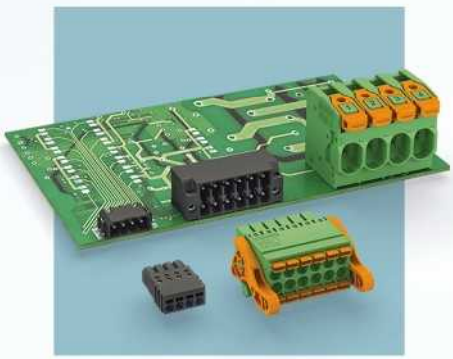
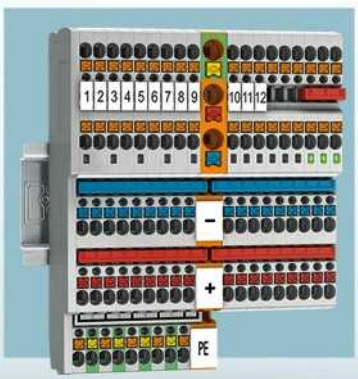
SUPPLEMENT 2014

Catalog





PHOENIX CONTACT
INSPIRING INNOVATIONS

The Phoenix Contact catalog system

PCB connection technology and electronics housing
- PCB terminal blocks and plug connectors
- Electronics housing

Connection technology for field devices
- Plug connectors
- Cables and connectors

Modular terminal blocks
- Modular terminal blocks

Sensor/actuator cabling and industrial plug connectors
- Sensor/actuator cabling
- Cables and connectors
- Plug connectors

Marking systems, tools, and mounting material
- Marking and labeling
- Tools
- Installation and mounting material

Surge protection and power supply units
- Lightning monitoring system
- Surge protection and interference filters
- Power supply units and UPS
- Protective devices

Interface technology and switching devices
- Electronic switching devices and motor control
- Measurement and control technology • Monitoring and signaling
- Relay modules • System cabling for controllers

Control technology, I/O systems and automation infrastructure
- Ethernet networks • Functional safety • HMIs and industrial PCs • I/O systems
- Industrial lighting and signaling • Industrial communication technology
- Fieldbus components and systems • Wireless data communication
- Process infrastructure • Software • Controllers

2 | **PCB connection technology and electronics housing** Catalog 1

40 | **Connection technology for field devices** Catalog 2

86 | **Modular terminal blocks** Catalog 3

174 | **Sensor/actuator cabling and industrial connectors** Catalog 4

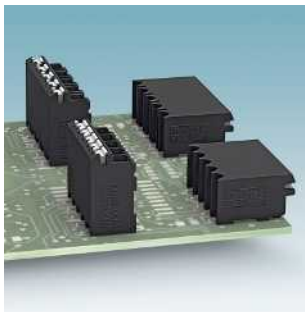
240 | **Marking systems, tools, and mounting material** Catalog 5

302 | **Surge protection and power supplies** Catalog 6

322 | **Interface technology and switching devices** Catalog 7

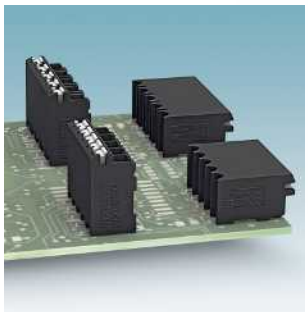
374 | **Control technology, I/O systems, and automation infrastructure** Catalog 8

434 | **Index**



SMD PCB terminal blocks with push-in spring connection up to 1.5 mm², 3.5 and 3.81 mm pitch

SPT-SMD 1,5/ ....-H-... R32 Page 7
SPT-SMD 1,5/ ...-V-... R32 Page 7

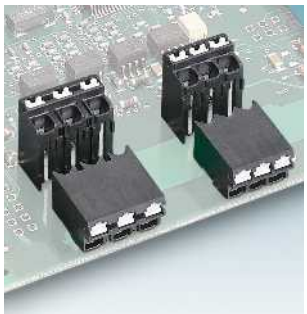


SMD PCB terminal blocks with push-in spring connection up to 1.5 mm², 5.0 and 5.08 mm pitch

SPT-SMD 1,5/ ...-H-5,0 R32 Page 9
SPT-SMD 1,5/ ...-V-5,0 R32 Page 9

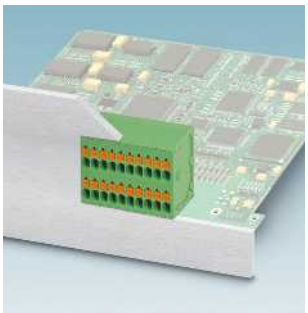
THR PCB terminal blocks with push-in spring connection up to 1.5 mm², 3.5 and 3.81 mm pitch

SPT-THR 1,5/ ...-H-3,5 P26 Page 10
SPT-THR 1,5/...-V-3,5 P26 Page 11



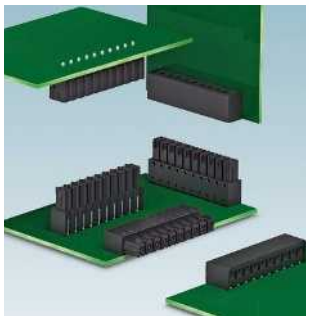
THR PCB terminal blocks with push-in spring connection up to 1.5 mm², 5.0 and 5.08 mm pitch

SPT-THR 1,5/ ...-H-5,0 P26 Page 12
SPT-THR 1,5/ ...-V-5,0 P26 Page 13



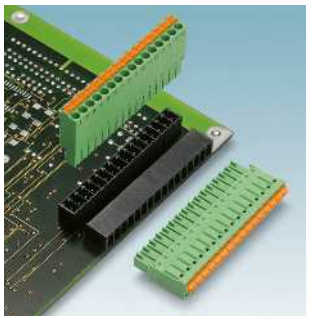
Double-row PCB terminal block with push-in spring connection up to 1.5 mm², 3.5 mm pitch

SPTD 1,5/ ...-H-3,5 Page 15



Inverted headers for reflow processes, 3.5 mm pitch

IMC 1,5/ ...-G-3,5 P20 THR Page 16
IMCV 1,5/ ...-G-3,5 P20 THR Page 17

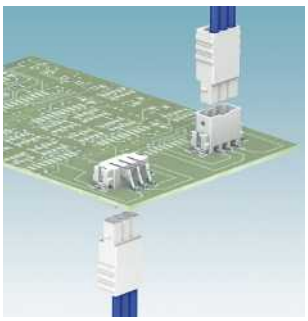


Single-level headers, 13 to 20-pos., for reflow processes, 3.81 mm pitch

MC 1,5/...-G-3,81 P20 THR Page 18
MCV 1,5/...-G-3,81 P20 THR Page 19

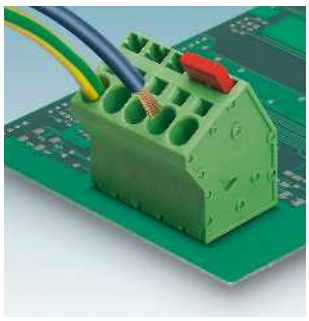
Taped single-level headers, 13 to 20-pos., for reflow processes, 3.81 mm pitch

MC 1,5/...-G-3,81 P20 THRR... Page 20
MCV 1,5/...-G-3,81 P20 THRR... Page 21



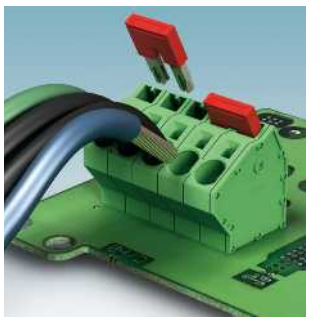
Plugs with push-in spring connection up to 0.75 mm², 2.5 mm pitch

PTSM 0,5/ ...-HV-2,5-SMD WH R32 Page 23
PTSM 0,5/ ...-HTB-2,5-SMD WH R32 Page 23



Angled PCB terminal blocks with push-in spring connection up to 6 mm², 7.5 mm pitch

SPTA 5/ ...-7,5-ZB Page 25

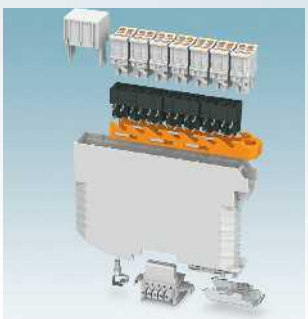


Angled PCB terminal blocks with push-in spring connection up to 6 mm², 10 mm pitch

SPTA 16/ ...-10,0-ZB Page 27

Feed-through terminal blocks with push-in spring connection up to 16 mm² for high-current applications

PWO 16-UW Page 29



ME-IO electronics housing with front connection

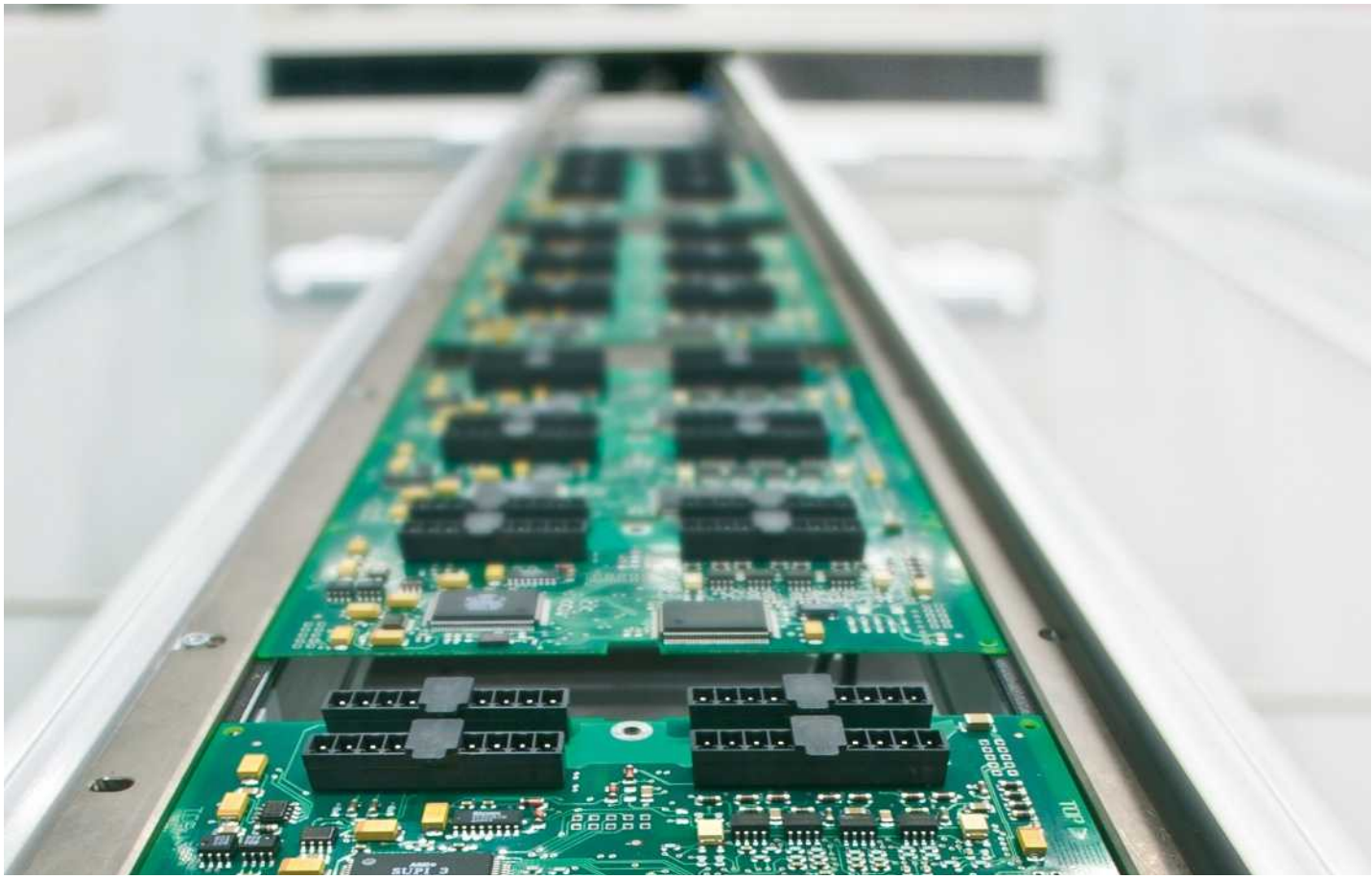
ME-IO 18, 8.... Page 30
HSC... Page 30

PCO... power connector for ME MAX housing

PCO ....-L KMGY Page 38
PBR 42A... Page 38

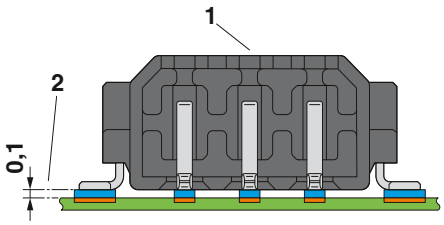
ME TBUS 4P1S and ME TBUS ADAPTER for ME and ME MAX housing

ME ....TBUS 1,5/4P1S KMGY Page 39
ME ....TBUS ADAPTER KMGY Page 39



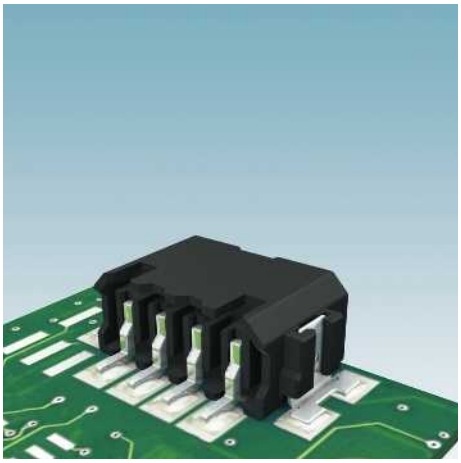
SMD- Surface Mount Device

Generally the term SMD or SMT (surface mount technology) refers to the dominant production method currently used for assemblies in electronics production. In this case solder paste is applied to the contact surfaces of the PCB. The surface contacts of the component are dipped in this paste and soldered by means of the reflow soldering process.



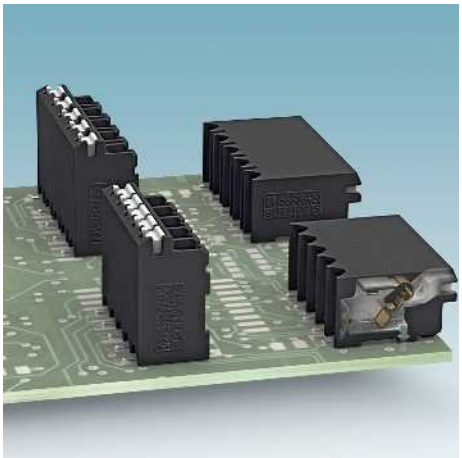
Properties of SMD/THR components in the reflow process

– Resistance to high temperatures
– Suction areas (1) for automatic PCB assembly by means of pick-and-place
– Stability in the case of mechanical loads
– Coplanarity (2) (evenness) of the SMD contacts



PTSM 0,5...SMD

In addition to the SMD contacts, the components have anchor metal on the side. This ensures that the insertion and withdrawal force of the plugs does not overload the contact points.

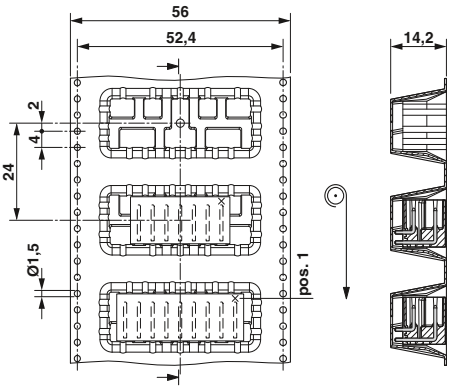


SPT-SMD 1,5...

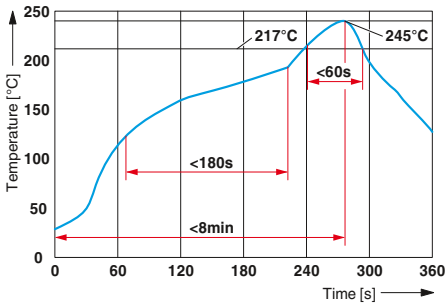
Additional solder pins on the side position the component on the PCB and prevent it moving during the process. Moreover, they absorb the force when the conductors are connected.

The qualification of the SMD connectors is based on IPC/JEDEC J-STD020 indicating the MSL (Moisture Sensitive Level) and the max. processing temperatures. The SMD/THR components meet MSL 1 or 2 which means that dry bag packaging is not required.

The standard tape width for tape-on-reel packaging supports automatic PCB assembly in pick-and-place applications.



Dimensional drawings of tape reels and suction areas and pads can be found online at phoenixcontact.net/products.



Reflow soldering

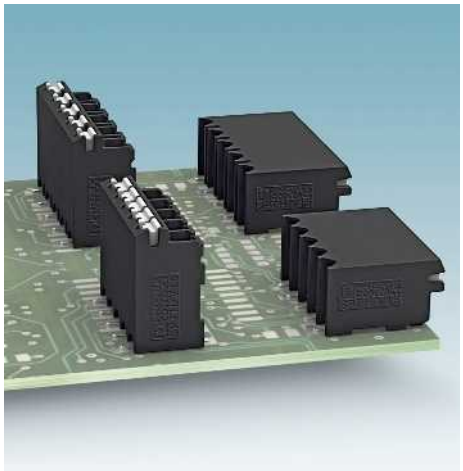
The reflow process and the required temperature profiles are described in SMD standards DIN EN 61760-1 or also IEC 60068-2-58. The profiles described are usually used for test purposes, but are also recommended for the application.

SMD PCB terminal blocks with push-in spring connection up to 1.5 mm²

Notes:

Dimensional drawings of tape reels and place pads can be found online at phoenixcontact.net/products.

[1]) Current carrying capacity curve available on request.



- Push-in direct plug-in technology for solid and stranded conductors
- Suitable for use in SMD processes
- Horizontal and vertical design with a 3.5 mm and 3.81 mm pitch
- High stability due to anchor pins or two soldering pads per position
- Supplied in taped packaging according to IEC 60286-3 for automatic assembly
- Touch connection for voltage testing using a 1 mm Ø test pin

For accessories, see Catalog 1

For all types	Type	Page
	Screwdriver **SZS 0,4 x 2,5 Order No. 1205037**	
	Marker cards **SK 3,5/2,8 or SK 3,81/2,8**	796
	Ferrules with and without plastic sleeve	834
	Crimping pliers for 0.25 to 6 mm² **CRIMPFOX 6 Order No. 1212034**	
	Test plug **MPS-MT 1-S Order No. 1944372**	831

Technical data

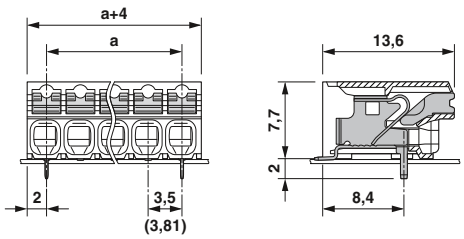
		SPT-SMD 1,5/...H..R...			SPT-SMD 1,5/...-V...R...		
Technical data in accordance to IEC / DIN VDE							
Rated current / conductor cross section	[A] / [mm²]	13.5[1]) / 1.5			13.5[1]) / 1.5		
Rated insulation voltage for pollution degree 2	[V]	160			160		
Pitch	[mm]	3.5 / 3.81			3.5 / 3.81		
Connection capacity							
Solid / stranded	[mm²] / [mm²] / AWG	0.2 - 1.5 / 0.2 - 1.5 / 24 - 16			0.2 - 1.5 / 0.2 - 1.5 / 24 - 16		
Stranded with ferrules without plastic sleeve	[mm²]	0.2 - 1.5			0.2 - 1.5		
Stranded with ferrules with plastic sleeve	[mm²]	0.2 - 0.75			0.2 - 0.75		
Insulation coordination							
Surge voltage category / pollution degree		III / 3	III / 2	II / 2	III / 3	III / 2	II / 2
Rated insulation voltage	[V]	160	160	320	160	160	320
Rated surge voltage	[kV]	2.5	2.5	2.5	2.5	2.5	2.5
Approval data (UL/CUL)	Use Group	B	C	D	B	C	D
Nominal voltage	[V]	-	-	-	-	-	-
Nominal current	[A]	-	-	-	-	-	-
Connection capacity AWG	AWG	-	-	-	-	-	-
Approval data (CSA)	Use Group	B	C	D	B	C	D
Nominal voltage	[V]	-	-	-	-	-	-
Nominal current	[A]	-	-	-	-	-	-
Connection capacity AWG	AWG	-	-	-	-	-	-
General data							
Stripping length	[mm]	8			8		
Type of insulation material / insulation material group		LCP / IIIa			LCP / IIIa		
Inflammability class according to UL 94		V0			V0		
Drill hole diameter / pin dimensions	[mm]	1.1 / 0.7 x 0.3			1.1 / 0.7 x 0.3		

No. of pos.	Dim. a [mm]
2	3.50
3	7.00
4	10.50
5	14.00
6	17.50
7	21.00
8	24.50
9	28.00
10	31.50
11	35.00
12	38.50
2	3.81
3	7.62
4	11.43
5	15.24
6	19.05
7	22.86
8	26.67
9	30.48
10	34.29
11	38.10
12	41.91

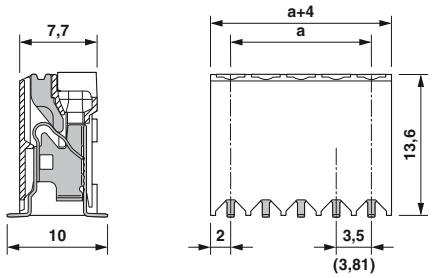
Taped PCB terminal block, connection direction horizontal to the PCB

Taped PCB terminal block, connection direction vertical to the PCB

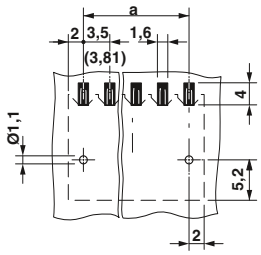
Dimensional drawing



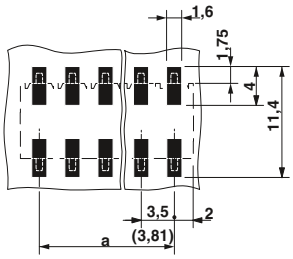
Dimensional drawing



Drilling diagram



Drilling diagram



Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 3.5 mm, color: black		
SPT-SMD 1,5/ 2-H-3,5 R24	1824527	300
SPT-SMD 1,5/ 3-H-3,5 R24	1824530	300
SPT-SMD 1,5/ 4-H-3,5 R44	1824543	300
SPT-SMD 1,5/ 5-H-3,5 R44	1824556	300
SPT-SMD 1,5/ 6-H-3,5 R44	1824569	300
SPT-SMD 1,5/ 7-H-3,5 R44	1824572	300
SPT-SMD 1,5/ 8-H-3,5 R72	1824585	300
SPT-SMD 1,5/ 9-H-3,5 R72	1824598	300
SPT-SMD 1,5/10-H-3,5 R72	1824608	300
SPT-SMD 1,5/11-H-3,5 R72	1824611	300
SPT-SMD 1,5/12-H-3,5 R72	1824624	300
3.81 mm pitch, color: black		
SPT-SMD 1,5/ 2-H-3,81 R24	1824637	300
SPT-SMD 1,5/ 3-H-3,81 R24	1824640	300
SPT-SMD 1,5/ 4-H-3,81 R44	1824653	300
SPT-SMD 1,5/ 5-H-3,81 R44	1824666	300
SPT-SMD 1,5/ 6-H-3,81 R44	1824679	300
SPT-SMD 1,5/ 7-H-3,81 R44	1824682	300
SPT-SMD 1,5/ 8-H-3,81 R72	1824695	300
SPT-SMD 1,5/ 9-H-3,81 R72	1824705	300
SPT-SMD 1,5/10-H-3,81 R72	1824718	300
SPT-SMD 1,5/11-H-3,81 R72	1824721	300
SPT-SMD 1,5/12-H-3,81 R72	1824734	300

Ordering data

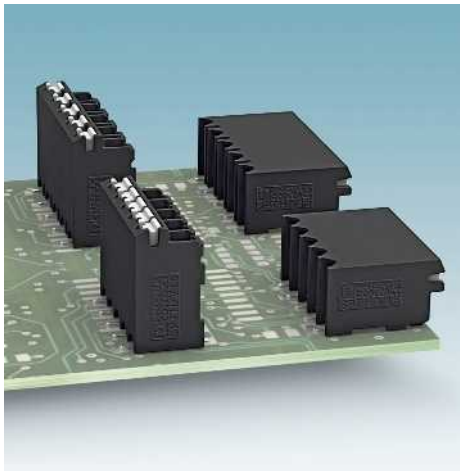
Type	Order No.	Pcs. / Pkt.
Pitch 3.5 mm, color: black		
SPT-SMD 1,5/ 2-V-3,5 R24	1824080	200
SPT-SMD 1,5/ 3-V-3,5 R32	1824093	200
SPT-SMD 1,5/ 4-V-3,5 R44	1824103	200
SPT-SMD 1,5/ 5-V-3,5 R44	1824116	200
SPT-SMD 1,5/ 6-V-3,5 R44	1824129	200
SPT-SMD 1,5/ 7-V-3,5 R44	1824132	200
SPT-SMD 1,5/ 8-V-3,5 R72	1824145	200
SPT-SMD 1,5/ 9-V-3,5 R72	1824158	200
SPT-SMD 1,5/10-V-3,5 R72	1824161	200
SPT-SMD 1,5/11-V-3,5 R72	1824174	200
SPT-SMD 1,5/12-V-3,5 R72	1824187	200
3.81 mm pitch, color: black		
SPT-SMD 1,5/ 2-V-3,81 R24	1824190	200
SPT-SMD 1,5/ 3-V-3,81 R32	1824200	200
SPT-SMD 1,5/ 4-V-3,81 R44	1824213	200
SPT-SMD 1,5/ 5-V-3,81 R44	1824226	200
SPT-SMD 1,5/ 6-V-3,81 R44	1824239	200
SPT-SMD 1,5/ 7-V-3,81 R44	1824242	200
SPT-SMD 1,5/ 8-V-3,81 R72	1824255	200
SPT-SMD 1,5/ 9-V-3,81 R72	1824268	200
SPT-SMD 1,5/10-V-3,81 R72	1824271	200
SPT-SMD 1,5/11-V-3,81 R72	1824284	200
SPT-SMD 1,5/12-V-3,81 R72	1824297	200

SMD PCB terminal blocks with push-in spring connection up to 1.5 mm²

Notes:

Dimensional drawings of tape reels and place pads can be found online at phoenixcontact.net/products.

[1]) Current carrying capacity curve available on request.



- Push-in direct plug-in technology for solid and stranded conductors
- Suitable for use in SMD processes
- Horizontal and vertical design with a 5.0 mm and 5.08 mm pitch
- High stability due to anchor pins or two soldering pads per position
- Supplied in taped packaging according to IEC 60286-3 for automatic assembly
- Touch connection for voltage testing using a 1 mm Ø test pin

For accessories, see Catalog 1

For all types	Type	Page
	Screwdriver **SZS 0,4 x 2,5** **Order No.** **1205037**	
	Marker cards **SK 5/3,8 orSK 5,08/3,8**	798
	Ferrules with and without plastic sleeve	834
	Crimping pliers for 0.25 to 6 mm² **CRIMPFOX 6** **Order No.** **1212034**	
	Test plug **MPS-MT 1-S** **Order No.** **1944372**	831

Technical data

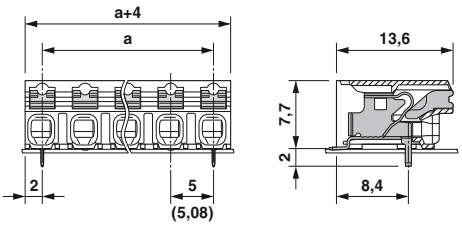
		SPT-SMD 1,5/...H..R			SPT-SMD 1,5/...V...R...		
Technical data in accordance to IEC / DIN VDE							
Rated current / conductor cross section	[A] / [mm²]	13.5[1]) / 1.5			13.5[1]) / 1.5		
Rated insulation voltage for pollution degree 2	[V]	320			320		
Pitch	[mm]	5 / 5.08			5 / 5.08		
Connection capacity							
Solid / stranded	[mm²] / [mm²] / AWG	0.2 - 1.5 / 0.2 - 1.5 / 24 - 16			0.2 - 1.5 / 0.2 - 1.5 / 24 - 16		
Stranded with ferrules without plastic sleeve	[mm²]	0.2 - 1.5			0.2 - 1.5		
Stranded with ferrules with plastic sleeve	[mm²]	0.2 - 0.75			0.2 - 0.75		
Insulation coordination							
Surge voltage category / pollution degree		III / 3	III / 2	II / 2	III / 3	III / 2	II / 2
Rated insulation voltage	[V]	250	320	500	250	320	500
Rated surge voltage	[kV]	4	4	4	4	4	4
Approval data (UL/CUL)	Use Group	B	C	D	B	C	D
Nominal voltage	[V]	-	-	-	-	-	-
Nominal current	[A]	-	-	-	-	-	-
Connection capacity AWG	AWG	-	-	-	-	-	-
Approval data (CSA)	Use Group	B	C	D	B	C	D
Nominal voltage	[V]	-	-	-	-	-	-
Nominal current	[A]	-	-	-	-	-	-
Connection capacity AWG	AWG	-	-	-	-	-	-
General data							
Stripping length	[mm]	8			8		
Type of insulation material / insulation material group		LCP / IIIa			LCP / IIIa		
Inflammability class according to UL 94		V0			V0		
Drill hole diameter / pin dimensions	[mm]	1.1 / 0.7 x 0.3 mm			1.1 / 0.7 x 0.3 mm		

No. of pos.	Dim. a [mm]
2	5.00
3	10.00
4	15.00
5	20.00
6	25.00
7	30.00
8	35.00
9	40.00
10	45.00
11	50.00
12	55.00
2	5.08
3	10.16
4	15.24
5	20.32
6	25.40
7	30.48
8	35.56
9	40.64
10	45.72
11	50.80
12	55.88

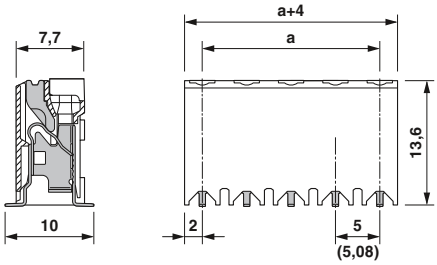
Taped PCB terminal block, connection direction horizontal to the PCB

Taped PCB terminal block, connection direction vertical to the PCB

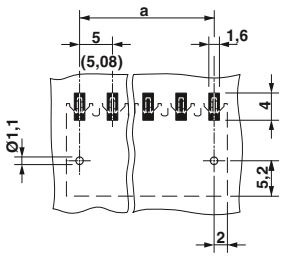
Dimensional drawing



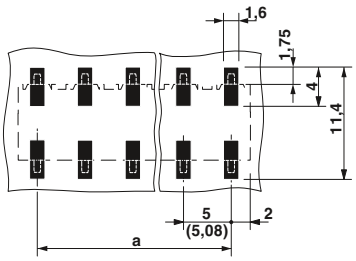
Dimensional drawing



Drilling diagram



Drilling diagram



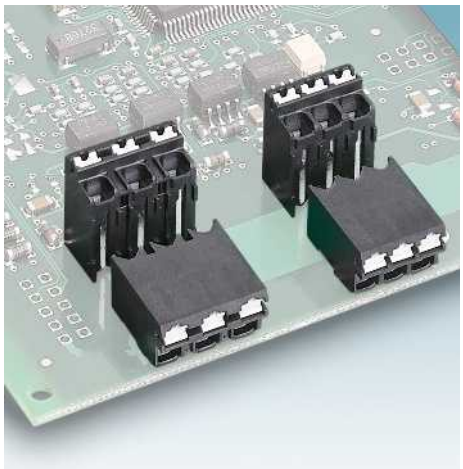
Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 5.0 mm, color: black		
SPT-SMD 1,5/ 2-H-5,0 R24	1824747	300
SPT-SMD 1,5/ 3-H-5,0 R32	1824750	300
SPT-SMD 1,5/ 4-H-5,0 R44	1824763	300
SPT-SMD 1,5/ 5-H-5,0 R44	1824776	300
SPT-SMD 1,5/ 6-H-5,0 R44	1824789	300
SPT-SMD 1,5/ 7-H-5,0 R88	1824792	300
SPT-SMD 1,5/ 8-H-5,0 R88	1824802	300
SPT-SMD 1,5/ 9-H-5,0 R88	1824815	300
SPT-SMD 1,5/10-H-5,0 R88	1824828	300
SPT-SMD 1,5/11-H-5,0 R88	1824831	300
SPT-SMD 1,5/12-H-5,0 R88	1824844	300
Headers, 5.08 mm pitch, color: black		
SPT-SMD 1,5/ 2-H-5,08 R24	1824857	300
SPT-SMD 1,5/ 3-H-5,08 R32	1824860	300
SPT-SMD 1,5/ 4-H-5,08 R44	1824873	300
SPT-SMD 1,5/ 5-H-5,08 R44	1824885	300
SPT-SMD 1,5/ 6-H-5,08 R44	1824899	300
SPT-SMD 1,5/ 7-H-5,08 R88	1824909	300
SPT-SMD 1,5/ 8-H-5,08 R88	1824912	300
SPT-SMD 1,5/ 9-H-5,08 R88	1824925	300
SPT-SMD 1,5/10-H-5,08 R88	1824938	300
SPT-SMD 1,5/11-H-5,08 R88	1824941	300
SPT-SMD 1,5/12-H-5,08 R88	1824954	300

Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 5.0 mm, color: black		
SPT-SMD 1,5/ 2-V-5,0 R24	1824307	200
SPT-SMD 1,5/ 3-V-5,0 R32	1824310	200
SPT-SMD 1,5/ 4-V-5,0 R44	1824323	200
SPT-SMD 1,5/ 5-V-5,0 R44	1824336	200
SPT-SMD 1,5/ 6-V-5,0 R44	1824349	200
SPT-SMD 1,5/ 7-V-5,0 R88	1824352	200
SPT-SMD 1,5/ 8-V-5,0 R88	1824365	200
SPT-SMD 1,5/ 9-V-5,0 R88	1824378	200
SPT-SMD 1,5/10-V-5,0 R88	1824381	200
SPT-SMD 1,5/11-V-5,0 R88	1824394	200
SPT-SMD 1,5/12-V-5,0 R88	1824404	200
Headers, 5.08 mm pitch, color: black		
SPT-SMD 1,5/ 2-V-5,08 R24	1824417	200
SPT-SMD 1,5/ 3-V-5,08 R32	1824420	200
SPT-SMD 1,5/ 4-V-5,08 R44	1824433	200
SPT-SMD 1,5/ 5-V-5,08 R44	1824446	200
SPT-SMD 1,5/ 6-V-5,08 R44	1824459	200
SPT-SMD 1,5/ 7-V-5,08 R88	1824462	200
SPT-SMD 1,5/ 8-V-5,08 R88	1824475	200
SPT-SMD 1,5/ 9-V-5,08 R88	1824488	200
SPT-SMD 1,5/10-V-5,08 R88	1824491	200
SPT-SMD 1,5/11-V-5,08 R88	1824501	200
SPT-SMD 1,5/12-V-5,08 R88	1824514	200

THR PCB terminal blocks with push-in spring connection up to 1.5 mm²



- Push-in direct plug-in technology for solid or stranded conductors
- Suitable for use in SMT reflow processes
- Horizontal and vertical design with 3.5 mm and 3.81 mm pitch
- Two solder pins for a high level of stability on the PCB
- Standard pin length of 2.6 mm also suitable for wave soldering processes
- Supplied in tape-on-reel packing according to IEC 60286-3 for automated mounting in the reflow process with pin length of 2.0 mm
- Touch connection for voltage testing using a 1 mm Ø test pin

Notes:

Dimensional drawings of tape reels and place pads can be found online at phoenixcontact.net/products.

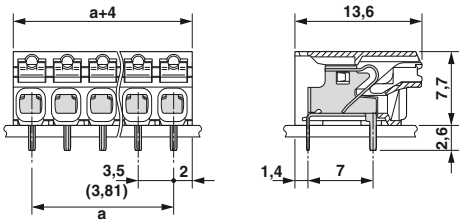
[1]) Current carrying capacity curve upon request.

Pin length of 2.6 mm, box-packaged PCB terminal blocks, connection direction horizontal to the PCB

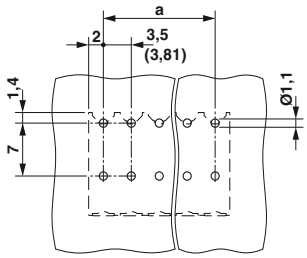
For accessories, see Catalog 1

For all types	Type	Page
	Screwdriver **SZS 0,4 x 2,5 Order No. 1205037**	
	Ferrules with and without plastic sleeve	834
	Crimping pliers for 0.25 to 6 mm² **CRIMPFOX 6 Order No. 1212034**	
	Test plug **MPS-MT 1-S Order No. 1944372**	831

Dimensional drawing



Drilling diagram



Technical data

Technical data in accordance to IEC / DIN VDE				
Rated current / conductor cross section	[A] / [mm²]	13.5[1]) / 1.5		
Rated insulation voltage for pollution degree 2	[V]	160		
Pitch	[mm]	3.5 / 3.81		
Connection capacity				
Solid / stranded	[mm²] / [mm²] / AWG	0.2 - 1.5 / 0.2 - 1.5 / 24 - 16		
Stranded with ferrules without plastic sleeve	[mm²]	0.2 - 1.5		
Stranded with ferrules with plastic sleeve	[mm²]	0.2 - 0.75		
Multi-conductor connection capacity (two conductors with the same cross section)				
Solid / stranded	[mm²]	- / -		
Stranded with ferrules without plastic sleeve	[mm²]	-		
Stranded with TWIN ferrule with plastic sleeve	[mm²]	-		
Insulation coordination				
Surge voltage category / pollution degree		III / 3	III / 2	II / 2
Rated insulation voltage	[V]	160	160	320
Rated surge voltage	[kV]	2.5	2.5	2.5
Approval data (UL/CUL)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
Approval data (CSA)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
General data				
Stripping length	[mm]	8		
Type of insulation material / insulation material group		LCP / IIIa		
Inflammability class according to UL 94		V0		
Drill hole diameter / pin dimensions	[mm]	1.1 / 0.7 x 0.3		

Ordering data

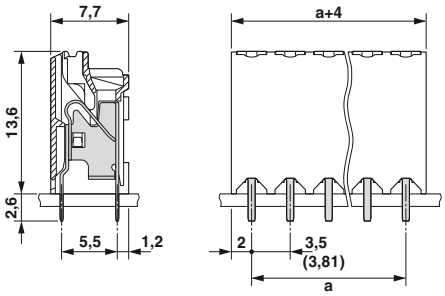
No. of pos.	Dim. a [mm]	Type	Order No.	Pcs. / Pkt.
		Pitch 3.5 mm, color: black		
2	3.50	**SPT-THR 1,5/ 2-H-3,5 P26**	**1822752**	370
3	7.00	**SPT-THR 1,5/ 3-H-3,5 P26**	**1822765**	240
4	10.50	**SPT-THR 1,5/ 4-H-3,5 P26**	**1822778**	170
5	14.00	**SPT-THR 1,5/ 5-H-3,5 P26**	**1822781**	150
6	17.50	**SPT-THR 1,5/ 6-H-3,5 P26**	**1822794**	130
7	21.00	**SPT-THR 1,5/ 7-H-3,5 P26**	**1822804**	110
8	24.50	**SPT-THR 1,5/ 8-H-3,5 P26**	**1822817**	80
9	28.00	**SPT-THR 1,5/ 9-H-3,5 P26**	**1822820**	80
10	31.50	**SPT-THR 1,5/10-H-3,5 P26**	**1822833**	60
11	35.00	**SPT-THR 1,5/11-H-3,5 P26**	**1822846**	60
12	38.50	**SPT-THR 1,5/12-H-3,5 P26**	**1822859**	60
		3.81 mm pitch, color: black		
2	3.81	**SPT-THR 1,5/ 2-H-3,81 P26**	**1822862**	350
3	7.62	**SPT-THR 1,5/ 3-H-3,81 P26**	**1822875**	240
4	11.43	**SPT-THR 1,5/ 4-H-3,81 P26**	**1822888**	170
5	15.24	**SPT-THR 1,5/ 5-H-3,81 P26**	**1822891**	130
6	19.05	**SPT-THR 1,5/ 6-H-3,81 P26**	**1822901**	110
7	22.86	**SPT-THR 1,5/ 7-H-3,81 P26**	**1822914**	80
8	26.67	**SPT-THR 1,5/ 8-H-3,81 P26**	**1822927**	80
9	30.48	**SPT-THR 1,5/ 9-H-3,81 P26**	**1822930**	60
10	34.29	**SPT-THR 1,5/10-H-3,81 P26**	**1822943**	60
11	38.10	**SPT-THR 1,5/11-H-3,81 P26**	**1822956**	60
12	41.91	**SPT-THR 1,5/12-H-3,81 P26**	**1822969**	60

Pin length of 2.6 mm, box-packaged PCB terminal blocks, connection direction vertical to the PCB

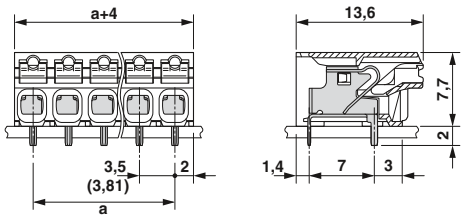
Pin length of 2.0 mm, taped PCB terminal blocks, connection direction horizontal to the PCB

Pin length of 2.0 mm, taped PCB terminal blocks, connection direction vertical to the PCB

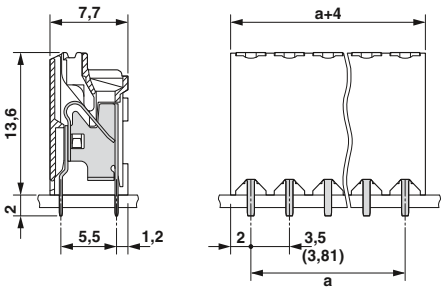
Dimensional drawing



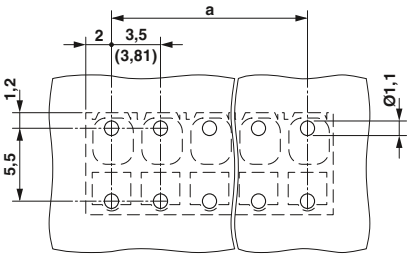
Dimensional drawing



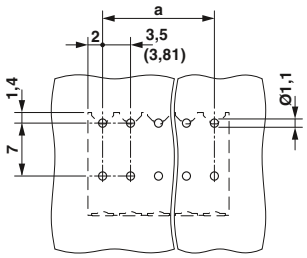
Dimensional drawing



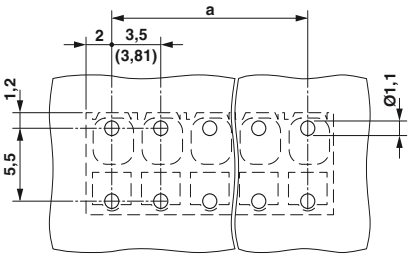
Drilling diagram



Drilling diagram



Drilling diagram



Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 3.5 mm, color: black		
SPT-THR 1,5/ 2-V-3,5 P26	1822312	540
SPT-THR 1,5/ 3-V-3,5 P26	1822325	350
SPT-THR 1,5/ 4-V-3,5 P26	1822338	250
SPT-THR 1,5/ 5-V-3,5 P26	1822341	220
SPT-THR 1,5/ 6-V-3,5 P26	1822354	190
SPT-THR 1,5/ 7-V-3,5 P26	1822367	160
SPT-THR 1,5/ 8-V-3,5 P26	1822370	120
SPT-THR 1,5/ 9-V-3,5 P26	1822383	120
SPT-THR 1,5/10-V-3,5 P26	1822396	90
SPT-THR 1,5/11-V-3,5 P26	1822406	90
SPT-THR 1,5/12-V-3,5 P26	1822419	90
3.81 mm pitch, color: black		
SPT-THR 1,5/ 2-V-3,81 P26	1822422	510
SPT-THR 1,5/ 3-V-3,81 P26	1822435	350
SPT-THR 1,5/ 4-V-3,81 P26	1822448	250
SPT-THR 1,5/ 5-V-3,81 P26	1822451	190
SPT-THR 1,5/ 6-V-3,81 P26	1822464	160
SPT-THR 1,5/ 7-V-3,81 P26	1822477	120
SPT-THR 1,5/ 8-V-3,81 P26	1822480	120
SPT-THR 1,5/ 9-V-3,81 P26	1822493	90
SPT-THR 1,5/10-V-3,81 P26	1822503	90
SPT-THR 1,5/11-V-3,81 P26	1822516	90
SPT-THR 1,5/12-V-3,81 P26	1822529	60

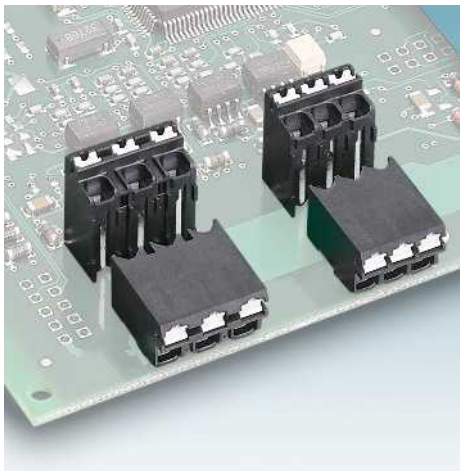
Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 3.5 mm, color: black		
SPT-THR 1,5/ 2-H-3,5 P20 R24	1823638	250
SPT-THR 1,5/ 3-H-3,5 P20 R32	1823641	250
SPT-THR 1,5/ 4-H-3,5 P20 R32	1823654	250
SPT-THR 1,5/ 5-H-3,5 P20 R32	1823667	250
SPT-THR 1,5/ 6-H-3,5 P20 R44	1823670	250
SPT-THR 1,5/ 7-H-3,5 P20 R44	1823683	250
SPT-THR 1,5/ 8-H-3,5 P20 R44	1823696	250
SPT-THR 1,5/ 9-H-3,5 P20 R72	1823706	250
SPT-THR 1,5/10-H-3,5 P20 R72	1823719	250
SPT-THR 1,5/11-H-3,5 P20 R72	1823722	250
SPT-THR 1,5/12-H-3,5 P20 R72	1823735	250
3.81 mm pitch, color: black		
SPT-THR 1,5/ 2-H-3,81 P20 R24	1823748	250
SPT-THR 1,5/ 3-H-3,81 P20 R32	1823751	250
SPT-THR 1,5/ 4-H-3,81 P20 R32	1823764	250
SPT-THR 1,5/ 5-H-3,81 P20 R32	1823777	250
SPT-THR 1,5/ 6-H-3,81 P20 R44	1823780	250
SPT-THR 1,5/ 7-H-3,81 P20 R44	1823793	250
SPT-THR 1,5/ 8-H-3,81 P20 R44	1823803	250
SPT-THR 1,5/ 9-H-3,81 P20 R72	1823816	250
SPT-THR 1,5/10-H-3,81 P20 R72	1823829	250
SPT-THR 1,5/11-H-3,81 P20 R72	1823832	250
SPT-THR 1,5/12-H-3,81 P20 R72	1823845	250

Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 3.5 mm, color: black		
SPT-THR 1,5/ 2-V-3,5 P20 R24	1823191	180
SPT-THR 1,5/ 3-V-3,5 P20 R24	1823201	180
SPT-THR 1,5/ 4-V-3,5 P20 R44	1823214	180
SPT-THR 1,5/ 5-V-3,5 P20 R44	1823227	180
SPT-THR 1,5/ 6-V-3,5 P20 R44	1823230	180
SPT-THR 1,5/ 7-V-3,5 P20 R44	1823243	180
SPT-THR 1,5/ 8-V-3,5 P20 R72	1823256	180
SPT-THR 1,5/ 9-V-3,5 P20 R72	1823269	180
SPT-THR 1,5/10-V-3,5 P20 R72	1823272	180
SPT-THR 1,5/11-V-3,5 P20 R72	1823285	180
SPT-THR 1,5/12-V-3,5 P20 R72	1823298	180
3.81 mm pitch, color: black		
SPT-THR 1,5/ 2-V-3,81 P20 R24	1823308	180
SPT-THR 1,5/ 3-V-3,81 P20 R24	1823311	180
SPT-THR 1,5/ 4-V-3,81 P20 R44	1823324	180
SPT-THR 1,5/ 5-V-3,81 P20 R44	1823337	180
SPT-THR 1,5/ 6-V-3,81 P20 R44	1823340	180
SPT-THR 1,5/ 7-V-3,81 P20 R44	1823353	180
SPT-THR 1,5/ 8-V-3,81 P20 R72	1823366	180
SPT-THR 1,5/ 9-V-3,81 P20 R72	1823379	180
SPT-THR 1,5/10-V-3,81 P20 R72	1823382	180
SPT-THR 1,5/11-V-3,81 P20 R72	1823395	180
SPT-THR 1,5/12-V-3,81 P20 R72	1823405	180

THR PCB terminal blocks with push-in spring connection up to 1.5 mm²



- Push-in direct plug-in technology for solid or stranded conductors
- Suitable for use in SMT reflow processes
- Horizontal and vertical design with 5.0 mm and 5.08 mm pitch
- Two solder pins for a high level of stability on the PCB
- Standard pin length of 2.6 mm also suitable for wave soldering processes
- Supplied in tape-on-reel packing according to IEC 60286-3 for automated mounting in the reflow process with pin length of 2.0 mm
- Touch connection for voltage testing using a 1 mm Ø test pin

Notes:

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[1]) Current carrying capacity curve upon request.

Pin length of 2.6 mm, box-packaged PCB terminal blocks, connection direction horizontal to the PCB

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For all types	Type	Page
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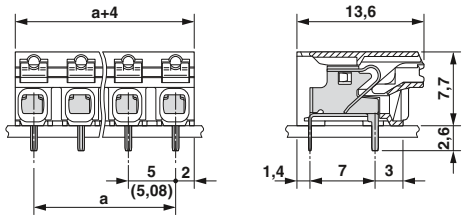
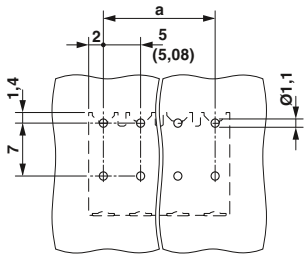
	Ferrules with and without plastic sleeve	834
	Crimping pliers for 0.25 to 6 mm² **CRIMPFOX 6 Order No. 1212034**	
	Test plug **MPS-MT 1-S Order No. 1944372**	831

Dimensional drawing



Drilling diagram



Technical data

Technical data in accordance to IEC / DIN VDE				
Rated current / conductor cross section	[A] / [mm²]	13.5[1]) / 1.5		
Rated insulation voltage for pollution degree 2	[V]	320		
Pitch	[mm]	5 / 5.08		
Connection capacity				
Solid / stranded	[mm²] / [mm²] / AWG	0.2 - 1.5 / 0.2 - 1.5 / 24 - 16		
Stranded with ferrules without plastic sleeve	[mm²]	0.2 - 1.5		
Stranded with ferrules with plastic sleeve	[mm²]	0.2 - 0.75		
Multi-conductor connection capacity (two conductors with the same cross section)				
Solid / stranded	[mm²]	- / -		
Stranded with ferrules without plastic sleeve	[mm²]	-		
Stranded with TWIN ferrule with plastic sleeve	[mm²]	-		
Insulation coordination				
Surge voltage category / pollution degree		III / 3	III / 2	II / 2
Rated insulation voltage	[V]	250	320	500
Rated surge voltage	[kV]	4	4	4
Approval data (UL/CUL)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
Approval data (CSA)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
General data				
Stripping length	[mm]	8		
Type of insulation material / insulation material group		LCP / IIIa		
Inflammability class according to UL 94		V0		
Drill hole diameter / pin dimensions	[mm]	1.1 / 0.7 x 0.3 mm		

Ordering data

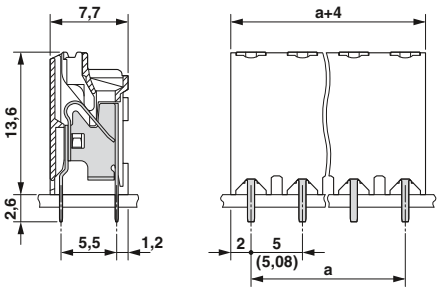
No. of pos.	Dim. a [mm]	Type	Order No.	Pcs. / Pkt.
		Pitch 5.0 mm, color: black		
2	5.00	**SPT-THR 1,5/ 2-H-5,0 P26**	**1822972**	300
3	10.00	**SPT-THR 1,5/ 3-H-5,0 P26**	**1822985**	190
4	15.00	**SPT-THR 1,5/ 4-H-5,0 P26**	**1822998**	130
5	20.00	**SPT-THR 1,5/ 5-H-5,0 P26**	**1823007**	110
6	25.00	**SPT-THR 1,5/ 6-H-5,0 P26**	**1823010**	80
7	30.00	**SPT-THR 1,5/ 7-H-5,0 P26**	**1823023**	60
8	35.00	**SPT-THR 1,5/ 8-H-5,0 P26**	**1823036**	60
9	40.00	**SPT-THR 1,5/ 9-H-5,0 P26**	**1823049**	40
10	45.00	**SPT-THR 1,5/10-H-5,0 P26**	**1823052**	40
11	50.00	**SPT-THR 1,5/11-H-5,0 P26**	**1823065**	40
12	55.00	**SPT-THR 1,5/12-H-5,0 P26**	**1823078**	40
		Headers, 5.08 mm pitch, color: black		
2	5.08	**SPT-THR 1,5/ 2-H-5,08 P26**	**1823081**	300
3	10.16	**SPT-THR 1,5/ 3-H-5,08 P26**	**1823094**	190
4	15.24	**SPT-THR 1,5/ 4-H-5,08 P26**	**1823104**	130
5	30.32	**SPT-THR 1,5/ 5-H-5,08 P26**	**1823117**	110
6	25.40	**SPT-THR 1,5/ 6-H-5,08 P26**	**1823120**	80
7	30.48	**SPT-THR 1,5/ 7-H-5,08 P26**	**1823133**	60
8	35.56	**SPT-THR 1,5/ 8-H-5,08 P26**	**1823146**	60
9	40.64	**SPT-THR 1,5/ 9-H-5,08 P26**	**1823159**	40
10	45.72	**SPT-THR 1,5/10-H-5,08 P26**	**1823162**	40
11	50.80	**SPT-THR 1,5/11-H-5,08 P26**	**1823175**	40
12	55.88	**SPT-THR 1,5/12-H-5,08 P26**	**1823188**	40

Pin length of 2.6 mm, box-packaged PCB terminal blocks, connection direction vertical to the PCB

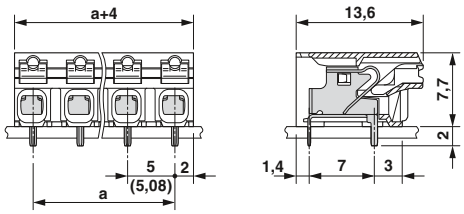
Pin length of 2.0 mm, taped PCB terminal blocks, connection direction horizontal to the PCB

Pin length of 2.0 mm, taped PCB terminal blocks, connection direction vertical to the PCB

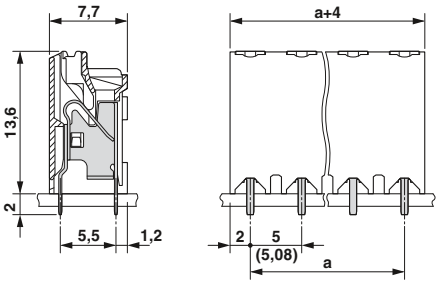
Dimensional drawing



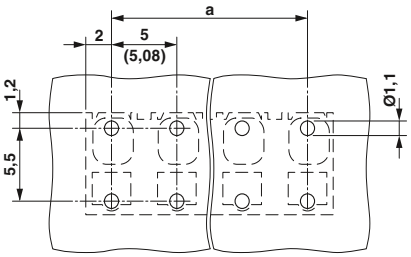
Dimensional drawing



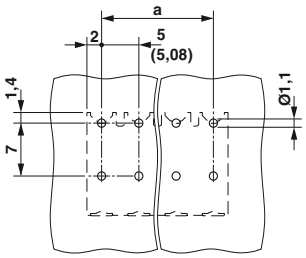
Dimensional drawing



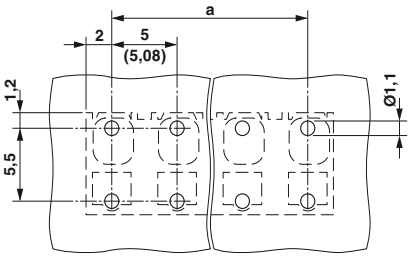
Drilling diagram



Drilling diagram



Drilling diagram



Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 5.0 mm, color: black		
SPT-THR 1,5/ 2-V-5,0 P26	1822532	440
SPT-THR 1,5/ 3-V-5,0 P26	1822545	280
SPT-THR 1,5/ 4-V-5,0 P26	1822558	190
SPT-THR 1,5/ 5-V-5,0 P26	1822561	160
SPT-THR 1,5/ 6-V-5,0 P26	1822574	120
SPT-THR 1,5/ 7-V-5,0 P26	1822587	90
SPT-THR 1,5/ 8-V-5,0 P26	1822590	90
SPT-THR 1,5/ 9-V-5,0 P26	1822600	60
SPT-THR 1,5/10-V-5,0 P26	1822613	60
SPT-THR 1,5/11-V-5,0 P26	1822626	60
SPT-THR 1,5/12-V-5,0 P26	1822639	60
Headers, 5.08 mm pitch, color: black		
SPT-THR 1,5/ 2-V-5,08 P26	1822642	440
SPT-THR 1,5/ 3-V-5,08 P26	1822655	280
SPT-THR 1,5/ 4-V-5,08 P26	1822668	190
SPT-THR 1,5/ 5-V-5,08 P26	1822671	160
SPT-THR 1,5/ 6-V-5,08 P26	1822684	120
SPT-THR 1,5/ 7-V-5,08 P26	1822697	90
SPT-THR 1,5/ 8-V-5,08 P26	1822707	90
SPT-THR 1,5/ 9-V-5,08 P26	1822710	60
SPT-THR 1,5/10-V-5,08 P26	1822723	60
SPT-THR 1,5/11-V-5,08 P26	1822736	60
SPT-THR 1,5/12-V-5,08 P26	1822749	60

Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 5.0 mm, color: black		
SPT-THR 1,5/ 2-H-5,0 P20 R24	1823858	250
SPT-THR 1,5/ 3-H-5,0 P20 R32	1823861	250
SPT-THR 1,5/ 4-H-5,0 P20 R32	1823874	250
SPT-THR 1,5/ 5-H-5,0 P20 R56	1823887	250
SPT-THR 1,5/ 6-H-5,0 P20 R56	1823890	250
SPT-THR 1,5/ 7-H-5,0 P20 R56	1823900	250
SPT-THR 1,5/ 8-H-5,0 P20 R56	1823913	250
SPT-THR 1,5/ 9-H-5,0 P20 R88	1823926	250
SPT-THR 1,5/10-H-5,0 P20 R88	1823939	250
SPT-THR 1,5/11-H-5,0 P20 R88	1823942	250
SPT-THR 1,5/12-H-5,0 P20 R88	1823955	250
Headers, 5.08 mm pitch, color: black		
SPT-THR 1,5/ 2-H-5,08 P20 R24	1823968	250
SPT-THR 1,5/ 3-H-5,08 P20 R32	1823971	250
SPT-THR 1,5/ 4-H-5,08 P20 R32	1823984	250
SPT-THR 1,5/ 5-H-5,08 P20 R56	1823997	250
SPT-THR 1,5/ 6-H-5,08 P20 R56	1824006	250
SPT-THR 1,5/ 7-H-5,08 P20 R56	1824019	250
SPT-THR 1,5/ 8-H-5,08 P20 R56	1824022	250
SPT-THR 1,5/ 9-H-5,08 P20 R88	1824035	250
SPT-THR 1,5/10-H-5,08 P20 R88	1824048	250
SPT-THR 1,5/11-H-5,08 P20 R88	1824051	250
SPT-THR 1,5/12-H-5,08 P20 R88	1824064	250

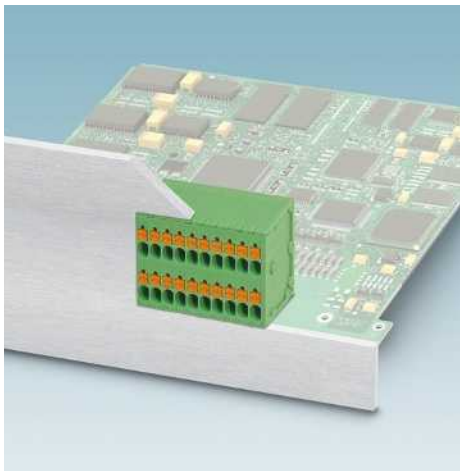
Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 5.0 mm, color: black		
SPT-THR 1,5/ 2-V-5,0 P20 R24	1823418	180
SPT-THR 1,5/ 3-V-5,0 P20 R32	1823421	180
SPT-THR 1,5/ 4-V-5,0 P20 R56	1823434	180
SPT-THR 1,5/ 5-V-5,0 P20 R56	1823447	180
SPT-THR 1,5/ 6-V-5,0 P20 R56	1823450	180
SPT-THR 1,5/ 7-V-5,0 P20 R56	1823463	180
SPT-THR 1,5/ 8-V-5,0 P20 R88	1823476	180
SPT-THR 1,5/ 9-V-5,0 P20 R88	1823489	180
SPT-THR 1,5/10-V-5,0 P20 R88	1823492	180
SPT-THR 1,5/11-V-5,0 P20 R88	1823502	180
SPT-THR 1,5/12-V-5,0 P20 R88	1823515	180
Headers, 5.08 mm pitch, color: black		
SPT-THR 1,5/ 2-V-5,08 P20 R24	1823528	180
SPT-THR 1,5/ 3-V-5,08 P20 R32	1823531	180
SPT-THR 1,5/ 4-V-5,08 P20 R56	1823544	180
SPT-THR 1,5/ 5-V-5,08 P20 R56	1823557	180
SPT-THR 1,5/ 6-V-5,08 P20 R56	1823560	180
SPT-THR 1,5/ 7-V-5,08 P20 R56	1823573	180
SPT-THR 1,5/ 8-V-5,08 P20 R88	1823586	180
SPT-THR 1,5/ 9-V-5,08 P20 R88	1823599	180
SPT-THR 1,5/10-V-5,08 P20 R88	1823609	180
SPT-THR 1,5/11-V-5,08 P20 R88	1823612	180
SPT-THR 1,5/12-V-5,08 P20 R88	1823625	180

Double-level PCB terminal blocks with push-in spring connection up to 1.5 mm²

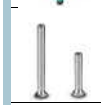
Notes:

[1]) Current carrying capacity curve upon request.



- Push-in connection with spring lever for tool-free conductor connection
- Unique integration into front panels in two rows
- Conductor cross sections up to 1.5 mm² with ferrule
- Printing area at the front
- Touch connection for voltage testing using a 1 mm test pin

For accessories, see Catalog 1

For all types	Type	Page
	Marker cards **SK 3,5/2,8**	796
	Screwdriver **SZS 0,4 x 2,5 Order No. 1205037**	
	Ferrules with and without plastic sleeve	834
	Crimping pliers for 0.25 to 6 mm² **CRIMPFOX 6 Order No. 1212034**	
	Test plug **MPS-MT 1-S Order No. 1944372**	831

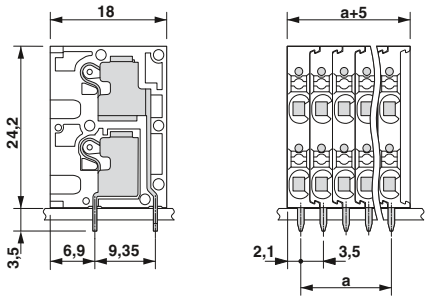
Technical data

Technical data in accordance to IEC / DIN VDE				
Rated current / conductor cross section	[A] / [mm²]	10[1]) / 1.5		
Rated insulation voltage for pollution degree 2	[V]	200		
Pitch	[mm]	3.5		
Connection capacity				
Solid / stranded	[mm²] / [mm²] / AWG	0.14 - 1.5 / 0.14 - 1.5 / 24 - 14		
Stranded with ferrules without plastic sleeve	[mm²]	0.2 - 1.5		
Stranded with ferrules with plastic sleeve	[mm²]	0.2 - 1.5		
Insulation coordination				
Surge voltage category / pollution degree		III / 3	III / 2	II / 2
Rated insulation voltage	[V]	160	200	400
Rated surge voltage	[kV]	2.5	2.5	2.5
Approval data (UL/CUL)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
Approval data (CSA)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
General data				
Stripping length	[mm]	8		
Type of insulation material / insulation material group		PA / I		
Inflammability class according to UL 94		V0		
Drill hole diameter / pin dimensions	[mm]	1.3 / 0.6 x 1.0 mm		

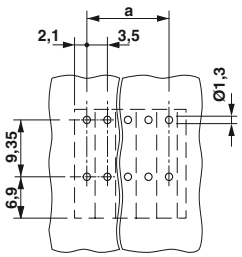
No. of pos.	Dim. a [mm]
2	3.50
3	7.00
4	10.50
5	14.00
6	17.50
7	21.00
8	24.50
9	28.00
10	31.50
11	35.00
12	38.50

Horizontal connection direction

Dimensional drawing



Drilling diagram



Ordering data

Type	Order No.	Pcs. / Pkt.
3.5 mm pitch, color: green		
SPTD 1,5/ 2-H-3,5	1841490	100
SPTD 1,5/ 3-H-3,5	1841500	100
SPTD 1,5/ 4-H-3,5	1841513	100
SPTD 1,5/ 5-H-3,5	1841526	100
SPTD 1,5/ 6-H-3,5	1841539	100
SPTD 1,5/ 7-H-3,5	1841542	100
SPTD 1,5/ 8-H-3,5	1841555	100
SPTD 1,5/ 9-H-3,5	1841568	100
SPTD 1,5/10-H-3,5	1841571	100
SPTD 1,5/11-H-3,5	1841584	100
SPTD 1,5/12-H-3,5	1841597	100

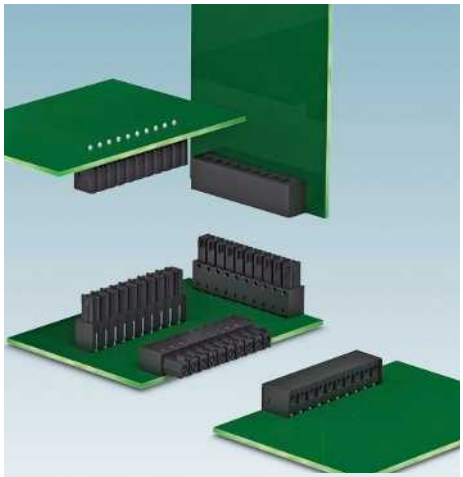
Inverted headers for reflow processes

Notes:

In accordance with DIN EN 61984, COMBICON connectors have no switching power. During designated use, they must not be plugged in or disconnected when carrying voltage or under load.

COMBICON select
Possible combinations for connectors can be found in COMBICON select at **phoenixcontact.net/products**.

[1]) Current carrying capacity curve upon request.



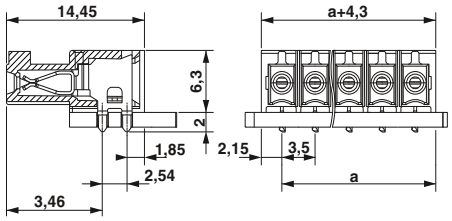
2.0 mm pin length
Box-packaged headers,
Plug-in direction parallel to the PCB

- Inverted headers with a 3.5 mm pitch
- Plug-in direction parallel or vertical to the PCB
- Versions with snap-in lug for locking inverted plugs with self-locking flanges
- You can find user notes and recommendations for the THR procedure in Catalog 1
- Combination with MC 1,5 pin strips for the PCB/PCB connection

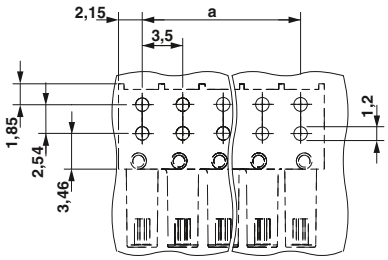
For accessories, see Catalog 1

For all types	Type	Page
	Marker cards **SK 3,5/2,8**	796

Dimensional drawing



Drilling diagram



Technical data

Technical data in accordance to IEC / DIN VDE				
Rated current	[A]	8[1])		
Rated insulation voltage for pollution degree 2	[V]	160		
Pitch	[mm]	3.5		
Insulation coordination				
Surge voltage category / pollution degree		III / 3	III / 2	II / 2
Rated insulation voltage	[V]	160	160	320
Rated surge voltage	[kV]	2.5	2.5	2.5
Approval data (UL/CUL)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
Approval data (CSA)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
General data				
Type of insulation material / insulation material group		LCP / IIIa		
Inflammability class according to UL 94		V0		
Drill hole diameter / pin dimensions	[mm]	1.2 / 0.8 x 0.8 mm		

Ordering data

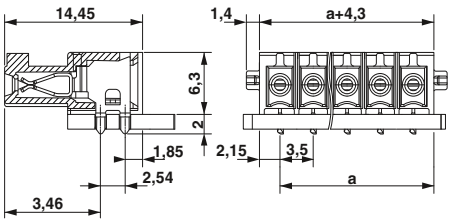
No. of pos.	Dim. a [mm]	Type	Order No.	Pcs. / Pkt.
		Pitch 3.5 mm, color: black		
2	3.50	**IMC 1,5/ 2-G-3,5 P20 THR**	**1830414**	50
3	7.00	**IMC 1,5/ 3-G-3,5 P20 THR**	**1830427**	50
4	10.50	**IMC 1,5/ 4-G-3,5 P20 THR**	**1830430**	50
5	14.00	**IMC 1,5/ 5-G-3,5 P20 THR**	**1830443**	50
6	17.50	**IMC 1,5/ 6-G-3,5 P20 THR**	**1830456**	50
7	21.00	**IMC 1,5/ 7-G-3,5 P20 THR**	**1830469**	50
8	24.50	**IMC 1,5/ 8-G-3,5 P20 THR**	**1830472**	50
9	28.00	**IMC 1,5/ 9-G-3,5 P20 THR**	**1830485**	50
10	31.50	**IMC 1,5/10-G-3,5 P20 THR**	**1830498**	50
11	35.00	**IMC 1,5/11-G-3,5 P20 THR**	**1830508**	50
12	38.50	**IMC 1,5/12-G-3,5 P20 THR**	**1830511**	50

Pin length of 2.0 mm, with snap-in lug,
box-packaged headers,
plug-in direction parallel to the PCB

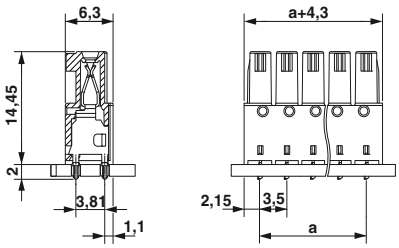
2.0 mm pin length
Box-packaged headers,
Plug-in direction vertical to the PCB

Pin length of 2.0 mm, with snap-in lug,
box-packaged headers,
plug-in direction vertical to the PCB

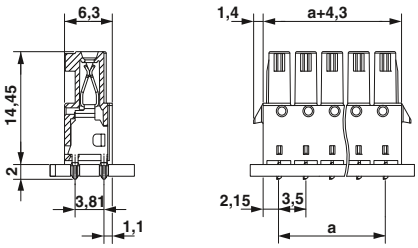
Dimensional drawing



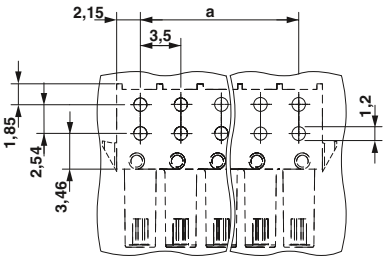
Dimensional drawing



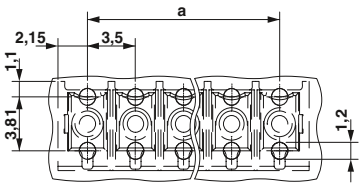
Dimensional drawing



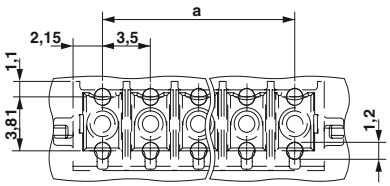
Drilling diagram



Drilling diagram



Drilling diagram



Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 3.5 mm, color: black		
IMC 1,5/ 2-G-3,5 RN P20 THR	1830566	50
IMC 1,5/ 3-G-3,5 RN P20 THR	1830579	50
IMC 1,5/ 4-G-3,5 RN P20 THR	1830582	50
IMC 1,5/ 5-G-3,5 RN P20 THR	1830595	50
IMC 1,5/ 6-G-3,5 RN P20 THR	1830605	50
IMC 1,5/ 7-G-3,5 RN P20 THR	1830618	50
IMC 1,5/ 8-G-3,5 RN P20 THR	1830621	50
IMC 1,5/ 9-G-3,5 RN P20 THR	1830634	50
IMC 1,5/10-G-3,5 RN P20 THR	1830647	50
IMC 1,5/11-G-3,5 RN P20 THR	1830650	50
IMC 1,5/12-G-3,5 RN P20 THR	1830663	50

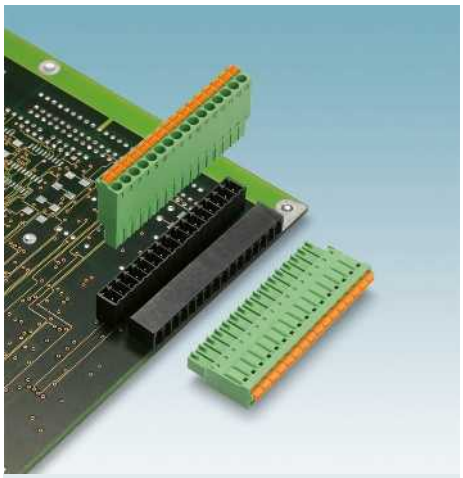
Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 3.5 mm, color: black		
IMCV 1,5/ 2-G-3,5 P20 THR	1830715	50
IMCV 1,5/ 3-G-3,5 P20 THR	1830728	50
IMCV 1,5/ 4-G-3,5 P20 THR	1830731	50
IMCV 1,5/ 5-G-3,5 P20 THR	1830744	50
IMCV 1,5/ 6-G-3,5 P20 THR	1830757	50
IMCV 1,5/ 7-G-3,5 P20 THR	1830760	50
IMCV 1,5/ 8-G-3,5 P20 THR	1830773	50
IMCV 1,5/ 9-G-3,5 P20 THR	1830786	50
IMCV 1,5/10-G-3,5 P20 THR	1830799	50
IMCV 1,5/11-G-3,5 P20 THR	1830809	50
IMCV 1,5/12-G-3,5 P20 THR	1830812	50

Ordering data

Type	Order No.	Pcs. / Pkt.
Pitch 3.5 mm, color: black		
IMCV 1,5/ 2-G-3,5 RN P20 THR	1830867	50
IMCV 1,5/ 3-G-3,5 RN P20 THR	1830870	50
IMCV 1,5/ 4-G-3,5 RN P20 THR	1830883	50
IMCV 1,5/ 5-G-3,5 RN P20 THR	1830896	50
IMCV 1,5/ 6-G-3,5 RN P20 THR	1830906	50
IMCV 1,5/ 7-G-3,5 RN P20 THR	1830919	50
IMCV 1,5/ 8-G-3,5 RN P20 THR	1830922	50
IMCV 1,5/ 9-G-3,5 RN P20 THR	1830935	50
IMCV 1,5/10-G-3,5 RN P20 THR	1830948	50
IMCV 1,5/11-G-3,5 RN P20 THR	1830951	50
IMCV 1,5/12-G-3,5 RN P20 THR	1830964	50

Single-level header for reflow processes



- 13 to 20 pos. headers with a 3.81 mm pitch
- High-precision pin strips for increased tolerance requirements
- Short 2.0 mm pin for reduced overhang in 1.6 mm PCBs
- You can find user notes and recommendations for the THR procedure in Catalog 1
- For further numbers of positions, visit **phoenixcontact.net/products**

Notes:

In accordance with DIN EN 61984, COMBICON connectors have no switching power. During designated use, they must not be plugged in or disconnected when carrying voltage or under load.

COMBICON select
Possible combinations for connectors can be found in COMBICON select at **phoenixcontact.net/products**.

CP-MSTB and SK 3,... may only be used after reflow soldering.

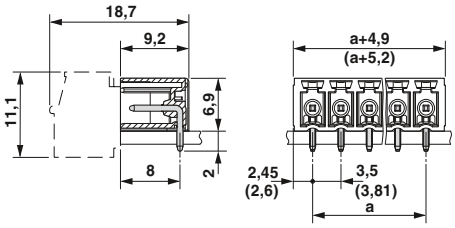
Dimensional drawings of the free space for solder paste, the tape, and pick-and-place pads can be found online at phoenixcontact.net/products.

Pin length 2.0 mm,
Box-packaged headers,
Plug-in direction parallel to the PCB

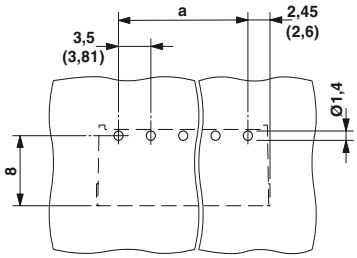
For accessories, see Catalog 1

For all types	Type	Page
	Coding profile **CP-MSTB Order No. 1734634**	
	Marker cards **SK 3,5/2,8 or SK 3,81/2,8**	796

Dimensional drawing



Drilling diagram



Technical data

Technical data in accordance to IEC / DIN VDE				
Rated current	[A]	8		
Rated insulation voltage for pollution degree 2	[V]	160		
Pitch	[mm]	3.81		
Insulation coordination				
Surge voltage category / pollution degree		III / 3	III / 2	II / 2
Rated insulation voltage	[V]	160	160	250
Rated surge voltage	[kV]	2.5	2.5	2.5
Approval data (UL/CUL)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
Approval data (CSA)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
General data				
Type of insulation material / insulation material group		LCP / IIIa		
Inflammability class according to UL 94		V0		
Drill hole diameter / pin dimensions	[mm]	1.4 / 0.8 x 0.8 mm		

Ordering data

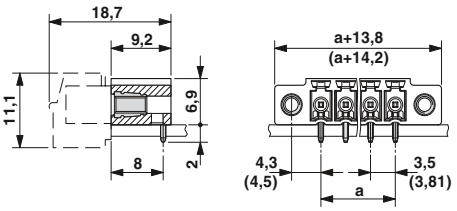
No. of pos.	Dim. a [mm]	Type	Order No.	Pcs. / Pkt.
		3.81 mm pitch, color: black		
13	45.72	**MC 1,5/13-G-3,81 P20 THR**	**1829056**	50
14	49.53	**MC 1,5/14-G-3,81 P20 THR**	**1829069**	50
15	53.34	**MC 1,5/15-G-3,81 P20 THR**	**1829072**	50
16	57.15	**MC 1,5/16-G-3,81 P20 THR**	**1829085**	50
17	60.96	**MC 1,5/17-G-3,81 P20 THR**	**1829098**	50
18	64.77	**MC 1,5/18-G-3,81 P20 THR**	**1829108**	50
19	68.58	**MC 1,5/19-G-3,81 P20 THR**	**1829111**	50
20	72.39	**MC 1,5/20-G-3,81 P20 THR**	**1829124**	50

Pin length 2.0 mm, with threaded flange
Box-packaged headers,
Plug-in direction parallel to the PCB

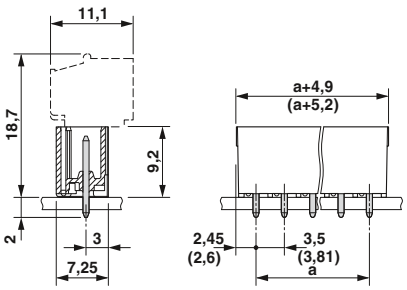
Pin length 2.0 mm,
Box-packaged headers,
Plug-in direction vertical to the PCB

Pin length 2.0 mm, with threaded flange
Box-packaged headers,
Plug-in direction vertical to the PCB

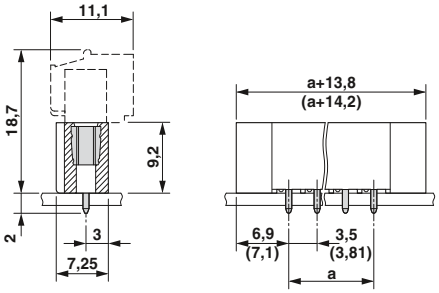
Dimensional drawing



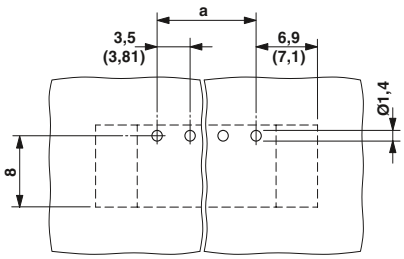
Dimensional drawing



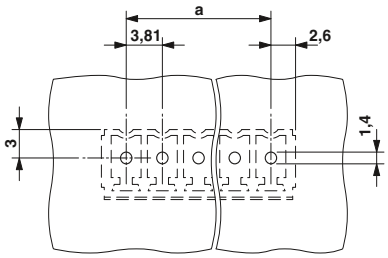
Dimensional drawing



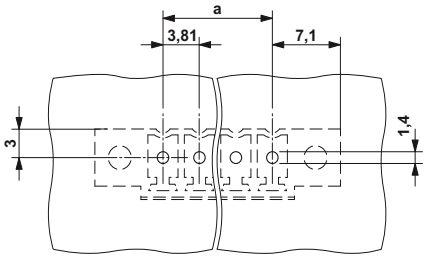
Drilling diagram



Drilling diagram



Drilling diagram



Ordering data

Type	Order No.	Pcs. / Pkt.
3.81 mm pitch, color: black		
MC 1,5/13-GF-3,81 P20 THR	1829137	50
MC 1,5/14-GF-3,81 P20 THR	1829140	50
MC 1,5/15-GF-3,81 P20 THR	1829153	50
MC 1,5/16-GF-3,81 P20 THR	1829166	50
MC 1,5/17-GF-3,81 P20 THR	1829179	50
MC 1,5/18-GF-3,81 P20 THR	1829182	50
MC 1,5/19-GF-3,81 P20 THR	1829195	50
MC 1,5/20-GF-3,81 P20 THR	1829205	50

Ordering data

Type	Order No.	Pcs. / Pkt.
3.81 mm pitch, color: black		
MCV 1,5/13-G-3,81 P20 THR	1828895	50
MCV 1,5/14-G-3,81 P20 THR	1828905	50
MCV 1,5/15-G-3,81 P20 THR	1828918	50
MCV 1,5/16-G-3,81 P20 THR	1828921	50
MCV 1,5/17-G-3,81 P20 THR	1828934	50
MCV 1,5/18-G-3,81 P20 THR	1828947	50
MCV 1,5/19-G-3,81 P20 THR	1828950	50
MCV 1,5/20-G-3,81 P20 THR	1828963	50

Ordering data

Type	Order No.	Pcs. / Pkt.
3.81 mm pitch, color: black		
MCV 1,5/13-GF-3,81 P20 THR	1828976	50
MCV 1,5/14-GF-3,81 P20 THR	1828989	50
MCV 1,5/15-GF-3,81 P20 THR	1828992	50
MCV 1,5/16-GF-3,81 P20 THR	1829001	50
MCV 1,5/17-GF-3,81 P20 THR	1829014	50
MCV 1,5/18-GF-3,81 P20 THR	1829027	50
MCV 1,5/19-GF-3,81 P20 THR	1829030	50
MCV 1,5/20-GF-3,81 P20 THR	1829043	50

Single-level header for reflow processes

- 13 to 20 pos. headers with a 3.81 mm pitch
- High-precision pin strips for increased tolerance requirements
- Short 2.0 mm pin for reduced overhang in 1.6 mm PCBs
- Tape-on-reel packing according to IEC 60286-3 for automated mounting
- Tape width corresponds to order designation, e.g., R32 = 32 mm tape width
- You can find user notes and recommendations for the THR procedure in Catalog 1
- For further numbers of positions, visit **phoenixcontact.net/products**

Notes:

In accordance with DIN EN 61984, COMBICON connectors have no switching power. During designated use, they must not be plugged in or disconnected when carrying voltage or under load.

COMBICON select
Possible combinations for connectors can be found in COMBICON select at **phoenixcontact.net/products**.

CP-MSTB and SK 3,... may only be used after reflow soldering.

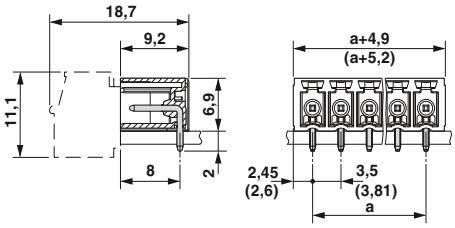
Pick and place pads for taped THR articles usually protrude beyond the components. The PCB layout must ensure that collisions are avoided when components are assembled. Dimensional drawings of the pick and place pads can be found online at phoenixcontact.net/products.

Pin length 2.0 mm,
Taped headers,
Plug-in direction parallel to the PCB

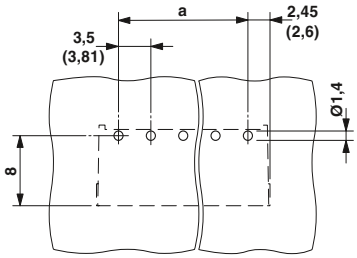
For accessories, see Catalog 1

For all types	Type	Page
	Coding profile **CP-MSTB Order No. 1734634**	
	Marker cards **SK 3,5/2,8 or SK 3,81/2,8**	796

Dimensional drawing



Drilling diagram



Technical data

Technical data in accordance to IEC / DIN VDE				
Rated current	[A]		8	
Rated insulation voltage for pollution degree 2	[V]		-	
Pitch	[mm]		-	
Insulation coordination				
Surge voltage category / pollution degree		III / 3	III / 2	II / 2
Rated insulation voltage	[V]	160		
Rated surge voltage	[kV]			
Approval data (UL/CUL)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
Approval data (CSA)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
General data				
Type of insulation material / insulation material group			- / -	
Inflammability class according to UL 94			-	

Ordering data

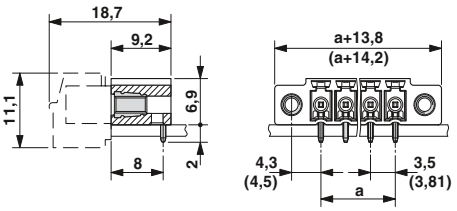
No. of pos.	Dim. a [mm]	Type	Order No.	Pcs. / Pkt.
		3.81 mm pitch, color: black		
13	45.72	**MC 1,5/13-G-3,81 P20 THRR72**	**1828691**	470
14	49.53	**MC 1,5/14-G-3,81 P20 THRR88**	**1828701**	470
15	53.34	**MC 1,5/15-G-3,81 P20 THRR88**	**1828714**	470
16	57.15	**MC 1,5/16-G-3,81 P20 THRR88**	**1828727**	470
17	60.96	**MC 1,5/17-G-3,81 P20 THRR88**	**1828730**	470
18	64.77	**MC 1,5/18-G-3,81 P20 THRR88**	**1828743**	470
19	68.58	**MC 1,5/19-G-3,81 P20 THRR104**	**1828756**	470
20	72.39	**MC 1,5/20-G-3,81 P20 THRR104**	**1828769**	470

Pin length 2.0 mm, with threaded flange,
Taped headers,
Plug-in direction parallel to the PCB

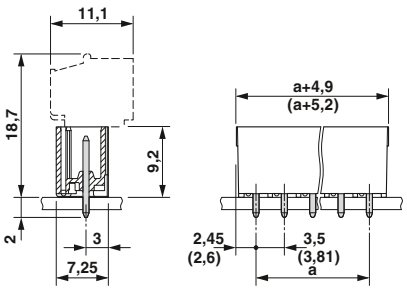
Pin length 2.0 mm,
Taped headers,
Plug-in direction vertical to the PCB

Pin length 2.0 mm, with threaded flange,
Taped headers,
Plug-in direction vertical to the PCB

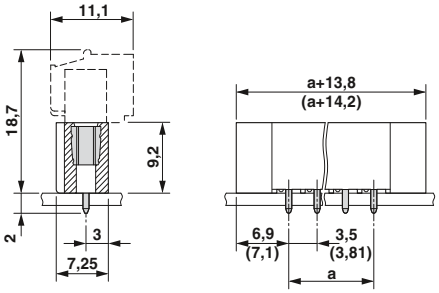
Dimensional drawing



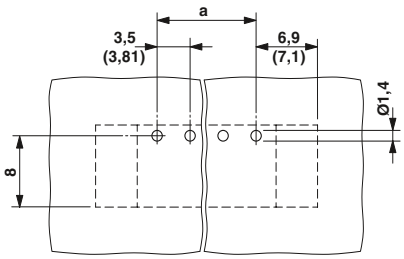
Dimensional drawing



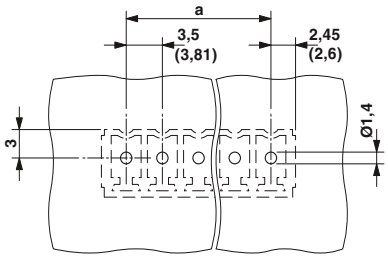
Dimensional drawing



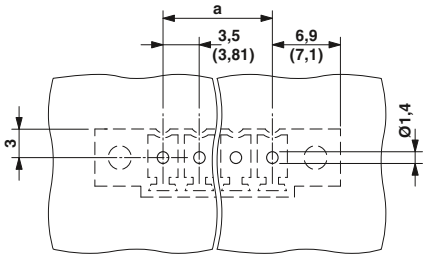
Drilling diagram



Drilling diagram



Drilling diagram



Ordering data

Type	Order No.	Pcs. / Pkt.
3.81 mm pitch, color: black		
MC 1,5/13-GF-3,81 P20 THRR72	1828772	470
MC 1,5/14-GF-3,81 P20 THRR88	1828785	470
MC 1,5/15-GF-3,81 P20 THRR88	1828798	470
MC 1,5/16-GF-3,81 P20 THRR88	1828808	470
MC 1,5/17-GF-3,81 P20 THRR88	1828811	470
MC 1,5/18-GF-3,81 P20 THRR88	1828824	470
MC 1,5/19-GF-3,81 P20 THRR104	1828837	470
MC 1,5/20-GF-3,81 P20 THRR104	1828840	470

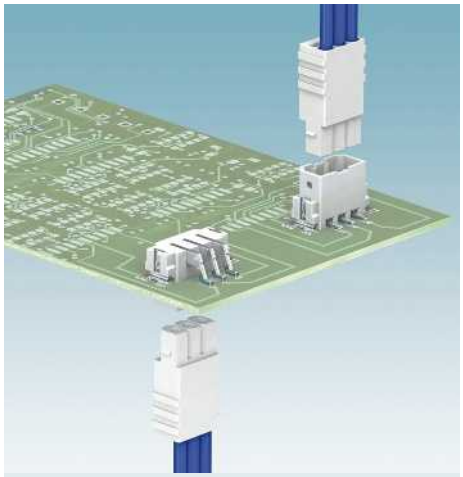
Ordering data

Type	Order No.	Pcs. / Pkt.
3.81 mm pitch, color: black		
MCV 1,5/13-G-3,81 P20 THRR72	1828536	200
MCV 1,5/14-G-3,81 P20 THRR88	1828549	200
MCV 1,5/15-G-3,81 P20 THRR88	1828522	200
MCV 1,5/16-G-3,81 P20 THRR88	1828565	200
MCV 1,5/17-G-3,81 P20 THRR88	1828578	200
MCV 1,5/18-G-3,81 P20 THRR88	1828581	200
MCV 1,5/19-G-3,81 P20 THRR104	1828594	200
MCV 1,5/20-G-3,81 P20 THRR104	1828604	200

Ordering data

Type	Order No.	Pcs. / Pkt.
3.81 mm pitch, color: black		
MCV 1,5/13-GF-3,81 P20 THRR72	1828617	200
MCV 1,5/14-GF-3,81 P20 THRR88	1828620	200
MCV 1,5/15-GF-3,81 P20 THRR88	1828633	200
MCV 1,5/16-GF-3,81 P20 THRR88	1828646	200
MCV 1,5/17-GF-3,81 P20 THRR88	1828659	200
MCV 1,5/18-GF-3,81 P20 THRR88	1828662	200
MCV 1,5/19-GF-3,81 P20 THRR104	1828675	200
MCV 1,5/20-GF-3,81 P20 THRR104	1828688	200

Plug with spring-cage connection up to 0.75 mm²



- Specifically designed for use in reflow and SMT processes
- High current carrying capacity of 6 A
- Robust solder anchor for secure, mechanical fixing to the surface
- Supplied in taped packaging according to IEC 60286-3 for automatic assembly
- Compatible with PTSM...-/PTPM...plugs
- 2.5 mm pitch

Notes:

PTSM plugs and headers are also available in black.

COMBICON select
Possible combinations for connectors can be found in COMBICON select at **phoenixcontact.net/products**.

Pick and place pads for taped THR articles usually protrude beyond the components. The PCB layout must ensure that collisions are avoided when components are assembled. Dimensional drawings of the pick and place pads can be found online at phoenixcontact.net/products.

[1]) Current carrying dependent upon plug used

[2]) 0.75 mm²possible, terminates the conductor insulation before the terminal block.

For accessories, see Catalog 1

For all types	Type	Page
	Screwdriver **SZS 0,4 X 2,0 Order No. 1205202**	
	Ferrules with and without plastic sleeve	834
	Crimping pliers for 0.25 to 6 mm² **CRIMPFOX 6 Order No. 1212034**	

Technical data

		PTSM 0,5/...-HV-2,5-SMD R..			PTSM 0,5/ ...-HTB-2,5-SMD WH R32			PTSM 0,5/ 1-2,5-H SMD WH L R24		
Technical data in accordance to IEC / DIN VDE										
Rated current	[A]	6[1])			6[1])			6[1]) / 0.5		
Rated insulation voltage for pollution degree 2	[V]	160			160			250		
Pitch	[mm]	2.5			2.5			-		
Connection capacity										
Solid / stranded	[mm²] / [mm²] / AWG	- / - / -			- / - / -			0.14 - 0.5 / 0.2 - 0.5[2]) / 26 - 20		
Stranded with ferrules without plastic sleeve	[mm²]	-			-			0.25 - 0.5		
Stranded with ferrules with plastic sleeve	[mm²]	-			-			-		
Insulation coordination										
Surge voltage category / pollution degree		III / 3	III / 2	II / 2	III / 3	III / 2	II / 2	III / 3	III / 2	II / 2
Rated insulation voltage	[V]	125	160	250	125	160	250	63	250	320
Rated surge voltage	[kV]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Approval data (UL/CUL)	Use Group	B	C	D	B	C	D	B	C	D
Nominal voltage	[V]	-	-	-	-	-	-	150	-	-
Nominal current	[A]	-	-	-	-	-	-	5	-	-
Connection capacity AWG	AWG	-	-	-	-	-	-	26-20	-	-
Approval data (CSA)	Use Group	B	C	D	B	C	D	B	C	D
Nominal voltage	[V]	-	-	-	-	-	-	-	-	-
Nominal current	[A]	-	-	-	-	-	-	-	-	-
Connection capacity AWG	AWG	-	-	-	-	-	-	-	-	-
General data										
Type of insulation material / insulation material group		PA / I			PA / I			PA / I		
Inflammability class according to UL 94		V0			V0			V0		

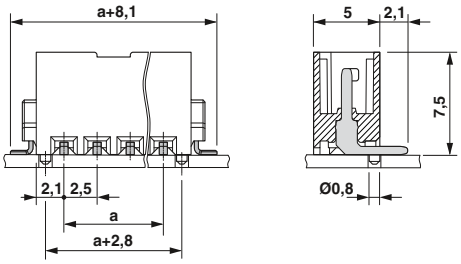
No. of pos.	Dim. a [mm]
1	
2	2.50
3	5.00
4	7.50
5	10.00
6	12.50
7	15.00
8	17.50

Vertical header
for SMD applications

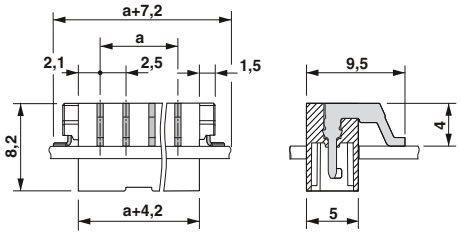
Through board header
for SMD applications

1-pos. horizontal PCB terminal block for SMD
applications

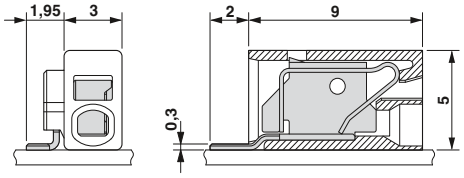
Dimensional drawing



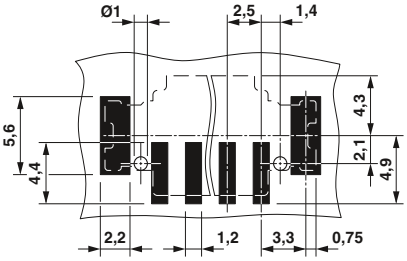
Dimensional drawing



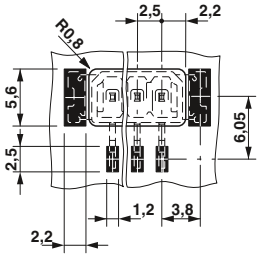
Dimensional drawing



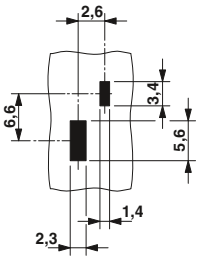
Drilling diagram



Drilling diagram



Drilling diagram



Ordering data

Type	Order No.	Pcs. / Pkt.
2.5 mm pitch, color: white		
PTSM 0,5/ 2-HV-2,5-SMD WH R32	1778696	500
PTSM 0,5/ 3-HV-2,5-SMD WH R32	1778706	500
PTSM 0,5/ 4-HV-2,5-SMD WH R44	1778719	400
PTSM 0,5/ 5-HV-2,5-SMD WH R44	1778722	400
PTSM 0,5/ 6-HV-2,5-SMD WH R44	1778735	400
PTSM 0,5/ 7-HV-2,5-SMD WH R44	1778748	400
PTSM 0,5/ 8-HV-2,5-SMD WH R44	1778751	400

Ordering data

Type	Order No.	Pcs. / Pkt.
2.5 mm pitch, color: white		
PTSM 0,5/ 2-HTB-2,5-SMD WH R32	1830126	330
PTSM 0,5/ 3-HTB-2,5-SMD WH R32	1830139	330
PTSM 0,5/ 4-HTB-2,5-SMD WH R44	1830142	330
PTSM 0,5/ 5-HTB-2,5-SMD WH R44	1830155	330
PTSM 0,5/ 6-HTB-2,5-SMD WH R44	1830168	330
PTSM 0,5/ 7-HTB-2,5-SMD WH R44	1830171	330
PTSM 0,5/ 8-HTB-2,5-SMD WH R44	1830184	330

Ordering data

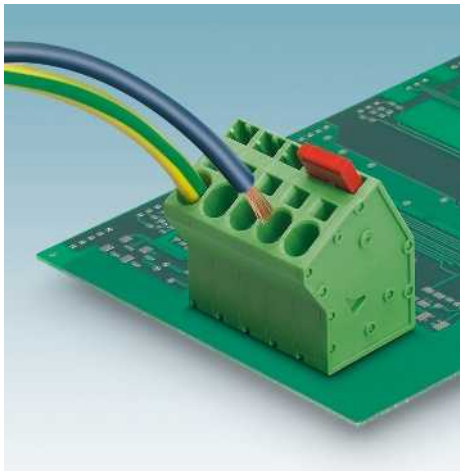
Type	Order No.	Pcs. / Pkt.
2.5 mm pitch, color: white		
PTSM 0,5/ 1-2,5-H SMD WH L R24	1840035	1000

PCB terminal blocks, 7.5 mm pitch

Notes:

When aligning versions with double pinning, other rated insulation voltages can occur.

[1]) Please observe the current carrying capacity curves and laboratory data sheets. Further current carrying capacity curves on request.



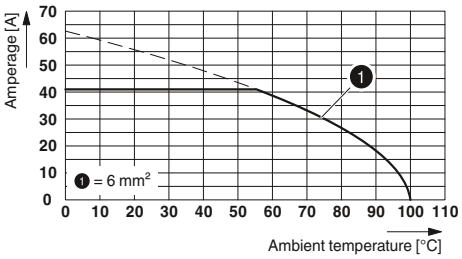
- SPTA 5 PCB terminal block with push-in spring connection for conductor cross sections up to 6 mm² and a current carrying capacity of 41 A
- Fully insulated bridges (FBSK) with different numbers of positions, e.g., for potential distribution
- Fast connection technology, thanks to tool-free direct plug-in principle
- Unrestricted 600-V-UL approval thanks to compact zig-zag pinning
- Conductor connection direction: 30° to the PCB
- Single-position terminal blocks with double pinning

For accessories, see Catalog 1

For all types	Type	Page
	Screwdriver **SZF 1-0,6 x 3,5 Order No. 1204517**	
	Crimping pliers for 0.25 to 6 mm² **CRIMPFOX 6 Order No. 1212034**	
	Ferrules with and without plastic sleeve	834
	Bridge **FBSK ...-7,5**	830

Current carrying capacity curve

Type: SPTA 5/...-7,5
Tested according to DIN EN 60512-5-2:2003-01
Reduction factor = 1
Number of positions: 4



Technical data

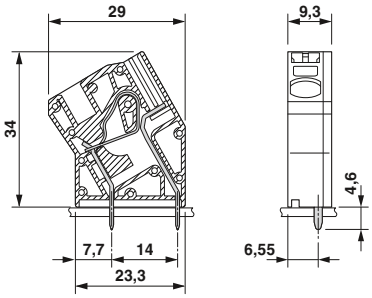
		SPTA 5/1-7,5			SPTA 5/...-7,5-ZB		
Technical data in accordance to IEC / DIN VDE							
Rated current / conductor cross section	[A] / [mm²]	41[1]) / 6			41[1]) / 6		
Rated insulation voltage for pollution degree 2	[V]	1000			1000		
Pitch	[mm]	7.5			7.5		
Connection capacity							
Solid / stranded	[mm²] / [mm²] / AWG	0.2 - 6 / 0.2 - 6 / 24 - 8			0.2 - 6 / 0.2 - 6 / 24 - 8		
Stranded with ferrules without plastic sleeve	[mm²]	0.25 - 6			0.25 - 6		
Stranded with ferrules with plastic sleeve	[mm²]	0.25 - 4			0.25 - 4		
Multi-conductor connection capacity (two conductors with the same cross section)							
Solid / stranded	[mm²]	- / -			- / -		
Stranded with ferrules without plastic sleeve	[mm²]	-			-		
Stranded with TWIN ferrule with plastic sleeve	[mm²]	0.25 - 1.5			0.25 - 1.5		
Insulation coordination							
Surge voltage category / pollution degree		III / 3	III / 2	II / 2	III / 3	III / 2	II / 2
Rated insulation voltage	[V]	630	1000	1000	800	1000	1000
Rated surge voltage	[kV]	6	6	6	8	8	6
Approval data (UL/CUL)	Use Group	B	C	D	B	C	D
Nominal voltage	[V]	-	-	-	-	-	-
Nominal current	[A]	-	-	-	-	-	-
Connection capacity AWG	AWG	-	-	-	-	-	-
Approval data (CSA)	Use Group	B	C	D	B	C	D
Nominal voltage	[V]	-	-	-	-	-	-
Nominal current	[A]	-	-	-	-	-	-
Connection capacity AWG	AWG	-	-	-	-	-	-
General data							
Stripping length	[mm]	15			15		
Type of insulation material / insulation material group		PA / I			PA / I		
Inflammability class according to UL 94		V0			V0		
Drill hole diameter / pin dimensions	[mm]	2.1 / 1.7 x 0.8			2.1 / 1.7 x 0.8		

No. of pos.	Dim. a [mm]
1	0.00
2	7.50
3	15.00
4	22.50
5	30.00
6	37.50
7	45.00
8	52.50
9	60.00
10	67.50
11	75.00
12	82.50

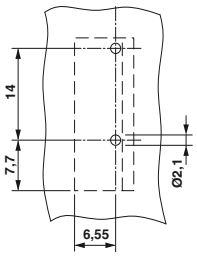
Single PCB terminal block, 30° angled connection direction, double pinning

30° angled connection direction, zigzag pinning, 600 V UL approval

Dimensional drawing



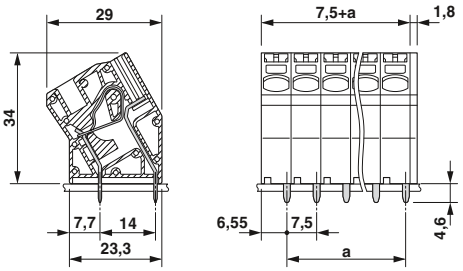
Drilling diagram



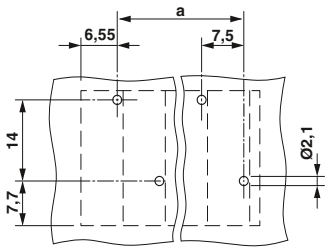
Ordering data

Type	Order No.	Pcs. / Pkt.
7.5 mm pitch, color: green		
SPTA 5/ 1-7,5	1819079	50

Dimensional drawing



Drilling diagram



Ordering data

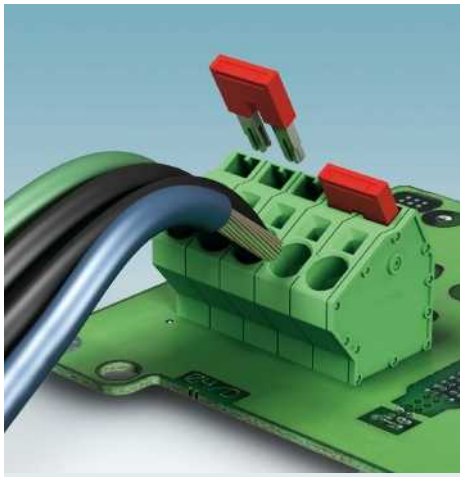
Type	Order No.	Pcs. / Pkt.
7.5 mm pitch, color: green		
SPTA 5/ 2-7,5-ZB	1819082	50
SPTA 5/ 3-7,5-ZB	1819095	50
SPTA 5/ 4-7,5-ZB	1819105	50
SPTA 5/ 5-7,5-ZB	1819118	50
SPTA 5/ 6-7,5-ZB	1819121	50
SPTA 5/ 7-7,5-ZB	1819134	50
SPTA 5/ 8-7,5-ZB	1819147	50
SPTA 5/ 9-7,5-ZB	1819150	50
SPTA 5/10-7,5-ZB	1819163	50
SPTA 5/11-7,5-ZB	1819176	50
SPTA 5/12-7,5-ZB	1819189	50

PCB terminal blocks, angled, 10 mm pitch

Notes:

When aligning versions with double pinning, other rated insulation voltages can occur.

[1]) Please observe the current carrying capacity curves and laboratory data sheets. Further current carrying capacity curves on request.



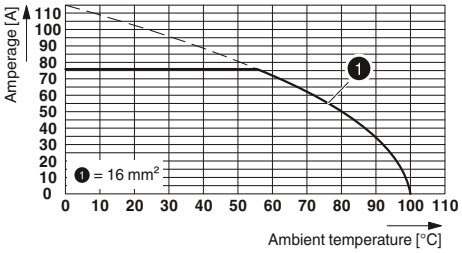
- SPTA 16 PCB terminal block with push-in spring connection for conductor cross sections up to 16 mm² and a current carrying capacity of 76 A
- Fully insulated bridges (FBSK) with different number of positions, e. g. for potential distribution
- Fast connection method thanks to principle of direct plug-in without tools
- Unrestricted 600-V-UL approval thanks to compact zig-zag pinning
- Conductor connection direction: 30° to the PCB
- Single-position terminal blocks with double pinning

For accessories, see Catalog 1

For all types	Type	Page
	Screwdriver **SZF 2-0,8 x4,0 Order No. 1204520**	
	Crimping pliers for 0.25 to 6 mm² **CRIMPFOX 6 Order No. 1212034**	
	Crimping pliers for 10 to 16 mm² **CRIMPFOX 16 S Order No. 1207983**	
	Fixed bridge **FBSK ...-10/ZFKDS 10**	830

Current carrying capacity curve

Type: SPTA 16/...-10,0
Tested according to DIN EN 60512-5-2:2003-01
Reduction factor = 1
Number of positions: 4



Technical data

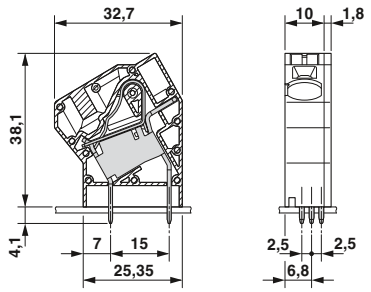
		SPTA 16/1-10,0			SPTA 16/...-10,0-ZB		
Technical data in accordance to IEC / DIN VDE							
Rated current / conductor cross section	[A] / [mm²]	76[1]) / 10			76[1]) / 10		
Rated insulation voltage for pollution degree 2	[V]	1000			1000		
Pitch	[mm]	10			10		
Solid & multi-strand / stranded	[mm²] / [mm²] / AWG	0.75 - 10 / 0.75 - 16 / 18 - 4			0.75 - 10 / 0.75 - 16 / 18 - 4		
Stranded with ferrules without plastic sleeve	[mm²]	0.75 - 16			0.75 - 16		
Stranded with ferrules with plastic sleeve	[mm²]	0.75 - 10			0.75 - 10		
Multi-conductor connection capacity (two conductors with the same cross section)							
Solid & multi-strand / stranded	[mm²]	- / -			- / -		
Stranded with ferrules without plastic sleeve	[mm²]	-			-		
Stranded with TWIN ferrule with plastic sleeve	[mm²]	0.75 - 4			0.75 - 4		
Insulation coordination							
Surge voltage category / pollution degree		III / 3	III / 2	II / 2	III / 3	III / 2	II / 2
Rated insulation voltage	[V]	1000	1000	1000	1000	1000	1000
Rated surge voltage	[kV]	8	8	6	8	8	6
Approval data (UL/CUL)	Use Group	B	C	D	B	C	D
Nominal voltage	[V]	-	-	-	-	-	-
Nominal current	[A]	-	-	-	-	-	-
Connection capacity AWG	AWG	-	-	-	-	-	-
Approval data (CSA)	Use Group	B	C	D	B	C	D
Nominal voltage	[V]	-	-	-	-	-	-
Nominal current	[A]	-	-	-	-	-	-
Connection capacity AWG	AWG	-	-	-	-	-	-
General data							
Stripping length	[mm]	18			18		
Type of insulation material / insulation material group		PA / I			PA / I		
Inflammability class according to UL 94		V0			V0		
Drill hole diameter / pin dimensions	[mm]	1.7 / 1.2 x 1			1.7 / 1.2 x 1		

No. of pos.	Dim. a [mm]
1	0.00
2	10.00
3	20.00
4	30.00
5	40.00
6	50.00
7	60.00
8	70.00
9	80.00

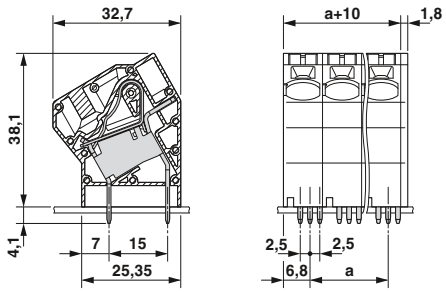
Single PCB terminal block,
30° angled connection direction,
double pinning

30° angled connection direction,
zigzag pinning, 600 V UL approval

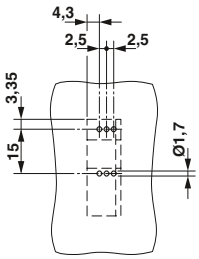
Dimensional drawing



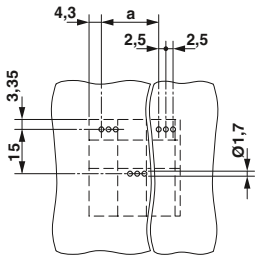
Dimensional drawing



Drilling diagram



Drilling diagram

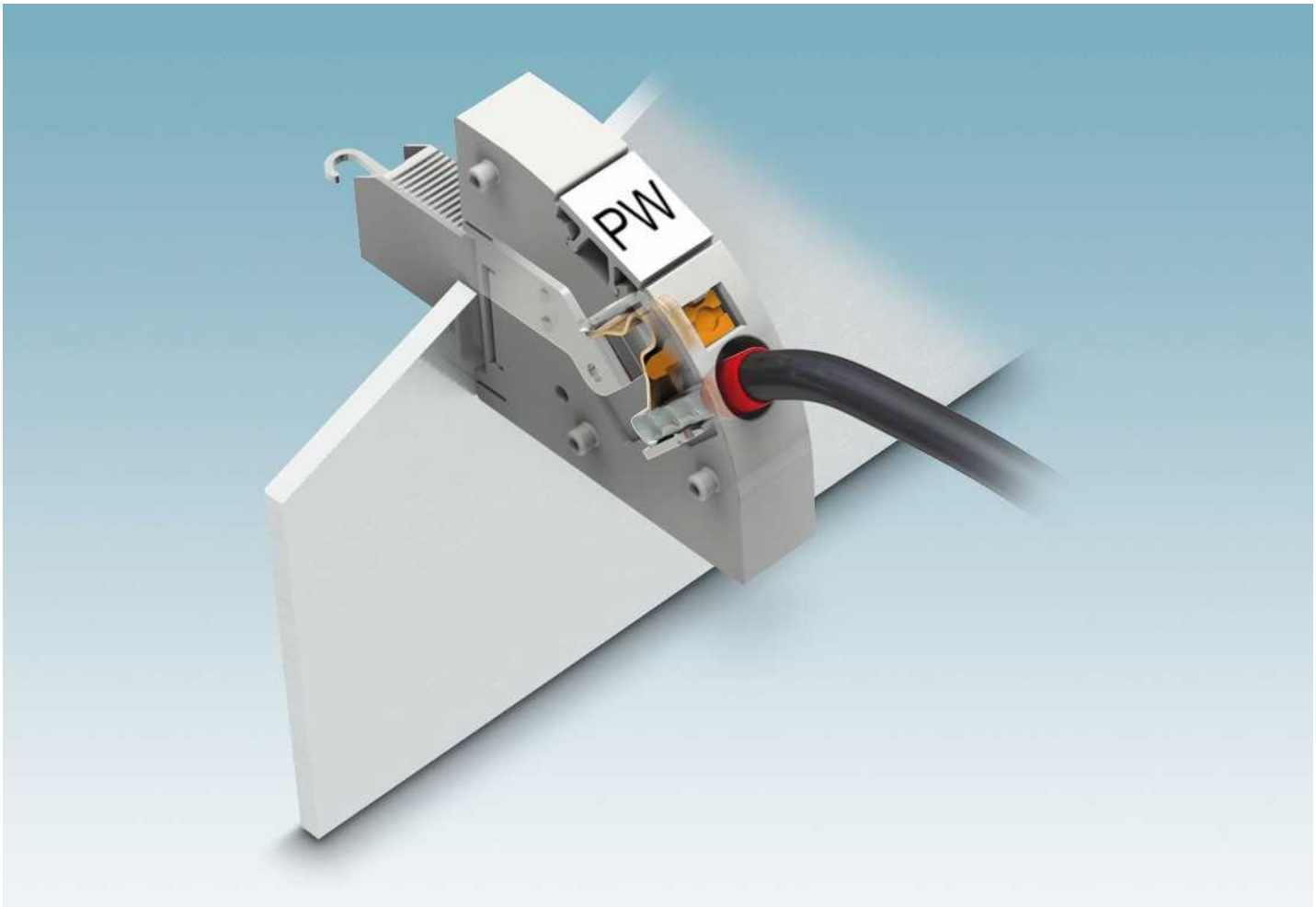


Ordering data

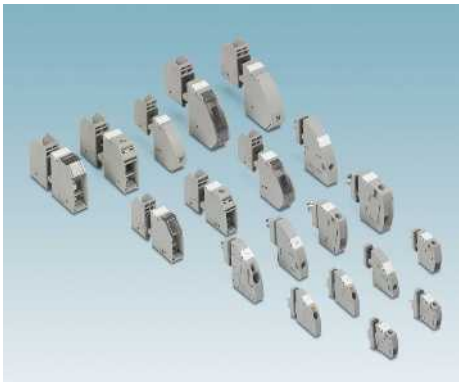
Type	Order No.	Pcs. / Pkt.
10 mm pitch, color: green		
SPTA 16/ 1-10,0	1819192	50

Ordering data

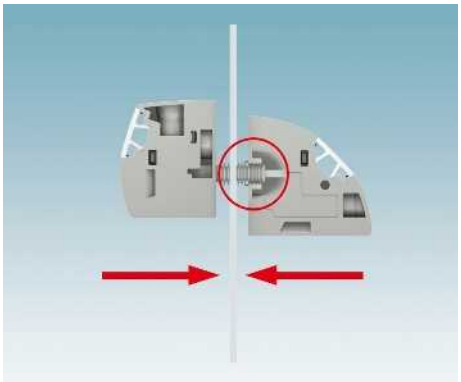
Type	Order No.	Pcs. / Pkt.
10 mm pitch, color: green		
SPTA 16/ 2-10,0-ZB	1819202	50
SPTA 16/ 3-10,0-ZB	1819215	50
SPTA 16/ 4-10,0-ZB	1819228	50
SPTA 16/ 5-10,0-ZB	1819231	50
SPTA 16/ 6-10,0-ZB	1819244	50
SPTA 16/ 7-10,0-ZB	1819257	50
SPTA 16/ 8-10,0-ZB	1819260	50
SPTA 16/ 9-10,0-ZB	1819273	50



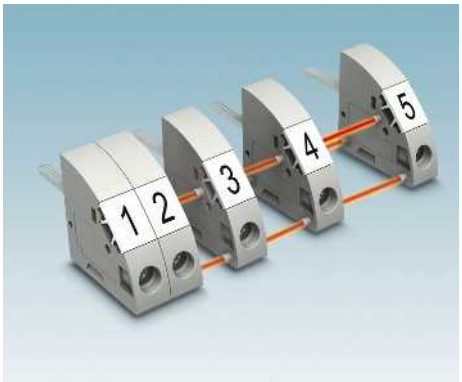
The 45° push-in spring connection enables quick, tool-free, and space-saving connection. The solid conductor or a conductor with ferrule is simply inserted into the terminal point and pressed against the current bar by the spring. It is only when fine-strand conductors without ferrules are connected and when this connection is released that it is necessary to use a standard bladed screwdriver. The perfect connection for rapid wiring in the field.



Optimally seal the potting compounds - molded feed-through terminal blocks from Phoenix Contact



The terminal blocks consist of an internal and external element. These pass through the housing panel and snap together without the need for tools. The engagement mechanism ensures a tight fit, however thick the panel.



The various engagement pin versions can be used to create pre-assembled blocks for fast mounting.

PWO 16... high-current feed-through terminal blocks with screw connection

- Outside the device with convenient push-in connection
- Inside the device with classic screw connection
- The two halves of the terminal can be easily assembled by simply snapping them together
- Automatic panel thickness compensation
- Flange plates as alternative mounting options

Notes:

Inside = left side of portrait photos
Outside = right side of portrait photos

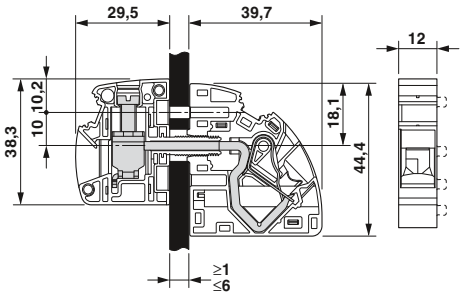
Corresponding screws for fixing the panel feed-through terminal blocks are supplied as standard.

16 mm² panel feed-through terminal block, external part with push-in connection, internal part with screw connection

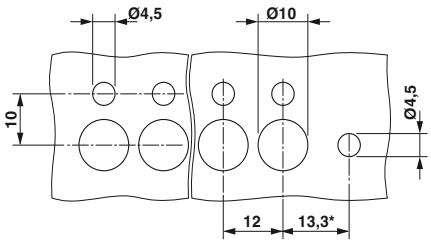
Accessories

For all types	Type
	Flange plate **PWO 16-F** **Order No.** **1705659**

Dimensional drawing



Drilling diagram



Technical data

Technical data in accordance to IEC / DIN VDE				
Current/conductor cross section	[A] / [mm²]	76 / 16 // 76 / 16		
Rated voltage	[V]	1000		
Connection capacity				
Solid / stranded	[mm²] / [mm²] / AWG	1.5 - 16 / 1.5 - 16 / 14 - 4		
Stranded with ferrules without plastic sleeve	[mm²]	1.5 - 16		
Stranded with ferrules with plastic sleeve	[mm²]	1.5 - 16		
Multi-conductor connection capacity (two conductors with the same cross section)				
Solid / stranded	[mm²]	- / -		
Stranded with ferrules without plastic sleeve	[mm²]	-		
Stranded with TWIN ferrule with plastic sleeve	[mm²]	1.5 - 4		
Cross section with insertion bridge (solid/stranded)	[mm²]	- / -		
Insulation coordination				
Surge voltage category / pollution degree		III / 3	III / 2	II / 2
Rated insulation voltage	[V]	800	1000	1000
Rated surge voltage	[kV]	6	6	6
Approval data (UL/CUL)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
Approval data (CSA)	Use Group	B	C	D
Nominal voltage	[V]	-	-	-
Nominal current	[A]	-	-	-
Connection capacity AWG	AWG	-	-	-
General data				
Stripping length	[mm]	18		
Cable lug connection: thread / tightening torque				
Insulation material		PA		
Inflammability class according to UL 94		V0		
Panel thickness	[mm]	1 - 6		

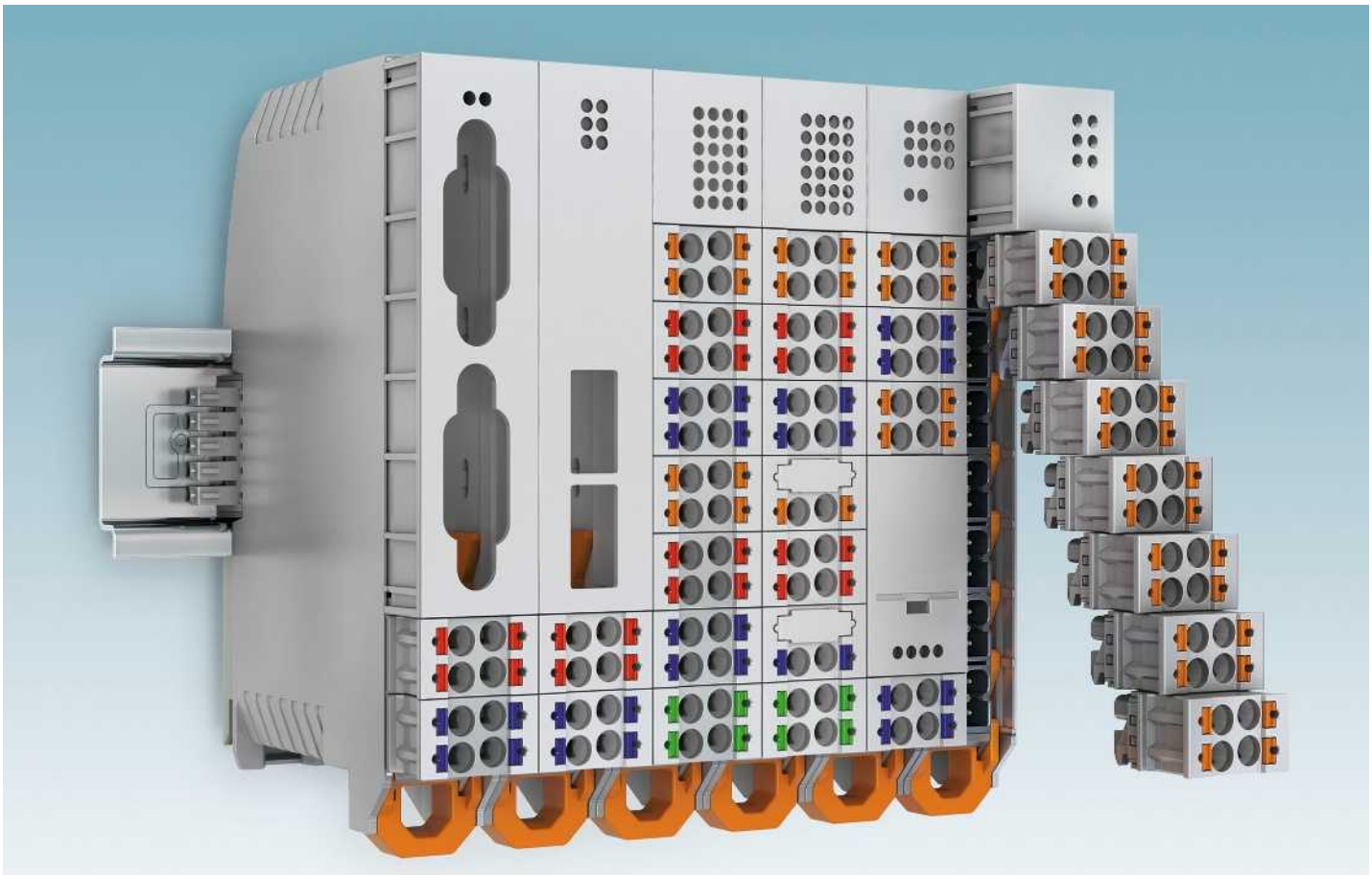
Ordering data

	Type	Order No.	Pcs. / Pkt.
Description	**Panel feed-through terminal block**		
	PWO 16-UW	**1844387**	50
	Panel feed-through terminal block, with engagement pin		
	PWO 16-UW/S	**1844390**	50

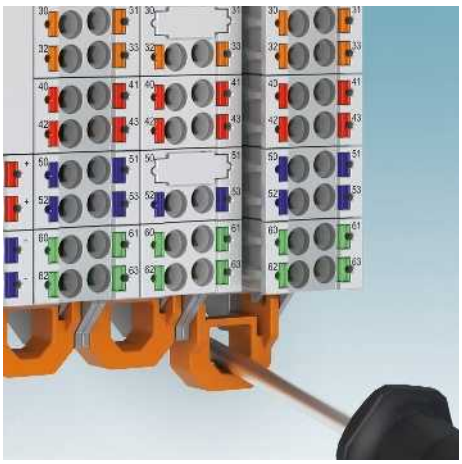
ZB 12.../ZBF 12... marking material (see Catalog 5)

TMT (EX9,5)R marking material (see online catalog)

Electronics housing for industrial electronics and semi-industrial applications



The ME-IO housing is particularly suitable for applications with a small amount of installation space. The push-in front connection technology as well as the compact design enable devices with up to 36 positions to be implemented in a confined space.



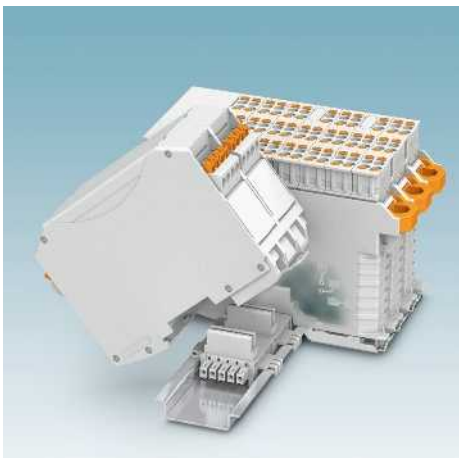
The Lock & Release system provides secure and defined locking and release for plugs and headers.

Releasing the lever automatically ejects the plug from the header. The contact system between the plug and header is interrupted, but the plugs do not fall out.

Coding with CP-DMC... coding profile prevents mismatching in the device.

The HSCP-... plugs and HSCH ... headers are mounted with corresponding CP-DMC ... coding profiles. If the coding profile is mounted between the same positions, the plug cannot be plugged in.

The coding can be implemented later on site or is provided in pre-assembled versions.



The ME 18,8 TBUS connector can be snapped onto the NS 35/7,5 DIN rail to connect individual modules together. This means that the signal and supply voltage can be implemented in the device system without any wiring.

The bus connector is compatible with the bus system of the ME TBUS and ME MAX housing ranges, thereby enabling the creation of complex devices with quick and convenient mounting.

Flexible modular principle

The flexible housing concept of ME-IO offers numerous solutions. Thanks to the variety of covering hoods, plugs, and headers, there is no doubt a solution for your special requirements.

An overview of predefined assembly versions is shown on the next page.

Lock & Release

The Lock & Release system is available in four lengths. It is available in 3, 5, 7, and 9 units. The length of Lock & Release defines the possible plug area.

Various covering hoods

Covering hoods are available in lengths from 2 to 7 units. This means that the appropriate hood can be used for display and operating elements as well as data connectors.

Plug version with TWIN connection

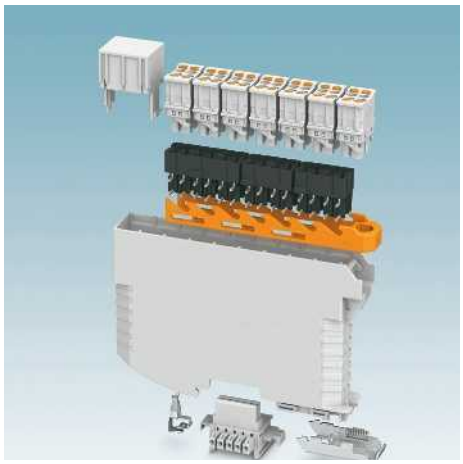
The TWIN connector is characterized by the connection of two conductors to one connection terminal. It is used to loop through signals or to distribute potential or power.

The 2 and 4-pos. plug versions can be flexibly combined for sophisticated device solutions.

Color options for the plug

The spring levers of plugs can also be produced in other standard colors. This enables easy conductor/terminal point assignment during installation.

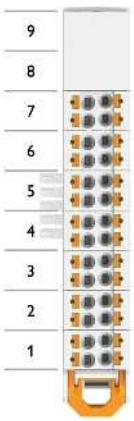
The plug and electronics housing can be produced in non-standard colors as well.

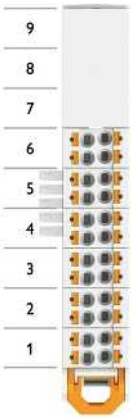


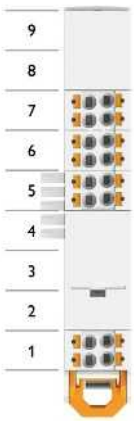
Exploded view of the ME-IO housing system

Electronics housing for industrial electronics and semi-industrial applications

Matrix for selection



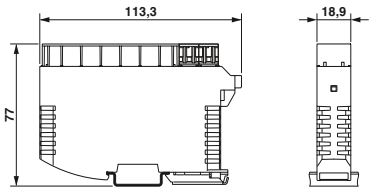


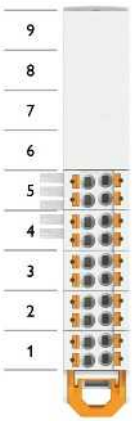
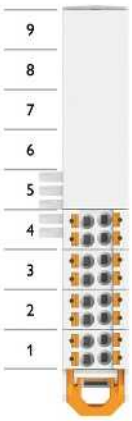
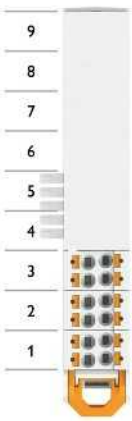
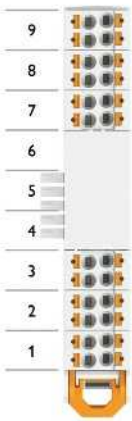
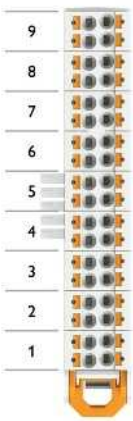


	Order No.	Type	Example 1: 28-pos.	Example 1: 20-pos. + 4 TWIN connections	Example 1: 26-pos.	Example 2: 24-pos.	Example 2: 6-pos. + 4 TWIN connections	Example 2: 22-pos.	Example 3: 12-pos. + 2 TWIN connections
			Quantity (fitted position)			Quantity (fitted position)			Quantity (fitted position)
Lower housing part with Lock & Release									
	2201960	ME-IO 18,8 B/FE 9/9U TBUS 7035							
	2201961	ME-IO 18,8 B/FE 7/9U TBUS 7035	1 x	1 x	1 x	1 x	1 x	1 x	1 x
	2201962	ME-IO 18,8 B/FE 5/9U TBUS 7035							
	2201963	ME-IO 18,8 B/FE 3/9U TBUS 7035							
Covering hood									
	2201799	ME-IO 18,8 C 2U 7035	1 x (8-9)	1 x (8-9)	1 x (8-9)				1 x (8-9)
	2201800	ME-IO 18,8 C 3U 7035				1 x (7-9)	1 x (7-9)	1 x (7-9)	
	2201801	ME-IO 18,8 C 3U S1 7035							1 x (2-4)
	2201802	ME-IO 18,8 C 4U 7035							
	2201803	ME-IO 18,8 C 5U 7035							
	2201804	ME-IO 18,8 C 6U 7035							
	2201805	ME-IO 18,8 C 7U 7035							
Header									
	2201788	HSCH 2,5-3U/12 9005	1 x (5-7)	1 x (5-7)	1 x (5-7)				1 x (5-7)
	2201789	HSCH 2,5-2U/ 8 9005	2 x (1-4)	1 x (3-4)	1 x (1-2)	3 x (1-6)	2 x (3-6)	2x(1-2 & 5-6)	
	2201790	HSCH 2,5-2U-TTTT 9005		1 x (1-2)			1 x (1-2)		
	2201791	HSCH 2,5-2U-TT00 9005							1 x (1-2)
	2201792	HSCH 2,5-2U-2220 9005			1 x (3-4)			1 x (3-4)	
Plug with push-in spring connection									
	2201780	HSCP-SP 2,5-1U/ 4 7035	7 x (1-7)	5 x (3-7)	6x(1-3 & 5-7)	6 x (1-6)	4 x (3-6)	5x(1-3 & 5-6)	3 x (5-7)
	2201781	HSCP-SP 2,5-1U-TT 7035		2 x (1-2)			2 x (1-2)		1 x (1)
	2201782	HSCP-SP 2,5-1U-20 7035			1 x (4)			1 x (4)	

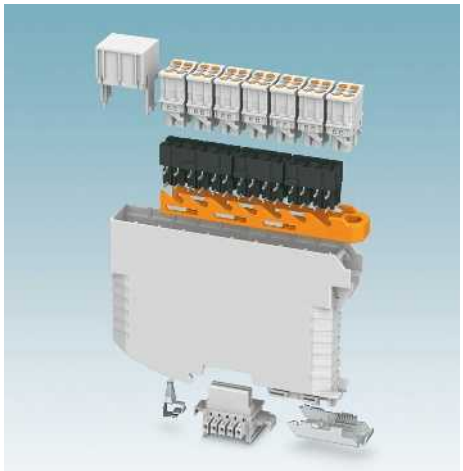
Notes:

For the functionality of the Lock & Release system, note the positioning of the header. A side-by-side arrangement of the HSCH 2,5-3U/12 9005 header is not possible.
In the examples, the quantities of covering hoods, headers, and plugs and their respective position for fitting are specified.
Data sheets for the housing system with connectors are available at phoenixcontact.net/products.
Numerous other configurations are possible.



Example 4			Example 5			Example 6	Example 7		Example 8	Example 9
										
20-pos.	12-pos. + 4 TWIN connections	18-pos.	16-pos.	8-pos. + 4 TWIN connections	14-pos.	12-pos.	8-pos.	4 TWIN connections	24-pos.	36-pos.
Quantity (fitted position)			Quantity (fitted position)			Quantity (fitted position)	Quantity (fitted position)		Quantity (fitted position)	Quantity (fitted position)
									1 x	1 x
1 x	1 x	1 x	1 x	1 x	1 x					
						1 x	1 x	1 x		
									1 x (4-6)	
1 x (6-9)	1 x (6-9)	1 x (6-9)								
			1 x (5-9)	1 x (5-9)	1 x (5-9)					
						1 x (4-9)				
							1 x (3-9)	1 x (3-9)		
1 x (3-5)	1 x (3-5)	1 x (3-5)				1 x (1-3)			2 x (1-3 & 7-9)	1 x (7-9)
1 x (1-2)			2 x (1-4)	1 x (3-4)	1 x (3-4)		1 x (1-2)			3 x (1-6)
	1 x (1-2)			1 x (1-2)				1 x (1-2)		
		1 x (1-2)			1 x (1-2)					
5 x (1-5)	3 x (3-5)	4 x (1 & 3-5)	4 x (1-4)	2 x (3-4)	3 x (1 & 3-4)	3 x (1-3)	2 x (1-2)		6 x (1-3 & 7-9)	9 x (1-9)
	2 x (1-2)			2 x (1-2)				2 x (1-2)		
		1 x (2)			1 x (2)					

ME-IO... electronics housing with front connection



Notes:

Additional housing dimensions and details of PCB layout, dimensions, and assembly areas can be found in the download center at: **phoenixcontact.net/products**

Width: 18.8 mm

Mounting principle:

- Electronic components and HSC headers can be assembled and soldered in a single step.
- Lock & Release and headers are snapped in. The pressure springs are inserted in the rear grips provided.
- The PCB can be easily snapped into the housing thanks to the guide edges in the lower housing part.
- The covering hood is placed on the free area and snapped into the HSC headers.
- The HSC plugs are marked with an arrow to indicate the plug-in direction.

HSC headers and plugs:

The headers are available in two and three-unit sizes and the plugs in one unit. Two plugs fit on the HSCH 2,5-2U... and three plugs fit on the HSCH 2,5-3U...

The HSC headers differ with regard to the number of terminal points and require the relevant plug versions:

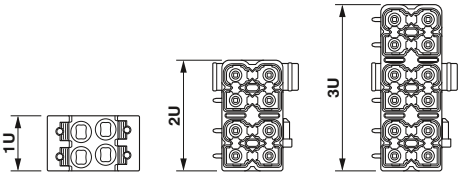
- 12 terminal points – 3 x 4-pos.
- 8 terminal points – 2 x 4-pos.
- 6 terminal points – 1 x 4-pos. and 1 x 2-pos.
- 4 terminal points – 2 x 2 TWIN connections
- 2 terminal points – 1 x 2 TWIN connections and ME-IO 18,8 C 3U S1 7035

Ordering data

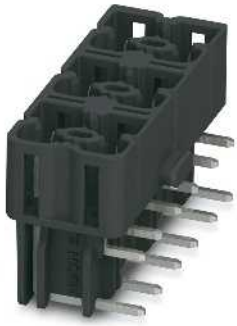
Description	Type	Order No.	Pcs. / Pkt.
Housing base, pre-assembled, with metal foot catch, with integrated functional earth ground contact, without TBUS plug, color: light gray, including Lock & Release in			
3 units	**ME-IO 18,8 B/FE 3/9U TBUS 7035**	**2201963**	10
5 units	**ME-IO 18,8 B/FE 5/9U TBUS 7035**	**2201962**	10
7 units	**ME-IO 18,8 B/FE 7/9U TBUS 7035**	**2201961**	10
9 units	**ME-IO 18,8 B/FE 9/9U TBUS 7035**	**2201960**	10
Covering hood, in various units, color: light gray			
2 units, dimension a = 22 mm			
3 units, dimension a = 33 mm			
3 units, for covering 1 unit header, dimension a = 33 mm			
4 units, dimension a = 44 mm			
5 units, dimension a = 55 mm			
6 units, dimension a = 66 mm			
7 units, dimension a = 77 mm			
HSC header, touch proof, in 2 units, color: black			
8 connections			
4 connections			
2 connections			
6 connections			
HSC header, touch proof, in 3 units, color: black, please note the positioning			
12 connections			
HSC push-in plug, for touch-proof HSC headers, in 1 unit, with integrated test connection, color: light gray			
4-pos.			
Partially assembled, 2-pos.			
2 TWIN connections			

Accessories

DIN rail connector, 5-pos.			
Coding profile, for header and push-in plug, color: natural			



Width: 18.8 mm



Touch-proof headers

Connector plugs for touch-proof headers

Ordering data

Type	Order No.	Pcs. / Pkt.
ME-IO 18,8 C 2U 7035	2201799	10
ME-IO 18,8 C 3U 7035	2201800	10
ME-IO 18,8 C 3U S1 7035	2201801	10
ME-IO 18,8 C 4U 7035	2201802	10
ME-IO 18,8 C 5U 7035	2201803	10
ME-IO 18,8 C 6U 7035	2201804	10
ME-IO 18,8 C 7U 7035	2201805	10

Ordering data

Type	Order No.	Pcs. / Pkt.
HSCH 2,5-2U/ 8 9005	2201789	50
HSCH 2,5-2U-TTTT 9005	2201790	50
HSCH 2,5-2U-TT00 9005	2201791	50
HSCH 2,5-2U-2220 9005	2201792	50
HSCH 2,5-3U/12 9005	2201788	50

Ordering data

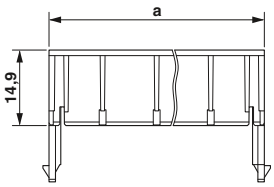
Type	Order No.	Pcs. / Pkt.
HSCP-SP 2,5-1U/ 4 7035	2201780	50
HSCP-SP 2,5-1U-TT 7035	2201781	50
HSCP-SP 2,5-1U-20 7035	2201782	50

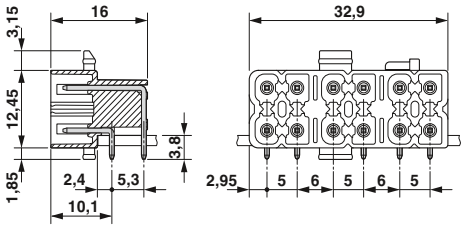
Accessories

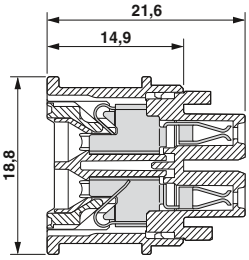
Accessories

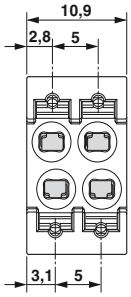
Accessories

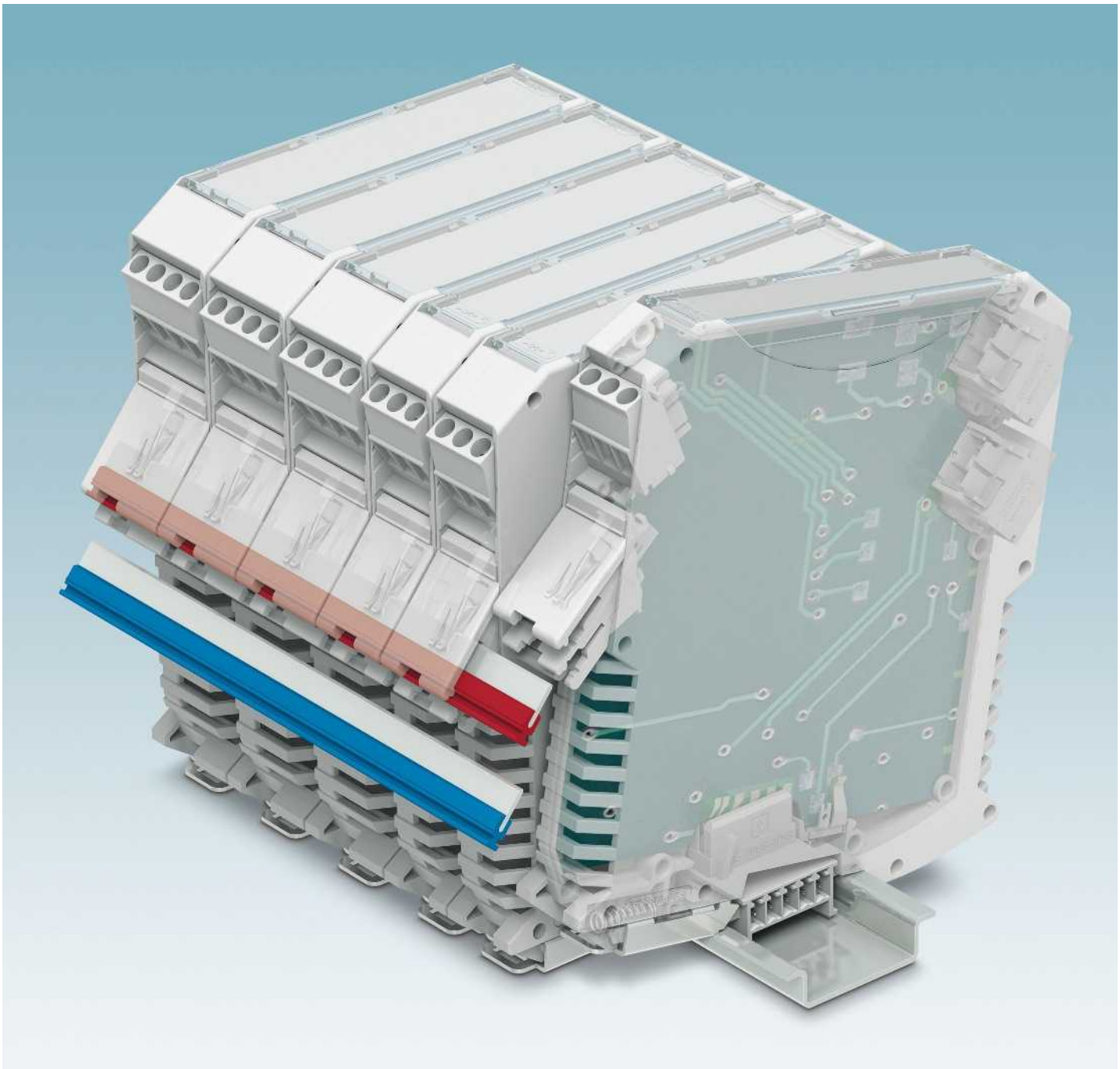
ME 18,8 TBUS 1,5/5-ST-3,81KMGY	2201813	50
CP-DMC 1,5-THR NAT	1790647	60







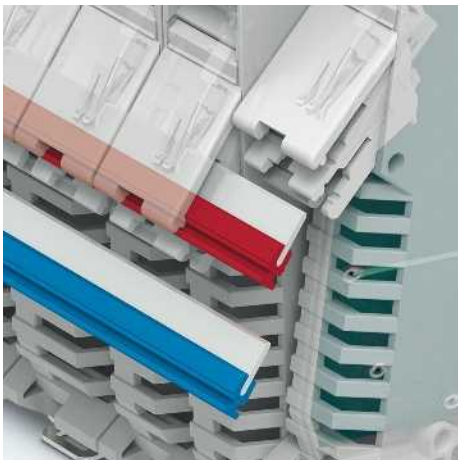




Together with the PBR jumper, the new PCO power connector enables the transmission of high levels of power between modules in ME MAX housings.

The new ME TBUS 4P1S enables the easy implementation of serial and parallel circuits for module-to-module connection in the DIN rail.

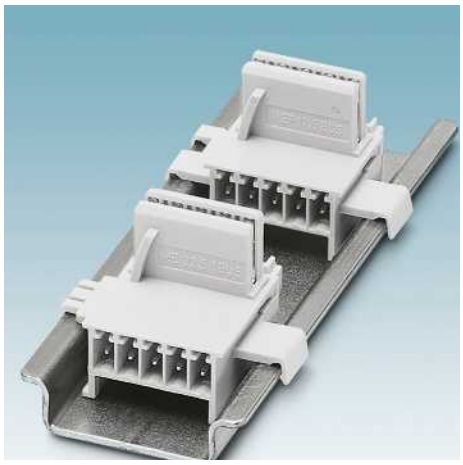
The ME TBUS ADAPTER allows even more effective use of ME TBUS technology for modules with a design width from 35 mm. ME TBUS 4P1S and the ME TBUS ADAPTER can be used in ME and ME MAX housings.



PCO... power connector for ME MAX housing

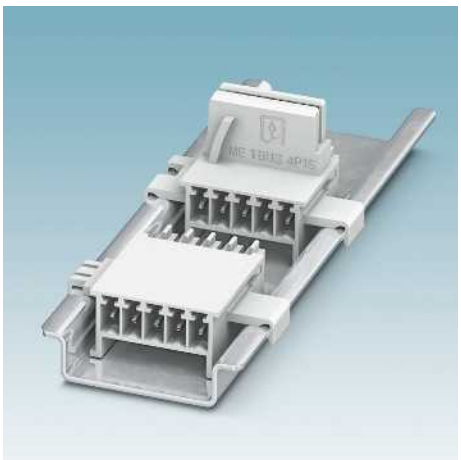
The PCO power connector is used to transmit power of up to 42 A (8 A per module) and 60 V DC between modules in ME MAX housings. There are no restrictions on the mounting and removal of modules from the group while in the off-load state.

The PCO connector can be soldered to other electronic components in the wave soldering process. For additional information, please refer to the data sheets at **phoenixcontact.net/products**. Cross connection is achieved by simply inserting the PBR jumper.



ME... TBUS 4P1S: serial and parallel connection in the DIN rail

The ME TBUS 4P1S enables the serial and parallel connection of modules via the DIN rail: 4 positions are intended for parallel circuits and 1 position for serial circuits.

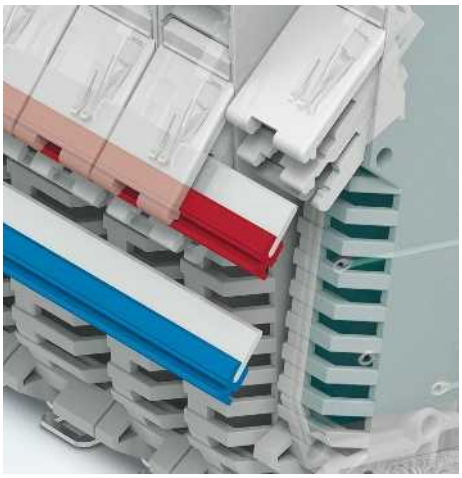


ME TBUS ADAPTER: easy extension

From a housing width of 35 mm, the ME TBUS ADAPTER is the ideal solution for the efficient use of the TBUS system.

In addition, by using the ME TBUS ADAPTER there is more PCB area available for mounting in the housing as there is no T-tap.

PCO... power connector for ME MAX housing



The PCO... power connector can be used together with the PBR... jumper in ME MAX housing.

Technical data:
- Voltage up to 60 V DC
- Total current of 42 A
- 8 A per module
- 2-pos.
- With orthogonal pin outlet
- Designed for parallel connections
- ME MAX connection technology and accessories can also be used without restriction

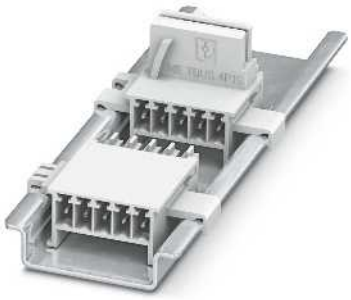
Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Power bus connector, suitable for ME MAX 17,5, ME MAX 35, 2-pos., color: light gray	**PCO 17,5-L KMGY**	**2201684**	50
Power bus connector, suitable for ME MAX 22,5, ME MAX 45, ME MAX 67,5, and ME MAX 90; 2-pos.; color: light gray	**PCO 22,5-L KMGY**	**2201685**	50

Accessories

Jumper, for connecting device modules when using power bus connectors; can be cut to length using diagonal cutter; supplied length: 500 mm;			
Color: light gray	**PBR 42A KMGY**	**2201917**	10
Color: blue	**PBR 42A BU**	**2201916**	10
Color: red	**PBR 42A RD**	**2201915**	10

ME TBUS 4P1S and ME TBUS ADAPTER for ME and ME MAX housing



The ME... TBUS 4P1S enables the implementation of parallel circuits together with serial circuits, which connect various modules on the DIN rail in ME and ME MAX housings.

Technical data:
– Voltage up to 50 V
– Currents up to 8 A per position
– 4 parallel positions
– 1 serial position

The ME... TBUS ADAPTER is particularly useful for using wider modules in the ME and ME MAX housing more efficiently together with the ME... TBUS.

Technical data:
– Voltage up to 125 V
– Currents up to 8 A per position
– 5 parallel positions
– No tap in the electronics housing

Description	No. of pos.	Ordering data: Type	Order No.	Pcs. / Pkt.
ME TBUS connector, suitable for ME and ME MAX housing, 5 positions (4 parallel positions and 1 serial position); color: light gray				
17.5 mm design width	5	**ME 17,5 TBUS 1,5/4P1S KMGY**	**2201731**	50
22.5 mm design width	5	**ME 22,5 TBUS 1,5/4P1S KMGY**	**2201732**	50
Adapter for extending the ME TBUS connector, suitable for ME and ME MAX housing, 5 parallel positions; color: light gray				
17.5 mm design width	5	**ME 17,5 TBUS ADAPTER KMGY**	**2201757**	50
22.5 mm design width	5	**ME 22,5 TBUS ADAPTER KMGY**	**2201756**	50

RJ45 industrial connectors, IP20
Page 44

Push-pull industrial connectors, version 14 with RJ45 insert
Page 46

Push-pull industrial connectors, version 14 with FO insert
Page 48

Modular distribution panel, panel mounting frame
Page 50

M12 device connectors XL
Page 54

M12 power device connectors
Page 56

M23 cable and coupler connectors, hybrid, SPEEDCON fast locking system
Page 63

M23 device connectors, hybrid
Page 64

SUNCLIX micon, AC-Y connectors
Page 70

SUNCLIX micon, mains connector plugs
Page 70

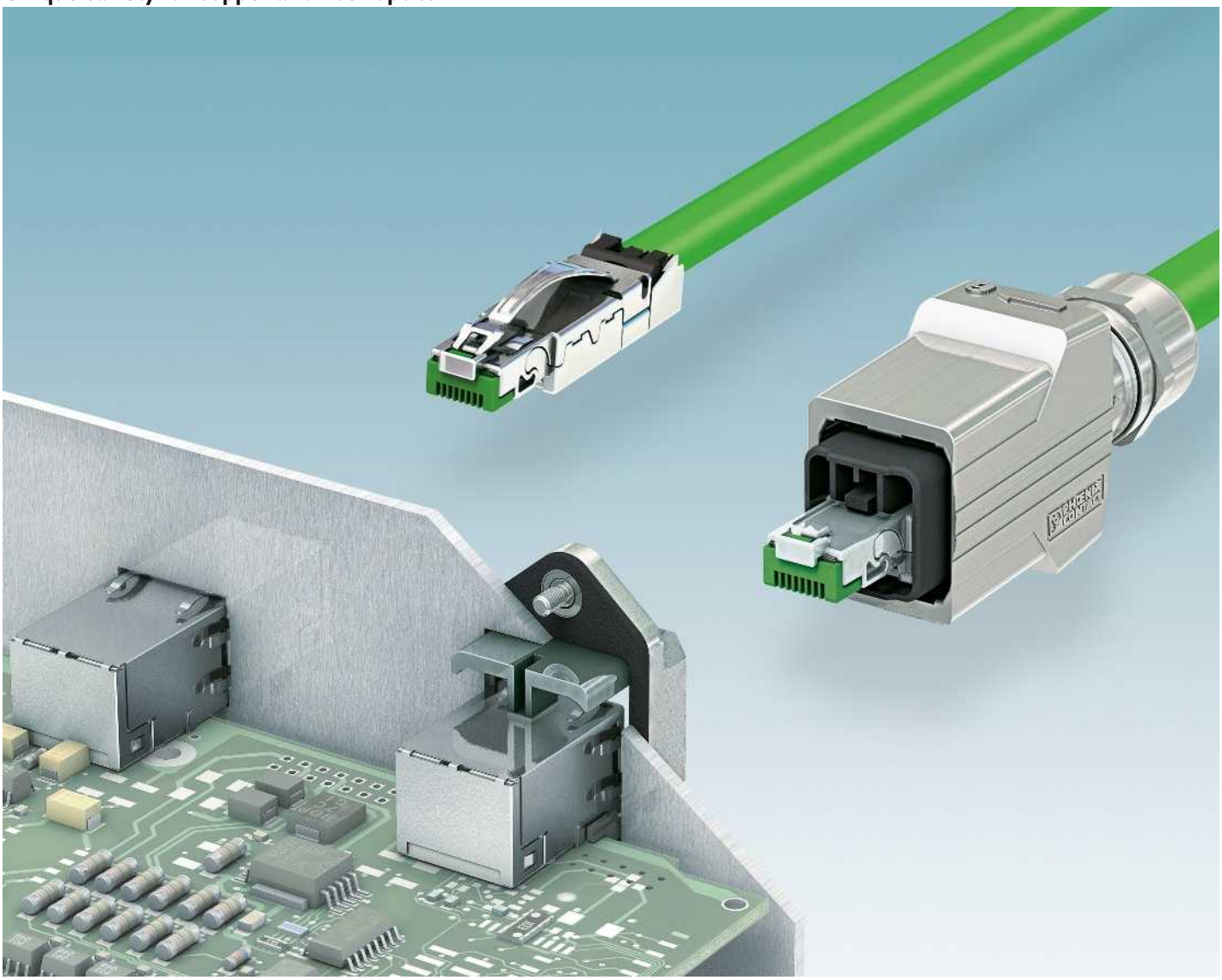
Photovoltaic AC connectors
Page 76

AC charging cables
Page 80

Mobile AC charging cables
Page 83

Combined charging system charging cables
Page 84

Unique variety for copper and fiber optics



For compact device connection

For flexible cable connection

For easy cabling

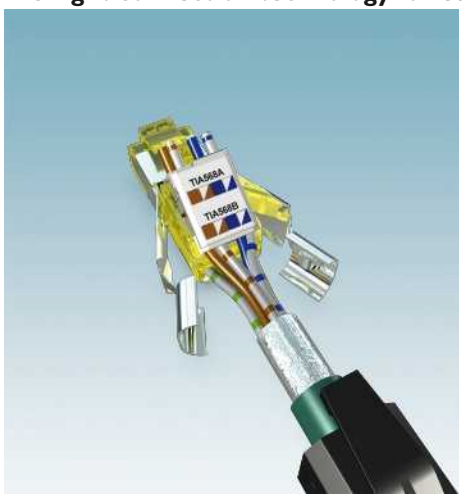
The right connection for every application

Modern industrial automation requires connectors for large quantities of data in robust packaging. Benefit now from powerful connectors and cables for on-site assembly.

High requirements are placed on components used for outdoor data transmission, in fields such as telecommunications, renewable energies, and offshore applications. Whether you're concerned about UV, temperature or humidity, the connectors from Phoenix Contact offer ideal protection.

Phoenix Contact offers an extensive and forward-looking product range for modern building cabling which impresses with its easy installation.
Our patch cables and patch fields allow you to install flexible and fault-tolerant cabling.

The right connection technology for every application



Fast assembly without special tools
– with IDC and Piercecon® fast connection

Fast assembly in the field
using professional tools

RJ45 industrial connectors, IP20

- Optimized for industrial use with a high degree of resistance to vibration
- High resistance to ESD and EMI for reliable transmission
- Easy handling, thanks to one-piece design
- Metal locking

RJ45 industrial, straight cable outlet

RJ45 industrial, cable outlet at the top

	Technical data		Technical data	
	Ethernet printing	**PROFINET printing**	**Ethernet printing**	**PROFINET printing**
Degree of protection	IP20	IP20	IP20	IP20
Connection cross section AWG	26 ... 24	23 ... 22	26 ... 24	23 ... 22
Transmission speed	10 Gbps	1 Gbps	10 Gbps	1 Gbps
Housing material	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast
External cable diameter	5 mm ... 9 mm	5 mm ... 9 mm	5 mm ... 9 mm	5 mm ... 9 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 750	≥ 750
Temperature data				
Ambient temperature (operation)	-20°C ... 70°C	-20°C ... 70°C	-20°C ... 70°C	-20°C ... 70°C

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet printing		**PROFINET printing**		**Ethernet printing**		**PROFINET printing**	
RJ45 industrial connector, 8-pos.								
	1406333	1	**1406334**	1	**1406336**	1	**1406337**	1
Value pack	**1406351**	30	**1406352**	30	**1406354**	30	**1406355**	30

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	**1657407**	1	**VS-CABLE-STRIP-VARIO**	**1657407**	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	**MICROFOX-SP-1**	**1212487**	1	**MICROFOX-SP-1**	**1212487**	1
Markers for terminal blocks, roll, unmarked, can be marked with: THERMOMARK ROLL, THERMOMARK X, THERMOMARK S1.1						
White	**TMT 5 R**	**0816430**	1	**TMT 5 R**	**0816430**	1
Red	**TMT 5 R RD**	**0816427**	1	**TMT 5 R RD**	**0816427**	1
Green	**TMT 5 R GN**	**0816401**	1	**TMT 5 R GN**	**0816401**	1
Marker for terminal blocks,sheet, white, unmarked, can be marked with: BLUEMARK CLED, BLUEMARK LED, plotter	**UC-TMF 5**	**0818153**	10	**UC-TMF 5**	**0818153**	10

RJ45 industrial connectors, IP20

RJ45 industrial,
cable outlet at the bottom

Technical data

	Ethernet printing	PROFINET printing
Degree of protection	IP20	IP20
Connection cross section AWG	26 ... 24	23 ... 22
Transmission speed	10 Gbps	1 Gbps
Housing material	Zinc die-cast	Zinc die-cast
External cable diameter	5 mm ... 9 mm	5 mm ... 9 mm
Insertion/withdrawal cycles	≥ 750	≥ 750
Temperature data		
Ambient temperature (operation)	-20°C ... 70°C	-20°C ... 70°C

Ordering data

Description	Order No. (Ethernet printing)	Pcs. / Pkt.	Order No. (PROFINET printing)	Pcs. / Pkt.
RJ45 industrial connector, 8-pos.				
	1406339	1	**1406340**	1
Value pack	**1406357**	30	**1406358**	30

Accessories

Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	**1657407**	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	**MICROFOX-SP-1**	**1212487**	1
Markers for terminal blocks, roll, unmarked, can be marked with: THERMOMARK ROLL, THERMOMARK X, THERMOMARK S1.1			
White	**TMT 5 R**	**0816430**	1
Red	**TMT 5 R RD**	**0816427**	1
Green	**TMT 5 R GN**	**0816401**	1
Marker for terminal blocks,sheet, white, unmarked, can be marked with: BLUEMARK CLED, BLUEMARK LED, plotter	**UC-TMF 5**	**0818153**	10

Push-pull industrial connectors, version 14

- High resistance to ESD and EMI for reliable transmission
- Easy handling, thanks to one-piece design
- Locking system to prevent unintentional removal
- Consistent 360° shielding concept

Push-pull Advance, straight cable outlet

Push-pull Advance, cable outlet at the top

	Technical data		Technical data	
	Ethernet printing	**PROFINET printing**	**Ethernet printing**	**PROFINET printing**
Degree of protection	IP65/67	IP65/67	IP65/67	IP65/67
Connection cross section AWG	26 ... 24	23 ... 22	26 ... 24	23 ... 22
Transmission speed	10 Gbps	1 Gbps	10 Gbps	1 Gbps
Housing material	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 750	≥ 750
Temperature data				
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C	-40°C ... 70°C	-40°C ... 70°C

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet printing		**PROFINET printing**		**Ethernet printing**		**PROFINET printing**	
Push-pull Advance, RJ45 industrial connector, IP67, 8-pos.								
	1407890	1	**1407889**	1	**1468007**	1	**1408027**	1
Value pack	**1467901**	10	**1408039**	10	**1467807**	10	**1408092**	10

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	**1657407**	1	**VS-CABLE-STRIP-VARIO**	**1657407**	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	**MICROFOX-SP-1**	**1212487**	1	**MICROFOX-SP-1**	**1212487**	1

Push-pull industrial connectors, version 14

Push-pull Advance, cable outlet at the bottom

	Technical data	
	Ethernet printing	**PROFINET printing**
Degree of protection	IP65/67	IP65/67
Connection cross section AWG	26 ... 24	23 ... 22
Transmission speed	10 Gbps	1 Gbps
Housing material	Zinc die-cast	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 750	≥ 750
Temperature data		
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C

	Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet printing		**PROFINET printing**	
Push-pull Advance, RJ45 industrial connector, IP67, 8-pos.				
	1408011	1	**1407895**	1
Value pack	**1467804**	10	**1408046**	10

	Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	**1657407**	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	**MICROFOX-SP-1**	**1212487**	1

Push-pull industrial connectors, version 14

- Available for POF, PCF, and GOF
- Easy handling, thanks to one-piece design
- Locking system to prevent unintentional removal

Push-pull Advance, straight cable outlet

Push-pull Advance, cable outlet at the top

	Technical data			Technical data		
	POF (Polymer Optical Fiber)	**PCF (Polymer Cladded Fiber)**	**GOF (Glass Optical Fiber)**	**POF (Polymer Optical Fiber)**	**PCF (Polymer Cladded Fiber)**	**GOF (Glass Optical Fiber)**
Degree of protection	IP65/67	IP65/67	IP65/67	IP65/67	IP65/67	IP65/67
Housing material	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 750	≥ 750	≥ 750	≥ 750
Temperature data						
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C	-40°C ... 70°C	-40°C ... 70°C	-40°C ... 70°C	-40°C ... 70°C

	Ordering data						Ordering data					
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	POF (Polymer Optical Fiber)		**PCF (Polymer Cladded Fiber)**		**GOF (Glass Optical Fiber)**		**POF (Polymer Optical Fiber)**		**PCF (Polymer Cladded Fiber)**		**GOF (Glass Optical Fiber)**	
Push-pull Advance, SC-RJ connector												
	1407896	1	**1407897**	1	**1407898**	1	**1408028**	1	**1408029**	1	**1408030**	1
Value pack	**1408047**	10	**1408048**	10	**1408049**	10	**1408093**	10	**1408094**	10	**1408095**	10

	Accessories				Accessories			
SC-RJ cutting tool set, for polymer fiber **(POF)**, for field assembly of connectors	**TF-SCRJ-POF KONF SET**		**1405246**	1	**TF-SCRJ-POF KONF SET**		**1405246**	1
Tool set for **PCF**	On request				On request			
Tool set for **GOF**	On request				On request			

Push-pull industrial connectors, version 14

Push-pull Advance, cable outlet at the bottom

	Technical data		
	POF (Polymer Optical Fiber)	**PCF (Polymer Cladded Fiber)**	**GOF (Glass Optical Fiber)**
Degree of protection	IP65/67	IP65/67	IP65/67
Housing material	Zinc die-cast	Zinc die-cast	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 750
Temperature data			
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C	-40°C ... 70°C

	Ordering data					
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	POF (Polymer Optical Fiber)		**PCF (Polymer Cladded Fiber)**		**GOF (Glass Optical Fiber)**	
Push-pull Advance, SC-RJ connector						
	1407902	1	**1407904**	1	**1407905**	1
Value pack	**1408053**	10	**1408055**	10	**1408056**	10

	Accessories		
SC-RJ cutting tool set, for polymer fiber **(POF)**, for field assembly of connectors	**TF-SCRJ-POF KONF SET**	**1405246**	1
Tool set for **PCF**	On request		
Tool set for **GOF**	On request		

Modular distribution panel

- 19" distribution field with space for 8 modules, with a total of 48 x RJ45
- Front release without special tool
- Plug and Play – thanks to pre-assembled modules
- Up to 10 Gbps (Class E_A)
- Cable length according to customer requirements
- Optimized strain relief for every module
- GHMT certification

Assembled modules for 19" mounting frames

19" mounting frame

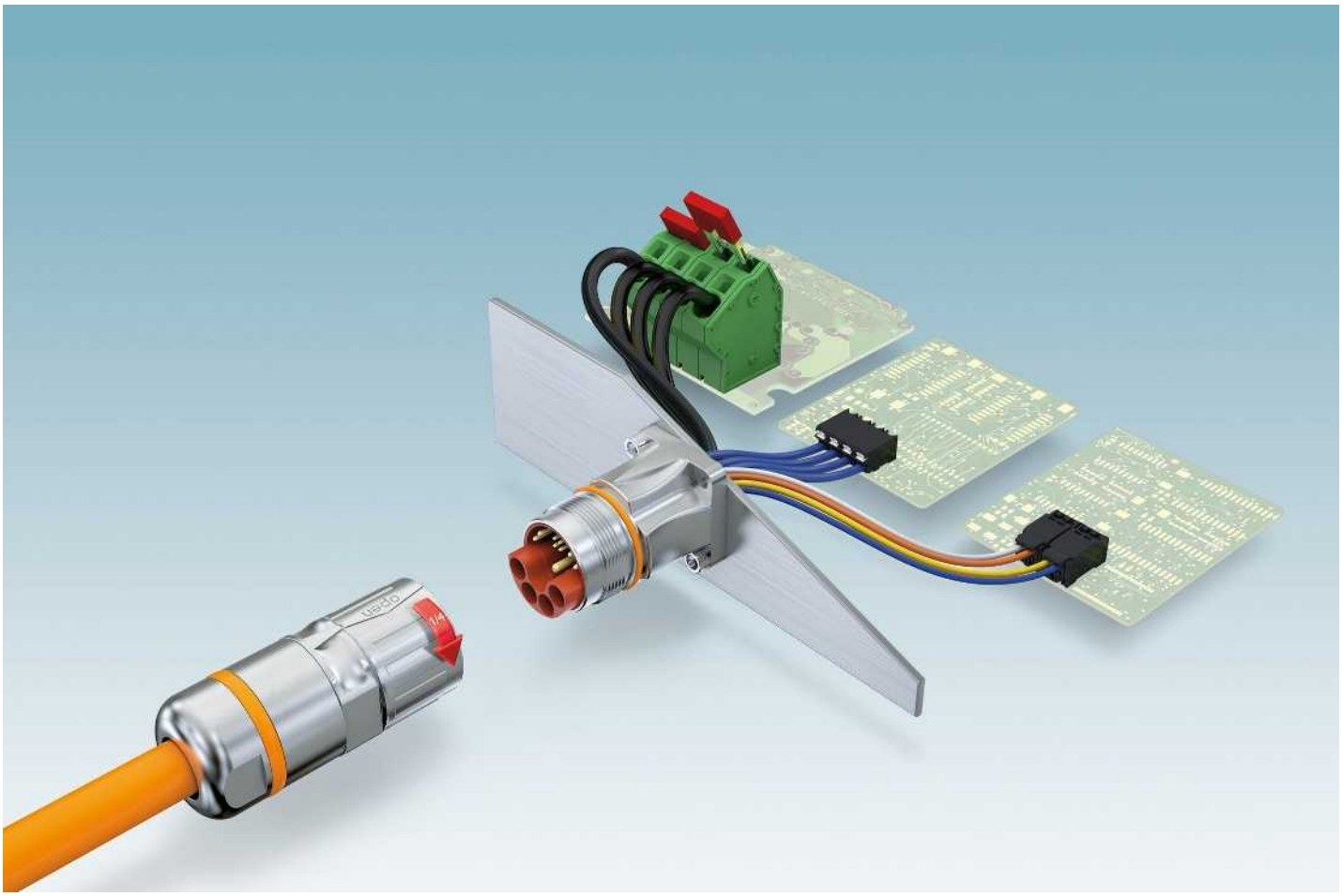
	Technical data	Technical data
Electrical data		
Transmission speed	10 Gbps	-
Transmission characteristics (category)	Class E_A	-
Material data		
Housing material	High-grade steel	Steel, powder-coated
Inflammability class according to UL 94	V0	V0
Connection data		
External cable diameter	18 mm	-
Insertion/withdrawal cycles	≥ 750	-
Temperature data		
Ambient temperature (operation)	-20°C ... 60°C	-20°C ... 60°C

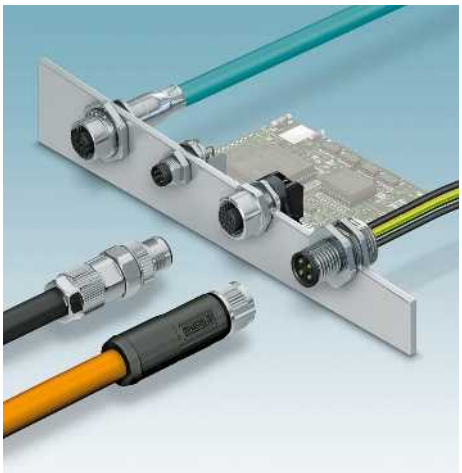
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
19" frame, empty, for using 8 modules (RJ45)						
Gray (similar to RAL 7035)				**CUC-PP-FRAME-19**	**1407986**	1
Black (similar to RAL 9005)				**CUC-PP-FRAME-19 BK**	**1409140**	1
Module, RJ45 to RJ45, consisting of two housings each with 6 x RJ45 10 Gbps (Class E_A) pre-assembled with multi-cable, variable length, GHMT-certified.	**CUC-PP-MODUL-RJ45:6-RJ45:6/...**	**1407995**	1			
Patch bay, 19", for orderly cabling in the control cabinet						
Gray, with plastic hooks				**CUC-PP-PATCHBAY**	**1407994**	1
Gray, with metal hooks				**CUC-PP-PATCHBAY-MH**	**1409283**	1
Black, with metal hooks				**CUC-PP-PATCHBAY-MH BK**	**1409284**	1
Dummy frame, size of one module, for use in the frame	**CUC-PP-MODUL-COVER**	**1407988**	1			

Ordering example for modules of variable length:

For an RJ45 module with a cable length of 25.0 m, the ordering data is as follows:

Order No.		Length [m] Max. 80 m
1407995	/	**25**
		Increment: 1.5 m ... 80 m = **0.5 m**





M5 to M12 circular connectors

Circular connectors for signals, data, and power.

M17 to M58 circular connectors

Circular connectors for signals, data, and power.

M12 rear mounting XL

The new device connectors for rear mounting feature an optimized housing contour with additional tightening limitation. This simplifies the housing cutout on the device and protects the O-ring during mounting.

M12 front mounting XL

The wrench flat on the new device connectors for front mounting has been enlarged and now features additional tightening limitation. This simplifies the device cutout and increases security and tightness when mounting.

M12 power front/rear mounting XL

The M12 XL housing design has also been introduced for the M12 power device connectors with S- and T-coding. This addition means that there is now a consistent design available for the M12 device connectors for signal and power.

M12 power for 230 V/16 A

The M12 power series has been extended with the 2+PE (S-coded) pin assignment. The M12 design means that a compact mains voltage plug is now available for 230 V and up to 16 A.

M23 hybrid cable and coupler connector

Special hybrid lines allow signals, data, and power to be transmitted using just one connector.

M23 hybrid device connectors

Angled, rotatable, and straight housing versions are available for front mounting on the device side.

M12 device connectors XL, rear mounting

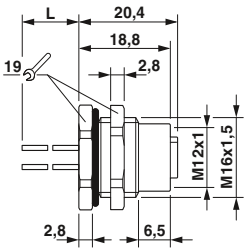
- M16 fastening thread
- With 0.5 m long litz wires
- Tightening limitation
- Wrench size 19

4-, 5-, 8-pos.

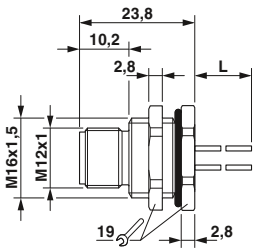
12-, 17-pos.

	Technical data			Technical data		
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data						
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	-
Pollution degree	3	3	3	3	3	-
Degree of protection	IP67	IP67	IP67	IP67	IP67	-
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	-
Electrical data						
Rated voltage	250 V	60 V	30 V	30 V	30 V	-
Rated current	4 A	4 A	2 A	1.5 A	1.5 A	-
Contact resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	-
Material data						
Material contact/contact surface	CuZn/Au	CuZn/Au	CuZn/Au	CuZn/Au	CuZn/Au	-/-
Contact carrier material	PA 66	PA 66	PA 66	PA 66	PA 66	-
Inflammability class according to UL 94	V0	V0	V0	V0	V0	-
Cable type	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	-
Temperature data						
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	**1411584**	1	**1411586**	1	**1411588**	1	**1411589**	1	**1411590**	1		
Plug	A - standard	**1411591**	1	**1411593**	1	**1411595**	1	**1411596**	1	**1411597**	1		
Socket	D - data	**1411585**	1										
Plug	D - data	**1411592**	1										
Socket	B - inverse			**1411587**	1								
Plug	B - inverse			**1411594**	1								



Dimensions: socket



Dimensions: plug

M12 device connectors XL, front mounting

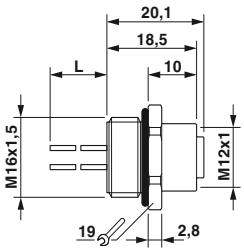
- M16 fastening thread
- With 0.5 m long litz wires
- Tightening limitation
- Wrench size 19

4-, 5-, 8-pos.

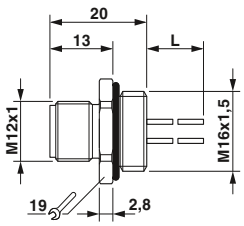
12-, 17-pos.

	Technical data			Technical data		
	4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data						
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	-
Pollution degree	3	3	3	3	3	-
Degree of protection	IP67	IP67	IP67	IP67	IP67	-
Connection method	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	-
Electrical data						
Rated voltage	250 V	60 V	30 V	30 V	30 V	-
Rated current	4 A	4 A	2 A	1.5 A	1.5 A	-
Contact resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	-
Material data						
Material contact/contact surface	CuZn/Au	CuZn/Au	CuZn/Au	CuZn/Au	CuZn/Au	-/-
Contact carrier material	PA 66	PA 66	PA 66	PA 66	PA 66	-
Inflammability class according to UL 94	V0	V0	V0	V0	V0	-
Cable type	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	-
Temperature data						
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	**1411568**	1	**1411571**	1	**1411573**	1	**1411574**	1	**1411576**	1		
Plug	A - standard	**1411577**	1	**1411579**	1	**1411581**	1	**1411582**	1	**1411583**	1		
Socket	D - data	**1411569**	1										
Plug	D - data	**1411578**	1										
Socket	B - inverse			**1411572**	1								
Plug	B - inverse			**1411580**	1								



Dimensions: socket



Dimensions: plug

M12 power device connectors XL, rear mounting

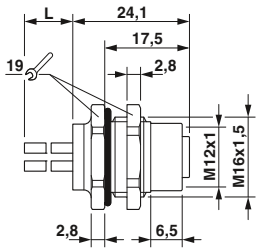
- M16 fastening thread
- With 0.5 m long litz wires
- Tightening limitation
- Wrench size 19

S-coded, 3-pos. + PE

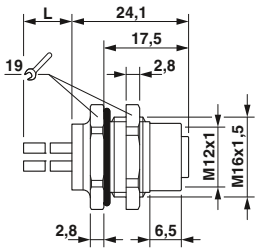
T-coded, 4-pos.

	Technical data	Technical data
General data		
Pollution degree	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	630 V	60 V
Rated current	12 A	12 A
Contact resistance	≤ 3 mΩ	≤ 3 mΩ
Material data		
Material contact/contact surface	CuZn/Au	CuZn/Au
Contact carrier material	PA	PA
Inflammability class according to UL 94	V0	V0
Cable type	PP litz wire	PP litz wire
Temperature data		
Plug/socket [°C]	-25 ... 85	-25 ... 85

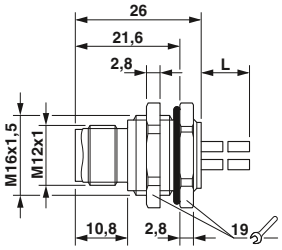
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Power device connectors						
Socket	SACC-DSI-M12FSS-4P-M16XL/0,5PE	1411598	1	SACC-DSI-M12FST-4P-M16XL/0,5	1411599	1
Plug	SACC-DSI-M12MSS-4P-M16XL/0,5PE	1411603	1	SACC-DSI-M12MST-4P-M16XL/0,5	1411604	1



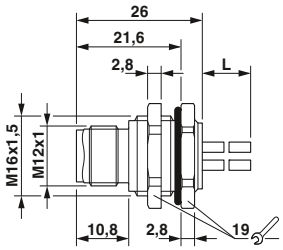
Dimensions: socket



Dimensions: socket



Dimensions: plug



Dimensions: plug

M12 power device connectors XL, front mounting

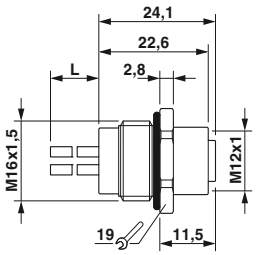
- M16 fastening thread
- With 0.5 m long litz wires
- Tightening limitation
- Wrench size 19

S-coded, 3-pos. + PE

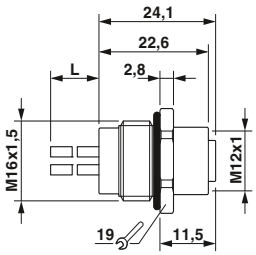
T-coded, 4-pos.

	Technical data	Technical data
General data		
Pollution degree	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	630 V	60 V
Rated current	12 A	12 A
Contact resistance	≤ 3 mΩ	≤ 3 mΩ
Material data		
Material contact/contact surface	CuZn/Au	CuZn/Au
Contact carrier material	PA	PA
Inflammability class according to UL 94	V0	V0
Cable type	PP litz wire	PP litz wire
Temperature data		
Plug/socket [°C]	-25 ... 85	-25 ... 85

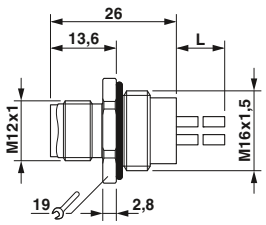
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Power device connectors						
Socket	**SACC-E-M12FSS-4P-M16XL/0,5 PE**	**1411605**	1	**SACC-E-M12FST-4P-M16XL/0,5**	**1411606**	1
Plug	**SACC-E-M12MSS-4P-M16XL/0,5 PE**	**1411607**	1	**SACC-E-M12MST-4P-M16XL/0,5**	**1411608**	1



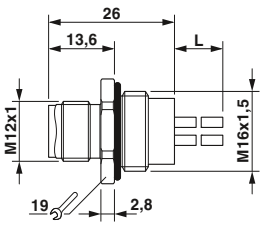
Dimensions: socket



Dimensions: socket



Dimensions: plug



Dimensions: plug

M12 power device connectors, 2-pos. + PE

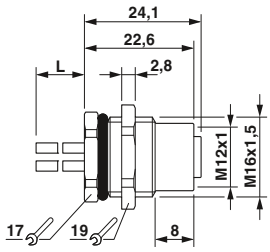
– M16 fastening thread
– With 0.5 m long litz wires
– S-coded

Rear mounting

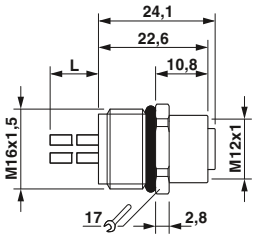
Front mounting

	Technical data	Technical data
General data		
Pollution degree	3	3
Degree of protection	IP67	IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	630 V	630 V
Rated current	16 A	16 A
Contact resistance	≤ 3 mΩ	≤ 3 mΩ
Material data		
Material contact/contact surface	CuZn/Au	CuZn/Au
Contact carrier material	PA	PA
Inflammability class according to UL 94	V0	V0
Cable type	PP litz wire	PP litz wire
Temperature data		
Plug/socket [°C]	-25 ... 105	-25 ... 105

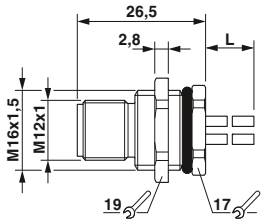
		Ordering data			Ordering data		
Description	Coding	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Power device connectors							
Socket	S power	**SACC-DSI-M12FSS-3P-M16/0,5 PE**	**1411652**	1	**SACC-E-M12FSS-3P-M16/0,5 PE**	**1411654**	1
Plug	S power	**SACC-DSI-M12MSS-3P-M16/0,5 PE**	**1411653**	1	**SACC-E-M12MSS-3P-M16/0,5 PE**	**1411655**	1



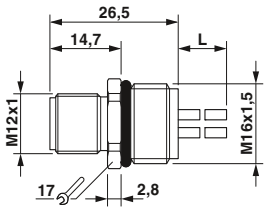
Dimensions: socket



Dimensions: socket



Dimensions: plug



Dimensions: plug

Mechanical and electrical data

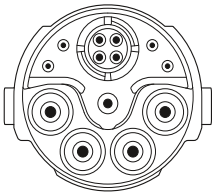
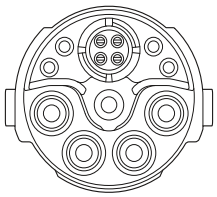
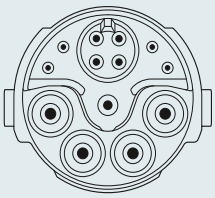
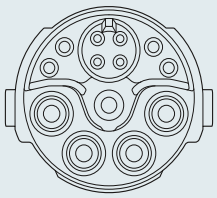
Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Contact connection method:	Crimp version
Sealing and O-ring:	Fluorocarbon rubber (FKM)
Ambient temperature:	-40°C ... 130°C
Cable entry:	Cable and coupler connectors for outer cable diameter of 7.5 - 18 mm, shielded
Type of locking:	M23 SPEEDCON screw locking
Mech. insertion/withdrawal cycles:	Standard: 100
Protection class:	IP67 in the locked state

Electrical data

No. of positions		**13 (4+4+4+PE), CAT5**				**13 (8+4+PE)**		
Contacts		4 +	4 +	4 +	PE	8 +	4 +	PE
Contact Ø	[mm]	0.8	1.0	2.0	2.0	1.0	2.0	2.0
Litz wire cross sections								
Cable and coupler connectors:								
Max. cable Ø of 18 mm	[mm²]	0.08 ... 0.5	0.06 … 1.0	0.25 … 4.0	0.25 … 4.0	0.06 … 1.0	0.25 … 4.0	0.25 … 4.0
Device connector:								
	[mm²]	0.08 ... 0.5	0.06 … 1.0	0.25 … 4.0	0.25 … 4.0	0.06 … 1.0	0.25 … 4.0	0.25 … 4.0
Nominal current per contact at 25°C [1]		3.6	8	30	-	8	30	–
Specifications according to DIN EN 61984:2009								–
Rated voltage	[V AC/DC]	50	50	630/850	-	50	630/850	–
Test/surge voltage	[kV AC]	1.5	1.5	6	-	1.5	6	–
Surge voltage category		III				III		
Pollution degree [2]		3				3		
Installation height	[m]	Up to 3000				Up to 3000		
Cable clamping area [3]	Max. Ø [mm]	18				18		

[1] The effective current carrying capacity must be determined using a derating curve, if necessary, according to the application.
[2] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of contamination, the connector must be sealed using a protective cap ≥ IP54.
[3] The cable clamping areas specified on the following pages may vary depending on the cable material/structure. Selection and testing is the responsibility of the user.

Pin assignments and coding

	Contact chamber numbering (view of plug-in side)			
No. of positions	**Pin**		**Socket**	
13-pos., CAT5 (4 + 4 + 4 + PE) Crimp				
13-pos. (8 + 4 + PE) Crimp				

M23 cable connector, hybrid, SPEEDCON fast locking system

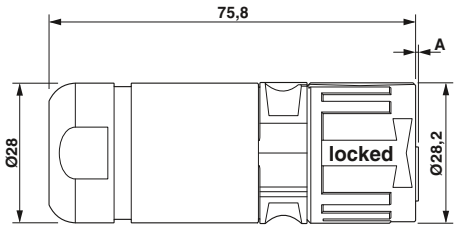
– 4 x power + PE, 4 x signal, 4 x data
– 4 x power + PE, 8 x signal

Cable connector, socket assembly

Cable connector, pin assembly

Description	Cable clamping area	Ordering data: Order No. (4 x signal + CAT5)	Pcs. / Pkt.	Ordering data: Order No. (8 x signal)	Pcs. / Pkt.	Ordering data: Order No. (4 x signal + CAT5)	Pcs. / Pkt.	Ordering data: Order No. (8 x signal)	Pcs. / Pkt.
Cable connector, with contact carrier, **without** contacts, crimp connection									
Universal gasket	7.5 mm ... 18 mm	**1621517**	1	**1621524**	1	**1621529**	1	**1621534**	1
	7.5 mm ... 9 mm	**1621520**	1	**1621525**	1	**1621530**	1	**1621535**	1
	9 mm ... 12 mm	**1621521**	1	**1621526**	1	**1621531**	1	**1621536**	1
	12 mm ... 15 mm	**1621522**	1	**1621527**	1	**1621532**	1	**1621537**	1
	15 mm ... 18 mm	**1621523**	1	**1621528**	1	**1621533**	1	**1621538**	1

	Accessories	Accessories
Crimp contacts **Color rings,** 50 pcs. in set (to be ordered separately)	See page 66 See Catalog 2, page 367	See page 66 See Catalog 2, page 367



Pin version: dimension A = 0.2 mm, socket version: dimension A = 0 mm

M23 coupler connector, hybrid

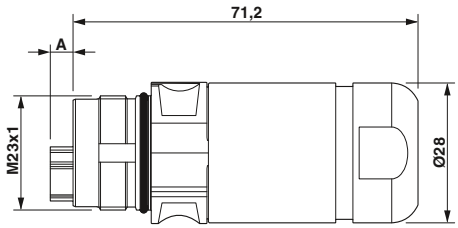
– 4 x power + PE, 4 x signal, 4 x data
– 4 x power + PE, 8 x signal

Coupler connector, socket assembly

Coupler connector, pin assembly

Description	Cable clamping area	Ordering data: Order No. (4 x signal + CAT5)	Pcs. / Pkt.	Ordering data: Order No. (8 x signal)	Pcs. / Pkt.	Ordering data: Order No. (4 x signal + CAT5)	Pcs. / Pkt.	Ordering data: Order No. (8 x signal)	Pcs. / Pkt.
Coupler connector, with contact carrier, **without** contacts, crimp connection									
Universal gasket	7.5 mm ... 18 mm	**1621539**	1	**1621544**	1	**1621549**	1	**1621554**	1
	7.5 mm ... 9 mm	**1621540**	1	**1621545**	1	**1621550**	1	**1621555**	1
	9 mm ... 12 mm	**1621541**	1	**1621546**	1	**1621551**	1	**1621556**	1
	12 mm ... 15 mm	**1621542**	1	**1621547**	1	**1621552**	1	**1621557**	1
	15 mm ... 18 mm	**1621543**	1	**1621548**	1	**1621553**	1	**1621558**	1

	Accessories	Accessories
Crimp contacts **Color rings,** 50 pcs. in set (to be ordered separately)	See page 66 See Catalog 2, page 367	See page 66 See Catalog 2, page 367



Pin version: dimension A = 4.7 mm,
socket version: dimension A = 0 mm

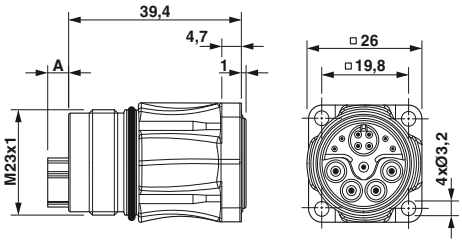
M23 device connectors, hybrid, straight

– 4 x power + PE, 4 x signal, 4 x data
– 4 x power + PE, 8 x signal

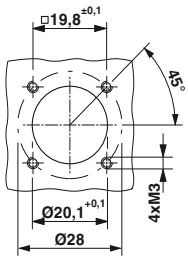
Device connector, straight, socket assembly

Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	4 x signal + CAT5		**8 x signal**		**4 x signal + CAT5**		**8 x signal**	
Device connector, with contact carrier, **without** contacts								
Flange dimensions: 26 mm x 26 mm	**1621567**	1	**1621568**	1	**1621569**	1	**1621570**	1
	Accessories				**Accessories**			
Crimp contacts **Color rings,** 50 pcs. in set (to be ordered separately)	See page 66 See Catalog 2, page 367				See page 66 See Catalog 2, page 367			



Pin version: dimension A = 4.75 mm, socket version: dimension A = 0 mm



Installation dimensions

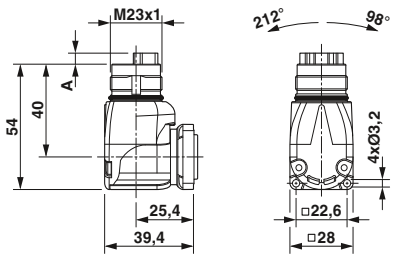
M23 device connector, hybrid, angled, rotatable

– 4 x power + PE, 4 x signal, 4 x data
– 4 x power + PE, 8 x signal
– Housing can be freely rotated by 310°

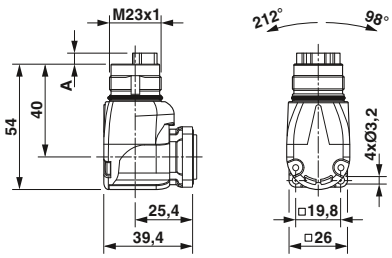
Device connector, angled, rotatable, socket assembly

Device connector, angled, rotatable, pin assembly

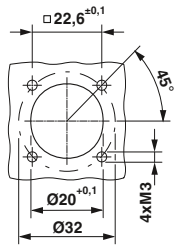
	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	4 x signal + CAT5		**8 x signal**		**4 x signal + CAT5**		**8 x signal**	
Device connector, with contact carrier, **without** contacts Flange dimensions: 26 mm x 26 mm	**1621563**	1	**1621564**	1	**1621565**	1	**1621566**	1
Device connector, with contact carrier, **without** contacts Flange dimensions: 28 mm x 28 mm	**1621559**	1	**1621560**	1	**1621561**	1	**1621562**	1
	Accessories				**Accessories**			
Crimp contacts **Color rings,** 50 pcs. in set (to be ordered separately)	See page 66 See Catalog 2, page 367				See page 66 See Catalog 2, page 367			



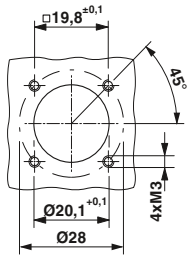
Pin version: dimension A = 4.7 mm, socket version: dimension A = 0 mm



Pin version: dimension A = 4.7 mm, socket version: dimension A = 0 mm



Installation dimensions



Installation dimensions

Crimp contacts

Crimp contacts, socket

Crimp contacts, pin

		Ordering data			Ordering data		
Description	Connection cross section [mm²]	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contacts, Ø 0.8 mm							
	0.08 mm² ... 0.25 mm²	**SF-08KS010**	**1621571**	100	**SF-08KP010**	**1621574**	100
	0.34 mm² ... 0.5 mm²	**SF-08KS020**	**1621573**	100	**SF-08KP020**	**1621575**	100
Contacts, Ø 1.0 mm							
	0.06 mm² ... 0.25 mm²	**ST-10KS010**	**1618239**	100	**ST-10KP010**	**1618255**	100
	0.34 mm² ... 0.5 mm²	**ST-10KS020**	**1618251**	100	**ST-10KP020**	**1618256**	100
	0.5 mm² ... 1.0 mm²	**ST-10KS030**	**1618254**	100	**ST-10KP030**	**1618261**	100
Contacts, Ø 2.0 mm							
	0.25 mm²... 1.0 mm²	**SF-20KS021**	**1621576**	50	**SF-20KP021**	**1621579**	50
	1.0 mm² ... 2.5 mm²	**SF-20KS022**	**1621577**	50	**SF-20KP022**	**1621580**	50
	2.5 mm² ... 4.0 mm²	**SF-20KS023**	**1621578**	50	**SF-20KP023**	**1621581**	50

Flexibility is required when it comes to the structure of a sustainable power supply system. A combination of various sources of renewable energy – even in conjunction with storage technologies – is already proving cost-effective. What is striking here is that miniaturization is more than just a trend; it is a recognized method of increasing system efficiency.

In photovoltaics, the micro inverter, the little brother of the string inverter, is particularly gaining in popularity. It can even be used cost-effectively in locations that are clearly less than ideal. Double-figure percentage increases in yield in comparison to string inverters mean that even areas that are not ideal can be used cost-effectively.

SUNCLIX micon, the connection system for the AC-side of micro inverters, simplifies installation using components which have proven themselves a million times over.

AC-Y connectors

The AC-Y connectors consist of two 3-pos. connections, which are connected to each other via the trunk line without the risk of polarity reversal. In addition to accommodating the trunk line, the coupling side also accommodates the drop line, which serves as a connection to the inverter.

Mains connector plugs

The mains connector plugs provide the connecting link between the PV system and mains. Depending on the system structure, the mains can be connected via the plug or coupling side of the AC Y-connector. The free cable end is either connected in a distributor box or fed into an incoming mains feeder box via a cable sleeve.

Protective caps

Dust protection caps (brown) made from biodegradable plastic protect the pin connector pattern from contamination during transport. When it comes to installation, they can be easily removed from the plug without any special tools. During installation, the IP protective caps (black) are inserted as an end cap on the last connector in order to protect it from atmospheric influences.

Contact removal tool

The locking mechanism on the connector is extremely robust and prevents unintentional release. The contact removal tool enables the lock to be opened easily and quickly. Thanks to an additional latch, it does not fall out of the plug housing once it has been released.

DC connectors

With the SUNCLIX DC connector as a device plug or for field assembly, you can also impress with performance and quality on the module side.

SUNCLIX micon

- Pre-assembled sets for minimum effort at the installation site
- Customer-specific versions on request
- Networked cables
- Proven SUNCLIX contact technology for optimum system performance

AC Y-distributor

Mains connector plug for the coupling side

		Technical data		Technical data	
		North American version	European version	North American version	European version
General data					
Degree of protection		IP67	IP67	IP67	IP67
Electrical data					
Rated voltage		600 V	400 V	600 V	400 V
Rated current					
	Trunk line	20 A	20 A	20 A	20 A
	Drop line	5 A	5 A	-	-
Conductor cross section					
	Trunk line	12 AWG	2.5 mm²	12 AWG	2.5 mm²
	Drop line	14 AWG	0.75 mm²	-	-
No. of pos.					
	Trunk line	3	3	3	3
	Drop line	3	3	-	-
Cable length					
	Trunk line	1150 mm	1150 mm	1000 mm	1000 mm
	Drop line	500 mm	500 mm	-	-
Temperature data					
Ambient temperature (operation)		-40°C ... 90°C	-40°C ... 85°C	-40°C ... 90°C	-40°C ... 85°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
AC Y-distributor for PV microinverters incl. dust protection caps						
North American version	**PV-MI-YC-1,15-3-12-NA-0,50-OE**	**1706518**	1			
European version	**PV-MI-YC-1,15-3-25-EU-0,50-OE**	**1621351**	1			
Mains connector plug of the AC Y-distributor incl. IP protective cap and contact removal tool						
North American version				**PV-MI-YC-GC-P-1,00-3-12-NA SET**	**1707091**	1
European version				**PV-MI-YC-GC-P-1,00-3-25-EU SET**	**1621349**	1
Patch cable for extending the trunk line incl. dust protection caps						
North American version						
European version						

	Accessories			Accessories		
Dust protection cap, IP40, for SUNCLIX micon						
Coupling side	**PV-MI-YC-CARRIER-CAP-TS**	**1706599**	5	**PV-MI-YC-CARRIER-CAP-TS**	**1706599**	5
Plug side	**PV-MI-YC-CARRIER-CAP-TP**	**1706608**	5	**PV-MI-YC-CARRIER-CAP-TP**	**1706608**	5
Protective cap, IP67, for SUNCLIX micon						
Coupling side	**PV-MI-YC-PROTECTION-CAP-TS**	**1706515**	1	**PV-MI-YC-PROTECTION-CAP-TS**	**1706515**	1
Plug side	**PV-MI-YC-PROTECTION-CAP-TP**	**1706610**	1	**PV-MI-YC-PROTECTION-CAP-TP**	**1706610**	1
Contact removal tool, for SUNCLIX micon, trunk line	**PV-MI-YC-UNLOCKTOOL**	**1706514**	5	**PV-MI-YC-UNLOCKTOOL**	**1706514**	5

Mains connector plug
for the plug side

Patch cable

Technical data	
North American version	European version
IP67	IP67
600 V	400 V
20 A -	20 A -
12 AWG -	2.5 mm² -
3 -	3 -
1000 mm -	1000 mm -
-40°C ... 90°C	-40°C ... 85°C

Ordering data		
Type	Order No.	Pcs. / Pkt.
PV-MI-YC-GC-S-1,00-3-12-NA SET	1707092	1
PV-MI-YC-GC-S-1,00-3-25-EU SET	1621350	1

Accessories		
PV-MI-YC-CARRIER-CAP-TS	1706599	5
PV-MI-YC-CARRIER-CAP-TP	1706608	5
PV-MI-YC-PROTECTION-CAP-TS	1706515	1
PV-MI-YC-PROTECTION-CAP-TP	1706610	1
PV-MI-YC-UNLOCKTOOL	1706514	5

Technical data	
North American version	European version
IP67	IP67
600 V	400 V
20 A -	20 A -
12 AWG -	2.5 mm² -
3 -	3 -
1000 mm -	1000 mm -
-40°C ... 90°C	-40°C ... 85°C

Ordering data		
Type	Order No.	Pcs. / Pkt.
PV-MI-YC-PATCH-1,00-3-12-NA	1707090	10
PV-MI-YC-PATCH-1,00-3-25-EU	1621352	10

Accessories		
PV-MI-YC-CARRIER-CAP-TS	1706599	5
PV-MI-YC-CARRIER-CAP-TP	1706608	5
PV-MI-YC-PROTECTION-CAP-TS	1706515	1
PV-MI-YC-PROTECTION-CAP-TP	1706610	1
PV-MI-YC-UNLOCKTOOL	1706514	5

Cable installation

Cable splice kit
– Cable-to-cable connection
– IP67 for outdoor applications
– Accepts three conductors, 1.5 mm² to 25 mm² (16 to 4 AWG)

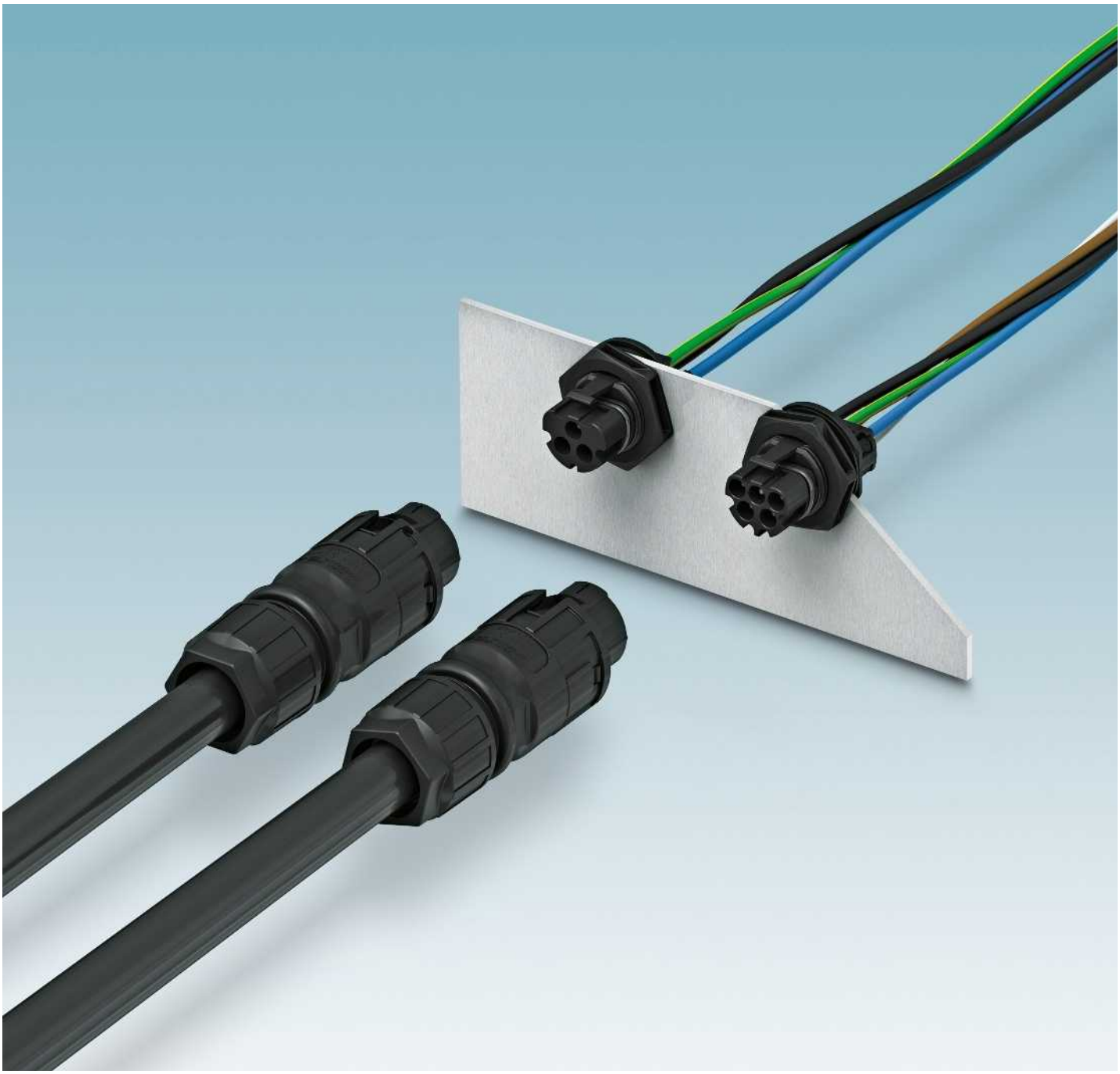
Cable terminator
– End-of-run cable terminator
– IP67 for outdoor applications
– Accepts three conductors, 1.5 mm² to 25 mm² (16 to 4 AWG)

Cable splice kit

Cable terminator

	Technical data	Technical data
General data		
Degree of protection	IP67	IP67
Connection method	Screw connection within housing	-
Electrical data		
Rated voltage	600 V AC/DC	600 V AC/DC
Rated current	30 A	-
Conductor cross section [mm² // AWG]	1.5 mm² ... 25 mm² // 16 ... 4	1.5 mm² ... 25 mm² // 16 ... 4
Cable diameter	9.5 mm ... 13 mm (0.37 ... 0.51 in.)	9.5 mm ... 13 mm (0.37 ... 0.51 in.)
Temperature data		
Ambient temperature (operation)	-40°C ... 90°C	-40°C ... 90°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable splice kit						
- 3 conductors	**PV-MI-CABLE SPLICE 3P**	**1812403**	1			
Cable terminator						
- 3 conductors				**PV-MI-CABLE TERMINATOR 3P**	**1812416**	1



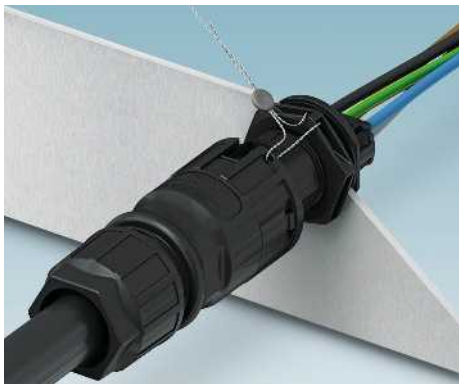
IP-protected circular connectors for power electronics

The new power connectors in the PRC series enable you to reliably and conveniently connect 3 and 5-wire cables to your device (e.g., a solar inverter). The device connectors with crimp connection are supplied pre-assembled with punched-on litz wires or alternatively they can be self-assembled.

Remove the cable sheath, strip the wires, and conveniently connect with screw connection

Snap the contact carrier into the plug housing

Tighten the cable gland



– Sealable for protection against tampering

– UV-resistant plastic for safe outdoor use

– Secure latching to be disconnected using tool

– Fully flexible for the device manufacturer: Pre-assembled panel feed-through or flexible and rapid self-assembly.

– The mechanical coding ensures that 3- and 5-pos. connectors are not accidentally connected to each other.

– Everything from a single source: Phoenix Contact supplies connectors for all the interfaces on a solar inverter.

Cable connectors

- Snaps in automatically when inserted, released using a screwdriver
- Screw connection of 1.5 mm² to 6 mm²
- With lagging PE contact

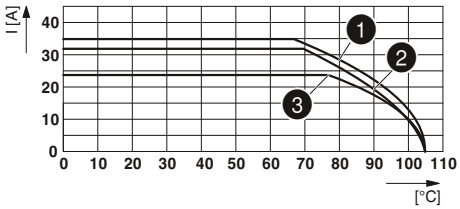
3-pos., socket contacts

5-pos., socket contacts

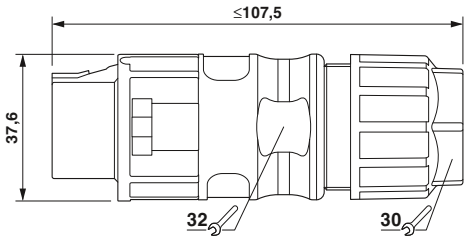
	Technical data	Technical data
General data		
Degree of protection	IP65/IP68	IP65/IP68
Conductor cross section	1.5 mm² ... 6 mm²	1.5 mm² ... 6 mm²
Electrical data		
Rated voltage	690 V	690 V
Rated current	35 A	30 A
Material data		
Contact surface material	Silver-plated	Silver-plated
Material of grip body	PPE	PPE
Inflammability class according to UL 94	V0	V0
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C (dependent on the derating curve)	-40°C ... 100°C (dependent on the derating curve)

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable connector, with screw connection for cable diameter:						
8 mm ... 21 mm	**PRC 3-FC-FS6 8-21**	**1410661**	1	**PRC 5-FC-FS6 8-21**	**1410656**	1
8 mm ... 12 mm	**PRC 3-FC-FS6 8-12**	**1410658**	1	**PRC 5-FC-FS6 8-12**	**1410629**	1
12 mm ... 16 mm	**PRC 3-FC-FS6 12-16**	**1409217**	1	**PRC 5-FC-FS6 12-16**	**1409205**	1
16 mm ... 25 mm	**PRC 3-FC-FS6 16-21**	**1410659**	1	**PRC 5-FC-FS6 16-21**	**1410655**	1

	Accessories			Accessories		
Protective cap	**PRC COVER F**	**1409236**	50	**PRC COVER F**	**1409236**	50
Test plug, black, 1.5 mm² ... 6 mm² with screw connection, for cables with diameter 8 mm ... 21 mm	**PRC 3-TC-FS6 8-21**	**1621326**	50	**PRC 5-TC-FS6 8-21**	**1621325**	50



Derating diagram



Device connectors

- Snaps in automatically when inserted, released using a screwdriver
- Pre-assembled with litz wires or for self-assembly
- IP65 when not plugged in
- With capacitive PE contact

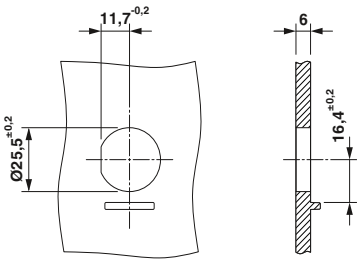
Pin contacts with litz wires

Pin contact carrier without contacts

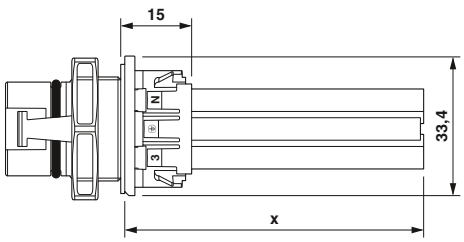
	Technical data		Technical data	
	3-pos.	**5-pos.**	**3-pos.**	**5-pos.**
General data				
Degree of protection (when plugged in)	IP65/IP68 (2m/24h)		IP65/IP68 (2m/24h)	
Electrical data				
Rated voltage	690 V		690 V	
Rated current	35 A	30 A	35 A	30 A
Material data				
Contact surface material	Silver-plated		Silver-plated	
Material of grip body	PPE		PPE	
Inflammability class according to UL 94	V0		V0	
Temperature data				
Ambient temperature (operation)	-40°C ... 100°C (dependent on the derating curve)		-40°C ... 100°C (dependent on the derating curve)	

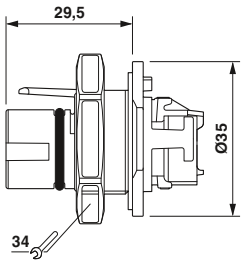
	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	3-pos.		**5-pos.**		**3-pos.**		**5-pos.**	
M25 device connector incl. locking nut, cable length 150 mm, with conductor cross section:								
2.5 mm²	**1409219**	10	**1409211**	10				
4 mm²	**1409220**	10	**1409212**	10				
6 mm²	**1409221**	10	**1409213**	10				
Contact carrier incl. locking nut, without contacts, for crimp contacts, conductor cross section of 2.5 mm² ... 6 mm²					**1409218**	50	**1409206**	50

	Accessories			Accessories		
Protective cap	**PRC COVER M**	**1409237**	50	**PRC COVER M**	**1409237**	50
Replacement locking nut	**FT NUT M25 BK**	**1457937**	100	**FT NUT M25 BK**	**1457937**	100
Crimp contacts CK 2,5, silver-plated contact surface for conductor cross section:						
2.5 mm²				**CK2,5-M-2,5 AG**	**1409207**	100
4 mm²				**CK2,5-M-4 AG**	**1409208**	100
6 mm²				**CK2,5-M-6 AG**	**1409209**	100



Panel cutout





The development of a widespread charging infrastructure in conjunction with renewable energy is an important step toward a mobile future. Internationally standardized charging systems are used to establish an electrical connection between the electric vehicle and the infrastructure (e.g., a charging station). In terms of the charging interfaces required, a distinction is made between:

– Vehicle inlets
– Socket outlets on the charging station
– Charging cables with connectors (charging plug on the vehicle), plugs (charging plug in the infrastructure), and integrated IC-CPD control units.

International standards ensure uniform connection for charging stations and vehicles:

– Type 1 according to SAE J1772 (USA, Japan)
– Type 2 according to IEC-62196 (Europe)
– GB standard (China).

The charging plugs from Phoenix Contact offer reliable, standard-compliant solutions for a consistent charging interface for all applications.

This is implemented, for example, with the Combined Charging System (CCS), which was developed by major German automobile manufacturers in cooperation with Phoenix Contact. The electric vehicle can be charged conventionally with AC at home, for example. In addition, the vehicle-side inlet is also designed for rapid DC charging. Only short stops are required for the charging process - e.g., on the go at rest stops.

AC type 1
The type 1 AC charging system is based on standard SAE J1772. It is primarily used in the USA and Japan. The lock is implemented using a lever system.

AC type 2
The type 2 AC charging system, developed for Europe, is designed according to the IEC 62196-2 standard. It supports single- and three-phase charging. An electromechanical actuator lock safeguards the charging process.

AC GB
The AC charging system standardized according to the Chinese GB standard enables both single- and three-phase charging. Charging takes place securely thanks to a special lever system.

DC CCS type 1
In the USA, the type 1 DC CCS charging system is used for fast DC charging, according to SAE J1772 and IEC 62196-3. The lever locking mechanism is also supported by an additional actuator lock.

DC CCS type 2
In Europe, the type 2 DC CCS charging system is the vanguard for rapid DC charging according to IEC-62196-3. The electromechanical actuator lock prevents premature removal during the charging process.

DC GB
The DC GB charging system is based on the GB standard. It offers rapid DC charging for Chinese charging stations. The lever lock is also supported by an additional actuator lock.

Type 1 AC charging cables with open cable end

Type 1 AC charging cables with open cable end are primarily installed in charging stations and wall boxes in the USA and Japan. They are used to charge electric vehicles with alternating current.

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.
Additional charging cables with higher rated currents are available on request.
All connectors are supplied with a protective cap.

Type 1 AC connector, with AWG cable

Type 1 AC connector, with metric cable

	Technical data		Technical data	
	16 A	**30 A**	**20 A**	**32 A**
Rated current	16 A	30 A	20 A	32 A
Number of phases	1	1	1	1
Rated voltage	240 V AC	240 V AC	250 V AC	250 V AC
Standards	SAE J1772	SAE J1772	SAE J1772	SAE J1772
Charging mode	AC level 2	AC level 2	Mode 3	Mode 3
Resistor coding	150 Ω (Lever actuated) 480 Ω (Lever not actuated)	150 Ω (Lever actuated) 480 Ω (Lever not actuated)	150 Ω (Lever actuated) 480 Ω (Lever not actuated)	150 Ω (Lever actuated) 480 Ω (Lever not actuated)
Ambient temperature (Operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)	3 (L1, N, PE)	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44	IP44
Degree of protection (with protective cap)	IP24	IP24	IP24	IP24
Degree of protection (when not plugged in)	IP20	IP20	IP20	IP20
Cable data				
Cable type	Straight	Straight	Spiraled	Spiraled
Cable length	4 m	4 m	4 m	4 m
Cable diameter	9.4 mm ± 0.2	16.4 mm ± 0.2	10.5 mm ±0.5	13.9 mm ±0.5
Cable structure	3 x 14 AWG + 1 x 18 AWG	3 x 10 AWG + 1 x 18 AWG	3 x 2.5 mm^2 + 1 x 0.5 mm^2	3 x 6.0 mm^2 + 1 x 0.5 mm^2
Sheath color	Black	Black	Black	Black

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	16 A		**30 A**		**20 A**		**32 A**	
AC charging cable with open cable end, mode 3, type 1								
	1621484	1	**1409949**	1	**1621670**	1	**1621794**	1

Type 2 AC charging cables with open cable end

Type 2 AC charging cables with open cable end are installed in charging stations and wall boxes in European infrastructure. They are used to charge electric vehicles with alternating current.

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.
Additional charging cables with higher rated currents are available on request.
All connectors are supplied with a protective cap.

Type 2 AC connector, 20 A

Type 2 AC connector, 32 A

	Technical data		Technical data	
	20 A	**20 A**	**32 A**	**32 A**
Rated current	20 A	20 A	32 A	32 A
Number of phases	1	3	1	3
Rated voltage	250 V AC	480 V AC	250 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3	Mode 3	Mode 3	Mode 3
Resistor coding	680 Ω (between PE and PP)	680 Ω (between PE and PP)	220 Ω (between PE and PP)	220 Ω (between PE and PP)
Ambient temperature (Operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44	IP44
Degree of protection (with protective cap)	IP24	IP24	IP24	IP24
Degree of protection (when not plugged in)	IP20	IP20	IP20	IP20
Cable data				
Cable type	Straight	Straight	Straight	Straight
Cable length	4 m	4 m	4 m	4 m
Cable diameter	10.5 mm ±0.5	13 mm ±0.5	13.9 mm ±0.5	17 mm ±0.5
Cable structure	3 x 2.5 mm^2 + 1 x 0.5 mm^2	5 x 2.5 mm^2 + 1 x 0.5 mm^2	3 x 6 mm^2 + 1 x 0.5 mm^2	5 x 6 mm^2 + 1 x 0.5 mm^2
Sheath color	Black	Black	Black	Black

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	20 A		**20 A**		**32 A**		**32 A**	
AC charging cable with open cable end, mode 3, type 2								
	1409319	1	**1409320**	1	**1405198**	1	**1405199**	1

Type 1 and type 1 mobile AC charging cables (mode 3)

The mobile AC charging cables enable electric vehicles to be charged with alternating current at European charging stations or wall boxes at home and while on the move. They can easily be stored inside the vehicle.

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.
All connectors and plugs are supplied with a protective cap.

Type 1 AC connector with type 2 plug

Type 2 AC connector with type 2 plug

	Technical data		Technical data	
	20 A	**32 A**	**20 A**	**32 A**
Rated current	20 A	32 A	20 A	32 A
Number of phases	1	1	1	3
Rated voltage	250 V AC	250 V AC	250 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3	Mode 3	Mode 3	Mode 3
Ambient temperature (Operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44	IP44
Degree of protection (with protective cap)	IP24	IP24	IP24	IP24
Degree of protection (when not plugged in)	IP20	IP20	IP20	IP20
Cable data				
Cable type	Straight	Straight	Straight	Straight
Cable length	4 m	4 m	4 m	4 m
Cable diameter	10.5 mm ±0.5	13.9 mm ±0.5	10.5 mm ±0.5	17 mm ±0.5
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm²	3 x 6 mm² + 1 x 0.5 mm²	3 x 2.5 mm² + 1 x 0.5 mm²	5 x 6 mm² + 1 x 0.5 mm²
Sheath color	Black	Black	Black	Black

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	20 A		**32 A**		**20 A**		**32 A**	
AC charging cable with plug, mode 3								
	1621481	1	**1410090**	1	**1405193**	1	**1404569**	1

Type 1 and type 2 mobile AC charging cables (mode 2)

The mobile AC charging cables with In Cable Control and Protection Device (IC-CPD) enable electric vehicles to be charged with alternating current at a normal, European socket at home and while on the move. Standardized communication with the vehicle as well as the safety equipment are integrated in the IC-CPD.

Notes:
All connectors are supplied with a protective cap.

Type 1 AC connector with IC-CPD and SCHUKO plug

Type 2 AC connector with IC-CPD and SCHUKO plug

	Technical data	Technical data
Rated current	6 A ... 13 A	6 A ... 13 A
Number of phases	1	1
Rated voltage	200 V AC ... 250 V AC	200 V AC ... 250 V AC
Frequency	50 Hz	50 Hz
Charging power	1.4 kW ... 3 kW	1.4 kW ... 3 kW
Standards	IEC 61851-1	IEC 61851-1
Charging mode	Mode 2	Mode 2
Ambient temperature (Operation)	-30°C ... 40°C	-30°C ... 40°C
Tripping characteristics / residual current	Type A/30 mA	Type A/30 mA
Infrastructure plug	SCHUKO (type AF)	SCHUKO (type AF)
Temperature sensor (infrastructure plug)	Available	Available
Degree of protection (IC-CPD)	IP67	IP67
Type of protection (when plugged in)	IP44	IP44
Degree of protection (with protective cap)	IP24	IP24
Degree of protection (when not plugged in)	IP20	IP20
Cable data		
Cable type	Straight	Straight
Cable length	4 m	4 m
Cable diameter	10.5 mm ±0.5	10.5 mm ±0.5
Cable structure	3 x 2.5 mm^2 + 2 x 0.5 mm^2	3 x 2.5 mm^2 + 2 x 0.5 mm^2
Sheath color	Red	Red

Description	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
AC charging cable with IC-CPD, mode 2	**EV-ICCPD-T1C-EU-S-13A1-A-GEN2**	**1621797**	1	**EV-ICCPD-T2C-EU-S-13A1-A**	**1621516**	1

Combined charging system (CCS) DC charging cables type 1 and type 2

The CCS DC charging cables with open cable end are connected directly to a DC charging station. They are suitable for fast DC charging of electric vehicles.

The CCS connector is compatible with the CCS inlet, which also accommodates an AC connector.

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.

Type 1 combined DC connector, with AWG cable

Type 2 combined DC connector, with metric cable

	Technical data			Technical data		
	60 A	**125 A**	**200 A**	**60 A**	**125 A**	**200 A**
Rated current	60 A	125 A	200 A	60 A	125 A	200 A
Rated voltage	600 V DC	600 V DC	600 V DC	850 V DC	850 V DC	850 V DC
Standards	SAE J1772	SAE J1772	SAE J1772	IEC 62196-3	IEC 62196-3	IEC 62196-3
Charging mode	DC level 2	DC level 2	DC level 2	Mode 4	Mode 4	Mode 4
Resistor coding	150 Ω (Lever actuated) 480 Ω (Lever not actuated)	150 Ω (Lever actuated) 480 Ω (Lever not actuated)	150 Ω (Lever actuated) 480 Ω (Lever not actuated)	1500 Ω (between PE and PP)	1500 Ω (between PE and PP)	1500 Ω (between PE and PP)
Ambient temperature (Operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N	< 100 N	< 100 N
Temperature sensor	Pt1000	Pt1000	Pt1000	Pt1000	Pt1000	Pt1000
Type of protection (when plugged in)	IP44	IP44	IP44	IP44	IP44	IP44
Degree of protection (when not plugged in)	IP20	IP20	IP20	IP24	IP24	IP24
Cable data						
Cable type	Straight	Straight	Straight	Straight	Straight	Straight
Cable length	5 m	5 m	5 m	4.5 m	5 m	5 m
Cable diameter	20.6 mm ± 0.2	32.2 mm ± 0.2	37.4 mm ± 0.2	19 mm ± 0.2	28.2 mm ± 0.2	32 mm ± 0.2
Cable structure	3 x 6 AWG + 3 x 2 x 18 AWG	2 x 1 AWG + 1 x 3 AWG + 3 x 2 x 18 AWG	2 x 00 AWG + 1 x 1 AWG + 3 x 2 x 18 AWG	3 x 16 mm^2 + 3 x 2 x 0.75 mm^2	2 x 50 mm^2 + 1 x 25 mm^2 + 3 x 2 x 0.75 mm^2	2 x 70 mm^2 + 1 x 35 mm^2 + 3 x 2 x 0.75 mm^2
Sheath color	Black	Black	Black	Black	Black	Black

	Ordering data						Ordering data					
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	60 A		**125 A**		**200 A**		**60 A**		**125 A**		**200 A**	
DC charging cable with open cable end, combined charging system (CCS)	**1621488**	1	**1409950**	1	**1621489**	1	**1618306**	1	**1409060**	1	**1621653**	1

DC charging cables GB standard (China)

DC GB charging cables with open cable end are installed in Chinese charging stations with a stationary AC/DC converter. They are suitable for fast DC charging of electric vehicles.

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.

DC GB connector, with metric cable

Technical data

Rated current	60 A
Rated voltage	750 V DC
Standards	GB/T Part 3
Charging mode	Mode 4
Resistor coding	1000 Ω
Ambient temperature (Operation)	-30°C ... 50°C
Number of power contacts	3
Insertion/withdrawal cycles	> 10000
Insertion/withdrawal force	< 100 N
Type of protection (when plugged in)	IP55
Cable data	
Cable type	Straight
Cable length	5 m
Cable diameter	20.2 mm ± 0.2
Cable structure	3 x 16 mm^2 + 2 x 2.5 mm^2 + 9 x 0.5 mm^2
Sheath color	Black

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
DC charging cable with open cable end, GB/T			
	EV-GBM4C-DC60A-5,0M16ESBK00	**1621468**	1

FAME plug-in test system with push-in connection, for wall and DIN rail mounting

PT ... Page 92

FAME plug-in test system with screw connection, for wall and DIN rail mounting

UT ... Page 94

FAME test plug, multi-position, freely configurable contact tabs

FTPR ..., FTP ... Page 96

Ordering example for configurable test plugs with twist grip or standard grip

Page 97

Blind plugs, coding profile, and colored test sockets

Page 98

Accessories
Bridges and cover profiles

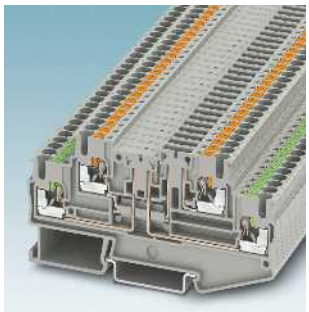
Page 100

FAME plug-in test system with push-in connection, VDE types, for wall and DIN rail mounting
PT ... Page 102

FAME plug-in test system with screw connection, VDE types, for wall and DIN rail mounting
UT ... Page 128

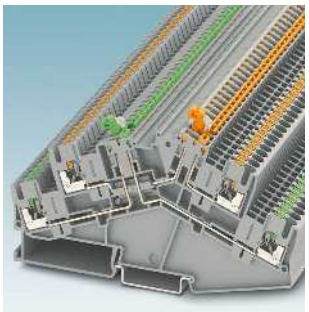
Push-in knife disconnect terminal blocks

PT 1,5..., PTT 1,5... Page 156



Push-in double-level disconnect and knife disconnect terminal blocks

PTT 2,5... Page 158

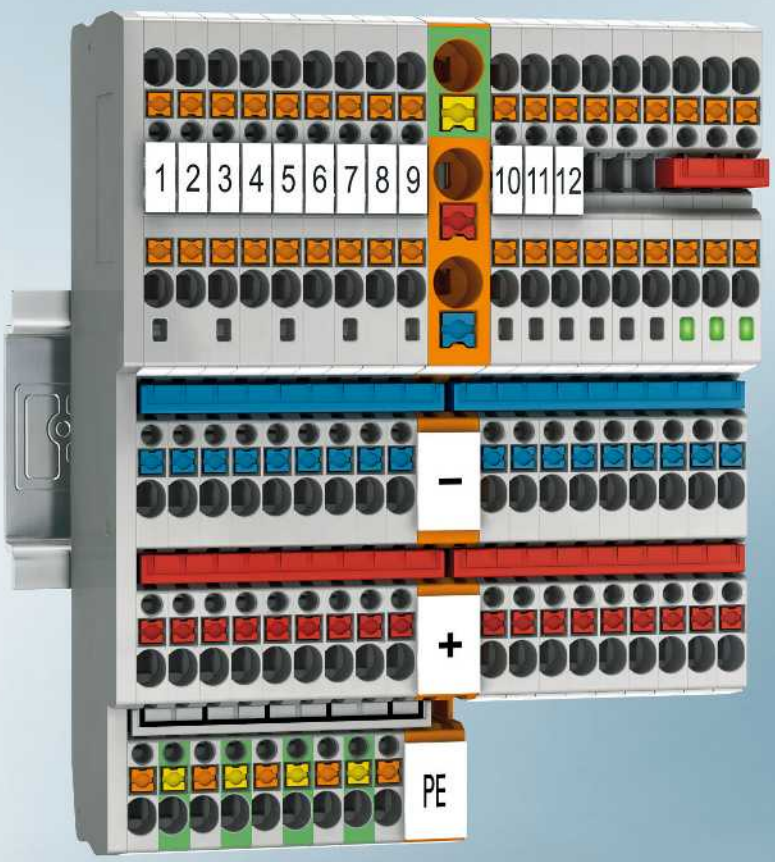


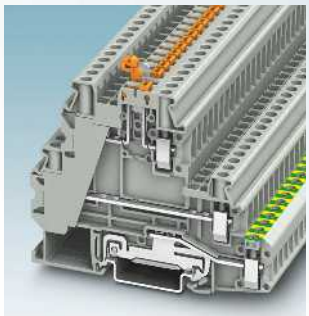
Push-in double-level disconnect and knife disconnect terminal blocks in desk design

PTTBS ... Page 160

Screw connection disconnect and knife disconnect terminal blocks with fuse plug

UT ...-TG Page 162
UTT ...-TG Page 164





Screw connection multi-level function and lever-type fuse terminal blocks with PE foot

UT 4...-TG/MT Page 166
UT 4...-HESI Page 168

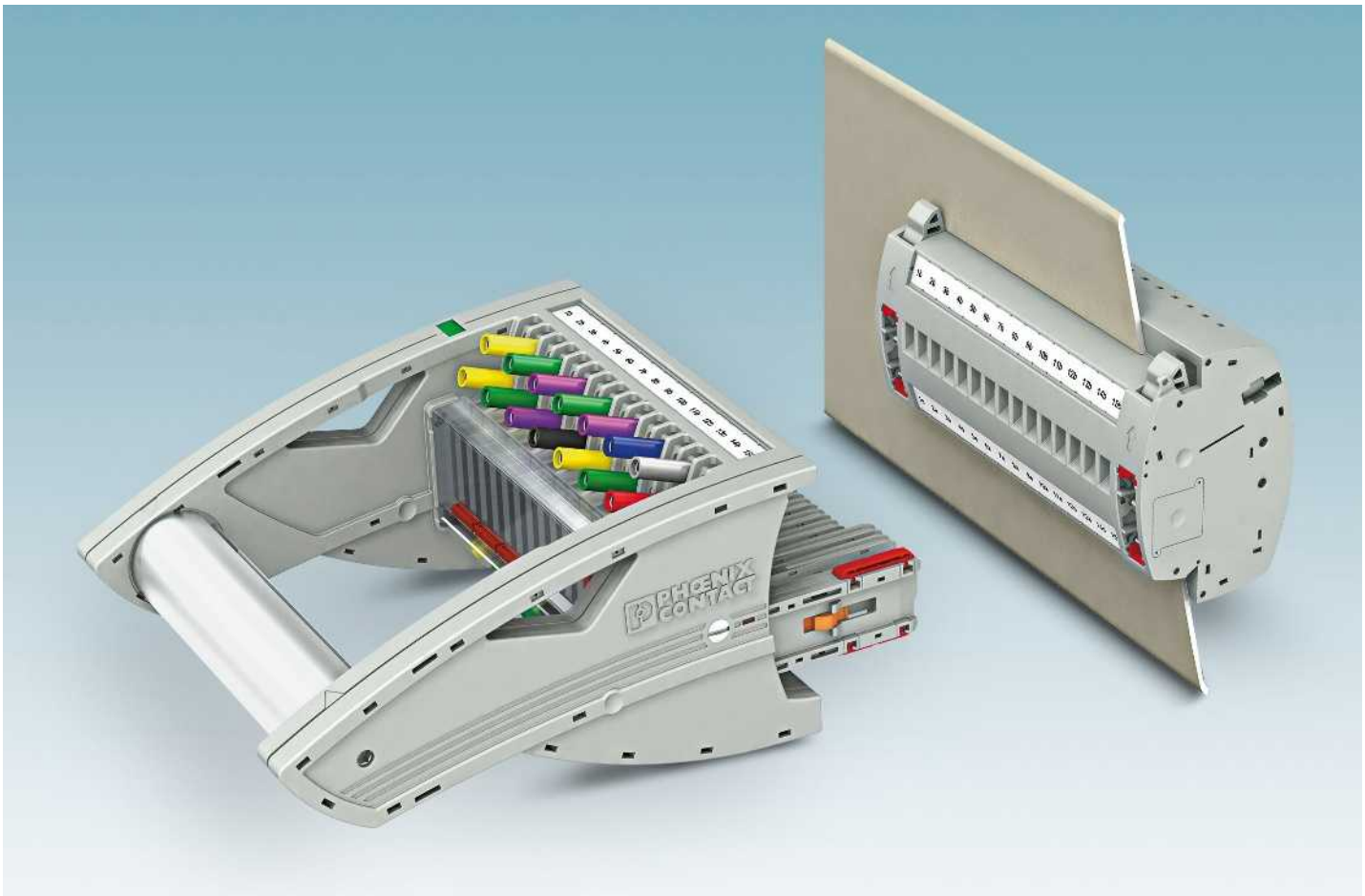
Fast connection hybrid knife disconnect terminal block with single-sided screw connection

QTCU 2,5-TWIN-MT Page 172

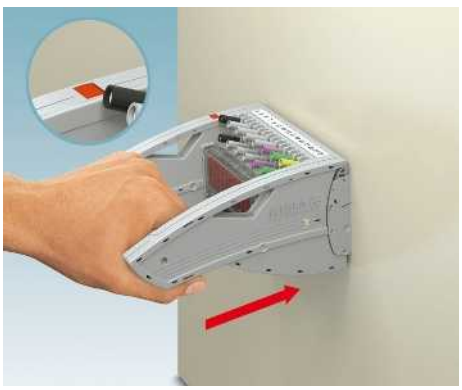
Fast connection feed-through and ground terminal blocks

QTC 2,5-QUATTRO Page 173

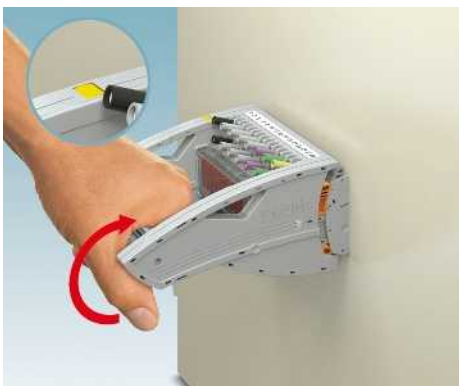
FAME plug-in test system



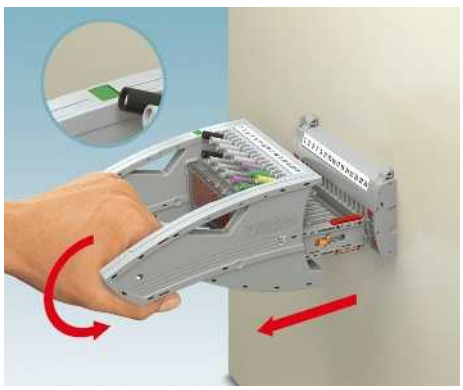
FAME is the innovative test system for all measuring and testing tasks in network protection technology for medium and high-voltage switchgear. With the modular system, you can now perform manual testing automatically, safely, and more quickly. Suitable for every application, the modular system can be directly integrated into the control cabinet panel or used as a DIN rail version.



The test plug is completely inserted and engaged, the display window turns red. All test contacts are contacted according to the test setup.

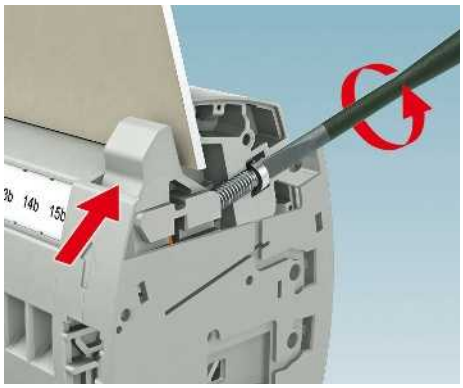


The twist grip is turned upward as far as it will go, the display window turns yellow. Test contacts with short contact tab lengths (e.g., current transformers) are once again connected to the protective device.

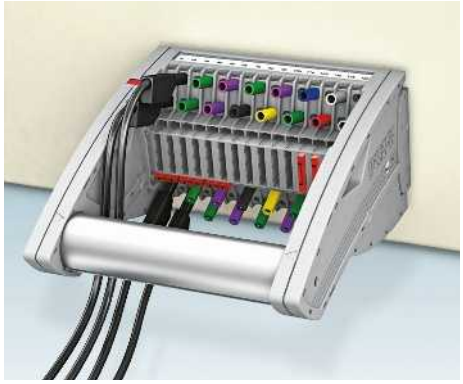


The twist grip must be turned back to its starting position. Now the mechanism releases the plug so it can be fully removed. The display window turns green.

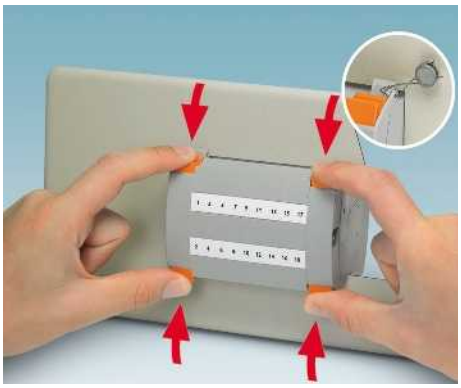
Preprogrammed short-circuit and switching operations depend on consistent insertion and removal of the test plug. Undefined contact states are effectively avoided thanks to the twist grip mechanism.



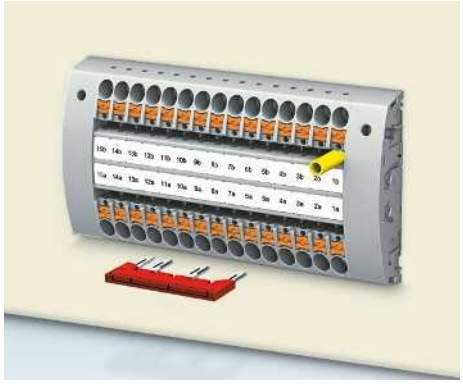
The patented wall fastening is easy to use and has a robust design. Even tolerances in the panel cutout of up to 4 mm are compensated.



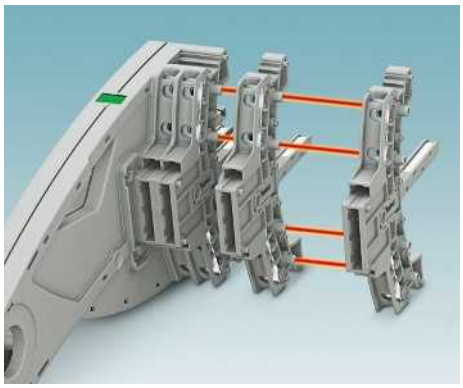
The offset test socket arrangement enables the use of CAT III and CAT IV/1000 V safety test leads according to EN 61010-031 in a confined space.



FAME test terminal strips have an IP20 design. Blind plugs without switching function can be inserted and secured with seals. These can only be released with two-hand operation.

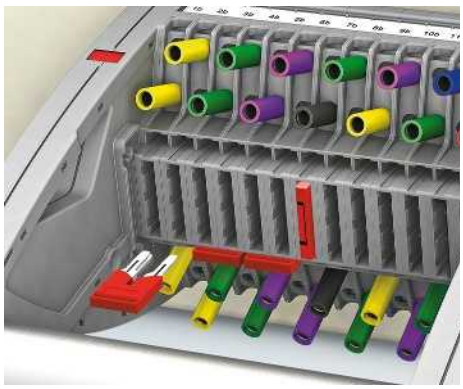


In addition to the two marking grooves, the test terminal strips for wall mounting also offer two function shafts, or six function shafts in the case of the DIN rail version, inside the control cabinet for forming and grounding the star point.

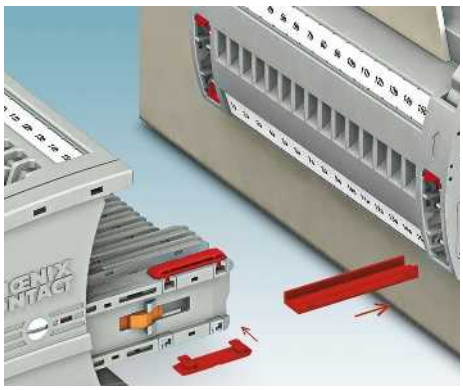


The compact and modular design of the system, as well as the plugs and test terminal strips, provides an extensive range of options for every application with positions from 4 to 25.

All applications which do not involve testing through the closed door and the open rack mounting can be implemented with the DIN rail version. Terminal points and plug-in zone can be operated from one direction.



The test plug provides three function shafts between the 4 mm test contacts. Horizontally aligned, as leading short-circuit jumper - vertically aligned as through connection in the plug.



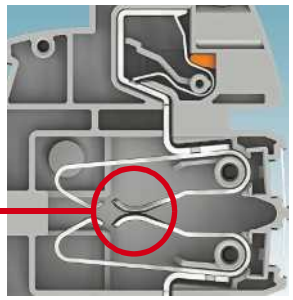
The coding profiles can be applied by the user according to their application. VDE-compliant versions are pre-coded on delivery. This ensures maximum safety.

FAME 2 – safe in every operating state

The new, modular FAME measuring transducer test system enables all transformer testing tasks to be carried out quickly and safely.
The automatically generated transformer short circuit, the twist grip mechanism, and the shock-proof design provide maximum safety during measurement.

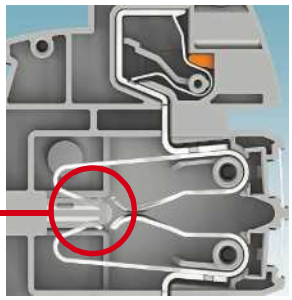
Normal operation

Closed N/O contact



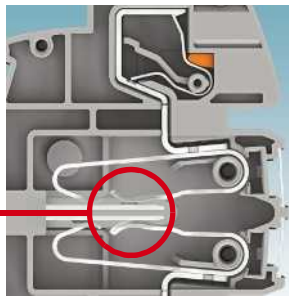
Transformer short circuit

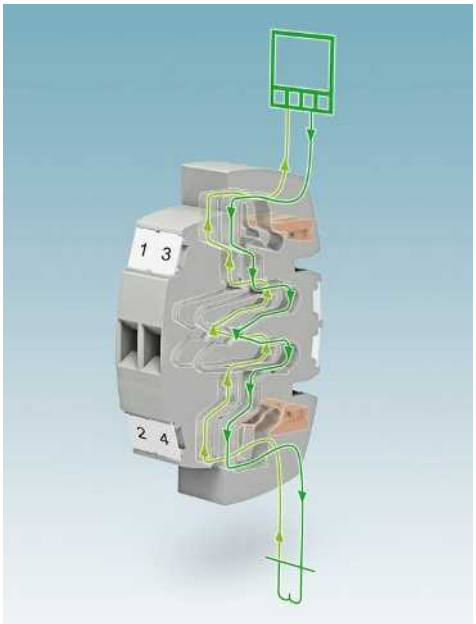
Leading short circuit by means of auxiliary contact



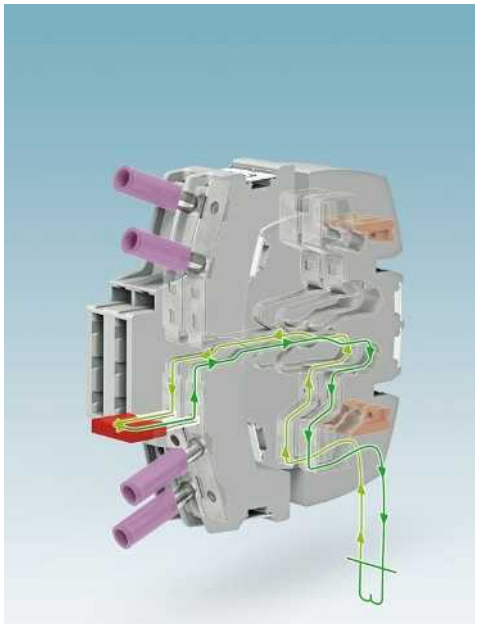
Test operation

N/O contact connected via test socket

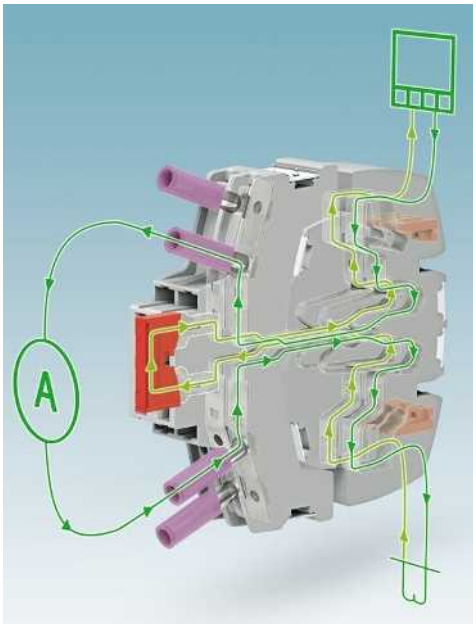




Due to the N/C contact function of the FAME 2 system, additional power plugs are not required for normal operation. If desired, the plug-in zone can be covered with a blind plug to prevent unauthorized access.

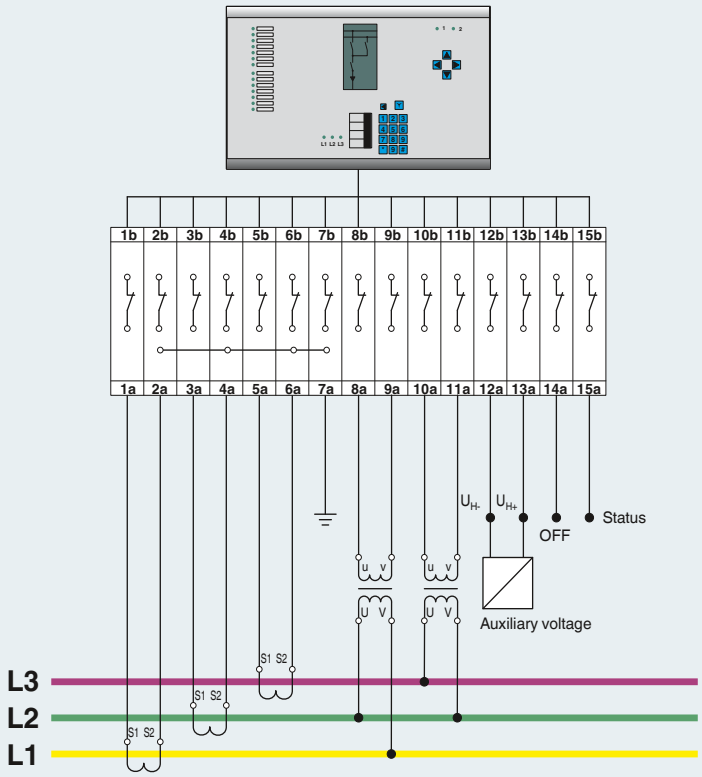


When replacing the protective device or even in the case of a relay test, a leading short circuit of the current transformer (for the purpose of signal splitting) can be easily carried out by means of a jumper inserted crossways.

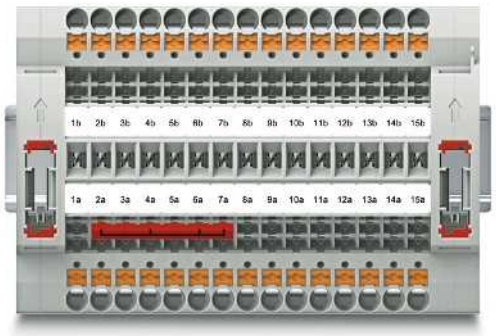


With the jumper simply inserted lengthways in the test plug, test equipment can be easily looped into the current path via the 4 mm test sockets.

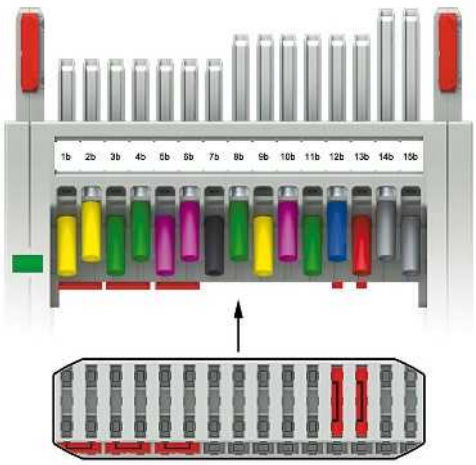
Medium-voltage circuit example with star point grounding in the test terminal strip



Test terminal strip with current transformer, voltage transducer, and signals



Test plug with current transformer, voltage transducer, and signals



Test terminal strip, blind plug

Order No.	Type	Required quantity
3069864	PTRE 6-2/15	1
3069886	FBP 2/15	1

Jumper

3032470	FBS 6-8	1

Test plug

Order No.	Type	Required quantity
3001693	FTPR 2/15	1

Jumper

3030284	FBS 2-8	3
3030297	FBS 3-8	2

Test terminal strip, multi-position with PT ... push-in connection, for PTWE ... wall mounting

The modular FAME measuring transducer test system, with the innovative push-in connection technology, enables all transformer testing tasks to be carried out quickly and safely. The transformer is short-circuited and the testing device is looped in automatically through the insertion process.

- The test terminal strips can be used universally for current and voltage transducers
- The test terminal strip can be mounted on the control cabinet door or on the DIN rail
- Signal and status messages can be wired in combination in a test terminal strip
- The correct switching sequence when removing the test plug is ensured by a locking device and a mechanical drive in the twist grip
- All test signals can be connected with touch-proof safety test leads (CAT III and CAT IV/1000 V according to EN 61010-031)
- All versions listed can be equipped with coding for the matching test plug
- Star points of the current transformer can easily be created in the test terminal strip on the rear by means of FBS jumpers.
- You can find corresponding accessories from page 99

Notes:

To create panel cutouts, see phoenixcontact.net/products.

[1]) Derating curve available on request.

[2]) Rated surge voltage of 5 kV.

6 (10) mm², 30 A, 4 ... 25-pos. test terminal strip, for wall mounting

Technical data

Max. electrical data	$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
	30	**400[2])**	**0.5 - 10**	**20 - 8**
Rated data	IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage [V]	400[2])	-	-	-
Nominal current / cross section [A] / [mm²]	24[1])/6	-	-	-
Rated cross section [mm²]	6	-	-	-
Cross section range AWG	20 - 8	-	-	-
Connection capacity	solid	stranded	ferrule with/without plastic sleeve	
1 conductor [mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule [mm²]				0.5 - 1.5
Plug-in connection cross sections [mm²]	1 - 10	-	1 - 6	1 - 6
General data				
Stripping length [mm]	12			
Tightening torque for wall fastening [Nm]	0.8 - 1			
Panel thickness [mm]	1 - 4			
Insulating material	PA			
Inflammability class according to UL 94	V0			

Ordering data

Description	No. of pos.	Color	Type	I_{max}	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting,						
4-pos.		gray	**PTWE 6-2/4**		**3069827**	1
5-pos.		gray	**PTWE 6-2/5**		**3069828**	1
9-pos.		gray	**PTWE 6-2/9**		**3069832**	1
10-pos.		gray	**PTWE 6-2/10**		**3069833**	1
12-pos.		gray	**PTWE 6-2/12**		**3069835**	1
14 pos.		gray	**PTWE 6-2/14**		**3069837**	1
15-pos.		gray	**PTWE 6-2/15**		**3069838**	1
17-pos.		gray	**PTWE 6-2/17**		**3069840**	1
19 pos.		gray	**PTWE 6-2/19**		**3069842**	1
20 pos.		gray	**PTWE 6-2/20**		**3069843**	1
21 pos.		gray	**PTWE 6-2/21**		**3069844**	1
22 pos.		gray	**PTWE 6-2/22**		**3069845**	1
25 pos.		gray	**PTWE 6-2/25**		**3069848**	1

Accessories

Jumper						
	2	red	**FBS 2-8**	24 A	**3030284**	10
	3	red	**FBS 3-8**	24 A	**3030297**	10
	4	red	**FBS 4-8**	24 A	**3030307**	10
	5	red	**FBS 5-8**	24 A	**3030310**	10
	6	red	**FBS 6-8**	24 A	**3032470**	10
	10	red	**FBS 10-8**	24 A	**3030323**	10
Jumper						
	16	red	**FBSR 16-8**	24 A	**3033816**	10
Pre-assembled bridge, labeled						
3-pos., positions 1, 3	3	red	**FBS 1/3-8**	24 A	**3032363**	10
4-pos., positions 1, 4	4	red	**FBS 1/4-8**	24 A	**3032376**	10
5-pos., positions 1, 3, 5	5	red	**FBS 1/3/5-8**	24 A	**3032389**	10
10-pos., positions 1, 4, 7, 10	10	red	**FBS 1/4/7/10-8**	24 A	**3032402**	10
Cover profile, supply length 1 m		transparent	**AP RSC-T**		**3059139**	10
Cover profile holder, can be snapped on and sealed		gray	**APH-UTWE 6-2**		**3069057**	10
Screwdriver			**SF-SL 0,8X4,0-100**		**1212551**	10
Lateral groove labeling			**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**			

Test terminal strip, multi-position with PT ... push-in connection, for PTRE ... DIN rail mounting

6 (10) mm², 30 A, 4 ... 25-pos. test terminal strip, for DIN rail mounting

Notes:

1) Derating curve available on request.

2) Rated surge voltage of 5 kV.

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400²)**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400²)	-	-	-
Nominal current / cross section	[A] / [mm²]	24¹)/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	No. of pos.	Color	Type	I_{max}	Order No.	Pcs. / Pkt.
Test terminal strip, for DIN rail mounting, 4-pos.		gray	**PTRE 6-2/4**		**3069849**	1
5-pos.		gray	**PTRE 6-2/5**		**3069850**	1
9-pos.		gray	**PTRE 6-2/9**		**3069854**	1
10-pos.		gray	**PTRE 6-2/10**		**3069855**	1
12-pos.		gray	**PTRE 6-2/12**		**3069861**	1
14 pos.		gray	**PTRE 6-2/14**		**3069863**	1
15-pos.		gray	**PTRE 6-2/15**		**3069864**	1
17-pos.		gray	**PTRE 6-2/17**		**3069866**	1
19 pos.		gray	**PTRE 6-2/19**		**3069868**	1
20 pos.		gray	**PTRE 6-2/20**		**3069869**	1
21 pos.		gray	**PTRE 6-2/21**		**3069870**	1
22 pos.		gray	**PTRE 6-2/22**		**3069871**	1
25 pos.		gray	**PTRE 6-2/25**		**3069874**	1

Accessories

Jumper						
	2	red	**FBS 2-8**	24 A	**3030284**	10
	3	red	**FBS 3-8**	24 A	**3030297**	10
	4	red	**FBS 4-8**	24 A	**3030307**	10
	5	red	**FBS 5-8**	24 A	**3030310**	10
	6	red	**FBS 6-8**	24 A	**3032470**	10
	10	red	**FBS 10-8**	24 A	**3030323**	10
Jumper						
	16	red	**FBSR 16-8**	24 A	**3033816**	10
Pre-assembled bridge, labeled						
3-pos., positions 1, 3	3	red	**FBS 1/3-8**	24 A	**3032363**	10
4-pos., positions 1, 4	4	red	**FBS 1/4-8**	24 A	**3032376**	10
5-pos., positions 1, 3, 5	5	red	**FBS 1/3/5-8**	24 A	**3032389**	10
10-pos., positions 1, 4, 7, 10	10	red	**FBS 1/4/7/10-8**	24 A	**3032402**	10
Cover profile, supply length 1 m		transparent	**AP-ME**	**METER**	**3034361**	10
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers		gray	**APH-ME**		**3034374**	10
Holder, for AP-ME cover profile		gray	**APT-ME**		**3034358**	10
Screwdriver			**SF-SL 0,8X4,0-100**		**1212551**	10
Lateral groove labeling			**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**			

Test terminal strip, multi-position with UT ... screw connection, for UTWE ... wall mounting

The modular FAME measuring transducer test system, with universal screw connection technology, enables all transformer testing tasks to be carried out quickly and safely. The transformer is short-circuited and the testing device is looped in automatically through the insertion process.

- The test terminal strips can be used universally for current and voltage transducers
- The test terminal strip can be mounted on the control cabinet door or on the DIN rail
- Signal and status messages can be wired in combination in a test terminal strip
- The correct switching sequence when removing the test plug is ensured by a locking device and a mechanical drive in the twist grip
- All test signals can be connected with touch-proof safety test leads (CAT III and CAT IV/1000 V according to EN 61010-031)
- All versions listed can be equipped with coding for the matching test plug
- Star points of the current transformer can easily be created in the test terminal strip on the rear by means of FBS jumpers
- You can find corresponding accessories from page 99

Notes:

To create panel cutouts, see phoenixcontact.net/products.

[1]) Derating curve available on request.

[2]) Rated surge voltage of 5 kV.

6 (10) mm², 30 A, 4 ... 25-pos. test terminal strip, for wall mounting

Technical data

Max. electrical data	$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
	30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data	IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage [V]	400[2])	-	-	-
Nominal current / cross section [A] / [mm²]	24[1])/6	-	-	-
Rated cross section [mm²]	6	-	-	-
Cross section range AWG	24 - 8	-	-	-
Connection capacity	solid	stranded	ferrule with/without plastic sleeve	
1 conductor [mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type) [mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule [mm²]				0.5 - 2.5
General data				
Stripping length [mm]	10			
Screw thread	M4			
Tightening torque [Nm]	1.5 - 1.8			
Tightening torque for wall fastening [Nm]	0.8 - 1			
Panel thickness [mm]	1 - 4			
Insulating material	PA			
Inflammability class according to UL 94	V0			

Ordering data

Description	No. of pos.	Color	Type	I_{max}	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting,						
4-pos.		gray	**UTWE 6-2/4**		**3069650**	1
5-pos.		gray	**UTWE 6-2/5**		**3069651**	1
9-pos.		gray	**UTWE 6-2/9**		**3069656**	1
10-pos.		gray	**UTWE 6-2/10**		**3069658**	1
12-pos.		gray	**UTWE 6-2/12**		**3069660**	1
14 pos.		gray	**UTWE 6-2/14**		**3069663**	1
15-pos.		gray	**UTWE 6-2/15**		**3069664**	1
17-pos.		gray	**UTWE 6-2/17**		**3069667**	1
19 pos.		gray	**UTWE 6-2/19**		**3069672**	1
20 pos.		gray	**UTWE 6-2/20**		**3069673**	1
21 pos.		gray	**UTWE 6-2/21**		**3069800**	1
22 pos.		gray	**UTWE 6-2/22**		**3069801**	1
25 pos.		gray	**UTWE 6-2/25**		**3069804**	1

Accessories

Jumper						
	2	red	**FBS 2-8**	24 A	**3030284**	10
	3	red	**FBS 3-8**	24 A	**3030297**	10
	4	red	**FBS 4-8**	24 A	**3030307**	10
	5	red	**FBS 5-8**	24 A	**3030310**	10
	6	red	**FBS 6-8**	24 A	**3032470**	10
	10	red	**FBS 10-8**	24 A	**3030323**	10
Jumper						
	16	red	**FBSR 16-8**	24 A	**3033816**	10
Pre-assembled bridge, labeled						
3-pos., positions 1, 3	3	red	**FBS 1/3-8**	24 A	**3032363**	10
4-pos., positions 1, 4	4	red	**FBS 1/4-8**	24 A	**3032376**	10
5-pos., positions 1, 3, 5	5	red	**FBS 1/3/5-8**	24 A	**3032389**	10
10-pos., positions 1, 4, 7, 10	10	red	**FBS 1/4/7/10-8**	24 A	**3032402**	10
Cover profile, supply length 1 m		transparent	**AP RSC-T**		**3059139**	10
Cover profile holder, can be snapped on and sealed		gray	**APH-UTWE 6-2**		**3069057**	10
Screwdriver			**SF-SL 0,8X4,0-100**		**1212551**	10
Lateral groove labeling			**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**			

Test terminal strip, multi-position with UT ... screw connection, for UTRE ... DIN rail mounting

6 (10) mm², 30 A, 4 ... 25-pos. test terminal strip, for DIN rail mounting

Notes:

1) Derating curve available on request.

2) Rated surge voltage of 5 kV.

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400²)**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400²)	-	-	-
Nominal current / cross section	[A] / [mm²]	24¹)/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	No. of pos.	Color	Type	I_{max}	Order No.	Pcs. / Pkt.
Test terminal strip, for DIN rail mounting,						
4-pos.		gray	**UTRE 6-2/4**		**3069805**	1
5-pos.		gray	**UTRE 6-2/5**		**3069806**	1
9-pos.		gray	**UTRE 6-2/9**		**3069810**	1
10-pos.		gray	**UTRE 6-2/10**		**3069811**	1
12-pos.		gray	**UTRE 6-2/12**		**3069813**	1
14 pos.		gray	**UTRE 6-2/14**		**3069815**	1
15-pos.		gray	**UTRE 6-2/15**		**3069816**	1
17-pos.		gray	**UTRE 6-2/17**		**3069818**	1
19 pos.		gray	**UTRE 6-2/19**		**3069820**	1
20 pos.		gray	**UTRE 6-2/20**		**3069821**	1
21 pos.		gray	**UTRE 6-2/21**		**3069822**	1
22 pos.		gray	**UTRE 6-2/22**		**3069823**	1
25 pos.		gray	**UTRE 6-2/25**		**3069826**	1

Accessories

Jumper						
	2	red	**FBS 2-8**	24 A	**3030284**	10
	3	red	**FBS 3-8**	24 A	**3030297**	10
	4	red	**FBS 4-8**	24 A	**3030307**	10
	5	red	**FBS 5-8**	24 A	**3030310**	10
	6	red	**FBS 6-8**	24 A	**3032470**	10
	10	red	**FBS 10-8**	24 A	**3030323**	10
Jumper						
	16	red	**FBSR 16-8**	24 A	**3033816**	10
Pre-assembled bridge, labeled						
3-pos., positions 1, 3	3	red	**FBS 1/3-8**	24 A	**3032363**	10
4-pos., positions 1, 4	4	red	**FBS 1/4-8**	24 A	**3032376**	10
5-pos., positions 1, 3, 5	5	red	**FBS 1/3/5-8**	24 A	**3032389**	10
10-pos., positions 1, 4, 7, 10	10	red	**FBS 1/4/7/10-8**	24 A	**3032402**	10
Cover profile, supply length 1 m		transparent	**AP-ME**	**METER**	**3034361**	10
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers		gray	**APH-ME**		**3034374**	10
Holder, for AP-ME cover profile		gray	**APT-ME**		**3034358**	10
Screwdriver			**SF-SL 0,8X4,0-100**		**1212551**	10
Lateral groove labeling			**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**			

Test plug, multi-position, freely-configurable contact tabs FTPR ... and FTP ...

The test plugs allow the switching sequence of the individual functions to be carried out with safe chronological disconnection with a switching operation via three different contact tab lengths. Configure the lengths of the contact tabs of the test plug to suit your application. We can provide you with a test plug according to your requirements in next to no time.

- **The test plugs can be easily configured and ordered with just a click of the mouse in the product area on our website at phoenixcontact.net/products**
- **To order via fax or e-mail, please use the ordering data as shown in the ordering example on the following page**

The test plugs are characterized by:

- User-friendly twist grip function with latching
- Robust and warp resistant design
- Mechanically secure, molded contact tabs
- High-quality contact surfaces for reliable transmission of signals
- Strain relief for the connected test leads on the plug
- Flexibility in the number of positions thanks to the modular design (additional options on request)
- Large-surface marking options for each contact
- Use of CLIPLINE complete accessories for testing, bridging, and marking
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- All test signals can be connected with touch-proof safety test leads (CAT III and CAT IV/1000 V according to EN 61010-031)
- You can find corresponding accessories from page 99

Notes:

[1]) Rated surge voltage of 5 kV.

24 A, 4 ... 25-pos. test plug with twist grip or standard grip, 4 mm test sockets

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		24	**400[1])**	**0.5 - 2.5**	**20 - 14**
Rated data		IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[1])	-	-	-
Nominal current / cross section	[A] / [mm²]	24/2.5	-	-	-
Cross section range	AWG	20 - 14	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	-	0.5 - 2.5	-	-
General data					
Tightening torque: test socket screw	[Nm]	0.5 - 0.6			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test plug, with twist grip, 4-pos.	gray	**FTPR-2/4**	**3001681**	1
5-pos.	gray	**FTPR-2/5**	**3001683**	1
9-pos.	gray	**FTPR-2/9**	**3001687**	1
10-pos.	gray	**FTPR-2/10**	**3001688**	1
12-pos.	gray	**FTPR-2/12**	**3001690**	1
14 pos.	gray	**FTPR-2/14**	**3001692**	1
15-pos.	gray	**FTPR-2/15**	**3001693**	1
17-pos.	gray	**FTPR-2/17**	**3001696**	1
19 pos.	gray	**FTPR-2/19**	**3001698**	1
20 pos.	gray	**FTPR-2/20**	**3001699**	1
21 pos.	gray	**FTPR-2/21**	**3001700**	1
22 pos.	gray	**FTPR-2/22**	**3001701**	1
25 pos.	gray	**FTPR-2/25**	**3001704**	1
Test plug, with standard grip, 4-pos.	gray	**FTP-2/4**	**3001706**	1
5-pos.	gray	**FTP-2/5**	**3001707**	1
9-pos.	gray	**FTP-2/9**	**3001711**	1
10-pos.	gray	**FTP-2/10**	**3001712**	1
12-pos.	gray	**FTP-2/12**	**3001714**	1
14 pos.	gray	**FTP-2/14**	**3001716**	1
15-pos.	gray	**FTP-2/15**	**3001717**	1
17-pos.	gray	**FTP-2/17**	**3001720**	1
19 pos.	gray	**FTP-2/19**	**3001723**	1
20 pos.	gray	**FTP-2/20**	**3001724**	1
21 pos.	gray	**FTP-2/21**	**3001725**	1
22 pos.	gray	**FTP-2/22**	**3001726**	1
25 pos.	gray	**FTP-2/25**	**3001729**	1

Accessories

Fork-type cable lug, insulated according to UL	red	**C-FCI 1,5/M3**	**3240032**	100
	blue	**C-FCI 2,5/M3**	**3240037**	100
Ring cable lug, insulated according to UL	red	**C-RCI 1,5/M3**	**3240016**	100
	blue	**C-RCI 2,5/M3**	**3240021**	100
Marking		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

Ordering example: configurable test plug with twist grip function

To ensure that your order is correct, you need a defined view of how everything is counted.
This is achieved when the status window in the top view is on the left-hand side.
Position 1 is then on the left.
Each position of a test plug is described by a contact tab feature that is selected.
The following features are possible:

S	Short contact tab, gray
M	Medium contact tab, gray
L	Long contact tab, gray
LGN	Long contact tab, green
N	No contact tab, gray

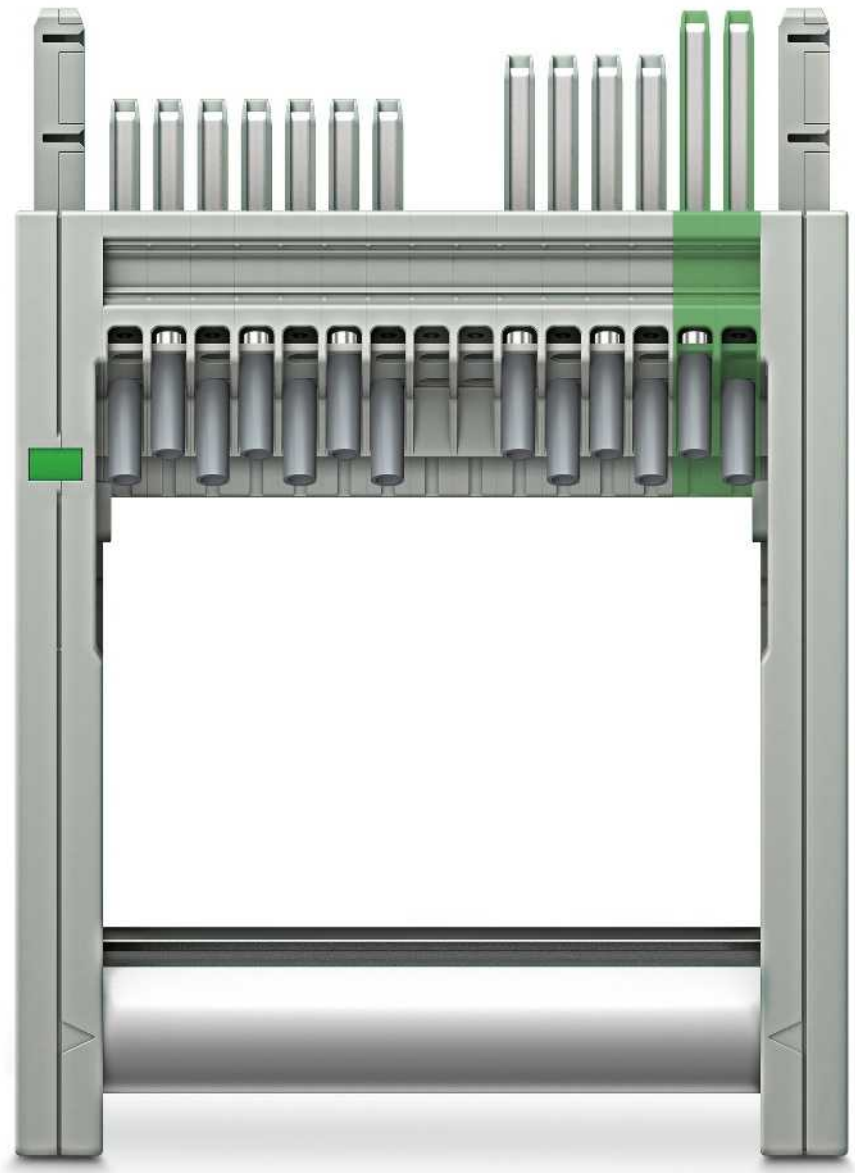
Each position with a contact tab is supplied fitted with two gray test sockets.

Ordering example:
A 15-pos. test plug with twist grip needs to be configured as follows:

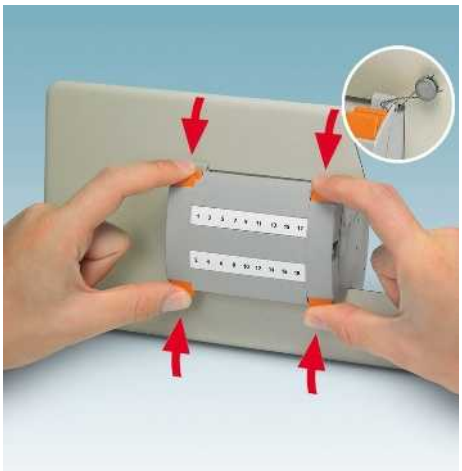
Pos. 1	Short contact tab, gray
Pos. 2	Short contact tab, gray
Pos. 3	Short contact tab, gray
Pos. 4	Short contact tab, gray
Pos. 5	Short contact tab, gray
Pos. 6	Short contact tab, gray
Pos. 7	Short contact tab, gray
Pos. 8	No contact tab, gray
Pos. 9	No contact tab, gray
Pos. 10	Medium contact tab, gray
Pos. 11	Medium contact tab, gray
Pos. 12	Medium contact tab, gray
Pos. 13	Medium contact tab, gray
Pos. 14	Long contact tab, green
Pos. 15	Long contact tab, green

The order data for this ordering example is therefore:

Order No.	Pos. 1	Pos. 2	Pos. 3	Pos. 4	Pos. 5	Pos. 6	Pos. 7	Pos. 8	Pos. 9	Pos. 10	Pos. 11	Pos. 12	Pos. 13	Pos. 14	Pos. 15
3001693	S	S	S	S	S	S	S	N	N	M	M	M	M	LGN	LGN



Blind plug, multi-position, sealable FBP-2/...



Blind plug 4 ... 25-pos.

During normal operation, the blind plug acts as a protective cover for the test terminal strip and is characterized by:

- Secure latching on the test terminal strip
- The robust latching can only be released with two-hand operation
- The optional seal protects against unauthorized actuation
- Large-surface marking options
- The coding profile set can be used to assign test terminal strips and blind plugs according to the specific application, see right-hand page

Technical data

General data	
Insulating material	PA
Inflammability class according to UL 94	V0

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Blind plug, 4-pos.	gray	**FBP-2/4**	**3069875**	1
5-pos.	gray	**FBP-2/5**	**3069876**	1
9-pos.	gray	**FBP-2/9**	**3069880**	1
10-pos.	gray	**FBP-2/10**	**3069881**	1
12-pos.	gray	**FBP-2/12**	**3069883**	1
14 pos.	gray	**FBP-2/14**	**3069885**	1
15-pos.	gray	**FBP-2/15**	**3069886**	1
17-pos.	gray	**FBP-2/17**	**3069888**	1
19 pos.	gray	**FBP-2/19**	**3069890**	1
20 pos.	gray	**FBP-2/20**	**3069891**	1
21 pos.	gray	**FBP-2/21**	**3069892**	1
22 pos.	gray	**FBP-2/22**	**3069893**	1
25 pos.	gray	**FBP-2/25**	**3069896**	1

Accessories

Lateral groove labeling	**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**

PC-...-TRI coding profile set

– The coding profile set can be used to assign test terminal strips and test plugs according to the specific application
– Maximum safety is therefore ensured for all testing tasks

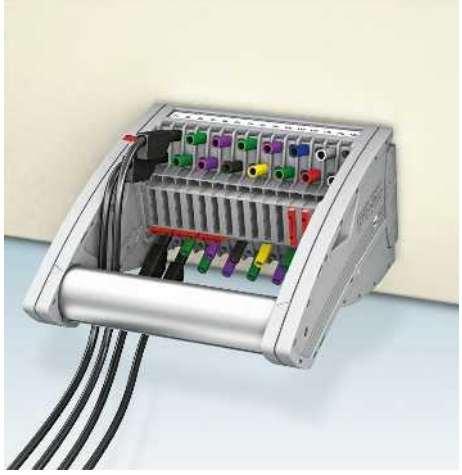
Technical data

General data	
Material	PA
Inflammability class according to UL 94	V0

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Coding profile set, for the test terminal strip	red	**PC-UTWE-TRI**	**3069897**	50
Coding profile set, for FTP-2 and FTPR-2 test plugs and FBP-2 blind plugs	red	**PC-FTP-TRI**	**3069898**	50

Colored PSBJ ... test sockets

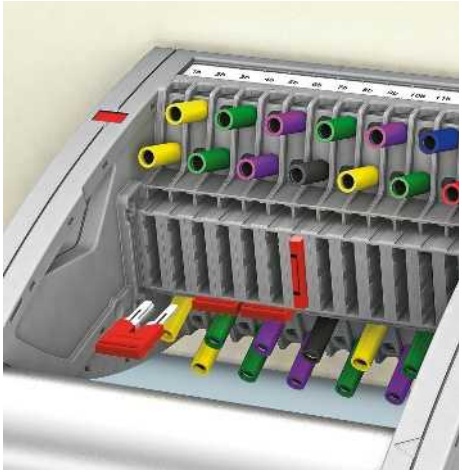


– 4 mm safety test leads with fixed insulation according to EN 61010−031 CAT III and CAT IV up to 1000 V can be coded in true color
– Additional test leads, assembled with ring and fork-type cable lugs (see accessories, e.g., page 96) can be attached with test sockets

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test socket, insulated				
	transparent	**PSBJ-URTK 6 FARBLOS**	**3026450**	10
	red	**PSBJ-URTK 6 RD**	**3026719**	10
	blue	**PSBJ-URTK 6 BU**	**3026434**	10
	yellow	**PSBJ-URTK 6 YE**	**3026405**	10
	green	**PSBJ-URTK 6 GN**	**3026418**	10
	violet	**PSBJ-URTK 6 VT**	**3026421**	10
	black	**PSBJ-URTK 6 BK**	**3026447**	10
	gray	**PSBJ-URTK 6 GY**	**3026612**	10
	brown	**PSBJ-URTK 6 BN**	**3026971**	10

Jumper, red, 8.2 mm pitch, FBS ...



– The FBS ...-8 plug-in bridges are used for short-circuiting, as star-point jumpers, and also to establish grounding in connection with a PE modular terminal block on the terminal strip

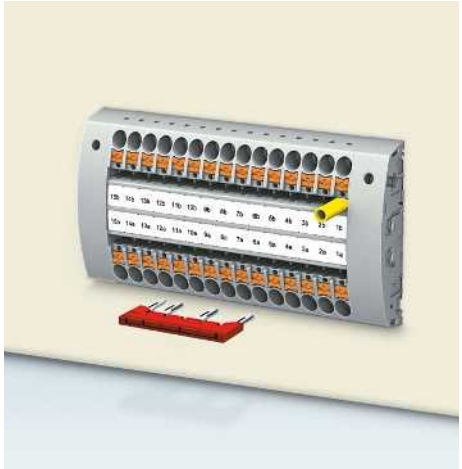
Description	No. of pos.	Ordering data: Type	I_{max}	Order No.	Pcs. / Pkt.
Jumper					
	2	**FBS 2-8**	41 A	**3030284**	10
	3	**FBS 3-8**		**3030297**	10
	4	**FBS 4-8**		**3030307**	10
	5	**FBS 5-8**		**3030310**	10
	6	**FBS 6-8**		**3032470**	10
	10	**FBS 10-8**		**3030323**	10
Jumper					
	16	**FBSR 16-8**	32 A	**3033816**	10

Jumper with extraction tool, red, 8.2 mm pitch, FBSRH ...

– The FBSRH ...-8 bridges have a molded extraction tool which means that they can be used conveniently and without tools for individual bridging tasks. This enables a transformer short circuit to be created in test disconnect terminal blocks, for example.

Description	No. of pos.	Ordering data: Type	I_{max}	Order No.	Pcs. / Pkt.
Jumper, with extraction tool					
	2	**FBSRH 2-8**	32 A	**3033802**	10
	3	**FBSRH 3-8**		**3033803**	10
	4	**FBSRH 4-8**		**3033804**	10

Pre-assembled bridge, red, 8.2 mm pitch



– Plug-in star-point jumpers or jumpers for bridging several positions can be supplied pre-configured without additional expense
– The bridges are printed and provide unique identification for bridging between non-adjacent terminal blocks

Ordering data

Description	No. of pos.	Type	I_{max}	Order No.	Pcs. / Pkt.
Pre-assembled bridge, labeled					
3-pos., positions 1, 3	3	**FBS 1/3-8**	41 A	**3032363**	10
4-pos., positions 1, 4	4	**FBS 1/4-8**		**3032376**	10
5-pos., positions 1, 3, 5	5	**FBS 1/3/5-8**		**3032389**	10
10-pos., positions 1, 4, 7, 10	10	**FBS 1/4/7/10-8**		**3032402**	10

Cover profiles for test plug or test terminal strip mounted on DIN rail

– The AP−FTP cover profile prevents undesired changes to the star point, feed-through, and short-circuit jumpers on the completely assembled test plug
– To mount, gently release the side screw connection of the plug and snap the profile into place
– The APH−ME end bracket is used in conjunction with the AP−ME cover for the DIN rail mounted test terminal strip

Technical data

General data	
Material	PVC

Ordering data

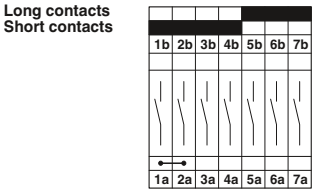
Description	Color	Type		Order No.	Pcs. / Pkt.
Cover profile, supply length 1 m	transparent	**AP-FTP**	**METER**	**3069899**	1
Cover profile, supply length 1 m	transparent	**AP-ME**	**METER**	**3034361**	10
Cover profile, supply length 1 m	transparent	**AP RSC-T**		**3059139**	10
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray	**APH-ME**		**3034374**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**		**3069057**	10

Test terminal strip with PT ... push-in connection, VDE type A7, for wall and DIN rail mounting

The **VDE A7** version described here is suitable as a plug-in test system in single-system current, voltage, and power relays, wattmetric and ground fault wiper relays, detuning level controllers or reverse power protection for generators.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
1) Derating curve available on request.
2) Rated surge voltage of 5 kV.



A7

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type A7

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400²)**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400²)	-	-	-
Nominal current / cross section	[A] / [mm²]	24¹)/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/A7**	**3069436**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type A7

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type A7

Blind plug, VDE coded type A7

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/A7	**3069449**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/A7	**3069484**	1
FTP-2/A7	**3069470**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/A7	**3069497**	1

Accessories

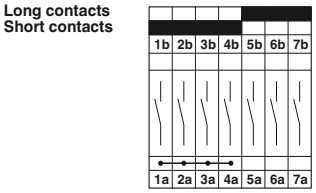
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type B7, for wall and DIN rail mounting

The **VDE B7** version described here is suitable as a plug-in test system in digital differential protection as an addition to the F19 plug-in test system, see page 120.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
1) Derating curve available on request.
2) Rated surge voltage of 5 kV.



B7

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type B7

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400²)**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400²)	-	-	-
Nominal current / cross section	[A] / [mm²]	24¹)/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/B7**	**3069437**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Description	Color	Type	Order No.	Pcs. / Pkt.
Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type B7

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type B7

Blind plug, VDE coded type B7

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/B7	**3069450**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/B7	**3069485**	1
FTP-2/B7	**3069471**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/B7	**3069498**	1

Accessories

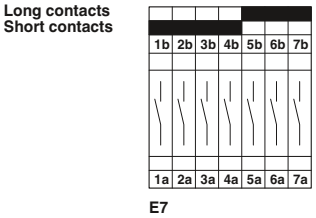
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type E7, for wall and DIN rail mounting

The **VDE E7** version described here is suitable as a plug-in test system for single-stage automatic frequency load shedding (AFLS) and as rotor ground fault protection.

- The test plugs are assembled according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type E7

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/E7**	**3069438**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Description	Color	Type	Order No.	Pcs. / Pkt.
Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type E7

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type E7

Blind plug, VDE coded type E7

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/E7	**3069451**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/E7	**3069486**	1
FTP-2/E7	**3069472**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/E7	**3069499**	1

Accessories

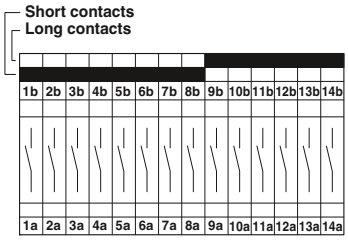
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type A14, for wall and DIN rail mounting

The **VDE A14** version described here is suitable as a plug-in test system for three-stage automatic frequency load shedding (AFLS), as zero-power comparison protection, and as stator and rotor ground fault protection.

- The test plugs are assembled according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



A14

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type A14

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/A14**	**3069439**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type A14

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type A14

Blind plug, VDE coded type A14

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/A14	**3069452**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/A14	**3069487**	1
FTP-2/A14	**3069474**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/A14	**3069500**	1

Accessories

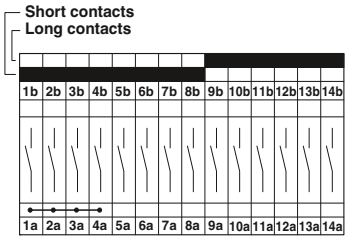
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type B14, for wall and DIN rail mounting

The **VDE B14** version described here is suitable as a plug-in test system in overcurrent directional protection, distance protection for high and medium voltage, as well as voltage regulation.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



B14

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type B14

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/B14**	**3069440**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type B14

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type B14

Blind plug, VDE coded type B14

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/B14	**3069453**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/B14	**3069488**	1
FTP-2/B14	**3069475**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/B14	**3069501**	1

Accessories

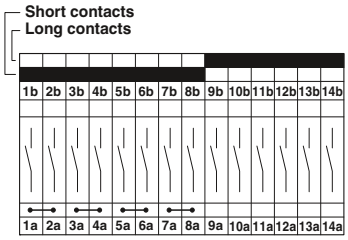
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type C14, for wall and DIN rail mounting

The **VDE C14** version described here is suitable as a plug-in test system in overcurrent time protection, unbalanced load protection, and stator ground fault protection for busbar operation.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
1) Derating curve available on request.
2) Rated surge voltage of 5 kV.



C14

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type C14

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400²)**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400²)	-	-	-
Nominal current / cross section	[A] / [mm²]	24¹)/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/C14**	**3069441**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type C14

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type C14

Blind plug, VDE coded type C14

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/C14	**3069454**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/C14	**3069489**	1
FTP-2/C14	**3069476**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/C14	**3069502**	1

Accessories

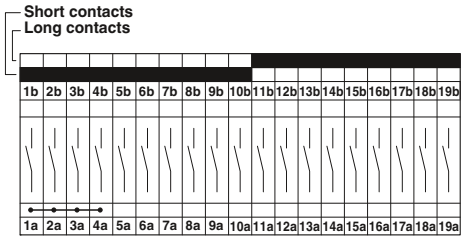
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type B19, for wall and DIN rail mounting

The **VDE B19** version described here is suitable as a plug-in test system in distance protection for high voltage.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



B19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type B19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/B19**	**3069442**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Description	Color	Type	Order No.	Pcs. / Pkt.
Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type B19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type B19

Blind plug, VDE coded type B19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/B19	**3069455**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/B19	**3069490**	1
FTP-2/B19	**3069477**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/B19	**3069503**	1

Accessories

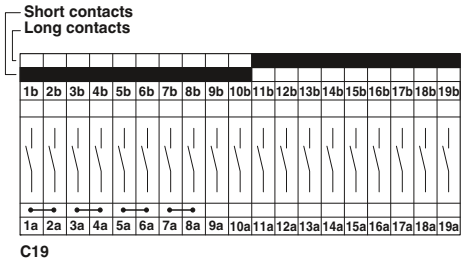
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type C19, for wall and DIN rail mounting

The **VDE C19** version described here is suitable as a plug-in test system in distance protection as system busbar protection, overcurrent directional protection, and current comparison protection for cables.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



C19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type C19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/C19**	**3069443**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type C19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type C19

Blind plug, VDE coded type C19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/C19	**3069456**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/C19	**3069491**	1
FTP-2/C19	**3069478**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/C19	**3069504**	1

Accessories

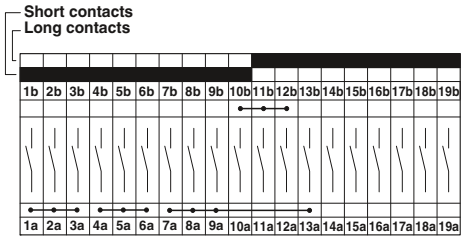
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type D19, for wall and DIN rail mounting

The **VDE D19** version described here is suitable as a plug-in test system for electromechanical differential protection for transformers.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
1) Derating curve available on request.
2) Rated surge voltage of 5 kV.



D19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type D19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400²)**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400²)	-	-	-
Nominal current / cross section	[A] / [mm²]	24¹)/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/D19**	**3069444**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type D19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type D19

Blind plug, VDE coded type D19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/D19	**3069457**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/D19	**3069492**	1
FTP-2/D19	**3069479**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/D19	**3069671**	1

Accessories

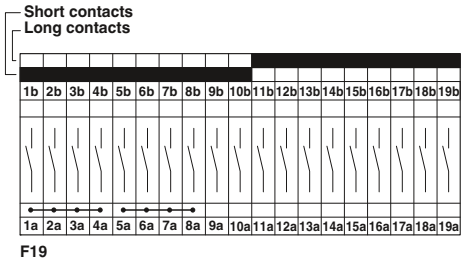
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type F19, for wall and DIN rail mounting

The **VDE F19** version described here is suitable as a plug-in test system in electromechanical differential protection for transformers, generators, motors, and cables.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



F19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type F19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/F19**	**3069445**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type F19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type F19

Blind plug, VDE coded type F19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/F19	**3069458**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/F19	**3069493**	1
FTP-2/F19	**3069480**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/F19	**3069675**	1

Accessories

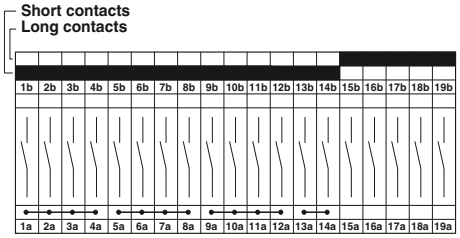
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type G19, for wall and DIN rail mounting

The **VDE G19** version described here is suitable as a plug-in test system in digital differential protection for transformers.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



G19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type G19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/G19**	**3069446**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type G19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type G19

Blind plug, VDE coded type G19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/G19	**3069459**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/G19	**3069494**	1
FTP-2/G19	**3069481**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/G19	**3069676**	1

Accessories

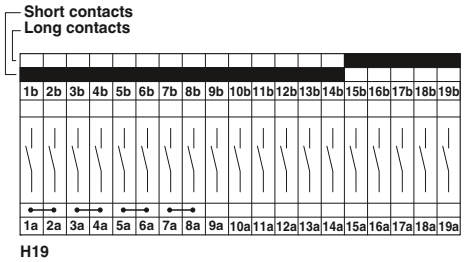
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type H19, for wall and DIN rail mounting

The **VDE H19** version described here is suitable as a plug-in test system in overcurrent directional protection and distance protection as system protection.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
1) Derating curve available on request.
2) Rated surge voltage of 5 kV.



6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type H19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400²)**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400²)	-	-	-
Nominal current / cross section	[A] / [mm²]	24¹)/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/H19**	**3069447**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Description	Color	Type	Order No.	Pcs. / Pkt.
Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type H19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type H19

Blind plug, VDE coded type H19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/H19	**3069460**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/H19	**3069495**	1
FTP-2/H19	**3069482**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/H19	**3069677**	1

Accessories

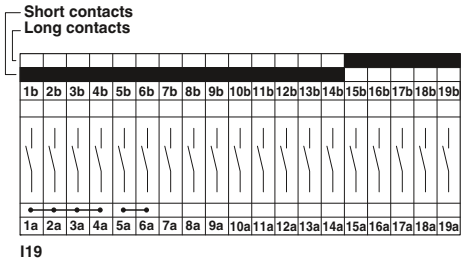
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with PT ... push-in connection, VDE type I19, for wall and DIN rail mounting

The **VDE I19** version described here is suitable as a plug-in test system in medium voltage, outlet, and coupling protection, including selective ground fault detection.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
1) Derating curve available on request.
2) Rated surge voltage of 5 kV.



I19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type I19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400²)**	**0.5 - 10**	**20 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400²)	-	-	-
Nominal current / cross section	[A] / [mm²]	24¹)/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	20 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
Plug-in connection cross sections	[mm²]	1 - 10	-	1 - 6	1 - 6
General data					
Stripping length	[mm]	12			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**PTWE 6-2/I19**	**3069448**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type I19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type I19

Blind plug, VDE coded type I19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.5 - 10**	**20 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
20 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.5 - 10	0.5 - 6	0.5 - 6	0.5 - 6 0.5 - 1.5
1 - 10	-	1 - 6	1 - 6
12			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTRE 6-2/I19	**3069461**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/I19	**3069496**	1
FTP-2/I19	**3069483**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/I19	**3069678**	1

Accessories

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type A7, for wall and DIN rail mounting

The **VDE A7** version described here is suitable as a plug-in test system in single-system current, voltage, and power relays, wattmetric and ground fault wiper relays, detuning level controllers or reverse power protection for generators.

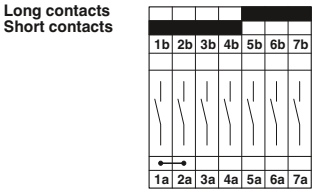
- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:

To create panel cutouts, see phoenixcontact.net/products.

[1]) Derating curve available on request.

[2]) Rated surge voltage of 5 kV.



A7

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type A7

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/A7**	**3069410**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type A7

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type A7

Blind plug, VDE coded type A7

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/A7	**3069423**	1

Accessories

AP-ME	**METER**	**3034361**	10
APH-ME		**3034374**	10
APT-ME		**3034358**	10
SF-SL 0,8X4,0-100		**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/A7	**3069484**	1
FTP-2/A7	**3069470**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/A7	**3069497**	1

Accessories

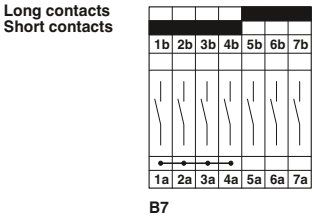
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type B7, for wall and DIN rail mounting

The **VDE B7** version described here is suitable as a plug-in test system in digital differential protection as an addition to the F19 plug-in test system, see page 120.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type B7

Technical data

Max. electrical data	$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
	30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data	IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage [V]	400[2])	-	-	-
Nominal current / cross section [A] / [mm²]	24[1])/6	-	-	-
Rated cross section [mm²]	6	-	-	-
Cross section range AWG	24 - 8	-	-	-
Connection capacity	solid	stranded	ferrule with/without plastic sleeve	
1 conductor [mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type) [mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule [mm²]				0.5 - 2.5
General data				
Stripping length [mm]	10			
Screw thread	M4			
Tightening torque [Nm]	1.5 - 1.8			
Tightening torque for wall fastening [Nm]	0.8 - 1			
Panel thickness [mm]	1 - 4			
Tightening torque: test socket screw [Nm]	-			
Insulating material	PA			
Inflammability class according to UL 94	V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/B7**	**3069411**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type B7

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type B7

Blind plug, VDE coded type B7

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/B7	**3069424**	1

Accessories

AP-ME	**METER**	**3034361**	10
APH-ME		**3034374**	10
APT-ME		**3034358**	10
SF-SL 0,8X4,0-100		**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/B7	**3069485**	1
FTP-2/B7	**3069471**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/B7	**3069498**	1

Accessories

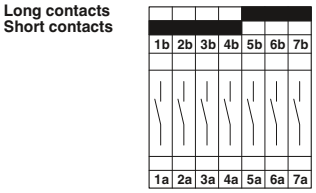
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type E7, for wall and DIN rail mounting

The **VDE E7** version described here is suitable as a plug-in test system for single-stage automatic frequency load shedding (AFLS) and as rotor ground fault protection.

- The test plugs are assembled according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



E7

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type E7

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/E7**	**3069412**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type E7

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type E7

Blind plug, VDE coded type E7

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/E7	**3069425**	1

Accessories

AP-ME	**METER**	**3034361**	10
APH-ME		**3034374**	10
APT-ME		**3034358**	10
SF-SL 0,8X4,0-100		**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/E7	**3069486**	1
FTP-2/E7	**3069472**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/E7	**3069499**	1

Accessories

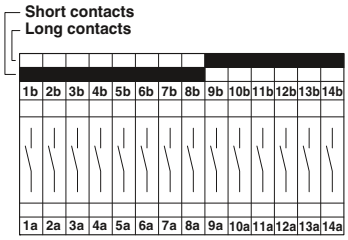
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type A14, for wall and DIN rail mounting

The **VDE A14** version described here is suitable as a plug-in test system for three-stage automatic frequency load shedding (AFLS), as zero-power comparison protection, and as stator and rotor ground fault protection.

- The test plugs are assembled according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



A14

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type A14

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/A14**	**3069413**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type A14

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type A14

Blind plug, VDE coded type A14

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/A14	**3069426**	1

Accessories

AP-ME	**METER**	**3034361**	10
APH-ME		**3034374**	10
APT-ME		**3034358**	10
SF-SL 0,8X4,0-100		**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/A14	**3069487**	1
FTP-2/A14	**3069474**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/A14	**3069500**	1

Accessories

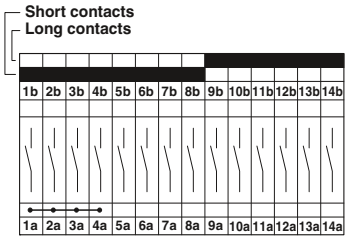
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type B14, for wall and DIN rail mounting

The **VDE B14** version described here is suitable as a plug-in test system in overcurrent directional protection, distance protection for high and medium voltage, as well as voltage regulation.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



B14

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type B14

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/B14**	**3069414**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type B14

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type B14

Blind plug, VDE coded type B14

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/B14	**3069427**	1

Accessories

AP-ME	**METER**	**3034361**	10
APH-ME		**3034374**	10
APT-ME		**3034358**	10
SF-SL 0,8X4,0-100		**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/B14	**3069488**	1
FTP-2/B14	**3069475**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/B14	**3069501**	1

Accessories

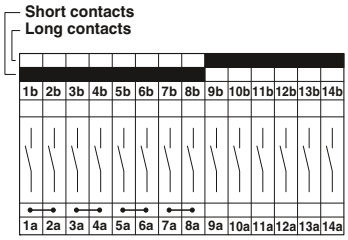
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type C14, for wall and DIN rail mounting

The **VDE C14** version described here is suitable as a plug-in test system in overcurrent time protection, unbalanced load protection, and stator ground fault protection for busbar operation.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



C14

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type C14

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/C14**	**3069415**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type C14

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type C14

Blind plug, VDE coded type C14

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/C14	**3069428**	1

Accessories

AP-ME	**METER**	**3034361**	10
APH-ME		**3034374**	10
APT-ME		**3034358**	10
SF-SL 0,8X4,0-100		**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/C14	**3069489**	1
FTP-2/C14	**3069476**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/C14	**3069502**	1

Accessories

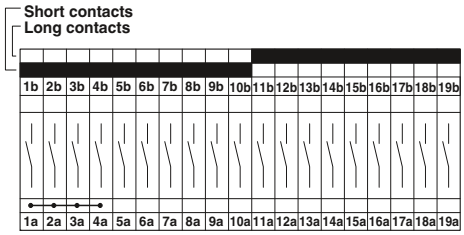
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type B19, for wall and DIN rail mounting

The **VDE B19** version described here is suitable as a plug-in test system in distance protection for high voltage.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



B19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type B19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/B19**	**3069416**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type B19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type B19

Blind plug, VDE coded type B19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/B19	**3069429**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/B19	**3069490**	1
FTP-2/B19	**3069477**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/B19	**3069503**	1

Accessories

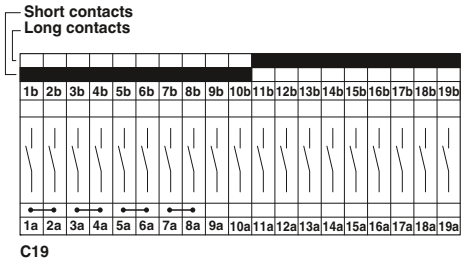
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type C19, for wall and DIN rail mounting

The **VDE C19** version described here is suitable as a plug-in test system in distance protection as system busbar protection, overcurrent directional protection, and current comparison protection for cables.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



C19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type C19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/C19**	**3069417**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type C19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type C19

Blind plug, VDE coded type C19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/C19	**3069430**	1

Accessories

AP-ME	**METER**	**3034361**	10
APH-ME		**3034374**	10
APT-ME		**3034358**	10
SF-SL 0,8X4,0-100		**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/C19	**3069491**	1
FTP-2/C19	**3069478**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/C19	**3069504**	1

Accessories

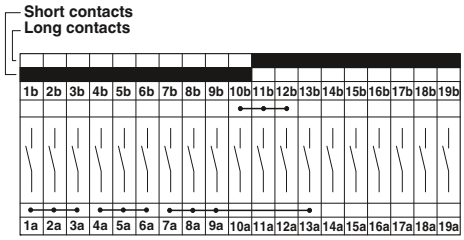
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type D19, for wall and DIN rail mounting

The **VDE D19** version described here is suitable as a plug-in test system for electromechanical differential protection for transformers.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
1) Derating curve available on request.
2) Rated surge voltage of 5 kV.



D19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type D19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400²)**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400²)	-	-	-
Nominal current / cross section	[A] / [mm²]	24¹)/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/D19**	**3069418**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type D19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type D19

Blind plug, VDE coded type D19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/D19	**3069431**	1

Accessories

AP-ME	**METER**	**3034361**	10
APH-ME		**3034374**	10
APT-ME		**3034358**	10
SF-SL 0,8X4,0-100		**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/D19	**3069492**	1
FTP-2/D19	**3069479**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/D19	**3069671**	1

Accessories

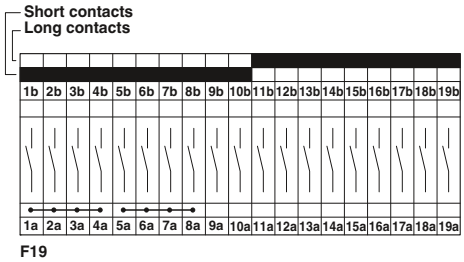
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type F19, for wall and DIN rail mounting

The **VDE F19** version described here is suitable as a plug-in test system in electromechanical differential protection for transformers, generators, motors, and cables.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



F19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type F19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/F19**	**3069419**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type F19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type F19

Blind plug, VDE coded type F19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/F19	**3069432**	1

Accessories

AP-ME	**METER**	**3034361**	10
APH-ME		**3034374**	10
APT-ME		**3034358**	10
SF-SL 0,8X4,0-100		**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/F19	**3069493**	1
FTP-2/F19	**3069480**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/F19	**3069675**	1

Accessories

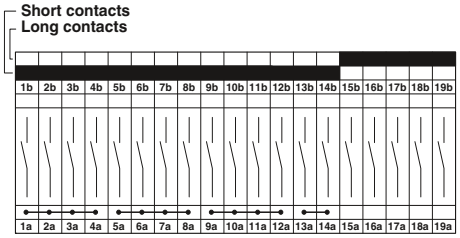
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type G19, for wall and DIN rail mounting

The **VDE G19** version described here is suitable as a plug-in test system in digital differential protection for transformers.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



G19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type G19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/G19**	**3069420**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated				
	transparent			
	red			
	blue			
	yellow			
	green			
	violet			
	black			
	gray			
	brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red			
	blue			
Ring cable lug, insulated according to UL	red			
	blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type G19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type G19

Blind plug, VDE coded type G19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/G19	**3069433**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/G19	**3069494**	1
FTP-2/G19	**3069481**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/G19	**3069676**	1

Accessories

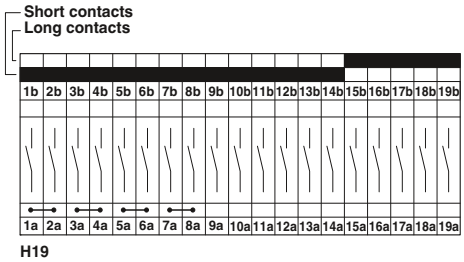
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type H19, for wall and DIN rail mounting

The **VDE H19** version described here is suitable as a plug-in test system in overcurrent directional protection and distance protection as system protection.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



H19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type H19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/H19**	**3069421**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type H19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type H19

Blind plug, VDE coded type H19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/H19	**3069434**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/H19	**3069495**	1
FTP-2/H19	**3069482**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/H19	**3069677**	1

Accessories

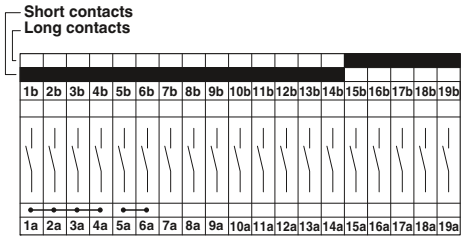
UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Test terminal strip with UT ... screw connection, VDE type I19, for wall and DIN rail mounting

The **VDE I19** version described here is suitable as a plug-in test system in medium voltage, outlet, and coupling protection, including selective ground fault detection.

- The test plugs are assembled with jumpers and contact tab lengths according to the circuit diagram
- A transparent covering hood protects the jumpers. The covering hood can only be removed by dismantling the test plug
- All VDE-specified 7, 14, and 19-pos. versions are supplied with exclusive coding for the matching test plug and blind plug
- The components are supplied pre-marked according to the VDE Directive
- Test signals can be connected with touch-proof safety test leads (CAT III and IV/1000 V according to EN 61010-031)
- The test plugs are equipped with two gray test sockets per position, for further color versions, see the range of accessories
- Additional test leads, assembled with ring and fork-type cable lugs, can be attached with test sockets
- Other VDE versions available on request

Notes:
To create panel cutouts, see phoenixcontact.net/products.
[1]) Derating curve available on request.
[2]) Rated surge voltage of 5 kV.



I19

6 (10) mm², 30 A, test terminal strip, for wall mounting, VDE coded type I19

Technical data

Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		30	**400[2])**	**0.2 - 10**	**24 - 8**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400[2])	-	-	-
Nominal current / cross section	[A] / [mm²]	24[1])/6	-	-	-
Rated cross section	[mm²]	6	-	-	-
Cross section range	AWG	24 - 8	-	-	-
Connection capacity		solid	stranded	ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
2 conductors (of the same type)	[mm²]	0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
2 stranded conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	10			
Screw thread		M4			
Tightening torque	[Nm]	1.5 - 1.8			
Tightening torque for wall fastening	[Nm]	0.8 - 1			
Panel thickness	[mm]	1 - 4			
Tightening torque: test socket screw	[Nm]	-			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Test terminal strip, for wall mounting	gray	**UTWE 6-2/I19**	**3069422**	1
Test terminal strip, for mounting on NS 35...	gray			
Test plug, with twist grip	gray			
With standard handle	gray			
Test plug, 1-pos., with cover	gray			
Blind plug, sealable	gray			

Accessories

Test socket, insulated	transparent red blue yellow green violet black gray brown			
Cover profile, supply length 1 m	transparent	**AP RSC-T**	**3059139**	10
Cover profile holder, can be snapped on and sealed	gray	**APH-UTWE 6-2**	**3069057**	10
Cover profile, supply length 1 m	transparent			
End brackets, for AP-ME cover profile, sealable, with storage option for jumpers	gray			
Holder, for AP-ME cover profile	gray			
Fork-type cable lug, insulated according to UL	red blue			
Ring cable lug, insulated according to UL	red blue			
Screwdriver		**SF-SL 0,8X4,0-100**	**1212551**	10
Lateral groove labeling		**UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)**		

6 (10) mm², 30 A, test terminal strip, for DIN rail mounting, VDE coded type I19

24 A, test plug, bridge assignment according to circuit diagram, VDE coded type I19

Blind plug, VDE coded type I19

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
30	**400²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24¹)/6	-	-	-
6	-	-	-
24 - 8	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 2.5
10			
M4			
1.5 - 1.8			
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTRE 6-2/I19	**3069435**	1

Accessories

AP-ME METER	**3034361**	10
APH-ME	**3034374**	10
APT-ME	**3034358**	10
SF-SL 0,8X4,0-100	**1212551**	10

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
24	**400²)**	**0.5 - 2.5**	**20 - 14**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400²)	-	-	-
24/2.5	-	-	-
6	-	-	-
20 - 14	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	0.5 - 2.5	-	-
-	-	-	-
-			
-			
-			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
FTPR-2/I19	**3069496**	1
FTP-2/I19	**3069483**	1
FTP-2/1	**3069469**	1

Accessories

PSBJ-URTK 6 FARBLOS	**3026450**	10
PSBJ-URTK 6 RD	**3026719**	10
PSBJ-URTK 6 BU	**3026434**	10
PSBJ-URTK 6 YE	**3026405**	10
PSBJ-URTK 6 GN	**3026418**	10
PSBJ-URTK 6 VT	**3026421**	10
PSBJ-URTK 6 BK	**3026447**	10
PSBJ-URTK 6 GY	**3026612**	10
PSBJ-URTK 6 BN	**3026971**	10
C-FCI 1,5/M3	**3240032**	100
C-FCI 2,5/M3	**3240037**	100
C-RCI 1,5/M3	**3240016**	100
C-RCI 2,5/M3	**3240021**	100

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Technical data

		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
-			
-			
PA			
V0			

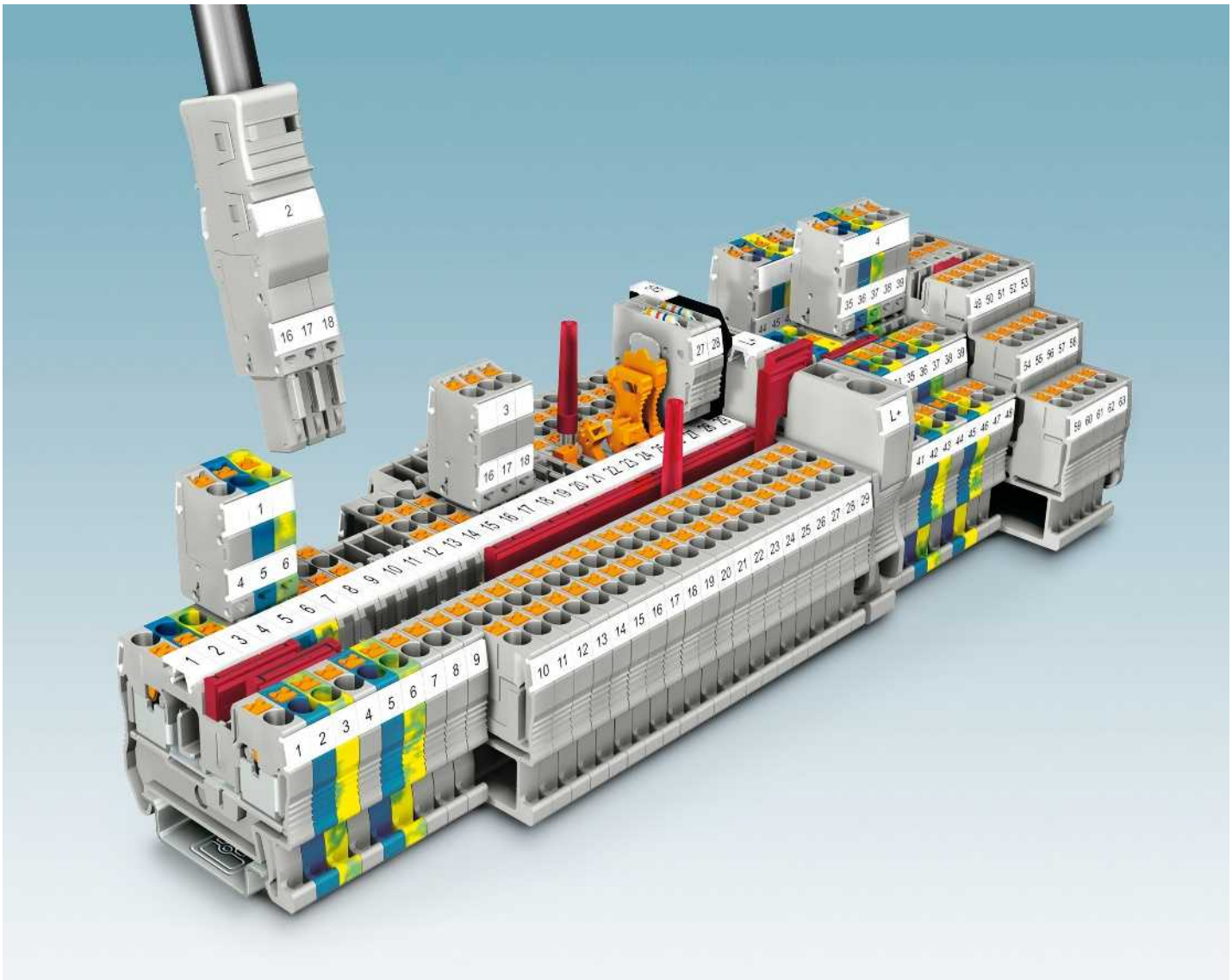
Ordering data

Type	Order No.	Pcs. / Pkt.
FBP-2/I19	**3069678**	1

Accessories

UC-TM 8, UCT-TM 8, ZB 8 or TMT (EX9,5)R (see Catalog 5)

Modular terminal blocks - CLIPLINE complete

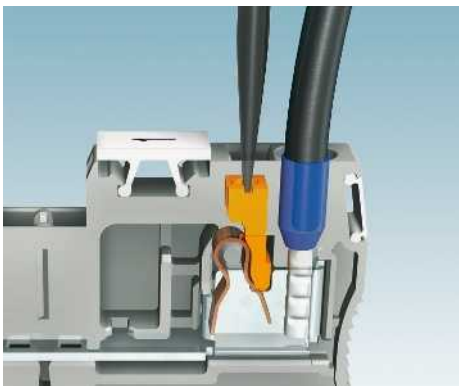


Push-in connection technology

The PT series is characterized by the easy, direct conductor connection and makes consistent use of the benefits of the CLIPLINE complete system.

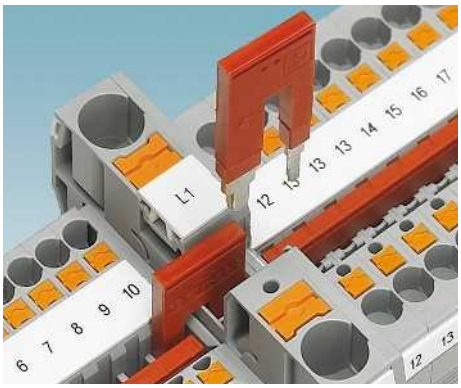
Easy insertion

The up to 50 percent reduction in insertion force offered by push-in technology supports simple and direct insertion of solid and stranded conductors featuring ferrules with a cross section of 0.34 mm² or higher.

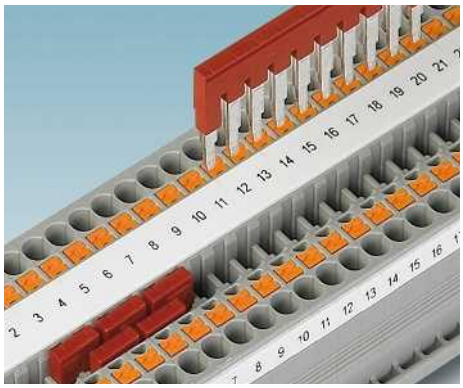


Latch function

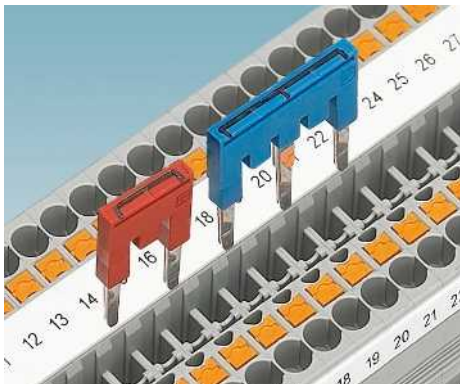
The integrated latch allows you to release connections with any type of tool – easily and without direct contact with live parts.



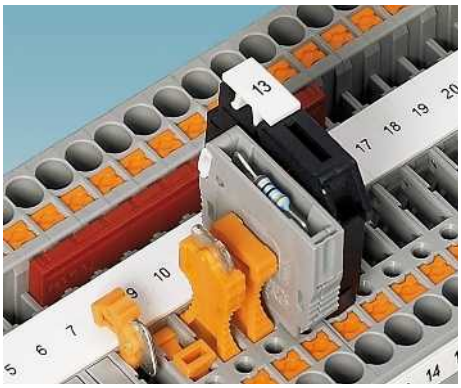
The reducing bridge allows terminal blocks with different nominal cross sections to be connected with ease, e.g., a PT 10 push-in terminal block to a PT 2,5. Power blocks can be created quickly using the reducing bridge.



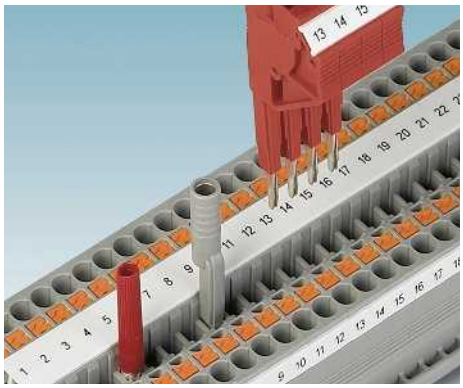
The double function shaft can be used to connect any number of terminal blocks with two-position bridges. The 2 to 50-pos. bridges allow up to 50 terminal blocks to be bridged in one step.



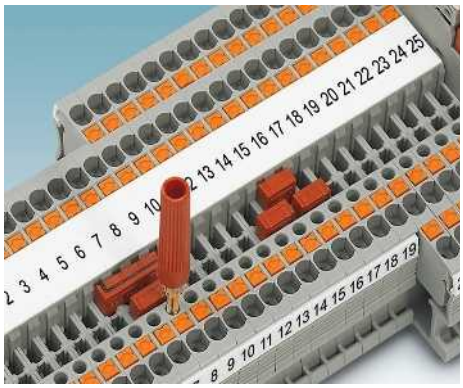
Bridging between non-adjacent terminal blocks is created by removing individual contact tabs from the standard bridge. Two potentials can then be routed in parallel through a terminal strip. The contact points can also be marked.



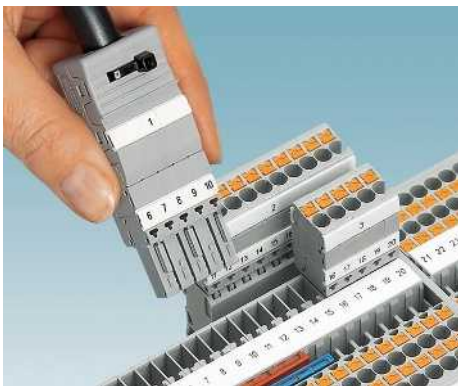
The isolated feed-through connector P-FIX, isolating plug P-DI, component plug P-CO, and the cartridge fuse plug P-FU can be used in the universal plug-in zone of the disconnect terminal block.



A test plug with a 2.3 mm diameter is available for measuring lines. All measurement and test work can be completed at speed using test adapters for 4 mm diameter test plugs and the modular test plugs.



As well as offering a testing facility in the double function shaft, all push-in technology terminal blocks offer an additional test contact for test plugs with a 2.3 mm diameter.

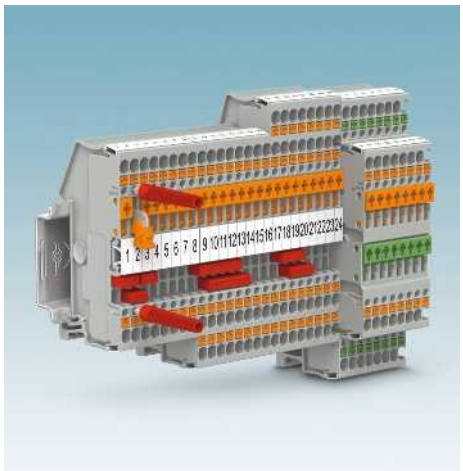


Push-in COMBI terminal blocks are available for the plug-in configuration of signal wiring. The system is touch-proof and offers plugs for self-assembly with extensive accessories.

Automatic flat-type fuse terminal blocks with a 4 mm² conductor connection are available in the same shape as the feed-through terminal blocks. All terminal blocks can be continuously bridged with one another with the double function shaft.

The compact lever-type fuse terminal blocks are of the same shape as the feed-through terminal blocks and can be labeled and bridged continuously. A time-saving potential distribution is easily created using bridging between non-adjacent terminal blocks.

PT 1,5/S... and PTT 1,5/S... push-in knife disconnect terminal blocks



- Now available for the first time with a design width of just 3.5 mm
- Testing facility on both sides of the disconnect point
- Actuation cross on the disconnect knife enables the use of different sized screwdrivers, see image below
- Same shape feed-through versions
- Clear grouping of the terminal strips through orange cover with a design width of just 0.8 mm

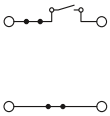
Single-level PT 1,5/S...

- Three and four-conductor terminal blocks can be used for multi-conductor connections
- Seamless and can be double bridged for all tasks in time-saving potential supply and distribution

Double-level PTT 1,5/S-2MT

- Space-saving design for maximum wiring density
- Disconnection option on each level
- The assignment from the disconnect knife to the contact points is indicated by the colored levers and the height offset

Notes:
The nominal current for PT ...MTD... terminal blocks is 17.5 A.
1) The max. load current must not be exceeded by the total current of all connected conductors.
2) Refer to the reducing bridge table; see Catalog 3.



1.5 (1.5) mm², 10 A, knife disconnect terminal block, two connections, bridgeable

Technical data

Dimensions		Width	Length	Height NS 35/7,5	
	[mm]	**3.5**	**58.9**	**32**	
Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		10	**400**	**0.14 - 1.5**	**26 - 14**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400	-	-	-
Nominal current / cross section	[A] / [mm²]	10/1.5	-	-	-
Rated cross section	[mm²]	1.5	-	-	-
Cross section range	AWG	26 - 14	-	-	-
Connection capacity		solid	stranded	Ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	0.14 - 1
Two stranded conductors with a TWIN ferrule	[mm²]				
Connection cross sections directly plug-in	[mm²]	0.25 - 1.5	-	0.34 - 1.5	0.34 - 1
General data					
Stripping length	[mm]	8			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

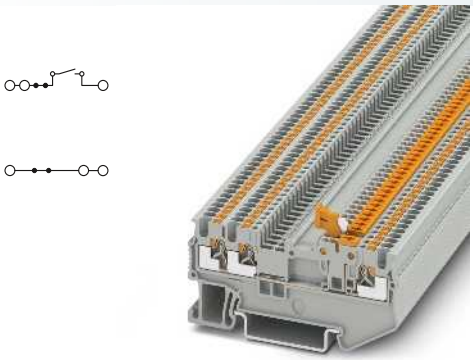
Description	No. of pos.	Color	Type	Order No.	Pcs. / Pkt.
Double-level knife disconnect terminal block, disconnection on both levels, for mounting on NS 35...		gray			
		blue			
Double-level knife disconnect terminal block, disconnection on the upper level, for mounting on NS 35...		gray			
		blue			
Knife disconnect terminal block, for mounting on NS 35...		gray	**PT 1,5/S-MT**	**3210301**	50
		blue	**PT 1,5/S-MT BU**	**3210302**	50
Feed-through terminal block, same shape, for mounting on NS 35...		gray	**PT 1,5/S-MTD**	**3210308**	50
		blue	**PT 1,5/S-MTD BU**	**3210309**	50

Accessories

Cover, 0.8 mm width		gray	**D-PT 1,5/S-MT-0,8**	**3210303**	50
		orange	**D-PT 1,5/S-MT-0,8 OG**	**3210304**	50
Jumper					
	2	red	**FBS 2-3,5**	**3213014**	50
	3	red	**FBS 3-3,5**	**3213027**	50
	4	red	**FBS 4-3,5**	**3213030**	50
	5	red	**FBS 5-3,5**	**3213043**	50
	10	red	**FBS 10-3,5**	**3213056**	50
	20	red	**FBS 20-3,5**	**3213069**	50
Reducing bridge2)					
	2	red	**RB ST (2,5/4)-1,5/S**	**3214356**	10
	2	red	**RB ST 6-1,5/S**	**3213250**	10
Partition plate, 2 mm width		gray	**ATP-ST-TWIN**	**3030789**	50
Test plug metal part, 2.3 mm Ø		silver	**MPS-MT**	**0201744**	10
Insulating sleeve, for MPS metal part		red	**MPS-IH RD**	**0201676**	10
Screwdriver			**SZF 0-0,4X2,5**	**1204504**	10

Center groove labeling	**UCT-TM 3,5 or ZB 3,5 (see Catalog 5)**
Center and side groove labeling	**UCT-TMF 3,5 or ZBF 3,5 (see Catalog 5)**

Modular terminal blocks - CLIPLINE complete



1.5 (1.5) mm², 10 A, knife disconnect terminal block, three connections, bridgeable

Technical data

Width	Length	Height NS 35/7,5	
3.5	**67.8**	**32**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
10¹)	**400**	**0.14 - 1.5**	**26 - 14**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400	-	-	-
10¹)/1.5	-	-	-
1.5	-	-	-
26 - 14	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	0.14 - 1
0.25 - 1.5	-	0.34 - 1.5	0.34 - 1
8			
PA			
V0			

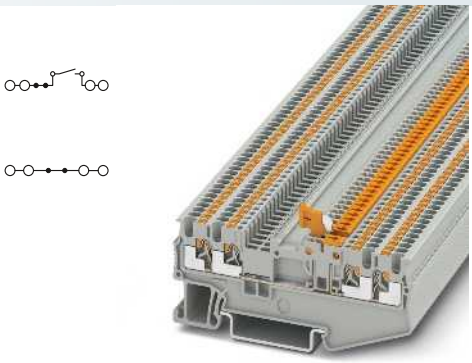
Ordering data

Type	Order No.	Pcs. / Pkt.
PT 1,5/S-TWIN-MT	**3210311**	50
PT 1,5/S-TWIN-MT BU	**3210312**	50
PT 1,5/S-TWIN-MTD	**3210317**	50
PT 1,5/S-TWIN-MTD BU	**3210319**	50

Accessories

D-PT 1,5/S-TWIN-MT-0,8	**3210313**	50
D-PT 1,5/S-TWIN-MT-0,8 OG	**3210314**	50
FBS 2-3,5	**3213014**	50
FBS 3-3,5	**3213027**	50
FBS 4-3,5	**3213030**	50
FBS 5-3,5	**3213043**	50
FBS 10-3,5	**3213056**	50
FBS 20-3,5	**3213069**	50
RB ST (2,5/4)-1,5/S	**3214356**	10
RB ST 6-1,5/S	**3213250**	10
ATP-ST-TWIN	**3030789**	50
MPS-MT	**0201744**	10
MPS-IH RD	**0201676**	10
SZF 0-0,4X2,5	**1204504**	10

UCT-TM 3,5 or ZB 3,5 (see Catalog 5)
UCT-TMF 3,5 or ZBF 3,5 (see Catalog 5)



1.5 (1.5) mm², 10 A, knife disconnect terminal block, four connections, bridgeable

Technical data

Width	Length	Height NS 35/7,5	
3.5	**76.9**	**32**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
10¹)	**400**	**0.14 - 1.5**	**26 - 16**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400	-	-	-
10¹)/1.5	-	-	-
1.5	-	-	-
26 - 16	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	0.14 - 1
0.25 - 1.5	-	0.34 - 1.5	0.34 - 1
8			
PA			
V0			

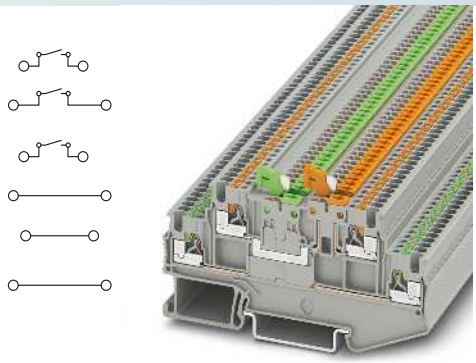
Ordering data

Type	Order No.	Pcs. / Pkt.
PT 1,5/S-QUATTRO-MT	**3210321**	50
PT 1,5/S-QUATTRO-MT BU	**3210322**	50
PT 1,5/S-QUATTRO-MTD	**3210328**	50
PT 1,5/S-QUATTRO-MTD BU	**3210329**	50

Accessories

D-PT 1,5/S-QUATTRO-MT-0,8	**3210333**	50
D-PT 1,5/S-QUATTRO-MT-0,8 OG	**3210334**	50
FBS 2-3,5	**3213014**	50
FBS 3-3,5	**3213027**	50
FBS 4-3,5	**3213030**	50
FBS 5-3,5	**3213043**	50
FBS 10-3,5	**3213056**	50
FBS 20-3,5	**3213069**	50
RB ST (2,5/4)-1,5/S	**3214356**	10
RB ST 6-1,5/S	**3213250**	10
ATP-ST QUATTRO	**3030815**	50
MPS-MT	**0201744**	10
MPS-IH RD	**0201676**	10
SZF 0-0,4X2,5	**1204504**	10

UCT-TM 3,5 or ZB 3,5 (see Catalog 5)
UCT-TMF 3,5 or ZBF 3,5 (see Catalog 5)



1.5 (1.5) mm², 8 A, double-level knife disconnect terminal block, four connections, not bridgeable

Technical data

Width	Length	Height NS 35/7,5	
3.5	**86**	**42.6**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
8	**400**	**0.14 - 1.5**	**26 - 14**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400	-	-	-
8/1.5	-	-	-
1.5	-	-	-
26 - 14	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	0.14 - 1
0.25 - 1.5	-	0.34 - 1.5	0.34 - 1
8			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTT 1,5/S-2MT	**3210351**	50
PTT 1,5/S-2MT BU	**3210352**	50
PTT 1,5/S-L/MT	**3210341**	50
PTT 1,5/S-L/MT BU	**3210342**	50
PTT 1,5/S-2L	**3210356**	50
PTT 1,5/S-2L BU	**3210357**	50

Accessories

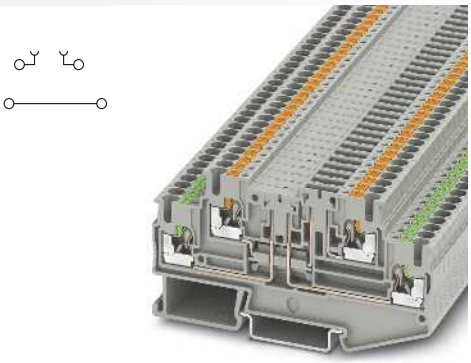
D-PTT 1,5/S-2MT-0,8	**3210353**	50
D-PTT 1,5/S-2MT-0,8 OG	**3210354**	50
ATP-STTB 4	**3030747**	50
MPS-MT	**0201744**	10
MPS-IH RD	**0201676**	10
SZF 0-0,4X2,5	**1204504**	10

UCT-TMF 3,5 or ZBF 3,5 (see Catalog 5)

PTT 2,5... push-in double-level disconnect and knife disconnect terminal blocks

- Design width of just 5.2 mm
- Testing facility on both sides of the disconnect point
- Space-saving design for maximum wiring density
- Clear grouping of the terminal strips through orange cover with a design width of just 0.8 mm
- Disconnection option on each level
- The assignment from the disconnect knife to the contact points is indicated by the colored levers and the height offset

Notes:
1) If the fuse is faulty, the downstream circuit is not disconnected.
2) Observe max. load current.
3) Observe max. load current, depending on the power dissipation of the components. Max. 0.5 W with single arrangement.
4) see Catalog 3.



2.5 (4) mm², 16 A, double-level terminal block, with one disconnect zone

Technical data

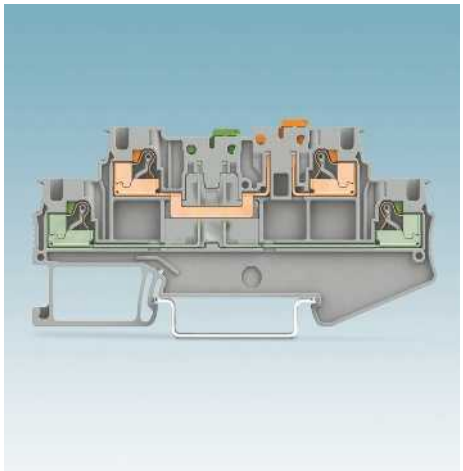
Dimensions		Width	Length	Height NS 35/7,5	
	[mm]	**5.2**	**92.4**	**47.4**	
Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		16	**400**	**0.14 - 4**	**26 - 12**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400	-	-	-
Nominal current / cross section	[A] / [mm²]	16/2.5	-	-	-
Rated cross section	[mm²]	2.5	-	-	-
Cross section range	AWG	26 - 12	-	-	-
Connection capacity		solid	stranded	Ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.14 - 4	0.14 - 2.5	0.14 - 2.5	0.14 - 2.5
Two stranded conductors with a TWIN ferrule	[mm²]				0.5
Connection cross sections directly plug-in	[mm²]	0.34 - 4	-	0.34 - 2.5	0.34 - 2.5
General data					
Stripping length	[mm]	10			
Insulating material		PA			
Inflammability class according to UL 94		V0			

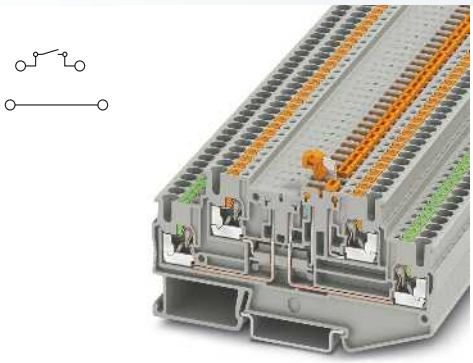
Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Disconnect terminal block, for mounting on NS 35...	gray	**PTT 2,5-L/TG**	**3210230**	50
	blue	**PTT 2,5-L/TG BU**	**3210270**	50
Knife disconnect terminal block, for mounting on NS 35...	gray			
	blue			
Double-level knife disconnect terminal block, disconnection on both levels, for mounting on NS 35...	gray			
	blue			
Feed-through terminal block, same shape, for mounting on NS 35...	gray			
	blue			

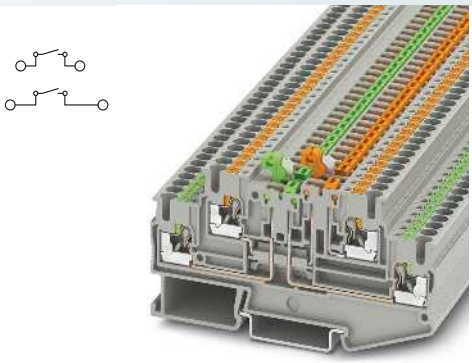
Accessories

Cover, 0.8 mm width	gray	**D-PTT 2,5-2MT-0,8**	**3210300**	50
	orange	**D-PTT 2,5-2MT-0,8 OG**	**3210299**	50
Partition plate, 2 mm width	gray	**ATP-STTB 4**	**3030747**	50
Switching lock, plug-in4)	white			
Isolating plug2)	orange	**P-DI**	**3036783**	50
Feed-through connector2)	gray	**P-FIX**	**3038956**	50
Component plug, labeled with ZBF 5 or UC–TMF 5³)	gray	**P-CO**	**3036796**	10
Fuse plug, width 5.2 mm1)	black	**P-FU 5X20-5**	**3209235**	10
with LED for 12-30 V DC, 0.35-0.95 mA	black	**P-FU 5X20 LED 24-5**	**3209248**	10
for 30–60 V AC/DC, 0.36–0.95 mA	black	**P-FU 5X20 LED 60-5**	**3209251**	10
for 110–250 V AC/DC, 0.4–0.95 mA	black	**P-FU 5X20 LED 250-5**	**3209264**	10
Test plug metal part, 2.3 mm Ø	silver	**MPS-MT**	**0201744**	10
Insulating sleeve, for MPS metal part	red	**MPS-IH RD**	**0201676**	10
Modular test plug housing, for MPS metal part, can be marked with ZB 5	red	**PS-5/2,3MM RD**	**3038723**	10
Screwdriver		**SZF 1-0,6X3,5**	**1204517**	10
Lateral groove labeling		**UC-TMF 5, UCT-TMF 5 or ZBF 5 (see Catalog 5)**		

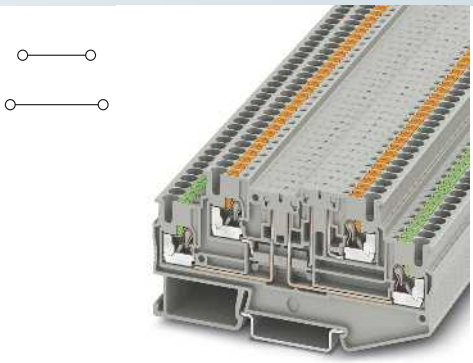




2.5 (4) mm², 16 A, double-level terminal block with one knife disconnect zone



2.5 (4) mm², 16 A, double-level terminal block with two knife disconnect zones



2.5 (4) mm², 20 A, double-level terminal block, same shape

Technical data

Width	Length	Height NS 35/7,5	
5.2	**92.4**	**47.4**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
16	**400**	**0.14 - 4**	**26 - 12**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400	-	-	-
16/2.5	-	-	-
2.5	-	-	-
26 - 12	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 4	0.14 - 2.5	0.14 - 2.5	0.14 - 2.5 0.5
0.34 - 4	-	0.34 - 2.5	0.34 - 2.5
10			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTT 2,5-L/MT	**3210251**	50
PTT 2,5-L/MT BU	**3210257**	50

Accessories

D-PTT 2,5-2MT-0,8	**3210300**	50
D-PTT 2,5-2MT-0,8 OG	**3210299**	50
ATP-STTB 4	**3030747**	50
S-MT	**3247954**	50
MPS-MT	**0201744**	10
MPS-IH RD	**0201676**	10
PS-5/2,3MM RD	**3038723**	10
SZF 1-0,6X3,5	**1204517**	10

UC-TMF 5, UCT-TMF 5 or ZBF 5 (see Catalog 5)

Technical data

Width	Length	Height NS 35/7,5	
5.2	**92.4**	**47.4**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
16	**400**	**0.14 - 4**	**26 - 12**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400	-	-	-
16/2.5	-	-	-
2.5	-	-	-
26 - 12	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 4	0.14 - 2.5	0.14 - 2.5	0.14 - 2.5 0.5
0.34 - 4	-	0.34 - 2.5	0.34 - 2.5
10			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTT 2,5-2MT	**3210258**	50
PTT 2,5-2MT BU	**3210265**	50

Accessories

D-PTT 2,5-2MT-0,8	**3210300**	50
D-PTT 2,5-2MT-0,8 OG	**3210299**	50
ATP-STTB 4	**3030747**	50
S-MT	**3247954**	50
MPS-MT	**0201744**	10
MPS-IH RD	**0201676**	10
PS-5/2,3MM RD	**3038723**	10
SZF 1-0,6X3,5	**1204517**	10

UC-TMF 5, UCT-TMF 5 or ZBF 5 (see Catalog 5)

Technical data

Width	Length	Height NS 35/7,5	
5.2	**92.4**	**47.4**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
20	**400**	**0.14 - 4**	**26 - 12**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400	-	-	-
20/2.5	-	-	-
2.5	-	-	-
26 - 12	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 4	0.14 - 2.5	0.14 - 2.5	0.14 - 2.5 0.5
0.34 - 4	-	0.34 - 2.5	0.34 - 2.5
10			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTT 2,5-2L	**3210267**	50
PTT 2,5-2L BU	**3210268**	50

Accessories

D-PTT 2,5-2MT-0,8	**3210300**	50
D-PTT 2,5-2MT-0,8 OG	**3210299**	50
ATP-STTB 4	**3030747**	50
MPS-MT	**0201744**	10
MPS-IH RD	**0201676**	10
PS-5/2,3MM RD	**3038723**	10
SZF 1-0,6X3,5	**1204517**	10

UC-TMF 5, UCT-TMF 5 or ZBF 5 (see Catalog 5)

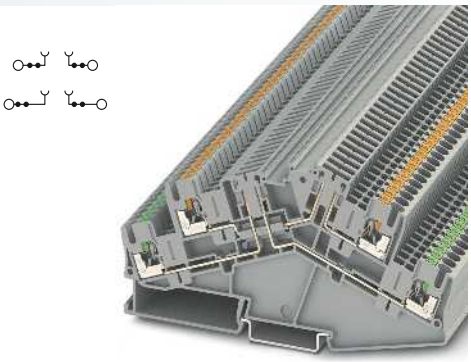
PTTBS 2,5... push-in double-level disconnect and knife disconnect terminal blocks in desk design

The angled push-in terminal blocks in desk-design were developed for wiring systems where space is saved by means of underfloor wiring. They offer numerous advantages:

- Design width of just 5.2 mm
- Angled conductor entry for use in flat terminal boxes
- Disconnection option on each level
- The assignment from the disconnect knife to the contact points is indicated by the colored levers and the height offset
- Two function shafts before and after the disconnect point for flexible potential distribution
- Additional 2.3 mm test connections on the contact chamber lever
- Two large-surface, central marking options, marking assigned through a height offset
- Convenient potential bridging of the levels with the vertical FBS-PV potential bridge
- PTTBS 2,5−2TGB with universal disconnect zone, for accommodating isolating plugs, feed-through connectors, component and fuse plugs

CLIP PROJECT Planning enables the quick and convenient planning and configuration of fault-free terminal strips.

Notes:
1) If the fuse is faulty, the downstream circuit is not disconnected.
2) Observe max. load current.
3) Observe max. load current, depending on the power dissipation of the components. Max. 0.5 W with single arrangement.
4) see Catalog 3.



2.5 (4) mm², 16 A, double-level terminal block with two disconnect zones

Technical data

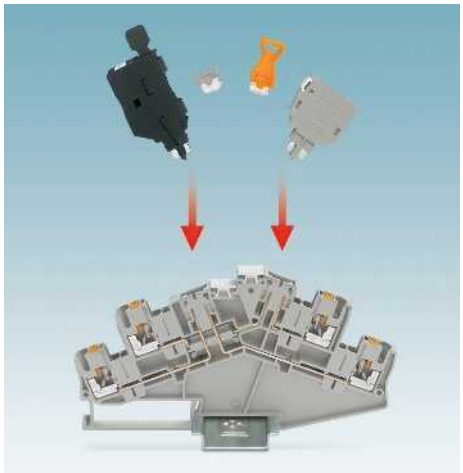
Dimensions		Width	Length	Height NS 35/7,5	
	[mm]	**5.2**	**124.8**	**64.3**	
Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		16	**400**	**0.14 - 4**	**26 - 12**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400	-	-	-
Nominal current / cross section	[A] / [mm²]	16/2.5	-	-	-
Rated cross section	[mm²]	2.5	-	-	-
Cross section range	AWG	26 - 12	-	-	-
Connection capacity		solid	stranded	Ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.14 - 4	0.14 - 2.5	0.14 - 2.5	0.14 - 2.5
Two stranded conductors with a TWIN ferrule	[mm²]				0.5
Connection cross sections, plug-in	[mm²]	0.34 - 4	-	0.34 - 2.5	0.34 - 2.5
General data					
Stripping length	[mm]	10			
Insulating material		PA			
Inflammability class according to UL 94		V0			

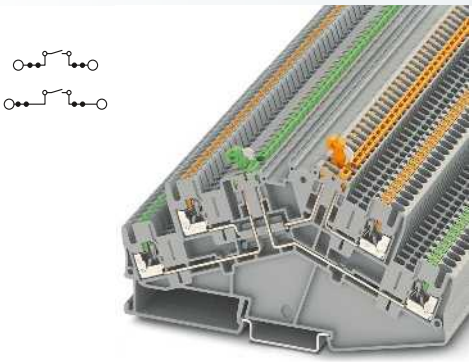
Ordering data

Description	No. of pos.	Color	Type	Order No.	Pcs. / Pkt.
Disconnect terminal block, for mounting on NS 35...		gray	**PTTBS 2,5-2TGB**	**3210402**	50
Knife disconnect terminal block, for mounting on NS 35...		gray blue			

Accessories

Cover, 0.8 mm width		gray	**D-PTTBS 2,5-2MTB**	**3210404**	50
Insulation stop sleeve, cross section range:					
0.08 - 0.2 mm²		white	**ISH 2,5/0,2**	**3002843**	50
0.25 - 0.5 mm²		gray	**ISH 2,5/0,5**	**3002856**	50
0.75 - 1 mm²		black	**ISH 2,5/1,0**	**3002869**	50
Jumper					
	2	red	**FBS 2-5**	**3030161**	50
	3	red	**FBS 3-5**	**3030174**	50
	4	red	**FBS 4-5**	**3030187**	50
	5	red	**FBS 5-5**	**3030190**	50
	10	red	**FBS 10-5**	**3030213**	10
	20	red	**FBS 20-5**	**3030226**	10
Vertical potential bridge, to connect the upper and lower level		black	**FBS-PV**	**3032185**	50
Switching lock, plug-in4)		white			
Modular test plug, for the individual assembly of test pin strips		red	**PS-5**	**3030983**	10
Isolating plug2)		orange	**P-DI**	**3036783**	50
Feed-through connector2)		gray	**P-FIX**	**3038956**	50
Component plug, labeled with ZBF 5 or UC–TMF 5³)		gray	**P-CO**	**3036796**	10
Fuse plug, width 5.2 mm1)		black	**P-FU 5X20-5**	**3209235**	10
With LED for 12-30 V DC, 0.35-0.95 mA		black	**P-FU 5X20 LED 24-5**	**3209248**	10
for 30–60 V AC/DC, 0.36–0.95 mA		black	**P-FU 5X20 LED 60-5**	**3209251**	10
for 110–250 V AC/DC, 0.4–0.95 mA		black	**P-FU 5X20 LED 250-5**	**3209264**	10
Screwdriver			**SZF 1-0,6X3,5**	**1204517**	10
Center groove labeling			**UC-TM 5, UCT-TM 5 or ZB 5 (see Catalog 5)**		





2.5 (4) mm², 16 A, double-level terminal block with two knife disconnect zones

Technical data

Width	Length	Height NS 35/7,5	
5.2	**124.8**	**64.3**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
16	**400**	**0.14 - 4**	**26 - 12**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400	-	-	-
16/2.5	-	-	-
2.5	-	-	-
26 - 12	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 4	0.14 - 2.5	0.14 - 2.5	0.14 - 2.5 0.5
0.34 - 4	-	0.34 - 2.5	0.34 - 2.5
10			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PTTBS 2,5-2MTB	**3210400**	50
PTTBS 2,5-2MTB BU	**3210401**	50

Accessories

D-PTTBS 2,5-2MTB	**3210404**	50
ISH 2,5/0,2	**3002843**	50
ISH 2,5/0,5	**3002856**	50
ISH 2,5/1,0	**3002869**	50
FBS 2-5	**3030161**	50
FBS 3-5	**3030174**	50
FBS 4-5	**3030187**	50
FBS 5-5	**3030190**	50
FBS 10-5	**3030213**	10
FBS 20-5	**3030226**	10
FBS-PV	**3032185**	50
S-MT	**3247954**	50
PS-5	**3030983**	10
SZF 1-0,6X3,5	**1204517**	10

UC-TM 5, UCT-TM 5 or ZB 5 (see Catalog 5)

UT ...-TG screw connection, disconnect and knife disconnect terminal blocks with fuse plug

– Compact design and high current carrying capacity of up to 20 A
– Double bridge shaft enables individual potential distribution and supply
– The function terminals are suitable for use in potentially explosive areas (zone 2) according to standards established worldwide.
  They meet the requirements of the following ignition protection concepts:

Marking

IECEx:
– Ex nA IIC Gc
ATEX:
– Ⓔx II 3 G Ex nA IIC Gc
– Ex i
c UL us
– AEx nA IIC Gc
– Class I zone 2
– Class I Division 2 Groups A B

S-MT switching lock

– The optional switching lock snaps in and effectively prevents accidental switching, see figure below

Notes:

Detailed information and data sheets regarding modular terminal blocks in the Ex area are available in the product area on our website at phoenixcontact.net/products and in IECEx Certificate of Conformity IECEx UL 13.0007U and in UL file E192998.

[1]) If the fuse is faulty, the downstream circuit is not disconnected.

[2]) Current and voltage are determined by the plug used.

[3]) see Catalog 3.

4 (6) mm², 20 A, disconnect terminal block, with test socket screws

Ex: c UL us, IECEx, Ⓔx
IECEx UL 13.0007U

Technical data

Dimensions				
	[mm]	Width	Length	Height NS 35/7,5
		6.2	**57.8**	**47.5**
Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²] / AWG
		20[2])	**500[2])**	**0.14 - 6** / **26 - 10**
Rated data		IEC 60947-7-1		Ⓔx
		IEC	UL/CUL	CSA / IEC/ EN 60079-7
Rated voltage	[V]	500[2])	-	- / 250
Nominal current / cross section	[A] / [mm²]	20[2])/2.5	-	- / 6.3
Rated cross section	[mm²]	4	-	- / 0.14-4
Cross section range	AWG	26 - 10	-	- / 26 - 10
Connection capacity		solid	stranded	Ferrule with/without plastic sleeve
1 conductor	[mm²]	0.14 - 6	0.14 - 6	0.14 - 4 / 0.14 - 4
Two conductors (of the same type)	[mm²]	0.14 - 1.5	0.14 - 1.5	0.14 - 1.5 / -
Two stranded conductors with a TWIN ferrule	[mm²]			0.5 - 2.5
General data				
Stripping length	[mm]	9		
Insulating material		PA		
Inflammability class according to UL 94		V0		

Ordering data

Description	No. of pos.	Color	Type	Order No.	Pcs. / Pkt.
Disconnect terminal block, for mounting on NS 35...		gray	**UT 4-TG-EX**	**3046143**	50
with test socket screws		gray	**UT 4-TG-P/P-EX**	**3046169**	50
Knife disconnect terminal block, for mounting on NS 35...		gray			
		gray			
Fuse plug, width 6.2 mm[1])		black			
with LED for 12-30 V DC, 0.35-0.95 mA		black			
for 30–60 V AC/DC, 0.36–0.95 mA		black			
for 110–250 V AC/DC, 0.4–0.95 mA		black			
Fuse plug, width 8.2 mm[1])		black			
with LED for 12-30 V DC, 0.35-0.95 mA		black			
for 30–60 V AC/DC, 0.36–0.95 mA		black			
for 110–250 V AC/DC, 0.4–0.95 mA		black			

Accessories

Switching lock, plug-in[3])		white			
Partition plate, 2.2 mm wide		gray	**ATP-UT-TWIN**	**3047183**	50
Test adapter, 4 mm test socket hole		gray	**PAI-4-N GY**	**3032871**	10
Test plug metal part, 2.3 mm Ø		silver	**MPS-MT**	**0201744**	10
Insulating sleeve, for MPS metal part		red	**MPS-IH RD**	**0201676**	10
Modular test plug, for the individual assembly of test pin strips		red	**PS-6**	**3030996**	10
Fuse plug, width 6.2 mm[1])		black	**P-FU 5X20-EX**	**3036807**	10
Width 8.2 mm		black			
Screwdriver			**SZS 0,6X3,5**	**1205053**	10
Center groove labeling					
Lateral groove labeling			**UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)**		

4 (6) mm², 20 A, knife disconnect terminal block, with test socket screws

Ex:
IECEx UL 13.0007U

Technical data

Width	Length	Height NS 35/7,5	
6.2	**57.8**	**49.1**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
20	**500**	**0.14 - 6**	**26 - 10**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
500	-	-	500
20/2.5	-	-	16
4	-	-	0.14-4
26 - 10	-	-	26 - 10
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 6	0.14 - 6	0.14 - 4	0.14 - 4
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	-
			0.5 - 2.5
9			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UT 4-MT-EX	**3046141**	50
UT 4-MT-P/P-EX	**3046173**	50

Accessories

S-MT	**3247954**	50
ATP-UT-TWIN	**3047183**	50
PAI-4-N GY	**3032871**	10
MPS-MT	**0201744**	10
MPS-IH RD	**0201676**	10
PS-6	**3030996**	10
SZS 0,6X3,5	**1205053**	10

UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)

6 (10) mm², 20 A, disconnect terminal block, with test socket screws

Ex:
IECEx UL 13.0007U

Technical data

Width	Length	Height NS 35/7,5	
8.2	**57.8**	**47.5**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
20²)	**500²)**	**0.2 - 10**	**24 - 8**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
500²)	-	-	250
20²)/2.5	-	-	6.3
6	-	-	0.2-6
24 - 8	-	-	24 - 8
solid	stranded	Ferrule with/without plastic sleeve	
0.2 - 10	0.2 - 10	0.25 - 6	0.25 - 6
0.2 - 2.5	0.2 - 2.5	0.25 - 1.5	-
			0.5 - 4
10			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UT 6-TG-EX	**3046486**	50
UT 6-TG P/P-EX	**3073870**	50

Accessories

ATP-UT-TWIN	**3047183**	50
PAI-4-N GY	**3032871**	10
MPS-MT	**0201744**	10
MPS-IH RD	**0201676**	10
PS-6	**3030996**	10
P-FU 6,3X32-EX	**3046499**	10
SZS 1,0X4,0 VDE	**1205066**	10

UC-TM 8, UCT-TM 8 or ZB 8 (see Catalog 5)

6.2 mm and 8.2 mm fuse plug, for 5 x 20 mm and 6.3 x 32 mm cartridge fuses

Ex:
IECEx UL 13.0007U

Technical data

Width	Length	Height NS 35/7,5	
-	**-**	**-**	
		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
P-FU 5X20-EX	**3036807**	10
P-FU 5X20 LED 24-EX	**3036821**	10
P-FU 5X20 LED 60-EX	**3036823**	10
P-FU 5X20 LA 250-EX	**3036836**	10
P-FU 6,3X32-EX	**3046499**	10
P-FU 6,3X32 LED 24-EX	**3046509**	10
P-FU 6,3X32 LED 60-EX	**3046512**	10
P-FU 6,3X32 LA 250-EX	**3046525**	10

Accessories

UC-TMF 5, UCT-TMF 5 or ZBF 5 (see Catalog 5)

UTTB ...-TG, UTT ...-2(MT) screw connection, double-level disconnect and knife disconnect terminal blocks

Optimized for process technology through:

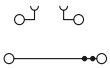
- Design width of just 5.2 mm
- Space-saving design for maximum wiring density
- Disconnection option on each level
- Testing facility on both sides of the disconnect point
- Clear assignment of the disconnect levels thanks to height offset and color disconnect knife, green at the bottom, orange at the top

Offset levels

Offset levels provide:

- Unobstructed access to the lower connection level if fully wired
- Better view of the lower marking labels and conductor entry funnel

Notes:
1) Observe max. load current.
2) Observe max. load current, depending on the power dissipation of the components. Max. 0.5 W with single arrangement.
3) Current and voltage are determined by the plug used.
4) see Catalog 3.
5) For maximum power dissipation, see Catalog 3.



2.5 (4) mm², 20 A, double-level terminal block with disconnect zone, test socket screw

Technical data

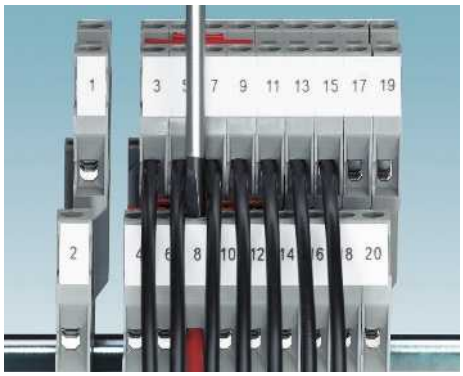
Dimensions		Width	Length	Height NS 35/7,5	
	[mm]	**5.2**	**69.9**	**64.8**	
Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		20	**400**	**0.14 - 4**	**26 - 12**
		IEC 60947-7-1			
Rated data lower level		IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400	-	-	-
Nominal current / cross section	[A] / [mm²]	20/2.5	-	-	-
Rated cross section	[mm²]	2.5	-	-	-
Cross section range	AWG	26 - 12	-	-	-
Rated data, upper level		IEC	UL/CUL	CSA	IEC/ EN 60079-7
Nominal current / cross section	[A] / [mm²]	16[3])/2.5	-	-	-
Connection capacity		solid	stranded	Ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.14 - 4	0.14 - 4	0.14 - 2.5	0.14 - 2.5
Two conductors (of the same type)	[mm²]	0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	-
Two stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
General data					
Stripping length	[mm]	9			
Screw thread		M3			
Tightening torque	[Nm]	0.5 - 0.6			
Insulating material		PA			
Inflammability class according to UL 94		V0			

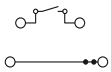
Ordering data

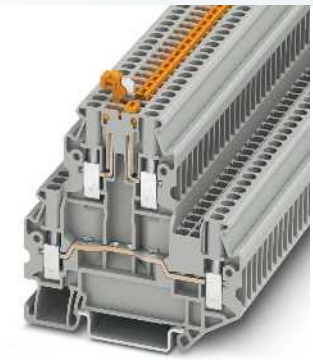
Description	No. of pos.	Color	Type	Order No.	Pcs. / Pkt.
Disconnect terminal block, for mounting on NS 35...		gray	**UTTB 2,5-TG-P/P**	**3044644**	50
Knife disconnect terminal block, for mounting on NS 35...		gray			
		blue			
Double-level knife disconnect terminal block, disconnection on both levels, for mounting on NS 35...		gray			
		blue			

Accessories

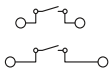
Cover, width 2.2 mm		gray	**D-UTT 2,5/4**	**3044676**	50
Spacer plate, compensates for level offsets, width 2.5 mm		gray	**DP-UTT 2,5/4**	**3044677**	50
Jumper					
	2	red	**FBS 2-5**	**3030161**	50
	3	red	**FBS 3-5**	**3030174**	50
	4	red	**FBS 4-5**	**3030187**	50
	5	red	**FBS 5-5**	**3030190**	50
	10	red	**FBS 10-5**	**3030213**	10
	20	red	**FBS 20-5**	**3030226**	10
Switching lock, plug-in[4])		white			
Isolating plug[1])		orange	**P-DI**	**3036783**	50
Feed-through connector[1])		gray	**P-FIX**	**3038956**	50
Component plug, labeled with ZBF 5 or UC–TMF 5[2])		gray	**P-CO**	**3036796**	10
Fuse plug, width 6.2 mm[5])		black	**P-FU 5X20**	**3036806**	10
Screwdriver			**SZG 0,6X3,5 VDE**	**1205121**	10
Lateral groove labeling			**UC-TM 5, UCT-TM 5 or ZB 5 (see Catalog 5)**		

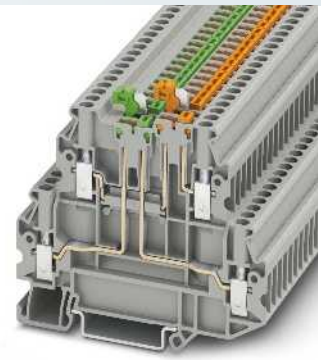






2.5 (4) mm², 20 A, double-level terminal block with disconnect knife, test socket screw





2.5 (4) mm², 16 A, double-level terminal block with a disconnect knife per level, test socket screw

Technical data

Width	Length	Height NS 35/7,5	
5.2	**69.9**	**64.8**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
20	**400**	**0.14 - 4**	**26 - 12**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400	-	-	-
20/2.5	-	-	-
2.5	-	-	-
26 - 12	-	-	-
IEC	UL/CUL	CSA	IEC/ EN 60079-7
16/2.5	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 4	0.14 - 4	0.14 - 2.5	0.14 - 2.5
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	- 0.5 - 1.5
9			
M3			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTTB 2,5-MT-P/P	**3044640**	50
UTTB 2,5-MT-P/P BU	**3044641**	50

Accessories

D-UTT 2,5/4	**3044676**	50
DP-UTT 2,5/4	**3044677**	50
FBS 2-5	**3030161**	50
FBS 3-5	**3030174**	50
FBS 4-5	**3030187**	50
FBS 5-5	**3030190**	50
FBS 10-5	**3030213**	10
FBS 20-5	**3030226**	10
S-MT	**3247954**	50
SZG 0,6X3,5 VDE	**1205121**	10

UC-TM 5, UCT-TM 5 or ZB 5 (see Catalog 5)

Technical data

Width	Length	Height NS 35/7,5	
5.2	**80.1**	**58.1**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
16	**400**	**0.14 - 4**	**26 - 12**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
400	-	-	-
16/2.5	-	-	-
2.5	-	-	-
26 - 12	-	-	-
IEC	UL/CUL	CSA	IEC/ EN 60079-7
16/2.5	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 4	0.14 - 4	0.14 - 2.5	0.14 - 2.5
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	- 0.5 - 1.5
9			
M3			
0.5 - 0.6			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
UTT 2,5-2MT-P/P	**3044670**	50
UTT 2,5-2MT-P/P BU	**3044671**	50

Accessories

D-UTT 2,5/4	**3044676**	50
DP-UTT 2,5/4	**3044677**	50
S-MT	**3247954**	50
SZG 0,6X3,5 VDE	**1205121**	10

UC-TM 5, UCT-TM 5 or ZB 5 (see Catalog 5)

Modular terminal blocks - CLIPLINE complete

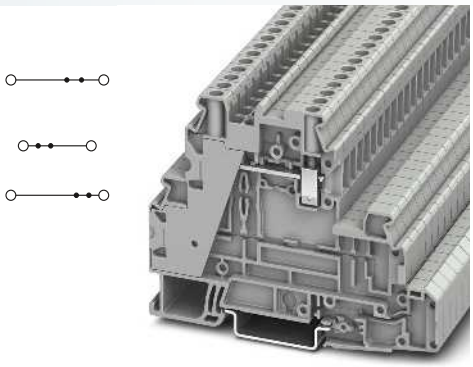
Screw connection, multi-level function and lever-type fuse terminal blocks with UT 4... PE foot

- Suitable for process technology thanks to applied for Ex nA approval
- For power and signal transmission in potentially explosive areas
- Same shape as UT 4-PE/L/HESI multi-level lever-type fuse terminal blocks on the following page

Terminal strip service

We produce fully pre-assembled terminal strips for fitting straight into the control cabinet or switch system. This simplifies installation, saves time, and cuts costs.

Notes:
1) Observe max. load current.
2) Observe max. load current, depending on the power dissipation of the components. Max. 0.5 W with single arrangement.
3) Current and voltage are determined by the plug used.
4) see Catalog 3.
5) For maximum power dissipation, see Catalog 3.



4 (6) mm², 36 A, feed-through terminal block

Technical data

Dimensions		Width	Length	Height NS 35/7,5	
	[mm]	**6.2**	**92.7**	**61.7**	
Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		36	**500**	**0.14 - 6**	**26 - 10**
		IEC 60947-7-1			
Rated data lower level		IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	500	-	-	-
Nominal current / cross section	[A] / [mm²]	30/4	-	-	-
Rated cross section	[mm²]	4	-	-	-
Cross section range	AWG	26 - 10	-	-	-
Rated data, upper level		IEC	UL/CUL	CSA	IEC/ EN 60079-7
Nominal current / cross section	[A] / [mm²]	32/4	-	-	-
Connection capacity		solid	stranded	Ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.14 - 6	0.14 - 6	0.14 - 4	0.14 - 4
Two conductors (of the same type)	[mm²]	0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	-
Two stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
General data					
Stripping length	[mm]	9			
Screw thread		M3			
Tightening torque	[Nm]	0.6 - 0.8			
Insulating material		PA			
Inflammability class according to UL 94		V0			

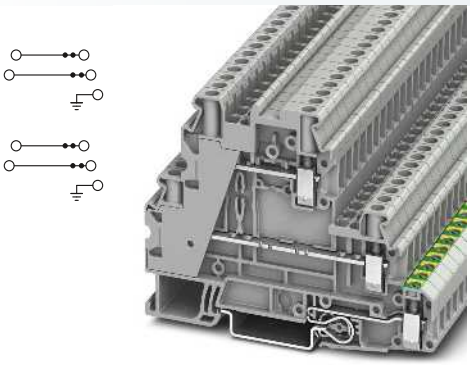
Ordering data

Description	No. of pos.	Color	Type	I_{max}	Order No.	Pcs. / Pkt.
Feed-through terminal block, only in the upper level, for mounting on NS 35...		gray	**UT 4-L**		**3214363**	50
Multi-level terminal block, upper and middle level, for mounting on NS 35...		gray	**UT 4-L/L**		**3214362**	50
Multi-level terminal block, 2 x feed-through, 1 x PE, for mounting on NS 35...		gray				
Multi-level terminal block, 1 x feed-through, 1 x blue printed feed-through, 1 x PE, for mounting on NS 35...		gray				
Disconnect terminal block, for mounting on NS 35...		gray				
Knife disconnect terminal block, for mounting on NS 35...		gray				

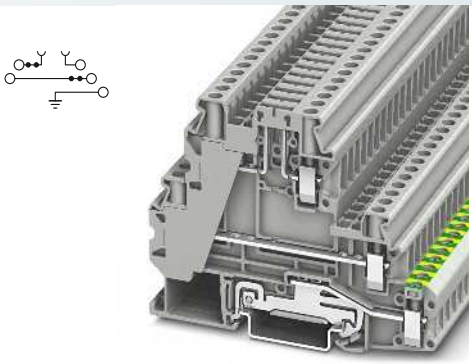
Accessories

Jumper						
	2	red	**FBS 2-6**	28 A	**3030336**	50
	3	red	**FBS 3-6**	28 A	**3030242**	50
	4	red	**FBS 4-6**	28 A	**3030255**	50
	5	red	**FBS 5-6**	28 A	**3030349**	50
	10	red	**FBS 10-6**	28 A	**3030271**	10
	20	red	**FBS 20-6**	28 A	**3030365**	10
Switching lock, plug-in4)		white				
Isolating plug1)		orange				
Feed-through connector1)		gray				
Component plug, labeled with ZBF 5 or UC–TMF 52)		gray				
Fuse plug, width 6.2 mm5)		black				
Screwdriver			**SZS 0,6X3,5**		**1205053**	10

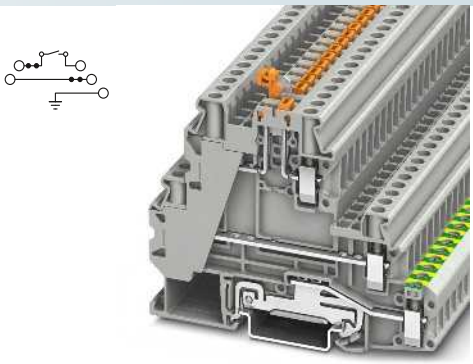
Center and side groove labeling **Lateral groove labeling**	**UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)**



4 (6) mm², 36 A, multi-level terminal block, PE foot



4 (6) mm², 36 A, multi-level terminal block, disconnect zone, PE foot



4 (6) mm², 36 A, multi-level terminal block, disconnect knife, PE foot

Technical data

Width	Length	Height NS 35/7,5	
6.2	**92.7**	**61.7**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
36	**500**	**0.14 - 6**	**26 - 10**
IEC 60947-7-1/IEC 60947-7-2			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
500	-	-	-
30/4	-	-	-
4	-	-	-
26 - 10	-	-	-
IEC	UL/CUL	CSA	IEC/ EN 60079-7
32/4	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 6	0.14 - 6	0.14 - 4	0.14 - 4
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	- 0.5 - 1.5
9			
M3			
0.6 - 0.8			
PA			
V0			

Ordering data

Type	I_{max}	Order No.	Pcs. / Pkt.
UT 4-PE/L/L		**3214360**	50
UT 4-PE/L/N		**3214361**	50

Accessories

FBS 2-6	28 A	**3030336**	50
FBS 3-6	28 A	**3030242**	50
FBS 4-6	28 A	**3030255**	50
FBS 5-6	28 A	**3030349**	50
FBS 10-6	28 A	**3030271**	10
FBS 20-6	28 A	**3030365**	10
SZS 0,6X3,5		**1205053**	10

UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)

Technical data

Width	Length	Height NS 35/7,5	
6.2	**92.7**	**61.7**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
36	**500**	**0.14 - 6**	**26 - 10**
IEC 60947-7-1/IEC 60947-7-2			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
500	-	-	-
30/4	-	-	-
4	-	-	-
26 - 10	-	-	-
IEC	UL/CUL	CSA	IEC/ EN 60079-7
20³)/2.5	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 6	0.14 - 6	0.14 - 4	0.14 - 4
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	- 0.5 - 1.5
9			
M3			
0.6 - 0.8			
PA			
V0			

Ordering data

Type	I_{max}	Order No.	Pcs. / Pkt.
UT 4-PE/L/TG		**3214365**	50

Accessories

FBS 2-6	28 A	**3030336**	50
FBS 3-6	28 A	**3030242**	50
FBS 4-6	28 A	**3030255**	50
FBS 5-6	28 A	**3030349**	50
FBS 10-6	28 A	**3030271**	10
FBS 20-6	28 A	**3030365**	10
P-DI		**3036783**	50
P-FIX		**3038956**	50
P-CO		**3036796**	10
P-FU 5X20		**3036806**	10
SZS 0,6X3,5		**1205053**	10

UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)

Technical data

Width	Length	Height NS 35/7,5	
6.2	**92.7**	**61.7**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
36	**500**	**0.14 - 6**	**26 - 10**
IEC 60947-7-1/IEC 60947-7-2			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
500	-	-	-
30/4	-	-	-
4	-	-	-
26 - 10	-	-	-
IEC	UL/CUL	CSA	IEC/ EN 60079-7
20³)/2.5	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 6	0.14 - 6	0.14 - 4	0.14 - 4
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	- 0.5 - 1.5
9			
M3			
0.6 - 0.8			
PA			
V0			

Ordering data

Type	I_{max}	Order No.	Pcs. / Pkt.
UT 4-PE/L/MT		**3214364**	50

Accessories

FBS 2-6	28 A	**3030336**	50
FBS 3-6	28 A	**3030242**	50
FBS 4-6	28 A	**3030255**	50
FBS 5-6	28 A	**3030349**	50
FBS 10-6	28 A	**3030271**	10
FBS 20-6	28 A	**3030365**	10
S-MT		**3247954**	50
SZS 0,6X3,5		**1205053**	10

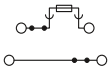
UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)

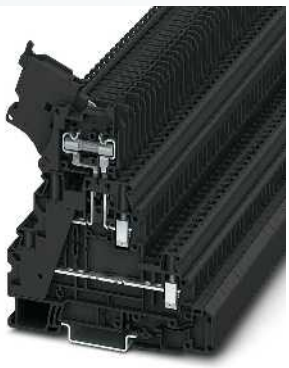
Screw connection, multi-level lever-type fuse terminal blocks with UT 4... PE foot

- Suitable for process technology thanks to applied for Ex nA approval
- For power and signal transmission in potentially explosive areas
- Compact design for maximum space saving
- Two function shafts mean that all potential distribution tasks can be undertaken at speed
- Test connection on both sides in safety lever
- Same shape as the UT 4-PE/L... feed-through and disconnect terminal blocks

CLIP PROJECT Planning enables the quick and convenient planning and configuration of fault-free terminal strips.

Notes:
1) If the fuse is faulty, the downstream circuit is not disconnected.
2) The current is determined by the fuse used.
3) The current is determined by the fuse used, the voltage by the light indicator.
4) For maximum power dissipation, see Catalog 3.





4 (6) mm², 36 A, multi-level terminal block, safety lever

Technical data

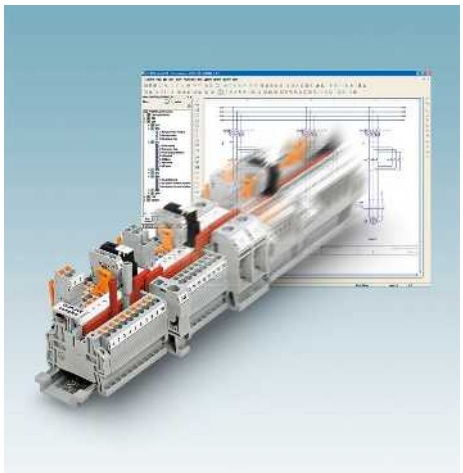
Dimensions		Width	Length	Height NS 35/7,5	
	[mm]	**6.2**	**92.7**	**88.9**	
Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		36[4])	**500[4])**	**0.14 - 6**	**26 - 10**
Rated data lower level		IEC 60947-7-3 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	500[4])	-	-	-
Nominal current / cross section	[A] / [mm²]	30/4	-	-	-
Rated cross section	[mm²]	4	-	-	-
Cross section range	AWG	26 - 10	-	-	-
Rated data, upper level		IEC	UL/CUL	CSA	IEC/ EN 60079-7
Nominal current / cross section	[A] / [mm²]	6.3[2])/1	-/-	-	-
Connection capacity		solid	stranded	Ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.14 - 6	0.14 - 6	0.14 - 4	0.14 - 4
Two conductors (of the same type)	[mm²]	0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	-
Two stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
General data					
Stripping length	[mm]	9			
Screw thread		M3			
Tightening torque	[Nm]	0.6 - 0.8			
Insulating material		PA			
Inflammability class according to UL 94		V0			

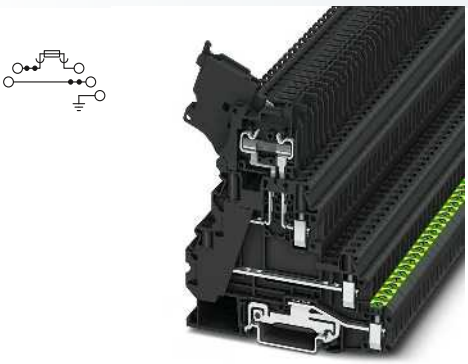
Ordering data

Description	No. of pos.	Color	Type	I_{max}	Order No.	Pcs. / Pkt.
Fuse terminal block, for mounting on NS 35..., for cartridge fuse inserts 5 x 20 mm		black	**UT 4-L/HESI (5X20)**		**3214325**	50
Fuse terminal block, for mounting on NS 35..., for 5 x 20 cartridge fuse inserts		black				
with LED for 12-30 V DC, 0.31-0.95 mA[1])		black				
for 30–60 V AC/DC, 0.40–0.86 mA[1])		black				
for 110–250 V AC/DC, 0.41–0.96 mA[1])		black				
Disconnect terminal block, for mounting on NS 35...		black				

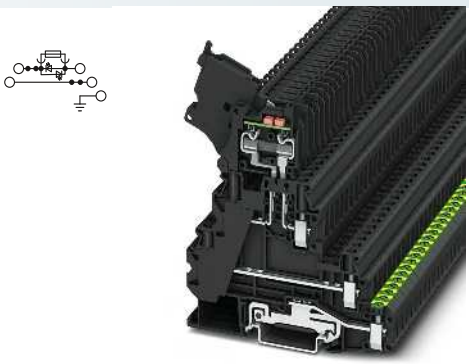
Accessories

Feed-through metal, in the shape of a 5 x 20 mm glass tube fuse insert			**DMET 5X20**		**3032075**	50
Jumper						
	2	red	**FBS 2-6**	28 A	**3030336**	50
	3	red	**FBS 3-6**	28 A	**3030242**	50
	4	red	**FBS 4-6**	28 A	**3030255**	50
	5	red	**FBS 5-6**	28 A	**3030349**	50
	10	red	**FBS 10-6**	28 A	**3030271**	10
	20	red	**FBS 20-6**	28 A	**3030365**	10
Screwdriver			**SZS 0,6X3,5**		**1205053**	10
Lever labeling			**UC-TM 5, UCT-TM 5 or ZB 5 (see Catalog 5)**			
Lateral groove labeling			**UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)**			

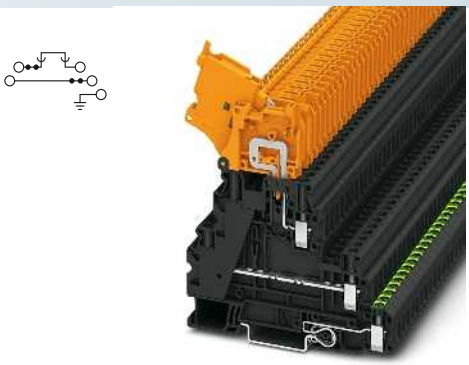




4 (6) mm², 36 A, multi-level terminal block, safety lever, PE foot



4 (6) mm², 36 A, multi-level terminal block, safety lever with LED, PE foot



4 (6) mm², 36 A, multi-level terminal block, disconnect lever, PE foot

Technical data

Width	Length	Height NS 35/7,5	
6.2	**92.7**	**88.9**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
36[4])	**500[4])**	**0.14 - 6**	**26 - 10**
IEC 60947-7-2/IEC 60947-7-3			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
500[4])	-	-	-
30/4	-	-	-
4	-	-	-
26 - 10	-	-	-
IEC	UL/CUL	CSA	IEC/ EN 60079-7
6.3[2])/1	-/-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 6	0.14 - 6	0.14 - 4	0.14 - 4
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	-
			0.5 - 1.5
9			
M3			
0.6 - 0.8			
PA			
V0			

Ordering data

Type	I_{max}	Order No.	Pcs. / Pkt.
UT 4-PE/L/HESI (5X20)		**3214320**	50

Accessories

DMET 5X20		**3032075**	50
FBS 2-6	28 A	**3030336**	50
FBS 3-6	28 A	**3030242**	50
FBS 4-6	28 A	**3030255**	50
FBS 5-6	28 A	**3030349**	50
FBS 10-6	28 A	**3030271**	10
FBS 20-6	28 A	**3030365**	10
SZS 0,6X3,5		**1205053**	10

UC-TM 5, UCT-TM 5 or ZB 5 (see Catalog 5)
UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)

Technical data

Width	Length	Height NS 35/7,5	
6.2	**92.7**	**88.9**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
36[4])	**500[4])**	**0.14 - 6**	**26 - 10**
IEC 60947-7-2/IEC 60947-7-3			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
500[4])	-	-	-
30/4	-	-	-
4	-	-	-
26 - 10	-	-	-
IEC	UL/CUL	CSA	IEC/ EN 60079-7
6.3[3])/1	-/-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 6	0.14 - 6	0.14 - 4	0.14 - 4
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	-
			0.5 - 1.5
9			
M3			
0.6 - 0.8			
PA			
V0			

Ordering data

Type	I_{max}	Order No.	Pcs. / Pkt.
UT 4-PE/L/HESILED 24 (5X20)		**3214321**	50
UT 4-PE/L/HESILED 60 (5X20)		**3214322**	50
UT 4-PE/L/HESILED 250 (5X20)		**3214323**	50

Accessories

DMET 5X20		**3032075**	50
FBS 2-6	28 A	**3030336**	50
FBS 3-6	28 A	**3030242**	50
FBS 4-6	28 A	**3030255**	50
FBS 5-6	28 A	**3030349**	50
FBS 10-6	28 A	**3030271**	10
FBS 20-6	28 A	**3030365**	10
SZS 0,6X3,5		**1205053**	10

UC-TM 5, UCT-TM 5 or ZB 5 (see Catalog 5)
UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)

Technical data

Width	Length	Height NS 35/7,5	
6.2	**92.7**	**88.9**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
36[4])	**500[4])**	**0.14 - 6**	**26 - 10**
IEC 60947-7-1/IEC 60947-7-2			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
500[4])	-	-	-
30/4	-	-	-
4	-	-	-
26 - 10	-	-	-
IEC	UL/CUL	CSA	IEC/ EN 60079-7
20/1	-/-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.14 - 6	0.14 - 6	0.14 - 4	0.14 - 4
0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	-
			0.5 - 1.5
9			
M3			
0.6 - 0.8			
PA			
V0			

Ordering data

Type	I_{max}	Order No.	Pcs. / Pkt.
UT 4-PE/L/HEDI		**3214324**	50

Accessories

FBS 2-6	28 A	**3030336**	50
FBS 3-6	28 A	**3030242**	50
FBS 4-6	28 A	**3030255**	50
FBS 5-6	28 A	**3030349**	50
FBS 10-6	28 A	**3030271**	10
FBS 20-6	28 A	**3030365**	10
SZS 0,6X3,5		**1205053**	10

UC-TM 5, UCT-TM 5 or ZB 5 (see Catalog 5)
UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)

Modular terminal blocks - CLIPLINE complete

Screw connection test disconnect terminal block with UK 4-SD test isolating plug

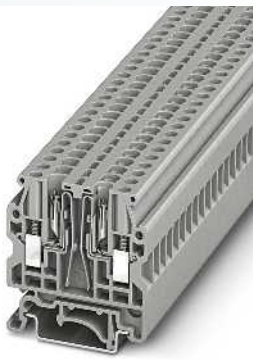
This disconnect terminal block offers numerous advantages especially for testing in measuring and signal circuits:

- Simultaneous interruption of individual or multiple neighboring disconnect terminal blocks by using the PS 6-DI-SD isolating plug
- Safe, uninterruptible looping in of measuring devices in the circuit with the aid of the PS 6−CT−SD test isolating plug
- Safe contacting of the potentials after opening the disconnect point through use of the PS 6−VT−SD test isolating plug
- Terminal points in the test isolating plugs allow individual test applications to be wired.
- Easy potential distribution in the terminal strip with insertion bridges

CLIP PROJECT Planning enables the quick and convenient planning and configuration of fault-free terminal strips.

Circuit examples

a) Normal operation: no plug inserted
b) Measurement checking: looping in a measuring device with the PS 6-CT-SD test isolating plug
c) Current transformer short circuit: measurement split between two positions



4 (6) mm², test disconnect terminal block

Technical data

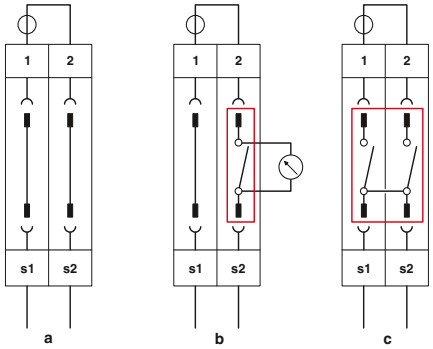
Dimensions		Width	Length	Height NS 35/7,5	
	[mm]	**6.2**	**45.5**	**47.3**	
Dimensions		Width	Length	Height NS 32	
	[mm]	**6.2**	**45.5**	**52.2**	
Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		10	**500**	**0.2 - 6**	**20 - 10**
Rated data		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	500	-	-	-
Nominal current / cross section	[A] / [mm²]	10/4	-	-	-
Rated cross section	[mm²]	4	-	-	-
Cross section range	AWG	20 - 10	-	-	-
Connection capacity		solid	stranded	Ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.5 - 6	0.2 - 4	0.5 - 4	0.5 - 4
Two conductors (of the same type)	[mm²]	0.5 - 1.5	0.5 - 1.5	0.5 - 1.5	-
Two stranded conductors with a TWIN ferrule	[mm²]				0.5 - 1.5
General data					
Stripping length	[mm]	9			
Screw thread		M3			
Tightening torque	[Nm]	0.5 - 0.6			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	No. of pos.	Color	Type	I_{max}	Order No.	Pcs. / Pkt.
Test disconnect terminal block, for mounting on NS 35		gray	**UK 4-SD**		**3246861**	50
Isolating plug		gray				
Test isolating plug		green				
Test isolating plug		red				

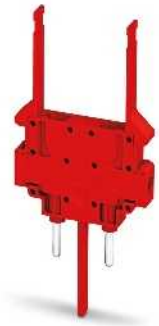
Accessories

Cover, width 2.2 mm		gray	**D-UK 4-SD**		**3246862**	50
Insertion bridge, insulated						
	2	gray	**EB 2- 6**	11 A	**0201155**	100
	3	gray	**EB 3- 6**	11 A	**0201142**	100
	10	gray	**EB 10- 6**	11 A	**0201139**	10
Partition plate, 1.5 mm wide		gray	**ATP-UK**		**3003224**	50
Screwdriver			**SF-SL 0,6X3,5-100 S-VDE**		**1212587**	10
Lateral groove labeling			**UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)**			



Isolating plug, disconnect function only

1.5 (2.5) mm² test isolating plug, contacts before the signal isolation



1.5 (2.5) mm² test isolating plug, contacts after the signal isolation

Technical data

Width	Length	Height NS 35/7,5	
6.2	**39.3**	**-**	
Width	Length	Height NS 32	
6.2	**39.3**	**-**	
		max. Ø [mm²]	AWG
		-	**-**
IEC	UL/CUL	CSA	IEC/ EN 60079-7
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
-	-	-	-
-	-	-	-
-			
-			
-			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PS 6-DI-SD	**3246856**	50

Accessories

UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)

Technical data

Width	Length	Height NS 35/7,5	
6.2	**39.3**	**-**	
Width	Length	Height NS 32	
6.2	**39.3**	**-**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
8	**250**	**0.5 - 2.5**	**20 - 14**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
250	-	-	-
6	-	-	-
2.5	-	-	-
20 - 14	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.5 - 2.5	0.5 - 2.5	0.5 - 1.5	0.5 - 1.5
-	-	-	-
7			
M3			
0.3 - 0.5			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PS 6-CT-SD	**3246857**	50

Accessories

SZF 1-0,6X3,5	**1204517**	10

UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)

Technical data

Width	Length	Height NS 35/7,5	
6.2	**39.3**	**-**	
Width	Length	Height NS 32	
6.2	**39.3**	**-**	
$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
8	**250**	**0.5 - 2.5**	**20 - 14**
IEC 60947-7-1			
IEC	UL/CUL	CSA	IEC/ EN 60079-7
250	-	-	-
6	-	-	-
2.5	-	-	-
20 - 14	-	-	-
solid	stranded	Ferrule with/without plastic sleeve	
0.5 - 2.5	0.5 - 2.5	0.5 - 1.5	0.5 - 1.5
-	-	-	-
7			
M3			
0.3 - 0.5			
PA			
V0			

Ordering data

Type	Order No.	Pcs. / Pkt.
PS 6-VT-SD	**3246858**	50

Accessories

SZF 1-0,6X3,5	**1204517**	10

UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)

Modular terminal blocks - CLIPLINE complete

Fast connection
QTCU 2,5−TWIN−MT hybrid knife disconnect terminal block

The advantages of the different connection methods are as follows:
- The TWIN fast connection is used inside the control cabinet and the universal screw connection is used on the end customer side
- Compact design and high current carrying capacity of 20 A
- Testing facility on both sides of the disconnect point

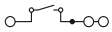
S-MT switching lock
- The optional switching lock snaps in and effectively prevents accidental switching

A test plug with a 2.3 mm diameter is available for measuring lines. All measurement and test work can be completed at speed using test adapters for 4 mm diameter test plugs and the modular test plugs.

Notes:

[1]) The max. load current must not be exceeded by the total current of all connected conductors.

[2]) see Catalog 3.



2.5 (2.5) mm², 20 A, knife disconnect terminal block, three connections

Technical data

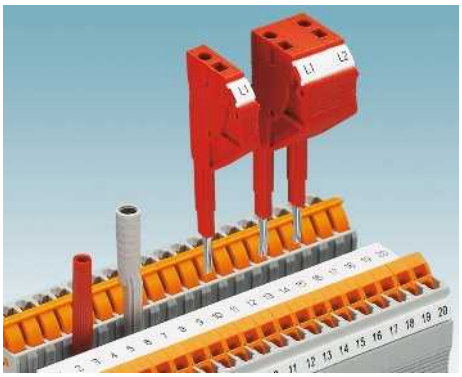
Dimensions		Width	Length	Height NS 35/7,5	
	[mm]	**6.2**	**79.3**	**42.8**	
Max. electrical data		$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG
		20[1])	**400**	**0.14 - 6**	**26 - 10**
Rated data, fast connection		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400	-	-	-
Nominal current / cross section	[A] / [mm²]	20/2.5	-	-	-
Rated cross section	[mm²]	2.5	-	-	-
Cross section range	AWG	20 - 14	-	-	-
Connection cross section in acc. with DIN VDE 0295					
H05V(Z) / H07V(Z)	[mm²]	0.5 - 2.5			
[Litz wires Ø ≥ 0.19 mm]	AWG	20 - 14			
Frequency of connections with the same cross section		100			
Rated data, screw connection		IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7
Rated voltage	[V]	400	-	-	-
Nominal current / cross section	[A] / [mm²]	20/2.5	-	-	-
Rated cross section	[mm²]	2.5	-	-	-
Cross section range	AWG	26 - 10	-	-	-
Connection capacity screw connection		solid	stranded	Ferrule with/without plastic sleeve	
1 conductor	[mm²]	0.14 - 6	0.14 - 4	0.14 - 4	0.14 - 4
Two conductors (of the same type)	[mm²]	0.14 - 1.5	0.14 - 1.5	0.14 - 1.5	-
Two conductors with a TWIN ferrule	[mm²]				0.5 - 2.5
General data					
Stripping length	[mm]	9			
Screw thread		M3			
Tightening torque	[Nm]	0.6 - 0.8			
Insulating material		PA			
Inflammability class according to UL 94		V0			

Ordering data

Description	No. of pos.	Color	Type	I_{max}	Order No.	Pcs. / Pkt.
Terminal block, for mounting on NS 35...		gray	**QTCU 2,5-TWIN-MT**		**3050304**	50
		blue	**QTCU 2,5-TWIN-MT BU**		**3050317**	50

Accessories

Cover, width 2.2 mm		gray	**D-QTCU 2,5-TWIN-MT**		**3050511**	50
Jumper						
	2	red	**FBS 2-6**	20 A	**3030336**	50
	3	red	**FBS 3-6**	20 A	**3030242**	50
	4	red	**FBS 4-6**	20 A	**3030255**	50
	5	red	**FBS 5-6**	20 A	**3030349**	50
	10	red	**FBS 10-6**	20 A	**3030271**	10
	20	red	**FBS 20-6**	20 A	**3030365**	10
Partition plate, 2 mm width		gray	**ATP-QTC TWIN**		**3206212**	50
Switching lock, plug-in[2])		white	**S-MT**		**3247954**	50
Test adapter, 4–mm test socket hole		gray	**PAI-4-N GY**		**3032871**	10
Test plug metal part, 2.3 mm Ø		silver	**MPS-MT**		**0201744**	10
Insulating sleeve, for MPS metal part		red	**MPS-IH RD**		**0201676**	10
Modular test plug, for the individual assembly of test pin strips		red	**PS-6**		**3030996**	10
Screwdriver			**SZF 1-0,6X3,5**		**1204517**	10
Lateral groove labeling			**UC-TMF 6, UCT-TMF 6 or ZBF 6 (see Catalog 5)**			

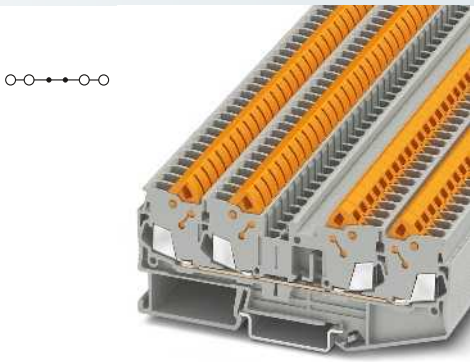


QTC 2,5-QUATTRO... fast connection feed-through and ground terminal blocks

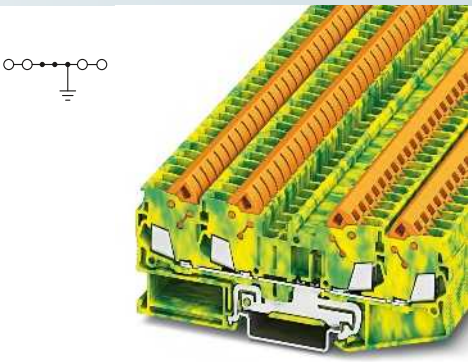
- The fastest conductor connection for signal and low-spectrum power wiring
- Large packing density with a maximum conductor cross section of 2.5 mm²
- Compact design

Notes:

[1]) The max. load current must not be exceeded by the total current of all connected conductors.



2.5 (2.5) mm², 24 A, feed-through terminal block, four connections



2.5 (2.5) mm², ground terminal block, four connections

Technical data

Dimensions	Width	Length	Height NS 35/7,5		
[mm]	**6.2**	**102.4**	**39.3**		
Max. electrical data	$I_{max.}$ [A]	$U_{max.}$ [V]	max. Ø [mm²]	AWG	
	24[1])	**800**	**0.5 - 2.5**	**20 - 14**	
Rated data	IEC 60947-7-1 IEC	UL/CUL	CSA	IEC/ EN 60079-7	
Rated voltage [V]	800	-	-	-	
Nominal current / cross section [A] / [mm²]	24/2.5	-	-	-	
Rated cross section [mm²]	2.5	-	-	-	
Cross section range AWG	20 - 14	-	-	-	
Connection cross section in acc. with DIN VDE 0295					
H05V(Z) / H07V(Z) [mm²]	0.5 - 2.5				
[Litz wires Ø ≥ 0.19 mm] AWG	20 - 14				
Frequency of connections with the same cross section	100				
General data					
Insulating material	PA				
Inflammability class according to UL 94	V0				

Technical data

Width	Length	Height NS 35/7,5		
6.2	**102.4**	**39.3**		
		max. Ø [mm²]	AWG	
		0.5 - 2.5	**20 - 14**	
IEC 60947-7-2 IEC	UL/CUL	CSA	IEC/ EN 60079-7	
-	-	-	-	
-	-	-	-	
2.5	-	-	-	
20 - 14	-	-	-	
0.5 - 2.5				
20 - 14				
100				
PA				
V0				

Ordering data

Description	No. of pos.	Color	Type	I_{max}	Order No.	Pcs. / Pkt.
Terminal block, for mounting on NS 35...		gray	**QTC 2,5-QUATTRO**		**3206446**	50
		gray	**QTC 2,5-QUATTRO BU**		**3206447**	50
Ground terminal block, for mounting on NS 35...		green-yellow				

Ordering data

Type	Order No.	Pcs. / Pkt.
QTC 2,5-QUATTRO-PE	**3206448**	50

Accessories

Cover, width 2.2 mm		gray	**D-QTC 2,5-QUATTRO**		**3206449**	50
End cover segment, for covering multi-conductor terminal blocks when two-conductor terminal blocks are aligned		gray	**DS-QTC 2,5**		**3206607**	50
Jumper						
	2	red	**FBS 2-6**	24 A	**3030336**	50
	3	red	**FBS 3-6**	24 A	**3030242**	50
	4	red	**FBS 4-6**	24 A	**3030255**	50
	5	red	**FBS 5-6**	24 A	**3030349**	50
	10	red	**FBS 10-6**	24 A	**3030271**	10
	20	red	**FBS 20-6**	24 A	**3030365**	10
Partition plate, 2 mm width		gray	**ATP-QTC QUATTRO**		**3206225**	50
Test adapter, 4–mm test socket hole		gray	**PAI-4-N GY**		**3032871**	10
Test plug metal part, 2.3 mm Ø		silver	**MPS-MT**		**0201744**	10
Insulating sleeve, for MPS metal part		red	**MPS-IH RD**		**0201676**	10
Modular test plug, for the individual assembly of test pin strips		red	**PS-6**		**3030996**	10
Double marker carrier, can be snapped into all terminal blocks with a width of 5.2 mm or above and a zack marker strip center groove, can be marked with ZB 5 or ZBF 5		gray	**STP 5-2-ZB**		**3037643**	100
Screwdriver			**SZF 1-0,6X3,5**		**1204517**	10
Center groove labeling			**UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)**			
Center and side groove labeling			**UC-TMF 6, UCT-TMF 6 or ZBF 6 (see Catalog 5)**			

Accessories

D-QTC 2,5-QUATTRO	**3206449**	50
DS-QTC 2,5	**3206607**	50
FBS 2-6	**3030336**	50
FBS 3-6	**3030242**	50
FBS 4-6	**3030255**	50
FBS 5-6	**3030349**	50
FBS 10-6	**3030271**	10
FBS 20-6	**3030365**	10
ATP-QTC QUATTRO	**3206225**	50
PAI-4-N GY	**3032871**	10
MPS-MT	**0201744**	10
MPS-IH RD	**0201676**	10
PS-6	**3030996**	10
STP 5-2-ZB	**3037643**	100
SZF 1-0,6X3,5	**1204517**	10
UC-TM 6, UCT-TM 6 or ZB 6 (see Catalog 5)		
UC-TMF 6, UCT-TMF 6 or ZBF 6 (see Catalog 5)		

Valve connector
with energy-reducing function
Page 177

Valve connector
for outdoor applications
Page 180

Valve connector
superseal connector
Page 181

Valve connector
Deutsch connector
Page 182

M12 power cable
Page 184

M12 connector
with crimp connection
Page 185

M12 Y-distributor
for power connectors
Page 186

M12 assembled cables,
for outdoor applications
Page 187

H and T-distributors, 6.0 mm²
Cable connectors, 6.0 mm²
Page 188

Panel feed-throughs, 2.5 mm² and 6.0 mm²
Assembled cables, 2.5 mm²
Page 191

HEAVYCON EVO housing
Type D15 and D25
Page 196

HEAVYCON contact inserts
Type B, BB series and HS series
Page 198

HEAVYCON EVO housing
Type B, for EMC applications

Page 202

HEAVYCON HPR housing
Type B, for railway applications

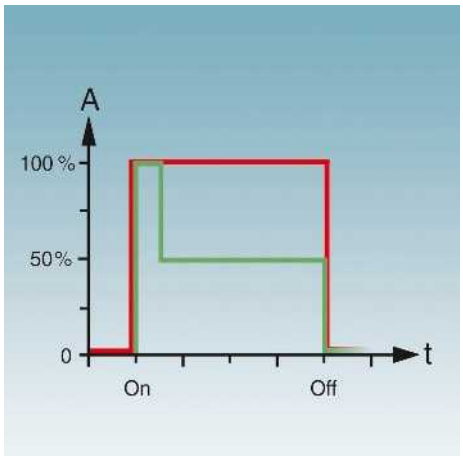
Page 214

CES cable entry system
Sealing frames with cone-shaped cable sleeves

Page 222

Plastic, brass, EMC, and
Ex cable glands

Page 224



Save energy

The new valve connectors with energy-reducing function are characterized by up to 50% reduced current consumption compared to conventional versions.

Save costs

After controlling the valve, the holding current is reduced to 50% by the energy-reducing function. This means that power supply units with smaller dimensions can be used.

Compatible with the standard

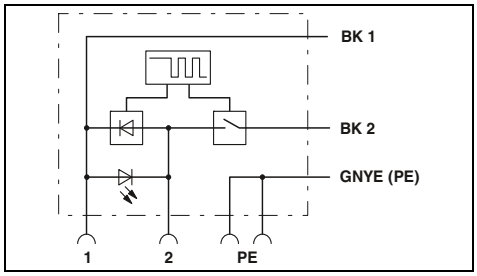
The functionality and compatibility of valve connectors corresponds to the familiar standard. Integration in existing systems can be easily accomplished.

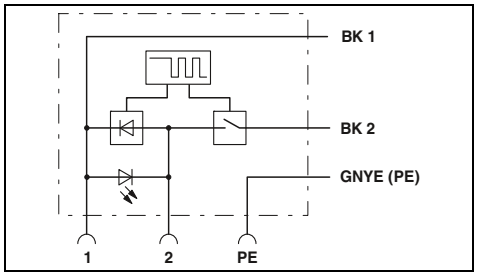
Valve connector with energy-reducing function

– Energy-reducing function by means of holding current limiting device

Valve connector with freewheeling diode, type A, 3-pos.

Valve connector with freewheeling diode, type B, 3-pos.





	Technical data	Technical data
General data		
Valve connector according to:	EN 175301-803	EN 175301-803
Degree of protection	IP67	IP67
Electrical data		
Rated voltage	24 V DC	24 V DC
Rated current	4 A	1 A
Contact resistance	≤ 5 mΩ	≤ 5 mΩ
Material data		
Material contact valve connector	CuSn	CuSn
Material contact surface valve connector	Ag	Ag
Material housing valve connector	TPU	TPU
Mechanical data		
No. of pos.	3	3
Temperature data		
Valve connectors [°C]	-25 ... 80	-25 ... 80

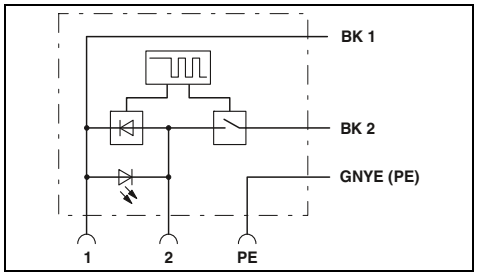
		Ordering data			Ordering data		
Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Assembled cable, with **valve connector**, and **free conductor end**							
	1.5 m	**SAC-3P- 1,5-PUR/A-1L-R-ES 4A**	**1400827**	1	**SAC-3P- 1,5-PUR/B-1L-R-ES**	**1401294**	1
	3 m	**SAC-3P- 3,0-PUR/A-1L-R-ES 4A**	**1401131**	1	**SAC-3P- 3,0-PUR/B-1L-R-ES**	**1401295**	1
	5 m	**SAC-3P- 5,0-PUR/A-1L-R-ES 4A**	**1401136**	1	**SAC-3P- 5,0-PUR/B-1L-R-ES**	**1401338**	1
	10 m	**SAC-3P-10,0-PUR/A-1L-R-ES 4A**	**1401168**	1	**SAC-3P-10,0-PUR/B-1L-R-ES**	**1401339**	1

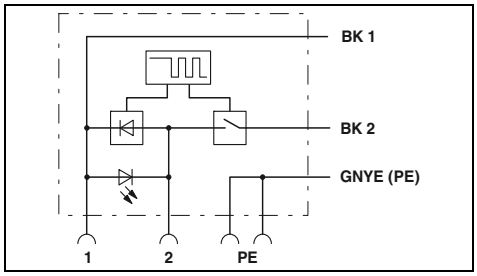
Valve connector with energy-reducing function

– Energy-reducing function by means of holding current limiting device

Valve connector with freewheeling diode, type BI, 3-pos.

Valve connector with freewheeling diode, type C, 3-pos.

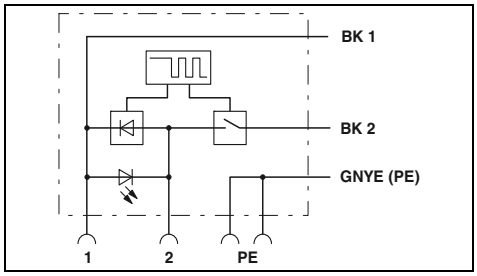




	Technical data	Technical data
General data		
Valve connector according to:	-	EN 175301-803
Degree of protection	IP67	IP67
Electrical data		
Rated voltage	24 V DC	24 V DC
Rated current	1 A	1 A
Contact resistance	≤ 5 mΩ	≤ 5 mΩ
Material data		
Material contact valve connector	CuSn	CuSn
Material contact surface valve connector	Ag	Ag
Material housing valve connector	TPU	TPU
Mechanical data		
No. of pos.	3	3
Temperature data		
Valve connectors [°C]	-25 ... 80	-25 ... 80

		Ordering data			Ordering data		
Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Assembled cable, with **valve connector**, and **free conductor end**							
	1.5 m	**SAC-3P- 1,5-PUR/BI-1L-R-ES**	**1401340**	1	**SAC-3P- 1,5-PUR/C-1L-R-ES**	**1401434**	1
	3 m	**SAC-3P- 3,0-PUR/BI-1L-R-ES**	**1401350**	1	**SAC-3P- 3,0-PUR/C-1L-R-ES**	**1401435**	1
	5 m	**SAC-3P- 5,0-PUR/BI-1L-R-ES**	**1401358**	1	**SAC-3P- 5,0-PUR/C-1L-R-ES**	**1401448**	1
	10 m	**SAC-3P-10,0-PUR/BI-1L-R-ES**	**1401359**	1	**SAC-3P-10,0-PUR/C-1L-R-ES**	**1401465**	1

Valve connector with freewheeling diode, type CI, 3-pos.



Technical data

-
IP67
24 V DC
1 A
≤ 5 mΩ
CuSn
Ag
TPU
3
-25 ... 80

Ordering data

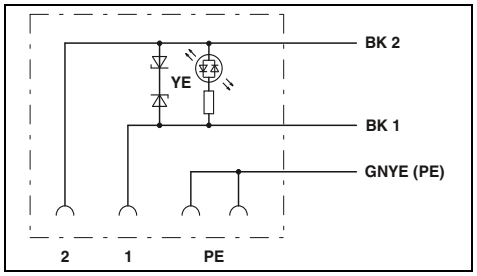
Type	Order No.	Pcs. / Pkt.
SAC-3P- 1,5-PUR/CI-1L-R-ES	**1401466**	1
SAC-3P- 3,0-PUR/CI-1L-R-ES	**1401542**	1
SAC-3P- 5,0-PUR/CI-1L-R-ES	**1401544**	1
SAC-3P-10,0-PUR/CI-1L-R-ES	**1401617**	1

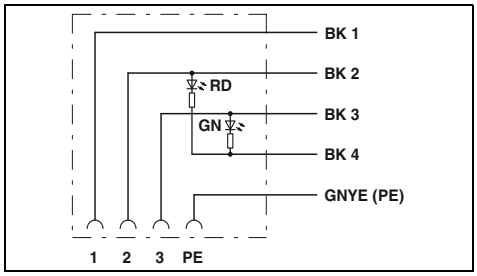
Valve connector for outdoor applications

- Stainless steel central screw
- Additional silicone seal ensures IP66K protection

Valve connector with Zener diode, type A, 3-pos.

Valve connector with 2 LEDs, type AD pressure switch, 5-pos.





	Technical data	Technical data
General data		
Valve connector according to:	EN 175301-803	EN 175301-803
Degree of protection	IP65/IP66K/IP67/IP68	IP65/IP66K/IP67/IP68
Electrical data		
Rated voltage	24 V	24 V
Rated current	4 A	4 A
Contact resistance	≤ 5 mΩ	≤ 5 mΩ
Material data		
Material contact valve connector	CuSn	CuSn
Material contact surface valve connector	Sn	Sn
Material housing valve connector	TPU	TPU
Mechanical data		
No. of pos.	3	5
Temperature data		
Valve connectors [°C]	-40 ... 85	-40 ... 85

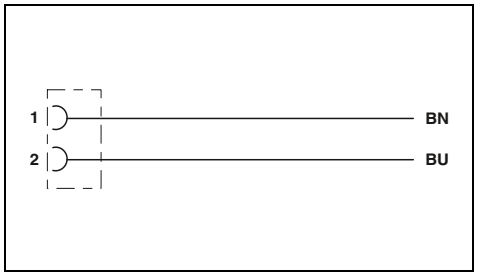
		Ordering data			Ordering data		
Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Assembled cable, with **valve connector**, and **free conductor end**							
	1.5 m	**SAC-3P- 1,5-PUO/A-1L-Z OD**	**1407287**	1	**SAC-5P- 1,5-PUO/AD-2L OD**	**1407291**	1
	3 m	**SAC-3P- 3,0-PUO/A-1L-Z OD**	**1407288**	1	**SAC-5P- 3,0-PUO/AD-2L OD**	**1407292**	1
	5 m	**SAC-3P- 5,0-PUO/A-1L-Z OD**	**1407289**	1	**SAC-5P- 5,0-PUO/AD-2L OD**	**1407293**	1
	10 m	**SAC-3P-10,0-PUO/A-1L-Z OD**	**1407290**	1	**SAC-5P-10,0-PUO/AD-2L OD**	**1407294**	1

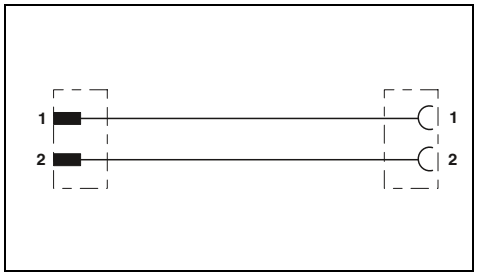
Valve connector, superseal connector

– For mobile hydraulic applications

Superseal, 2-pos.

Superseal, 2-pos.





		Technical data	Technical data
General data			
Degree of protection		IP67	IP67
Electrical data			
Rated voltage		24 V	24 V
Rated current		8 A	8 A
Contact resistance		≤ 5 mΩ	≤ 5 mΩ
Material data			
Contact material		PhCuSn	CuZn (pin)/PhCuSn (socket)
Material of grip body		PA	PA
Mechanical data			
No. of pos.		2	2
Temperature data			
Plug/socket	[°C]	-20 ... 85	-20 ... 85

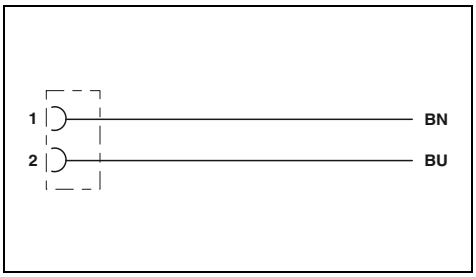
		Ordering data			Ordering data		
Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Assembled cable, with **straight socket** and **free cable end**							
	1.5 m	**SAC-2P- 1,5-PUR/SUSFS**	**1410748**	1			
	3 m	**SAC-2P- 3,0-PUR/SUSFS**	**1410749**	1			
	5 m	**SAC-2P- 5,0-PUR/SUSFS**	**1410750**	1			
	10 m	**SAC-2P-10,0-PUR/SUSFS**	**1410751**	1			
Assembled cable, with **straight plug** and **free cable end**							
	1.5 m	**SAC-2P-SUSMS/ 1,5-PUR**	**1410752**	1			
	3 m	**SAC-2P-SUSMS/ 3,0-PUR**	**1410753**	1			
	5 m	**SAC-2P-SUSMS/ 5,0-PUR**	**1410755**	1			
	10 m	**SAC-2P-SUSMS/10,0-PUR**	**1410756**	1			
Assembled cable, with **straight plug** and **straight socket**							
	0.3 m				**SAC-2P-SUSMS/ 0,3-PUR/SUSFS**	**1410757**	1
	0.6 m				**SAC-2P-SUSMS/ 0,6-PUR/SUSFS**	**1410759**	1
	1.5 m				**SAC-2P-SUSMS/ 1,5-PUR/SUSFS**	**1410760**	1
	3 m				**SAC-2P-SUSMS/ 3,0-PUR/SUSFS**	**1410761**	1

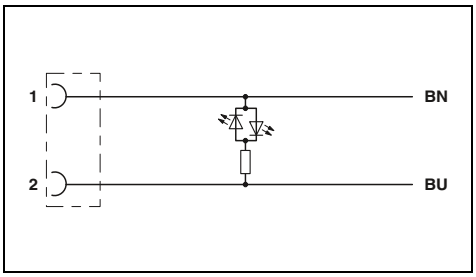
Valve connector, Deutsch DT06-2S connector

– For mobile hydraulic applications

Valve connector, Deutsch DT06-2S, 2-pos.

Valve connector, Deutsch DT06-2S, with 1 LED, 2-pos.

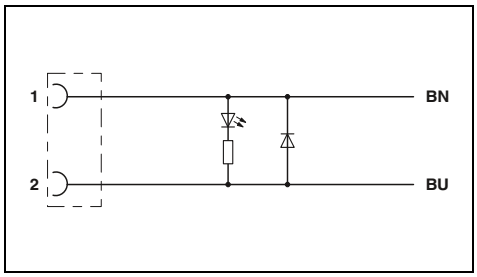




		Technical data	Technical data
General data			
Degree of protection		IP67	IP67
Electrical data			
Rated voltage		48 V	24 V
Rated current		8 A	8 A
Contact resistance		≤ 8 mΩ	≤ 8 mΩ
Material data			
Contact material		Cu alloy	Cu alloy
Contact surface material		Nickel-plated	Nickel-plated
Material of grip body		PA	PA
Mechanical data			
No. of pos.		2	2
Temperature data			
Plug/socket	[°C]	-20 ... 85	-20 ... 85

		Ordering data			Ordering data		
Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Assembled cable, with **straight socket** and **free cable end**							
	1.5 m	**SAC-2P- 1,5-PUR/DTFS**	**1410723**	1	**SAC-2P- 1,5-PUR/DTFS-1L**	**1410728**	1
	3 m	**SAC-2P- 3,0-PUR/DTFS**	**1410724**	1	**SAC-2P- 3,0-PUR/DTFS-1L**	**1410729**	1
	5 m	**SAC-2P- 5,0-PUR/DTFS**	**1410726**	1	**SAC-2P- 5,0-PUR/DTFS-1L**	**1410730**	1
	10 m	**SAC-2P-10,0-PUR/DTFS**	**1410727**	1	**SAC-2P-10,0-PUR/DTFS-1L**	**1410731**	1

Valve connector, Deutsch DT06-2S, with suppressor diode, 2-pos.



Technical data

IP67
24 V 3 A ≤ 8 mΩ
Cu alloy Nickel-plated PA
2
-20 ... 85

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-2P- 1,5-PUR/DTFS-1L-S	**1410732**	1
SAC-2P- 3,0-PUR/DTFS-1L-S	**1410733**	1
SAC-2P- 5,0-PUR/DTFS-1L-S	**1410734**	1
SAC-2P-10,0-PUR/DTFS-1L-S	**1410735**	1

M12-SPEEDCON power cable, 2-pos.+PE, unshielded

Free end	M12 plug, SPEEDCON	

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1 m	**1411636**	1 m	**1411640**
			2 m	**1411637**	2 m	**1411641**
			5 m	**1411638**	5 m	**1411642**
			10 m	**1411639**	10 m	**1411643**
M12 socket, SPEEDCON, straight						
	1 m	**1411644**				
	2 m	**1411645**				
	5 m	**1411646**				
	10 m	**1411647**				
M12 socket, SPEEDCON, angled						
	1 m	**1411648**				
	2 m	**1411649**				
	5 m	**1411650**				
	10 m	**1411651**				

Cable description	Cable type	Color coding		Pin assignment
PVC - black	**PVC**	BK1	1	1
		BK2	2	3
		GNYE		PE

		Technical data
		M12
Rated voltage	[V]	230
Rated current	[A]	16
Contact resistance		≤ 3 mΩ
Inflammability class in acc. with UL 94		V0
Material contact M12		CuZn
Material contact surface M12		Au
Material handle M12		TPU, hardly inflammable, self-extinguishing
Material, knurls		Zinc die-cast, nickel-plated
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-25 ... 105

M12 connector with crimp connection

Notes:
Order crimp contacts separately

Ethernet

M12 Plug, straight, 4-pos.

Ethernet

M12 Plug, angled, 4-pos.

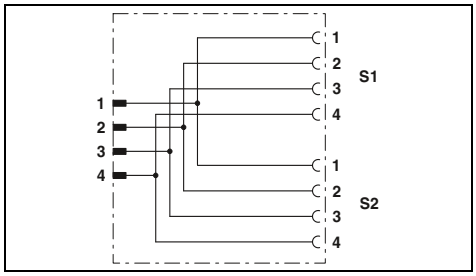
	Technical data	Technical data
General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Pollution degree	3	3
Degree of protection	IP67	IP67
Connection method	Crimp connection	Crimp connection
Cable Diameter	5 mm ... 8 mm	5 mm ... 8 mm
Electrical data		
Rated voltage	60 V	60 V
Rated current	4 A	4 A
Insulation resistance	≥ 10 GΩ	≥ 10 GΩ
Material data		
Contact carrier material	PA	PA
Inflammability class according to UL 94	HB	HB
Temperature data		
Plug/socket [°C]	-25 ... 85	-25 ... 85

		Ordering data			Ordering data		
Description	Coding	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Bus system plug, PROFINET, 4-pos., shielded with **Pg9** screw connection	D - data	SACC-M12MSD-4CT SH PN	1411046	1	SACC-M12MRD-4CT SH PN	1411047	1

	Accessories			Accessories		
Crimp contacts, for conductor cross section: 0.34 mm² ... 0.5 mm²	SACC-CC1,0-T-0,50-M AU PU100	1412351	100	SACC-CC1,0-T-0,50-M AU PU100	1412351	100
Crimping pliers - For turned contacts; 0.14 ... 4 mm²	CRIMPFOX-1,6/2,5-ED-4,0	1687419	1	CRIMPFOX-1,6/2,5-ED-4,0	1687419	1

M12 Y-distributor for power connectors

Y-distributor, T-coded, 4-pos.



Technical data

General data	
Pollution degree	3
Degree of protection	IP65/IP67
Electrical data	
Rated voltage	60 V
Rated current	12 A (at 40°C)
Material data	
Contact material	CuZn
Contact surface material	Ni/Au
Inflammability class according to UL 94	HB
Temperature data	
Plug/socket [°C]	-25 ... 80

Ordering data

Description	Center distance	Type	Order No.	Pcs. / Pkt.
Y-distributor, M12-SPEEDCON, unshielded, M12 plug (T-coded) to 2 x M12 socket (T-coded)	21 mm	**SAC-4PY-MT/2XFT VP**	**1410632**	5

M12 assembled cables for outdoor applications

– For DeviceNet™
– For CANopen®

Bus system cable, 5-pos.

Bus system cable, 5-pos.

		Technical data	Technical data
Electrical data			
Rated voltage		60 V	60 V
Rated current		4 A	4 A
Contact resistance		≤ 5 mΩ	≤ 5 mΩ
Material data			
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Contact carrier material		PP	PP
Inflammability class according to UL 94		V0	V0
Mechanical data			
No. of pos.		5	5
Pollution degree		3	3
Degree of protection		IP65/IP67/IP68/IP69K	IP65/IP67/IP68/IP69K
Temperature data			
Plug/socket	[°C]	-40 ... 105	-40 ... 105
Cable, fixed installation	[°C]	-40 ... 105	-40 ... 105

		Ordering data			Ordering data		
Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Bus system cable, 5-pos., A-coded, FRNC, halogen-free, black, shielded, straight M12 socket to free cable ends							
	2 m	**SAC-5P- 2,0-92X/M12FS SH OD**	**1410474**	1			
	5 m	**SAC-5P- 5,0-92X/M12FS SH OD**	**1410494**	1			
	10 m	**SAC-5P-10,0-92X/M12FS SH OD**	**1410496**	1			
Bus system cable, 5-pos., A-coded, FRNC, halogen-free, black, shielded, straight M12 plug to free cable ends							
	2 m	**SAC-5P-M12MS/ 2,0-92X SH OD**	**1410471**	1			
	5 m	**SAC-5P-M12MS/ 5,0-92X SH OD**	**1410472**	1			
	10 m	**SAC-5P-M12MS/10,0-92X SH OD**	**1410473**	1			
Bus system cable, 5-pos., A-coded, FRNC, halogen-free, black, shielded, straight M12 plug to straight M12 socket							
	2 m				**SAC-5P-M12MS/2,0-92X/M12FSSHOD**	**1410467**	1
	5 m				**SAC-5P-M12MS/5,0-92X/M12FSSHOD**	**1410470**	1

H-distributor, 6.0 mm²

- Can be used as a H-distributor with continuous master cable
- Can be used a star distributor
- Can be used as a Y-distributor with a test connection
- Touch-proof in accordance with DIN EN 50274

With four QUICKON nuts, 4+PE-pos.

Without QUICKON nut, 4+PE-pos.

	Technical data		Technical data	
	Black	**Gray**	**Black**	**Gray**
General data				
Degree of protection	IP68/IP69K	IP68/IP69K	IP68/IP69K	IP68/IP69K
Electrical data				
Rated voltage (III/3)	690 V	690 V	690 V	690 V
Rated surge voltage	6 kV	6 kV	6 kV	6 kV
Rated current	40 A	40 A	40 A	40 A
Surge voltage category/pollution degree	III/3	III/3	III/3	III/3
Material data				
Housing material	PA	PA	PA	PA
Contact material	Cu	Cu	Cu	Cu
Inflammability class according to UL 94	V0	V0	V0	V0
Mechanical data				
Impact category	IK07	IK07	IK07	IK07
Color	Black	Gray	Black	Gray
Connector data QUICKON connection				
Core insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm
Connection frequency	max. 10	max. 10	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10	14 ... 10	14 ... 10	14 ... 10
Temperature data				
Ambient temperature (operation)	-40°C ... 80°C	-40°C ... 80°C	-40°C ... 80°C	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C	-5°C ... 50°C	-5°C ... 50°C

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Black		**Gray**		**Black**		**Gray**	
H-distributor, with **four** QUICKON nuts and one sealing bolt, for cable diameters:								
9 mm ... 14 mm	**1411422**	1	**1411428**	1				
12 mm ... 20 mm	**1411425**	1	**1411429**	1				
H-distributor, without QUICKON nuts					**1411426**	1	**1411427**	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:								
9 mm ... 14 mm					**1410409**	1	**1410407**	1
12 mm ... 20 mm					**1410406**	1	**1410405**	1

T-distributor, 6.0 mm²

- Can be used as a T-distributor with continuous master cable
- Touch-proof in accordance with DIN EN 50274

With three QUICKON nuts, 4+PE-pos.

With two QUICKON nuts, 4+PE-pos.

	Technical data		Technical data	
	Black	**Gray**	**Black**	**Gray**
General data				
Degree of protection	IP68/IP69K	IP68/IP69K	IP68/IP69K	IP68/IP69K
Electrical data				
Rated voltage (III/3)	690 V	690 V	690 V	690 V
Rated surge voltage	6 kV	6 kV	6 kV	6 kV
Rated current	40 A	40 A	40 A	40 A
Surge voltage category/pollution degree	III/3	III/3	III/3	III/3
Material data				
Housing material	PA	PA	PA	PA
Contact material	Cu	Cu	Cu	Cu
Inflammability class according to UL 94	V0	V0	V0	V0
Mechanical data				
Impact category	IK07	IK07	IK07	IK07
Color	Black	Gray	Black	Gray
Connector data QUICKON connection				
Core insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm
Connection frequency	max. 10	max. 10	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10	14 ... 10	14 ... 10	14 ... 10
Temperature data				
Ambient temperature (operation)	-40°C ... 80°C	-40°C ... 80°C	-40°C ... 80°C	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C	-5°C ... 50°C	-5°C ... 50°C

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Black		**Gray**		**Black**		**Gray**	
T-distributor, with **three** QUICKON nuts, for cable diameter:								
9 mm ... 14 mm	**1411414**	1	**1411418**	1				
12 mm ... 20 mm	**1411415**	1	**1411419**	1				
T-distributor, with **two** QUICKON nuts, for cable diameter:								
9 mm ... 14 mm					**1411416**	1	**1411420**	1
12 mm ... 20 mm					**1411417**	1	**1411421**	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:								
9 mm ... 14 mm					**1410409**	1	**1410407**	1
12 mm ... 20 mm					**1410406**	1	**1410405**	1

Cable connectors, 6.0 mm²

- The QUICKON connections at opposite ends feature different position markings and mechanical coding
- Touch-proof in accordance with DIN EN 50274

With two QUICKON nuts, 4+PE-pos.

With one QUICKON nut, 4+PE-pos.

	Technical data		Technical data	
	Black	**Gray**	**Black**	**Gray**
General data				
Degree of protection	IP68/IP69K	IP68/IP69K	IP68/IP69K	IP68/IP69K
Electrical data				
Rated voltage (III/3)	690 V	690 V	690 V	690 V
Rated surge voltage	6 kV	6 kV	6 kV	6 kV
Rated current	40 A	40 A	40 A	40 A
Surge voltage category/pollution degree	III/3	III/3	III/3	III/3
Material data				
Housing material	PA	PA	PA	PA
Contact material	Cu	Cu	Cu	Cu
Inflammability class according to UL 94	V0	V0	V0	V0
Mechanical data				
Impact category	IK07	IK07	IK07	IK07
Color	Black	Gray	Black	Gray
Connector data QUICKON connection				
Core insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6 / min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm
Connection frequency	max. 10	max. 10	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	10 ... 14	10 ... 14	10 ... 14	10 ... 14
Temperature data				
Ambient temperature (operation)	-40°C ... 80°C	-40°C ... 80°C	-40°C ... 80°C	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C	-5°C ... 50°C	-5°C ... 50°C

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Black		**Gray**		**Black**		**Gray**	
Cable connector, with **two** QUICKON nuts, for cable diameters:								
9 mm ... 14 mm	**1410410**	1	**1410413**	1				
12 mm ... 20 mm	**1410412**	1	**1410414**	1				
Cable connector, with **one** QUICKON nut, for cable diameters:								
9 mm ... 14 mm					**1410415**	1	**1410417**	1
12 mm ... 20 mm					**1410416**	1	**1410418**	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:								
9 mm ... 14 mm					**1410409**	1	**1410407**	1
12 mm ... 20 mm					**1410406**	1	**1410405**	1

Panel feed-throughs, 2.5 mm²
with push-in connection

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- For internal push-in connection, solid conductors are simply stripped and inserted in the connection
- Touch-proof in accordance with DIN EN 50274

With one QUICKON nut, 4+PE-pos.

	Technical data	
	Black	**Gray**
General data		
Degree of protection	IP68/IP69K	IP68/IP69K
Electrical data		
Rated voltage (III/3)	690 V	690 V
Rated surge voltage	6 kV	6 kV
Rated current	20 A	20 A
Surge voltage category/pollution degree	III/3	III/3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Inflammability class according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	Black	Black
Connector data QUICKON connection		
Core insulation	PVC/PE/Rubber/TPE	PVC/PE/Rubber/TPE
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm²/ 1 mm² ... 2.5 mm²	1 mm² ... 2.5 mm²/ 1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14	16 ... 14
Temperature data		
Ambient temperature (operation)	-40°C ... 80°C	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C

	Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Black		**Gray**	
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:				
6 mm ... 11 mm	**1411432**	1	**1411434**	1
9 mm ... 16 mm	**1411433**	1	**1411435**	1

Panel feed-throughs, 2.5 mm²
for intrinsically safe circuits

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof in accordance with DIN EN 50274

Notes:

Intended for applications in intrinsically safe circuits according to EN 60079-11 and EN 60079-14.

With litz wires, 4+PE-pos.

With manual solder/spade connection, 4+PE-pos.

	Technical data	Technical data
General data		
Degree of protection	IP68/IP69K	IP68/IP69K
Electrical data		
Rated voltage	60 V	60 V
Rated surge voltage	6 kV	6 kV
Surge voltage category/pollution degree	III/3	III/3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Inflammability class according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	Black	Black
Connector data QUICKON connection		
Core insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm²/1 mm² ... 2.5 mm²	1 mm² ... 2.5 mm²/1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14	16 ... 14
Temperature data		
Ambient temperature (operation)	-40°C ... 80°C	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C

Description	Cable length	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Panel feed-through, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameter:							
6 mm ... 11 mm	0.5 m	**QPD W 4PE2,5 6-11 M20 0,5 EX**	**1411393**	1			
6 mm ... 11 mm	1 m	**QPD W 4PE2,5 6-11 M20 1,0 EX**	**1411394**	1			
6 mm ... 11 mm					**QPD W 4PE2,5 6-11 M20 FC EX**	**1411395**	1
9 mm ... 16 mm	0.5 m	**QPD W 4PE2,5 9-16 M20 0,5 EX**	**1411397**	1			
9 mm ... 16 mm	1 m	**QPD W 4PE2,5 9-16 M20 1,0 EX**	**1411398**	1			
9 mm ... 16 mm					**QPD W 4PE2,5 9-16 M20 FC EX**	**1411399**	1
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:							
6 mm ... 11 mm	0.5 m	**QPD W 4PE2,5 6-11 M25 0,5 EX**	**1411387**	1			
6 mm ... 11 mm	1 m	**QPD W 4PE2,5 6-11 M25 1,0 EX**	**1411388**	1			
6 mm ... 11 mm					**QPD W 4PE2,5 6-11 M25 FC EX**	**1411389**	1
9 mm ... 16 mm	0.5 m	**QPD W 4PE2,5 9-16 M25 0,5 EX**	**1411390**	1			
9 mm ... 16 mm	1 m	**QPD W 4PE2,5 9-16 M25 1,0 EX**	**1411391**	1			
9 mm ... 16 mm					**QPD W 4PE2,5 9-16 M25 FC EX**	**1411392**	1

Panel feed-throughs, 6.0 mm²

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof in accordance with DIN EN 50274

With one QUICKON nut, 4+PE-pos.

Without QUICKON nut, 4+PE-pos.

	Technical data		Technical data	
	Black	**Gray**	**Black**	**Gray**
General data				
Degree of protection	IP68/IP69K	IP68/IP69K	IP68/IP69K	IP68/IP69K
Electrical data				
Rated voltage (III/3)	690 V	690 V	690 V	690 V
Rated surge voltage	6 kV	6 kV	6 kV	6 kV
Rated current	40 A	40 A	40 A	40 A
Surge voltage category/pollution degree	III/3	III/3	III/3	III/3
Material data				
Housing material	PA	PA	PA	PA
Contact material	Cu	Cu	Cu	Cu
Inflammability class according to UL 94	V0	V0	V0	V0
Mechanical data				
Impact category	IK07	IK07	IK07	IK07
Color	Black	Gray	Black	Gray
Connector data QUICKON connection				
Core insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm	VDE 0295 class 1 to 6/ min. 0.15 mm
Connection frequency	max. 10	max. 10	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm²/ 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10	14 ... 10	14 ... 10	14 ... 10
Temperature data				
Ambient temperature (operation)	-40°C ... 80°C	-40°C ... 80°C	-40°C ... 80°C	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C	-5°C ... 50°C	-5°C ... 50°C

		Ordering data				Ordering data			
Description	Cable length	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
		Black		**Gray**		**Black**		**Gray**	
Panel feed-through, with M25 x 1.5 mounting flange, with **one** QUICKON nut, for cable diameter:									
9 mm ... 14 mm	0.5 m	**1410392**	1	**1410399**	1				
9 mm ... 14 mm	1 m	**1410393**	1	**1410400**	1				
12 mm ... 20 mm	0.5 m	**1410394**	1	**1410401**	1				
12 mm ... 20 mm	1 m	**1410395**	1	**1410402**	1				
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut									
	0.5 m					**1410396**	1	**1410403**	1
	1 m					**1410397**	1	**1410404**	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:									
9 mm ... 14 mm						**1410409**	1	**1410407**	1
12 mm ... 20 mm						**1410406**	1	**1410405**	1

Assembled cables, 2.5 mm²

- Connecting cable between two QUICKON connections
- User-friendly connection, even on devices that are difficult to access
- Touch-proof in accordance with DIN EN 50274
- Other versions available on request

4+PE-pos.

	Technical data
General data	
Degree of protection	IP68/IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Surge voltage category/pollution degree	III/3
Material data	
Housing material	PA
Contact material	Cu
Inflammability class according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	Black
Connector data QUICKON connection	
Core insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm²/1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.
Assembled cable				
	1 m	**QPD 5P/ 1,0-PVC/5P 5X2,5 BK**	**1408720**	1
	3 m	**QPD 5P/ 3,0-PVC/5P 5X2,5 BK**	**1408721**	1
	5 m	**QPD 5P/ 5,0-PVC/5P 5X2,5 BK**	**1408722**	1
	10 m	**QPD 5P/10,0-PVC/5P 5X2,5 BK**	**1408723**	1

Accessories

- Mounting clip ① for easily fixing the H-distributor in place without the need for tools
- DIN rail mounting can be achieved using two DIN-rail adapters ②
- Plastic labels ③ can be stuck to the middle of the H-distributor
- Red sealing plugs ④ can be easily stuck into the QUICKON nuts and create a seal when screwed tight
- Protective caps with retaining cords ⑤ for closing open QUICKON domes which are going to have a connector (for example) fitted at a later date
- Locking nuts ⑥ for fixing the panel feed-throughs to thin panels that are unable to accommodate a proprietary thread
- Insulating sleeve ⑦ for 4.8 mm slip-on connections
- Transparent protective caps ⑧ for attaching to the open QUICKON dome
- Transparent protective caps ⑨ at front for attaching to the connector
- Slotted socket wrenches ⑩ enable you to tighten the QUICKON nuts easily and securely
- Red coding profiles ⑪ for preventing QPD connector mix-ups. Simply insert them into the QUICKON dome and connector on the front side. They are marked with an arrow and their symmetrical form enables them to be mounted in four different positions
- AS-Interface seals ⑫ for connecting 1 or 2 AS-Interface cables
- Aluminum shielding tape ⑬ prevents the splicing of the braided shield and enables a clean shield connection

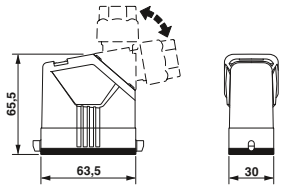
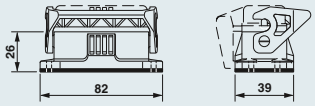
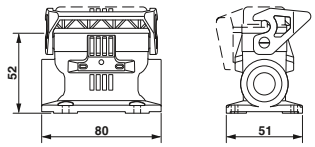
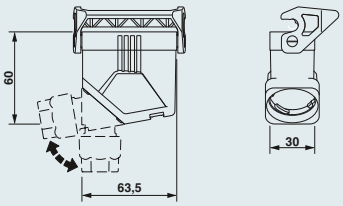
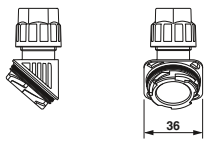
Description		Ordering data: Type	Order No.	Pcs. / Pkt.
Mounting clip, for the 4-pos. H-distributor, color: black	①			
		QPD CLIP 2,5 BK	**1582235**	10
DIN rail adapter	②			
For M5 screws		**USA 10/4,6**	**1202713**	10
Plastic label	③			
For plotting and engraving		**GPE 13X 9 WH**	**0806932**	10
Can be printed using thermal transfer printer		**EMLP (13X9)R**	**0819453**	1
Closing cap, for closing unused bore holes in multiple seals and cable glands	④			
Ø 10 mm		**SEALING PLUG 10X16 RD**	**1400284**	10
Ø 14 mm		**SEALING PLUG 14X22 RD**	**1400270**	10
Protective cap, captive, IP68	⑤			
Color: green		**QPD QSK 2,5 FS**	**1582488**	1
Color: black		**QPD QSK BK 2,5 FS**	**1582645**	1
Color: gray		**QPD QSK GY 5X2,5 FS**	**1404526**	1
Color: black		**QPD QSK BK 5X2,5 FS**	**1404525**	1
Counter nut, (plastic), to lock the contact carrier from the inside of the device	⑥			
M16 / SW22 / color: green		**Q-MU M16**	**1640692**	25
M20 / SW26 / color: green		**Q-MU M20**	**1640702**	25
M25 / SW32 / color: black		**Q-MU M25**	**1640715**	25
Pg21 / SW36 / color: black		**Q-MU PG 21 BK**	**1582655**	50
Insulating sleeve, as shock protection for 4.8 mm slip-on sleeves; first slide over the conductor	⑦			
For 4.8 mm slip-on sleeves		**PT/FS 4,8**	**1670497**	25
Protective cap, transparent plastic, for QUICKON connection, IP54	⑧			
		QPD QSK 2,5	**1582150**	10
		QPD QSK 5X2,5	**1404528**	10
		QPD QSK 5X6,0	**1411403**	10
Protective cap, transparent plastic, for QUICKON connection, IP50	⑨			
		QPD PSK 2,5	**1582151**	10
		QPD PSK 5X2,5	**1404529**	10
		QPD PSK 5X6,0	**1411404**	10
Slotted socket wrench for QUICKON nuts and panel feed-throughs, for wrench size:	⑩			
15 mm		**QSS 15**	**1641992**	1
19 mm		**QSS 19**	**1670895**	1
22 mm		**QSS 22**	**1670206**	1
24 mm		**QSS 24**	**1670219**	1
27 mm		**QSS 27**	**1670646**	1
Coding profile, for insertion into the connector and QUICKON dome	⑪			
		CP-QPD	**1582459**	10
		CP-QPD 5X2,5	**1404530**	10
Seal for 4-pos. versions, NBR, black, for IP65/IP67 protection	⑫			
One AS-i cable		**KV-DI-PG16-1XASI**	**1582462**	10
Two AS-i cables		**KV-DI-PG16-2XASI**	**1582464**	10
Shielding tape, aluminum, for the shielded QPD versions	⑬			
		ALU-SB	**1404531**	100

EVO housing, type D15, plastic, single locking latch

Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40°C ... 100°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 65.5 mm** 		**HC-EVO-D15-HHFS-PL-BK**	**1411340**	1	
Panel mounting base **Height: 26 mm** 		Without cover **HC-EVO-D15-BWS-PLR-BK** With cover **HC-EVO-D15-BWSC-PLR-BK**	 **1411336** **1411337**	 1 1	
Box mounting base **Height: 52 mm** 	 2x M25 2x M25	Without cover **HC-EVO-D15-SLWS-2SSM25-PLR-BK** With cover **HC-EVO-D15-SLWSC-2SSM25-PLR-BK**	 **1411341** **1411343**	 1 1	
Coupling housing **Height: 60 mm** 		**HC-EVO-D15-CHWS-PL-BK**	**1411338**	1	
Cable gland 	 1x M20 1x M25	 **HC-D-G-M20-PLRBK** **HC-D-G-M25-PLRBK**	 **1411350** **1411351**	 1 1	
Connector set 		Without cover, screw connection **HC-EVO-A10UT-BWS-HH-M20-PLRBK** With cover, screw connection **HC-EVO-A10UT-BWSC-HH-M20-PLRBK**	 **1411356** **1411357**	 1 1	

Accessories

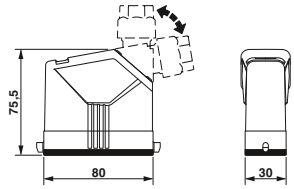
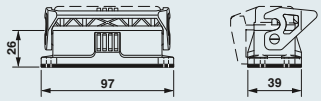
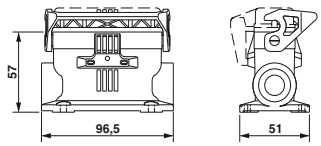
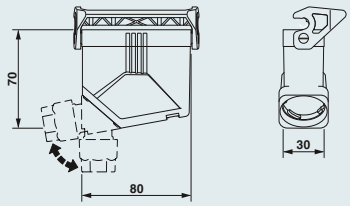
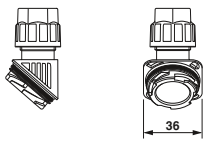
Thread adapter
From page 219

EVO housing, type D25, plastic, single locking latch

Technical data

General data	
Housing material	Polyamide
Locking latch material	Polyamide
Sealing material	NBR
Ambient temperature (operation)	-40°C ... 100°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 75.5 mm** 		**HC-EVO-D25-HHFS-PL-BK**	**1411347**	1	
Panel mounting base **Height: 26 mm** 		Without cover **HC-EVO-D25-BWS-PLR-BK** With cover **HC-EVO-D25-BWSC-PLR-BK**	 **1411344** **1411345**	 1 1	
Box mounting base **Height: 57 mm** 	 2x M25 2x M25	Without cover **HC-EVO-D25-SLWS-2SSM25-PLR-BK** With cover **HC-EVO-D25-SLWSC-2SSM25-PLR-BK**	 **1411348** **1411349**	 1 1	
Coupling housing **Height: 70 mm** 		**HC-EVO-D25-CHWS-PLR-BK**	**1411346**	1	
Cable gland 	 1x M20 1x M25	 **HC-D-G-M20-PLRBK** **HC-D-G-M25-PLRBK**	 **1411350** **1411351**	 1 1	
Connector set 		Without cover, screw connection **HC-EVO-A16UT-BWS-HH-M25-PLRBK** With cover, screw connection **HC-EVO-A16UT-BWSC-HH-M25-PLRBK**	 **1411358** **1411359**	 1 1	

Accessories

Thread adapter
From page 219

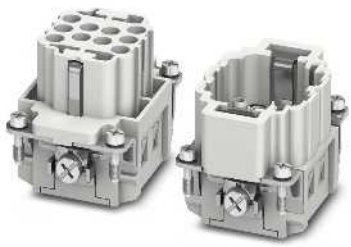
Contact inserts
BB series

500 V, 16 A

Connection technology:
– Crimp connection

With groove for accommodating coding profiles for easy and inexpensive coding of identical plug-in connections
– Can be coded in seconds, thanks to the coding profile

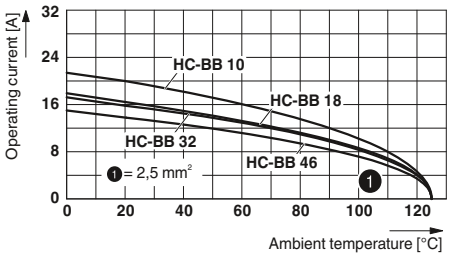
Notes:
For accessories, see Catalog 4 from page 552
Order crimp contacts separately
Connectors may only be operated when under no load
Observe notes on the connection technology



Technical data

Type		HC-BB 10-I-CT-...	HC-BB 18-I-CT-...	HC-BB 32-I-CT-...	HC-BB 46-I-CT-...
Approvals		-	-	-	-
IEC data					
Rated current, contacts (at 40°C)	A	16	16	16	16
Surge voltage category		III	III	III	III
Pollution degree		3	3	3	3
Rated voltage (III/3) contacts	V	500	500	500	500
Rated surge voltage, contacts	kV	6	6	6	6
Connection cross section	mm^2	0.5 ... 4	0.5 ... 4	0.5 ... 4	0.5 ... 4
UL data					
Rated voltage	V	-	-	-	-
Rated current	A	-	-	-	-
AWG		-	-	-	-
CSA data					
Rated voltage	V	-	-	-	-
Rated current	A	-	-	-	-
AWG		-	-	-	-
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class in acc. with UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection method		Crimp connection	Crimp connection	Crimp connection	Crimp connection
No. of pos.		10	18	32	46
Contact numbering		1 - 10	1 - 18	1 - 32	1 - 46
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

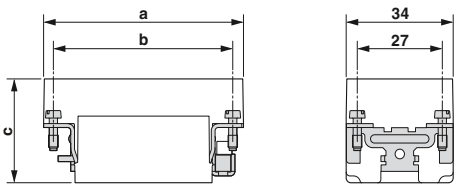


HC-BB ...

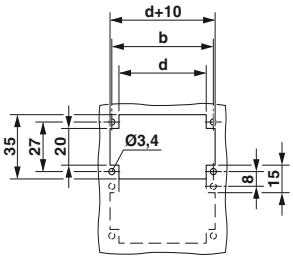
Ordering data

Description	Pos.	Number	Housing	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Crimp connection							
	10	1 - 10	B6	① HC-BB 10-I-CT-...	1584703	1584774	1
Crimp connection							
	18	1 - 18	B10	② HC-BB 18-I-CT-...	1584729	1584716	1
Crimp connection							
	32	1 - 32	B16 / B32	③ HC-BB 32-I-CT-...	1584745	1584732	1
	32	33 - 64	B16 / B32	④ HC-BB 32-I-CT-... 33-64	1406543	1406544	1
Crimp connection							
	46	1 - 46	B24 / B48	⑤ HC-BB 46-I-CT-...	1584758	1584761	1
	46	47 - 92	B24 / B48	⑥ HC-BB 46-I-CT-... 47-92	1406545	1406546	1
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100
			4 / 12	CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AU	1674859	1674804	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AU	1674833	1674781	100
			1.5 / 16	CK2,5-ED-1,50... AU	1674820	1674778	100
			2.5 / 14	CK2,5-ED-2,50... AU	1674862	1674817	100
			4 / 12	CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	51	44	32.5	35
	Plug			33.2	
②	Socket	64	57	32.5	48
	Plug			33.2	
③	Socket	84.5	77.5	32.5	68.5
	Plug			33.2	
④	Socket	84.5	77.5	32.5	68.5
	Plug			33.2	
⑤	Socket	111	104	32.5	95
	Plug			33.2	
⑥	Socket	111	104	32.5	95
	Plug			33.2	

Accessories

Coding profiles
From page 221

PE screws
Catalog 4 from page 580

Crimping tools
Catalog 4 from page 562

Contact inserts
HS series, high-current applications

500 V, 35 A

Connection technology:
– Screw connection

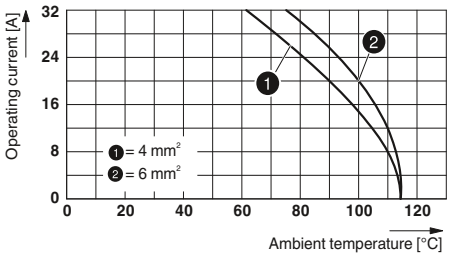
With groove for accommodating coding profiles for easy and inexpensive coding of identical plug-in connections
– Can be coded in seconds, thanks to the coding profile

Notes:
For accessories, see Catalog 4 from page 552
Connectors may only be operated when under no load
Observe notes on the connection technology

Technical data

Type		HC-HS06-I-UT-...	HC-HS06-I-UT-... 7-12		
Approvals		-	-		
IEC data					
Rated current, contacts (at 40°C)	A	35	35		
Surge voltage category		III	III		
Pollution degree		3	3		
Rated voltage (III/3) contacts	V	400/690	400/690		
Rated surge voltage, contacts	kV	6	6		
Connection cross section	mm^2	0.5 ... 6	0.5 ... 6		
UL data					
Rated voltage	V	-	-		
Rated current	A	-	-		
AWG		-	-		
CSA data					
Rated voltage	V	-	-		
Rated current	A	-	-		
AWG		-	-		
Material data					
Contact carrier material		PC	PC		
Inflammability class in acc. with UL 94		V0	V0		
Contact material		Copper alloy	Copper alloy		
Contact surface material		Ag	Ag		
Temperature data					
Ambient temperature range	°C	-40 ... 125	-40 ... 125		
General data					
Connection method		Screw connection	Screw connection		
No. of pos.		6	6		
Contact numbering		1 - 6	7 - 12		
Insertion/withdrawal cycles		≥ 500	≥ 500		

Derating curves

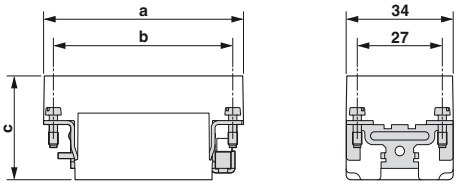


HC-HS06-I-UT-...

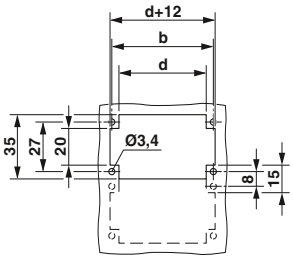
Ordering data

Description	Pos.	Number	Housing	Type	Order No. Socket	Order No. Plug	Pcs. / Pkt.
Screw connection	6	1 - 6	B16 / B32	① **HC-HS06-I-UT-...**	**1406530**	**1406531**	1
Screw connection	6	7 - 12	B16 / B32	② **HC-HS06-I-UT-... 7-12**	**1406533**	**1406534**	1

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket Plug	84.5	77.5	34	72
②	Socket Plug	84.5	77.5	34	72

Accessories

Coding profiles
Catalog 4 from page 581

PE screws
Catalog 4 from page 580

EMC protection

The new EMC series of HEAVYCON EVO heavy-duty connectors has been specifically developed for applications with increased requirements. Furthermore, the housing surfaces and all seals are constructed so as to be electrically conductive.

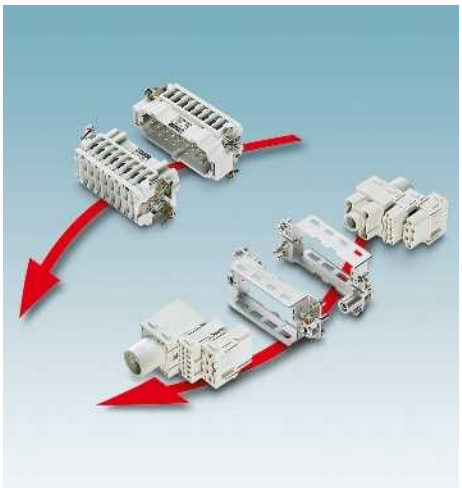
Flexible, thanks to reduced number of versions

Thanks to the unique HEAVYCON EVO bayonet locking, only the swivel cable glands have to be replaced in order to cover the M20, M25, M32, and M40 clamping areas with straight and lateral outlet.

Fully compatible

The HEAVYCON EVO housing is plug-compatible with standard aluminum housing. It fits the standard panel cutouts of heavy-duty connectors.

Easy closing operation
The bayonet locking designed specially for EVO applications ensures easy on-site assembly without tools.
For removal, a standard screwdriver is used to push down on the locking spring.



Suitable for all inserts
All fixed and modular contact inserts in B series format fit in HEAVYCON EVO housing.

Electrical connection
A solid electrical connection is required between the housing and the cable gland for EMC and safety reasons.
The locking spring ensures a safe mechanical and electrical connection.

Complete panel feed-through
The new EMC housings combine the advantages of EVO plastic housing with those of standard metal housing. A complete panel feed-through system is therefore available for EMC applications.

Easy cable assembly
On the HEAVYCON EVO housing, the angled cable inlet is particularly large. This simplifies cable assembly if the cable gland is only mounted at the end of the process.

For harsh conditions
The metal housings are made from salt-water-resistant aluminum. They meet the requirements of IP66 protection and NEMA 4/4x/12.

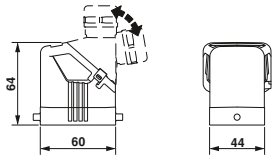
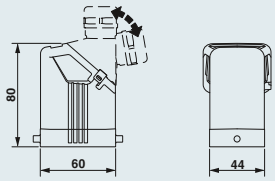
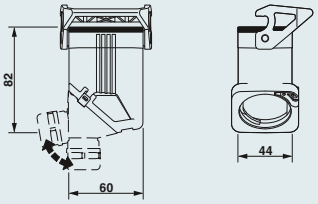
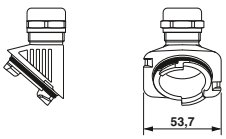
EVO housing, type B6, metal, for EMC applications, single locking latch

EMC

Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Uncoated
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 64 mm** 		**HC-EVO-B06-HLFS-EL-AL**	**1411448**	1	
Sleeve housing **Height: 80 mm** 		**HC-EVO-B06-HHFS-EL-AL**	**1411447**	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B06-BWS-ELC-AL** With cover **HC-STA-B06-BWSC-ELC-AL**	 **1411318** **1411319**	 1 1	
Coupling housing **Height: 82 mm** 		**HC-EVO-B06-CHWS-ELC-AL**	**1411450**	1	
Cable gland 	1x M20 1x M25 1x M32 1x M40	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	**1411439** **1411446** **1411440** **1411441**	1 1 1 1	
Connector set 		Push-in connection **HC-EVO-B06PT-BWSC-HL-M20ELC-AL**	 **1411487**	 1	

Accessories

Replacement seals
From page 220

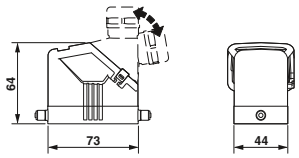
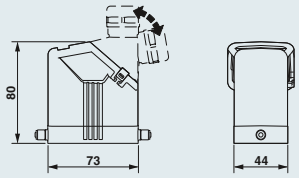
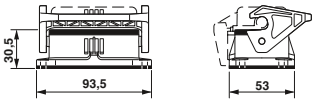
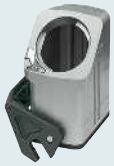
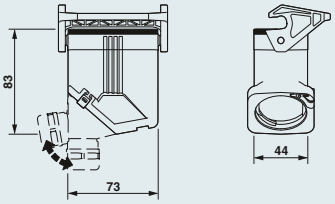
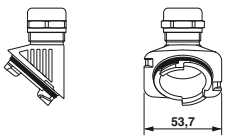
EVO housing, type B10, metal, for EMC applications, single locking latch

EMC

Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Uncoated
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 64 mm** 		**HC-EVO-B10-HLFS-EL-AL**	**1411456**	1	
Sleeve housing **Height: 80 mm** 		**HC-EVO-B10-HHFS-EL-AL**	**1411453**	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B10-BWS-ELC-AL** With cover **HC-STA-B10-BWSC-ELC-AL**	 **1411320** **1411321**	 1 1	
Coupling housing **Height: 83 mm** 		**HC-EVO-B10-CHWS-ELC-AL**	**1411459**	1	
Cable gland 	1x M20 1x M25 1x M32 1x M40	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	**1411439** **1411446** **1411440** **1411441**	1 1 1 1	
Connector set 		Push-in connection **HC-EVO-B10PT-BWSC-HL-M25ELC-AL**	**1411491**	1	

Accessories

Replacement seals
From page 220

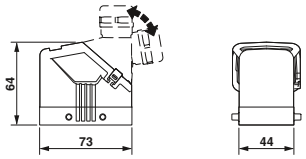
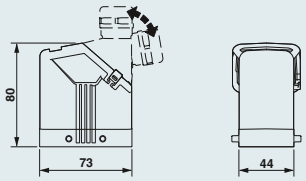
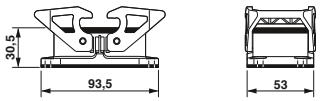
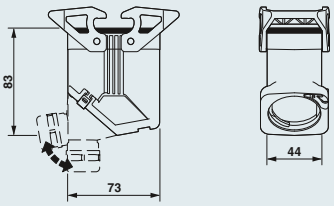
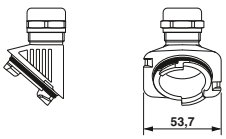
EVO housing, type B10, metal, for EMC applications, double locking latch

EMC

Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Uncoated
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 64 mm** 		**HC-EVO-B10-HLFD-EL-AL**	**1411455**	1	
Sleeve housing **Height: 80 mm** 		**HC-EVO-B10-HHFD-EL-AL**	**1411451**	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B10-BWD-ELC-AL**	**1411322**	1	
Coupling housing **Height: 83 mm** 		**HC-EVO-B10-CHWD-ELC-AL**	**1411458**	1	
Cable gland 	1x M20 1x M25 1x M32 1x M40	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	**1411439** **1411446** **1411440** **1411441**	1 1 1 1	
Connector set 		Push-in connection **HC-EVO-B10PT-BWD-HL-M25ELC-AL**	**1411488**	1	

Accessories

Replacement seals
From page 220

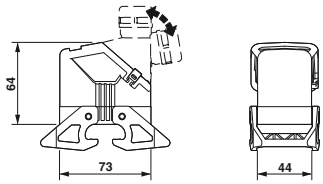
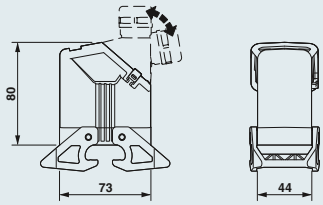
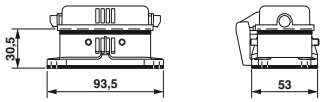
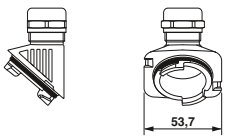
EVO housing, type B10, metal, for EMC applications, double locking latch

EMC

Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Uncoated
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 64 mm** 		**HC-EVO-B10-HLWD-EL-AL**	**1411457**	1	
Sleeve housing **Height: 80 mm** 		**HC-EVO-B10-HHWD-EL-AL**	**1411454**	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-STA-B10-BFDC-ELC-AL**	**1411323**	1	
Cable gland 	1x M20 1x M25 1x M32 1x M40	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	**1411439** **1411446** **1411440** **1411441**	1 1 1 1	

Accessories

Replacement seals
From page 220

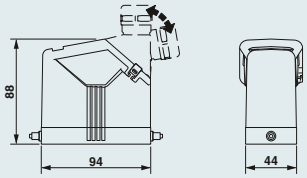
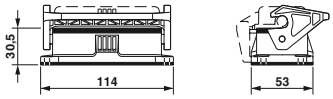
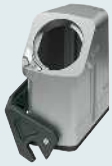
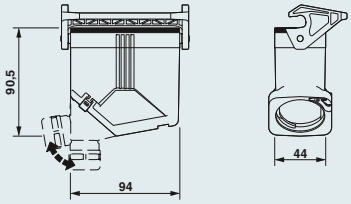
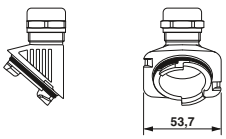
EVO housing, type B16, metal, for EMC applications, single locking latch

EMC

Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Uncoated
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B16-HHFS-EL-AL**	**1411461**	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B16-BWS-ELC-AL** With cover **HC-STA-B16-BWSC-ELC-AL**	 **1411324** **1411325**	 1 1	
Coupling housing **Height: 90.5 mm** 		**HC-EVO-B16-CHWS-ELC-AL**	**1411464**	1	
Cable gland 	1x M20 1x M25 1x M32 1x M40	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	**1411439** **1411446** **1411440** **1411441**	1 1 1 1	
Connector set 		Push-in connection **HC-EVO-B16PT-BWSC-HH-M25ELC-AL**	 **1411492**	 1	

Accessories

Replacement seals
From page 220

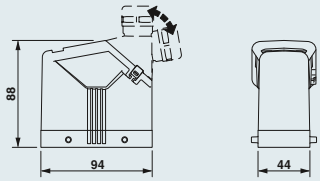
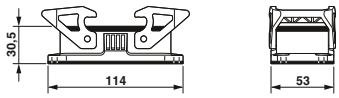
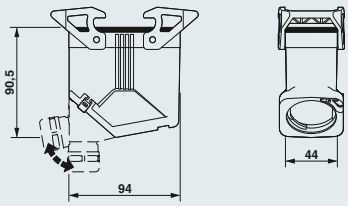
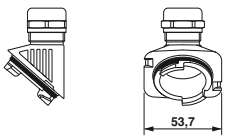
EVO housing, type B16, metal, for EMC applications, double locking latch

EMC

Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Uncoated
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B16-HHFD-EL-AL**	**1411460**	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B16-BWD-ELC-AL**	**1411327**	1	
Coupling housing **Height: 90.5 mm** 		**HC-EVO-B16-CHWD-ELC-AL**	**1411463**	1	
Cable gland 	1x M20 1x M25 1x M32 1x M40	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	**1411439** **1411446** **1411440** **1411441**	1 1 1 1	
Connector set 		Push-in connection **HC-EVO-B16PT-BWD-HH-M25ELC-AL**	**1411489**	1	

Accessories

Replacement seals
From page 220

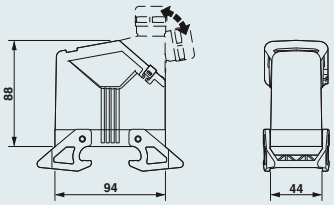
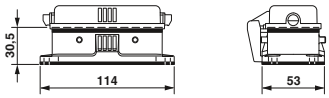
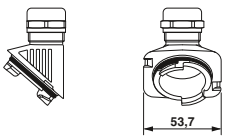
EVO housing, type B16, metal, for EMC applications, double locking latch

EMC

Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Uncoated
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B16-HHWD-EL-AL**	**1411462**	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-STA-B16-BFDC-ELC-AL**	**1411328**	1	
Cable gland 	1x M20	**HC-B-G-M20-EC-AL**	**1411439**	1	
	1x M25	**HC-B-G-M25-EC-AL**	**1411446**	1	
	1x M32	**HC-B-G-M32-EC-AL**	**1411440**	1	
	1x M40	**HC-B-G-M40-EC-AL**	**1411441**	1	

Accessories

Replacement seals
From page 220

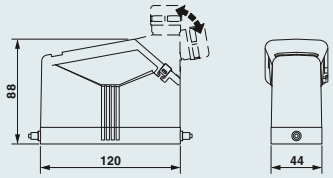
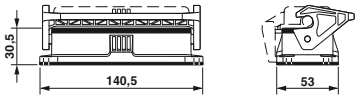
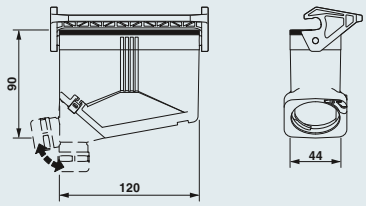
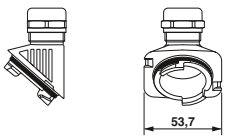
EVO housing, type B24, metal, for EMC applications, single locking latch

EMC

Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Uncoated
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B24-HHFS-EL-AL**	**1411473**	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B24-BWS-ELC-AL** With cover **HC-STA-B24-BWSC-ELC-AL**	 **1411329** **1411330**	 1 1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B24-CHWS-ELC-AL**	**1411476**	1	
Cable gland 	1x M20 1x M25 1x M32 1x M40	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	**1411439** **1411446** **1411440** **1411441**	1 1 1 1	
Connector set 		Push-in connection **HC-EVO-B24PT-BWSC-HH-M32ELC-AL**	**1411493**	1	

Accessories

Replacement seals
From page 220

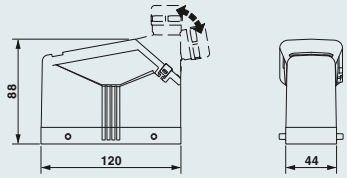
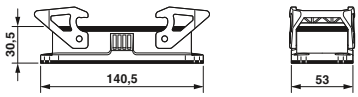
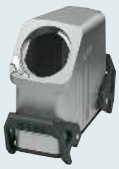
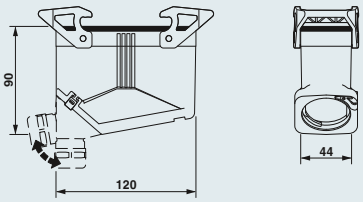
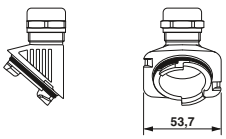
EVO housing, type B24, metal, for EMC applications, double locking latch

EMC

Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Uncoated
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B24-HHFD-EL-AL**	**1411472**	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B24-BWD-ELC-AL**	**1411331**	1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B24-CHWD-ELC-AL**	**1411475**	1	
Cable gland 	1x M20 1x M25 1x M32 1x M40	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	**1411439** **1411446** **1411440** **1411441**	1 1 1 1	
Connector set 		Push-in connection **HC-EVO-B24PT-BWD-HH-M32ELC-AL**	**1411490**	1	

Accessories

Replacement seals
From page 220

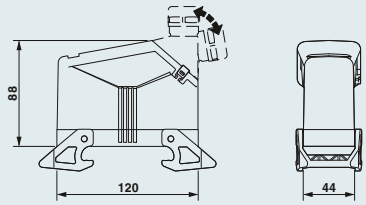
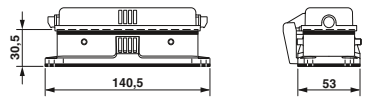
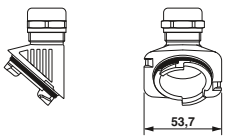
EVO housing, type B24, metal, for EMC applications, double locking latch

EMC

Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Uncoated
Locking latch material	Polyamide
Sealing material	NBR, conductive
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP66

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B24-HHWD-EL-AL**	**1411474**	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-STA-B24-BFDC-ELC-AL**	**1411332**	1	
Cable gland 	1x M20	**HC-B-G-M20-EC-AL**	**1411439**	1	
	1x M25	**HC-B-G-M25-EC-AL**	**1411446**	1	
	1x M32	**HC-B-G-M32-EC-AL**	**1411440**	1	
	1x M40	**HC-B-G-M40-EC-AL**	**1411441**	1	

Accessories

Replacement seals
From page 220

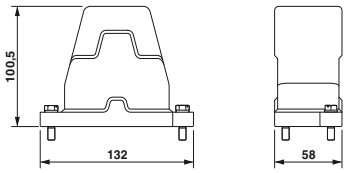
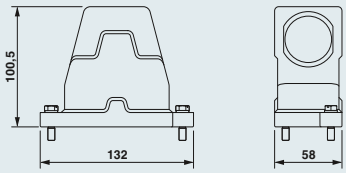
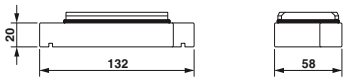
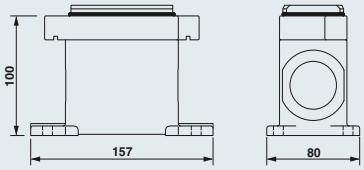
HPR housing, type B6, metal, for railway applications, screw locking

EMC

Technical data

General data	
Housing material	Aluminum die-cast
Surface material	Powder-coated, black
Lock material	High-grade steel
Sealing material	Silicon
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP68/IP69K

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 100.5 mm** 	1x M20 1x M25	Cable entry: top **HC-HPR-B06-HHWH-1TTM20-EM-BK** **HC-HPR-B06-HHWH-1TTM25-EM-BK**	**1411879** **1411106**	1 1	
Sleeve housing **Height: 100.5 mm** 	1x M20 1x M25	Cable entry: lateral **HC-HPR-B06-HHWH-1STM20-EM-BK** **HC-HPR-B06-HHWH-1STM25-EM-BK**	**1411878** **1411119**	1 1	
Panel mounting base **Height: 20 mm** 		Without cover **HC-HPR-B06-BFH-EMR-BK**	**1411122**	1	
Box mounting base **Height: 100 mm** 	2x M20 2x M25	Without cover **HC-HPR-B06-SHFH-2SSM20-EMR-BK** **HC-HPR-B06-SHFH-2SSM25-EMR-BK**	**1411880** **1411135**	1 1	

Accessories

Cable gland
From page 229

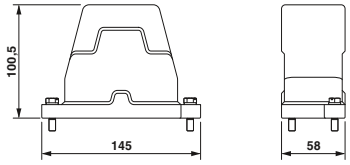
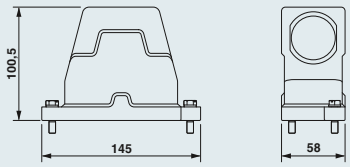
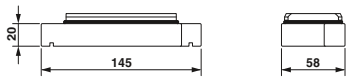
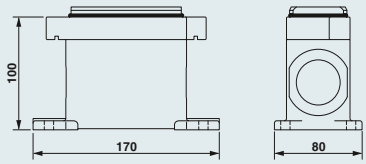
HPR housing, type B10, metal, for railway applications, screw locking

EMC

Technical data

General data	
Housing material	Aluminum die-cast
Surface material	Powder-coated, black
Lock material	High-grade steel
Sealing material	Silicon
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP68/IP69K

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 100.5 mm** 	1x M25 1x M32	Cable entry: top **HC-HPR-B10-HHWH-1TTM25-EM-BK** **HC-HPR-B10-HHWH-1TTM32-EM-BK**	**1411882** **1411067**	1 1	
Sleeve housing **Height: 100.5 mm** 	1x M25 1x M32	Cable entry: lateral **HC-HPR-B10-HHWH-1STM25EM-BK** **HC-HPR-B10-HHWH-1STM32-EM-BK**	**1411881** **1411070**	1 1	
Panel mounting base **Height: 20 mm** 		Without cover **HC-HPR-B10-BFH-EMR-BK**	**1411083**	1	
Box mounting base **Height: 100 mm** 	2x M25 2x M32	Without cover **HC-HPR-B10-SHFH-2SSM25-EMR-BK** **HC-HPR-B10-SHFH-2SSM32-EMR-BK**	**1411883** **1411096**	1 1	

Accessories

Cable gland
From page 229

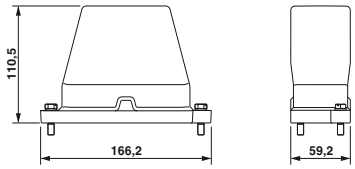
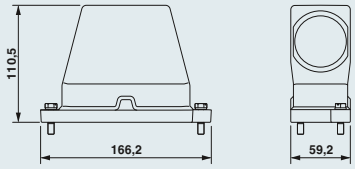
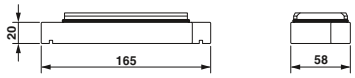
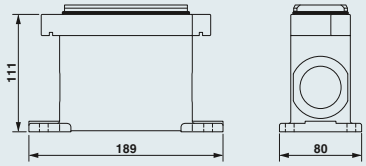
HPR housing, type B16, metal, for railway applications, screw locking

EMC

Technical data

General data	
Housing material	Aluminum die-cast
Surface material	Powder-coated, black
Lock material	High-grade steel
Sealing material	Silicon
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP68/IP69K

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 110.5 mm** 	1x M32 1x M40	Cable entry: top **HC-HPR-B16-HHWH-1TTM32-EM-BK** **HC-HPR-B16-HHWH-1TTM40-EM-BK**	**1411059** **1411885**	1 1	
Sleeve housing **Height: 110.5 mm** 	1x M32 1x M40	Cable entry: lateral **HC-HPR-B16-HHWH-1STM32-EM-BK** **HC-HPR-B16-HHWH-1STM40-EM-BK**	**1411058** **1411884**	1 1	
Panel mounting base **Height: 20 mm** 		Without cover **HC-HPR-B16-BFH-EMR-BK**	**1411060**	1	
Box mounting base **Height: 111 mm** 	2x M32 2x M40	Without cover **HC-HPR-B16-SHFH-2SSM32-EMR-BK** **HC-HPR-B16-SHFH-2SSM40-EMR-BK**	**1411054** **1411886**	1 1	

Accessories

Cable gland
From page 229

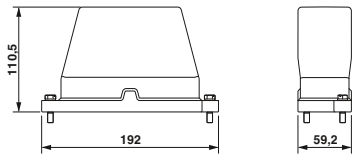
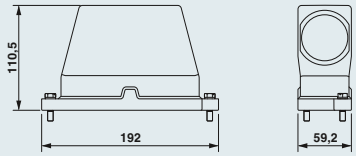
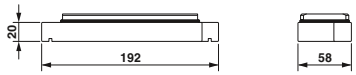
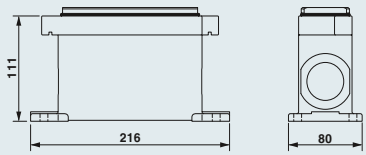
HPR housing, type B24, metal, for railway applications, screw locking

EMC

Technical data

General data	
Housing material	Aluminum die-cast
Surface material	Powder-coated, black
Lock material	High-grade steel
Sealing material	Silicon
Ambient temperature (operation)	-40°C ... 125°C
Type of protection (when plugged in)	IP68/IP69K

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 110.5 mm** 	1x M32 1x M40	Cable entry: top **HC-HPR-B24-HHWH-1TTM32-EM-BK** **HC-HPR-B24-HHWH-1TTM40-EM-BK**	**1411888** **1411062**	1 1	
Sleeve housing **Height: 110.5 mm** 	1x M32 1x M40	Cable entry: lateral **HC-HPR-B24-HHWH-1STM32-EM-BK** **HC-HPR-B24-HHWH-1STM40-EM-BK**	**1411887** **1411061**	1 1	
Panel mounting base **Height: 20 mm** 		Without cover **HC-HPR-B24-BFH-EMR-BK**	**1411055**	1	
Box mounting base **Height: 111 mm** 	2x M32 2x M40	Without cover **HC-HPR-B24-SHFH-2SSM32-EMR-BK** **HC-HPR-B24-SHFH-2SSM40-EMR-BK**	**1411889** **1411063**	1 1	

Accessories

Cable gland
From page 229

Cable glands

Metal HEAVYCON EVO standard cable gland for higher strain relief with bayonet locking.

Black plastic cable glands with extended clamping area.

Notes:
Not for EMC applications

EVO standard cable gland, metal, with NBR seal

Cable gland, plastic

	Technical data	Technical data
Material data		
Material	Aluminum, die-cast	-
Material, pressure screw	Nickel-plated brass	Polyamide
Cable seal material	CR/NBR	-
Degree of protection	IP66	IP68, to 5 bar
Temperature data		
Ambient temperature (operation)	-40°C ... 125°C	-20°C ... 100°C

Description	Thread type	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Metal standard cable gland, for HEAVYCON EVO metal housing, for cable diameter [mm]:							
7 mm ... 13 mm	M20	**HC-B-G-M20-ER-AL**	**1411442**	1			
11 mm ... 16 mm	M25	**HC-B-G-M25-ER-AL**	**1411443**	1			
14 mm ... 21 mm	M32	**HC-B-G-M32-ER-AL**	**1411444**	1			
19 mm ... 27 mm	M40	**HC-B-G-M40-ER-AL**	**1411445**	1			
Plastic cable gland, with extended clamping area, for cable diameter [mm]:							
5 mm ... 13 mm	M20				**HC-K-KV-M20(5-13)BK**	**1411261**	10
8 mm ... 17 mm	M25				**HC-K-KV-M25(8-17)BK**	**1411258**	10
12 mm ... 21 mm	M32				**HC-K-KV-M32(12-21)BK**	**1407673**	10
16 mm ... 28 mm	M40				**HC-K-KV-M40(16-28)BK**	**1407674**	10

Thread adapters, filler plugs

These thread adapters enable the use of special cable glands and corrugated pipe connections with HEAVYCON EVO type D housings.

Filler plugs for sealing unused thread openings on box mounting bases.

EVO D thread adapter, plastic

Filler plug, plastic

	Technical data	Technical data
Material data		
Material	Polyamide fiberglass reinforced	Polyamide fiberglass reinforced
Material, pressure screw	-	-
Cable seal material	-	-
Degree of protection	IP66	IP65
Temperature data		
Ambient temperature (operation)	-40°C ... 125°C	-20°C ... 80°C

		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Plastic thread adapter, for HEAVYCON EVO type D plastic housing							
	M25	**HC-D-TA-M25-PLRBK**	**1411352**	1			
	Pg16	**HC-D-TA-PG16-PLR-BK**	**1411353**	1			
	NPT3/4"	**HC-D-TA-NPT-3/4-PLR-BK**	**1411354**	1			
Plastic filler plug, for HEAVYCON base profiles							
	M25				**HC-K-BS-M25 BK**	**1411245**	10
	M32				**HC-K-BS-M32-BK**	**1410754**	10
	M40				**HC-K-BS-M40-BK**	**1410767**	10

Replacement flat gaskets, profile gaskets for type B

– For EMC housing

Notes:
Bond the replacement profile gaskets to the housing.

Replacement EMC flat gasket, for EVO B panel mounting base

Replacement EMC profile gasket, for EVO B supporting base element

	Technical data	Technical data
Material data		
Material	NBR, conductive	NBR, conductive
Temperature data		
Ambient temperature (operation)	-40°C ... 125°C	-40°C ... 125°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement flat seal, for HEAVYCON panel mounting base type:						
B6	**HC-B06-SG-CBK**	**1411483**	10			
B10	**HC-B10-SG-CBK**	**1411484**	10			
B16	**HC-B16-SG-CBK**	**1411485**	10			
B24	**HC-B24-SG-CBK**	**1411486**	10			
Replacement profile gasket, for HEAVYCON EVO supporting base element type:						
B6				**HC-B06-SP-CBK**	**1411477**	10
B10				**HC-B10-SP-CBK**	**1411479**	10
B16				**HC-B16-SP-CBK**	**1411480**	10
B24				**HC-B24-SP-CBK**	**1411482**	10

Special flat gaskets, coding profiles

Special flat gaskets for type B panel mounting bases for uneven mounting surfaces.

Coding profile for new BB series contact inserts.

– For easy and inexpensive coding of identical plug-in connections
– Can be coded in seconds, thanks to the coding profile

Special flat gasket, for standard B panel mounting base

Coding profile

	Technical data	Technical data
Material data		
Material	EPDM/CR	PA
Temperature data		
Ambient temperature (operation)	-40°C ... 125°C	-40°C ... 125°C

	Ordering data			Ordering data		
Description	**Type**	**Order No.**	Pcs. / Pkt.	**Type**	**Order No.**	Pcs. / Pkt.
Special flat gasket, made from foam rubber for HEAVYCON panel mounting base type:						
B6	**HC-B 6-FL-MDI**	**1410929**	10			
B10	**HC-B 10-FL-MDI**	**1410932**	10			
B16	**HC-B 16-FL-MDI**	**1410945**	10			
B24	**HC-B 24-FL-MDI**	**1410958**	10			
Coding profile, for new BB series contact inserts				**CP-HC-S**	**1410916**	10

Sealing frames with cone-shaped cable sleeves

Pre-assembled sealing frames with 8 (B16) or 10 (B24) cone-shaped cable sleeves. Particularly suitable for cables that are assembled or wired in the control cabinet. Cables up to 11 mm in diameter can be fed through by cutting off the sleeves.

– IP65 when using cable binders and vertical mounting
– Resistant to oil, fuels, and grease
– Halogen-free

Sealing frames with cone-shaped cable sleeves and screw locking

Technical data

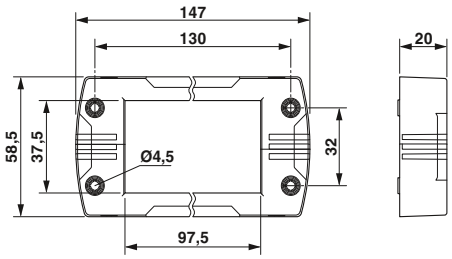
General data		
Material of frames		Polyamide
Material of cable sleeves		NBR
Degree of protection		IP54 (DIN IEC 60529)/IP65 (when directly mounted on the housing panel (perpendicular mounting or underwall mounting) and using a 3.6 mm wide cable binder (e.g., Order No. 3240744))
Temperature range	[°C]	-40 ... 120

Ordering data

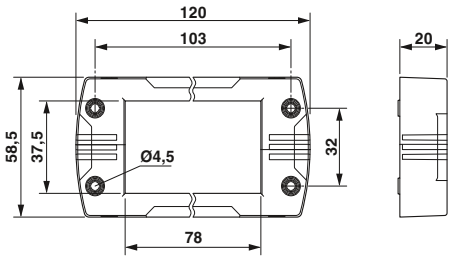
Description	Type	Order No.	Pcs. / Pkt.
Pre-assembled sealing frames with **cone-shaped cable sleeves,** for cables with a diameter of:			
2 - 11 mm	**CES-B16-8XSRC-BK**	**1411073**	1
2 - 11 mm	**CES-B24-10XSRC-BK**	**1411074**	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Electrician's scissors, high cutting performance, thanks to micro-serrated cutting area, suitable for copper, aluminum, Kevlar fibers, and plastic, two-component non-slip soft-grip handles, ergonomic design, adjustable screw joint	**CUTFOX-ES**	**1212621**	1
M4 replacement locking screw, with 3 mm Allen screw head, for sealing frame with screw locking	**CES-SFFS-H**	**0801728**	10
Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic	**SF-M BH**	**1212070**	1
Screw bit, hexagonal, E6.3-1/4" drive, hardened, suitable for holder according to DIN 3126-F 6.3/ISO 1173, size: hex 3 x 50 mm			
Size: hex 3 x 50 mm	**SF-BIT-HEX 3-50**	**1212647**	5



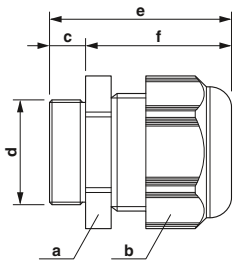
CES-B16-8XSRC-BK



CES-B24-10XSRC-BK

Plastic cable gland, metric, EN 60423

- Material: polyamide 6
- Color: silver-gray (RAL 7001)
- Seal: neoprene
- Ambient temperature: -30°C ... +80°C (+150°C briefly)
- Degree of protection: IP68, 5 bar
- Strain relief: integrated according to EN 50262



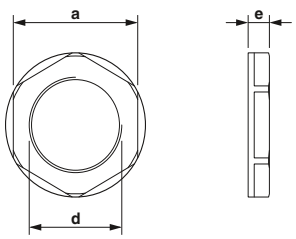
Plastic cable gland

243143 / QCRV2.E320158 / 40024418

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data: Type	Order No.	Pcs. / Pkt.
M12	3.00 - 6.50	15.00	15.00	8.00	12.00	32.10	24.10	-	G-INS-M12-S68N-PNES-GY	1411123	10
M16	5.00 - 10.00	22.00	22.00	10.00	16.00	39.70	29.70	-	G-INS-M16-S68N-PNES-GY	1411124	10
M20	6.00 - 12.00	24.00	24.00	10.00	20.00	42.30	32.30	-	G-INS-M20-S68N-PNES-GY	1411125	5
M25	11.00 - 17.00	29.00	29.00	8.00	25.00	42.50	34.50	-	G-INS-M25-M68N-PNES-GY	1411126	5
M32	15.00 - 21.00	36.00	36.00	10.00	32.00	50.80	40.80	-	G-INS-M32-M68N-PNES-GY	1411127	5
M40	19.00 - 28.00	46.00	46.00	10.00	40.00	55.10	45.10	-	G-INS-M40-M68N-PNES-GY	1411128	5
M50	30.00 - 38.00	60.00	60.00	18.00	50.00	71.70	53.70	-	G-INS-M50-L68L-PNES-GY	1411129	1
M63	34.00 - 44.00	65.00	65.00	18.00	63.00	75.40	57.40	-	G-INS-M63-L68L-PNES-GY	1411130	1

Plastic counter nut, metric, EN 60423

- Material: polyamide 6
- Color: silver-gray (RAL 7001)
- Ambient temperature: -20°C ... +80°C

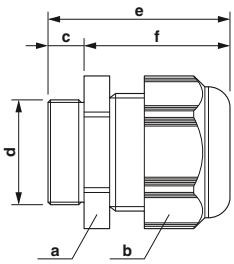


Plastic counter nut

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data: Type	Order No.	Pcs. / Pkt.
M12	-	18.00	-	-	12.00	5.00	-	-	A-INL-M12-P-GY	1411205	10
M16	-	22.00	-	-	16.00	5.00	-	-	A-INL-M16-P-GY	1411206	10
M20	-	26.00	-	-	20.00	6.00	-	-	A-INL-M20-P-GY	1411207	5
M25	-	32.00	-	-	25.00	6.00	-	-	A-INL-M25-P-GY	1411208	5
M32	-	41.00	-	-	32.00	7.00	-	-	A-INL-M32-P-GY	1411209	5
M40	-	50.00	-	-	40.00	7.00	-	-	A-INL-M40-P-GY	1411210	5
M50	-	60.00	-	-	50.00	8.00	-	-	A-INL-M50-P-GY	1411211	5
M63	-	75.00	-	-	63.00	8.00	-	-	A-INL-M63-P-GY	1411212	5

Plastic cable gland, metric, EN 60423

- Material: polyamide 6
- Color: deep black (RAL 9005)
- Seal: neoprene
- Ambient temperature: -30°C ... +80°C (+150°C briefly)
- Degree of protection: IP68, 5 bar
- Strain relief: integrated according to EN 50262



Plastic cable gland

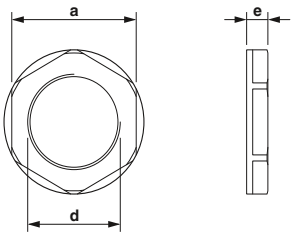
243143 / QCRV.E320158 / 40024418

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	3.00 - 6.50	15.00	15.00	8.00	12.00	32.10	24.10	-	G-INS-M12-S68N-PNES-BK	1411131	10
M16	5.00 - 10.00	22.00	22.00	10.00	16.00	39.70	29.70	-	G-INS-M16-S68N-PNES-BK	1411132	10
M20	6.00 - 12.00	24.00	24.00	10.00	20.00	42.30	32.30	-	G-INS-M20-S68N-PNES-BK	1411133	5
M25	11.00 - 17.00	29.00	29.00	8.00	25.00	42.50	34.50	-	G-INS-M25-M68N-PNES-BK	1411134	5
M32	15.00 - 21.00	36.00	36.00	10.00	32.00	50.80	40.80	-	G-INS-M32-M68N-PNES-BK	1411136	5
M40	19.00 - 28.00	46.00	46.00	10.00	40.00	55.10	45.10	-	G-INS-M40-M68N-PNES-BK	1411137	5
M50	30.00 - 38.00	60.00	60.00	18.00	50.00	71.70	53.70	-	G-INS-M50-L68L-PNES-BK	1411138	1
M63	34.00 - 44.00	65.00	65.00	18.00	63.00	75.40	57.40	-	G-INS-M63-L68L-PNES-BK	1411139	1

Ordering data

Plastic counter nut, metric, EN 60423

- Material: polyamide 6
- Color: deep black (RAL 9005)
- Ambient temperature: -20°C ... +80°C



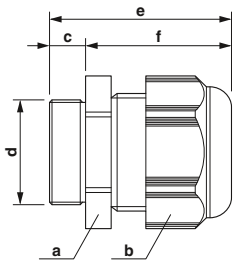
Plastic counter nut

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	-	18.00	-	-	12.00	5.00	-	-	A-INL-M12-P-BK	1411213	10
M16	-	22.00	-	-	16.00	5.00	-	-	A-INL-M16-P-BK	1411214	10
M20	-	26.00	-	-	20.00	6.00	-	-	A-INL-M20-P-BK	1411215	5
M25	-	32.00	-	-	25.00	6.00	-	-	A-INL-M25-P-BK	1411216	5
M32	-	41.00	-	-	32.00	7.00	-	-	A-INL-M32-P-BK	1411217	5
M40	-	50.00	-	-	40.00	7.00	-	-	A-INL-M40-P-BK	1411218	5
M50	-	60.00	-	-	50.00	8.00	-	-	A-INL-M50-P-BK	1411219	5
M63	-	75.00	-	-	63.00	8.00	-	-	A-INL-M63-P-BK	1411220	5

Ordering data

Plastic cable gland, Pg, EN 40430

- Material: polyamide 6
- Color: silver-gray (RAL 7001)
- Seal: neoprene
- Ambient temperature: -30°C ... +80°C (+150°C briefly)
- Degree of protection: IP68, 5 bar
- Strain relief: integrated according to EN 50262



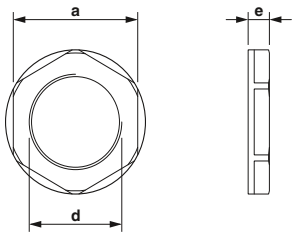
Plastic cable gland

243143 / QCRV2.E320158

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data Type	Order No.	Pcs. / Pkt.
Pg7	3.00 - 6.50	15.00	15.00	8.00	12.50	32.70	24.70	-	G-INS-PG7-S68N-PNES-GY	1411140	10
Pg9	4.00 - 8.00	19.00	19.00	8.00	15.20	36.20	28.20	-	G-INS-PG9-S68N-PNES-GY	1411141	10
Pg11	5.00 - 10.00	22.00	22.00	8.00	18.60	38.10	30.10	-	G-INS-PG11-S68N-PNES-GY	1411142	5
Pg13.5	6.00 - 12.00	24.00	24.00	9.00	20.40	40.00	31.00	-	G-INS-PG13,5-S68N-PNES-GY	1411143	5
Pg16	10.00 - 14.00	27.00	27.00	10.00	22.50	44.20	34.20	-	G-INS-PG16-S68N-PNES-GY	1411144	5
Pg21	13.00 - 18.00	33.00	33.00	11.00	28.30	49.30	38.30	-	G-INS-PG21-M68N-PNES-GY	1411145	5
Pg29	18.00 - 25.00	42.00	42.00	11.00	37.00	53.90	42.90	-	G-INS-PG29-M68N-PNES-GY	1411146	5
Pg36	22.00 - 32.00	53.00	53.00	13.00	47.00	65.40	52.40	-	G-INS-PG36-L68N-PNES-GY	1411147	5
Pg42	30.00 - 38.00	60.00	60.00	13.00	54.00	65.90	52.90	-	G-INS-PG42-L68N-PNES-GY	1411149	1
Pg48	34.00 - 44.00	65.00	65.00	14.00	59.30	68.80	54.80	-	G-INS-PG48-L68N-PNES-GY	1411150	1

Plastic counter nut, Pg, EN 40430

- Material: polyamide 6
- Color: silver-gray (RAL 7001)
- Ambient temperature: -20°C ... +80°C

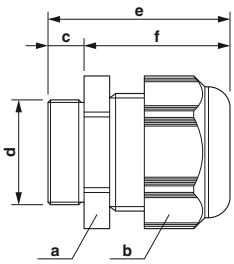


Plastic counter nut

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data Type	Order No.	Pcs. / Pkt.
Pg7	-	19.00	-	-	12.50	5.00	-	-	A-INL-PG7-P-GY	1411221	10
Pg9	-	22.00	-	-	15.20	5.00	-	-	A-INL-PG9-P-GY	1411222	10
Pg11	-	24.00	-	-	18.60	5.00	-	-	A-INL-PG11-P-GY	1411223	5
Pg13.5	-	27.00	-	-	20.40	6.00	-	-	A-INL-PG13,5-P-GY	1411224	5
Pg16	-	30.00	-	-	22.50	6.00	-	-	A-INL-PG16-P-GY	1411225	5
Pg21	-	36.00	-	-	28.30	7.00	-	-	A-INL-PG21-P-GY	1411226	5
Pg29	-	46.00	-	-	37.00	7.00	-	-	A-INL-PG29-P-GY	1411227	5
Pg36	-	60.00	-	-	47.00	8.00	-	-	A-INL-PG36-P-GY	1411228	5
Pg42	-	65.00	-	-	54.00	8.00	-	-	A-INL-PG42-P-GY	1411229	5
Pg48	-	70.00	-	-	59.30	8.00	-	-	A-INL-PG48-P-GY	1411230	5

Plastic cable gland, NPT, ANSI B1.20.1

- Material: polyamide 6
- Color: silver-gray (RAL 7001)
- Seal: neoprene
- Ambient temperature: -30°C ... +80°C (+150°C briefly)
- Degree of protection: IP68, 5 bar
- Strain relief: integrated according to EN 50262



Plastic cable gland

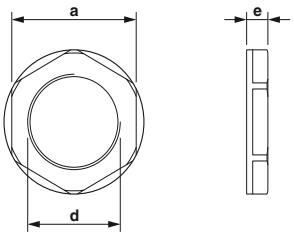
243143 / QCRV.E320158

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
NPT3/8"	5.00 - 10.00	22.00	22.00	15.00	16.60	44.50	29.50	-	G-INS-N3/8-S68L-PNES-GY	1411152	10
NPT1/2"	10.00 - 14.00	27.00	27.00	15.00	20.60	47.10	32.10	-	G-INS-N1/2-S68L-PNES-GY	1411153	10
NPT3/4"	13.00 - 18.00	33.00	33.00	15.00	25.90	47.50	35.50	-	G-INS-N3/4-M68L-PNES-GY	1411154	5
NPT1"	18.00 - 25.00	42.00	42.00	18.00	32.40	58.50	40.50	-	G-INS-N1-M68L-PNES-GY	1411155	5

Ordering data

Plastic counter nut, NPT, ANSI B1.20.1

- Material: polyamide 6
- Color: silver-gray (RAL 7001)
- Ambient temperature: -20°C ... +80°C



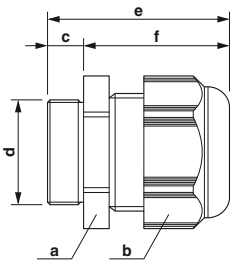
Plastic counter nut

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
NPT3/8"	-	22.00	-	-	16.60	5.00	-	-	A-INL-NPT3/8-P-GY	1411231	10
NPT1/2"	-	27.00	-	-	20.60	5.00	-	-	A-INL-NPT1/2-P-GY	1411233	10
NPT3/4"	-	33.00	-	-	25.90	5.00	-	-	A-INL-NPT3/4-P-GY	1411234	5
NPT1"	-	47.00	-	-	32.40	6.00	-	-	A-INL-NPT1-P-GY	1411235	5

Ordering data

Plastic cable gland, NPT, ANSI B1.20.1

- Material: polyamide 6
- Color: deep black (RAL 9005)
- Seal: neoprene
- Ambient temperature: -30°C ... +80°C (+150°C briefly)
- Degree of protection: IP68, 5 bar
- Strain relief: integrated according to EN 50262



Plastic cable gland

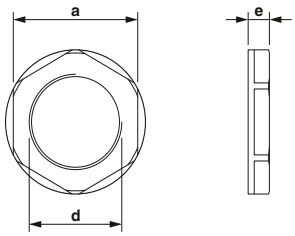
243143 / QCRV.E320158

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
NPT3/8"	5.00 - 10.00	22.00	22.00	15.00	16.60	44.50	29.50	-	G-INS-N3/8-S68L-PNES-BK	1411156	10
NPT1/2"	10.00 - 14.00	27.00	27.00	15.00	20.60	47.10	32.10	-	G-INS-N1/2-S68L-PNES-BK	1411157	10
NPT3/4"	13.00 - 18.00	33.00	33.00	12.00	25.90	47.50	35.50	-	G-INS-N3/4-M68L-PNES-BK	1411158	5
NPT1"	18.00 - 25.00	42.00	42.00	18.00	32.40	58.50	40.50	-	G-INS-N1-M68L-PNES-BK	1411159	5

Ordering data

Plastic counter nut, NPT, ANSI B1.20.1

- Material: polyamide 6
- Color: deep black (RAL 9005)
- Ambient temperature: -20°C ... +80°C



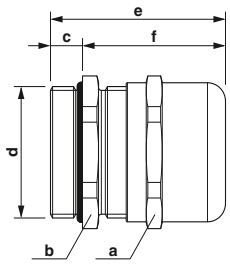
Plastic counter nut

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
NPT3/8"	-	22.00	-	-	16.60	5.00	-	-	A-INL-NPT3/8-P-BK	1411236	10
NPT1/2"	-	27.00	-	-	20.60	5.00	-	-	A-INL-NPT1/2-P-BK	1411237	10
NPT3/4"	-	33.00	-	-	25.90	5.00	-	-	A-INL-NPT3/4-P-BK	1411238	5
NPT1"	-	47.00	-	-	32.40	6.00	-	-	A-INL-NPT1-P-BK	1411239	5

Ordering data

Brass cable gland, metric, EN 60423

- Material: brass, nickel-plated
- Seal: neoprene
- Clamping insert: polyamide 6
- O-ring: NBR
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP69K
- Strain relief: integrated according to EN 50262



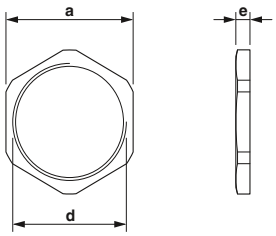
Brass cable gland

QCRV.E320158

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data: Type	Order No.	Pcs. / Pkt.
M12	3.00 - 6.50	14.00	14.00	6.00	12.00	27.80	21.80	-	G-INS-M12-S68N-NNES-S	1411160	10
M16	5.00 - 10.00	20.00	20.00	7.00	16.00	34.50	27.50	-	G-INS-M16-S68N-NNES-S	1411162	10
M20	6.00 - 12.00	22.00	22.00	8.00	20.00	37.50	29.50	-	G-INS-M20-S68N-NNES-S	1411163	5
M25	11.00 - 17.00	27.00	27.00	8.00	25.00	40.00	32.00	-	G-INS-M25-M68N-NNES-S	1411165	5
M32	15.00 - 21.00	34.00	34.00	8.00	32.00	43.00	35.00	-	G-INS-M32-M68N-NNES-S	1411166	5
M40	19.00 - 28.00	43.00	43.00	9.00	40.00	53.70	44.70	-	G-INS-M40-M68N-NNES-S	1411167	5
M50	27.00 - 38.00	58.00	58.00	9.00	50.00	61.00	52.00	-	G-INS-M50-L68N-NNES-S	1411168	1
M63	34.00 - 44.00	64.00	68.00	14.00	63.00	65.20	51.20	-	G-INS-M63-L68N-NNES-S	1411169	1

Brass counter nut, metric, EN 60423

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C

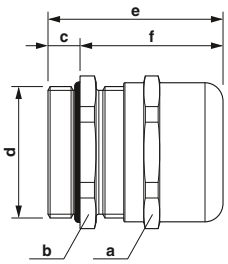


Brass counter nut

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data: Type	Order No.	Pcs. / Pkt.
M12	-	15.00	-	-	12.00	2.80	-	-	A-INL-M12-N-S	1411240	100
M16	-	19.00	-	-	16.00	2.80	-	-	A-INL-M16-N-S	1411241	100
M20	-	24.00	-	-	20.00	3.00	-	-	A-INL-M20-N-S	1411242	100
M25	-	30.00	-	-	25.00	3.50	-	-	A-INL-M25-N-S	1411243	100
M32	-	36.00	-	-	32.00	4.00	-	-	A-INL-M32-N-S	1411244	100
M40	-	46.00	-	-	40.00	5.00	-	-	A-INL-M40-N-S	1411246	50
M50	-	57.00	-	-	50.00	5.00	-	-	A-INL-M50-N-S	1411247	25
M63	-	70.00	-	-	63.00	6.00	-	-	A-INL-M63-N-S	1411248	25

Brass cable gland, Pg, EN 40430

- Material: brass, nickel-plated
- Seal: neoprene
- Clamping insert: polyamide 6
- O-ring: NBR
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP68/IP69K
- Strain relief: integrated according to EN 50262



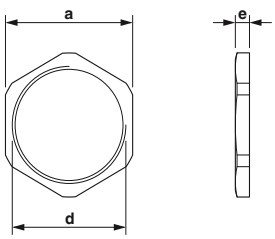
Brass cable gland

QCRV.E320158

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data Type	Order No.	Pcs. / Pkt.
Pg7	3.00 - 6.50	14.00	14.00	6.00	12.50	27.80	21.80	-	G-INS-PG7-S68N-NNES-S	1411170	10
Pg9	4.00 - 8.00	17.00	17.00	6.00	15.20	28.20	22.20	-	G-INS-PG9-S68N-NNES-S	1411171	10
Pg11	5.00 - 10.00	20.00	20.00	6.00	18.60	21.00	15.00	-	G-INS-PG11-S68N-NNES-S	1411172	5
Pg13.5	6.00 - 12.00	22.00	22.00	6.50	20.40	30.50	24.00	-	G-INS-PG13,5-S68N-NNES-S	1411173	5
Pg16	10.00 - 14.00	24.00	24.00	6.50	22.50	33.90	27.40	-	G-INS-PG16-S68N-NNES-S	1411174	5
Pg21	13.00 - 18.00	30.00	30.00	7.20	28.30	38.50	31.30	-	G-INS-PG21-M68N-NNES-S	1411175	5
Pg29	18.00 - 25.00	40.00	40.00	8.00	37.00	46.90	38.90	-	G-INS-PG29-M68N-NNES-S	1411176	5
Pg36	22.00 - 32.00	50.00	50.00	9.00	47.00	57.20	48.20	-	G-INS-PG36-L68N-NNES-S	1411178	5
Pg42	30.00 - 38.00	58.00	58.00	12.00	54.00	60.00	48.00	-	G-INS-PG42-L68N-NNES-S	1411179	1
Pg48	34.00 - 44.00	64.00	64.00	14.00	59.30	63.40	49.40	-	G-INS-PG48-L68N-NNES-S	1411181	1

Brass counter nut, Pg, EN 40430

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C

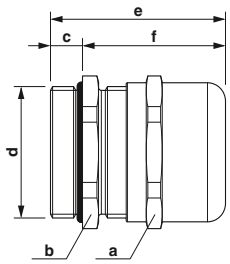


Brass counter nut

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data Type	Order No.	Pcs. / Pkt.
Pg7	-	15.00	-	-	12.50	2.80	-	-	A-INL-PG7-N-S	1411255	100
Pg9	-	18.00	-	-	15.20	2.80	-	-	A-INL-PG9-N-S	1411256	100
Pg11	-	21.00	-	-	18.60	3.00	-	-	A-INL-PG11-N-S	1411257	100
Pg13.5	-	23.00	-	-	20.40	3.00	-	-	A-INL-PG13,5-N-S	1411259	100
Pg16	-	26.00	-	-	22.50	3.00	-	-	A-INL-PG16-N-S	1411260	100
Pg21	-	32.00	-	-	28.30	3.50	-	-	A-INL-PG21-N-S	1411262	100
Pg29	-	41.00	-	-	37.00	4.00	-	-	A-INL-PG29-N-S	1411263	50
Pg36	-	51.00	-	-	47.00	5.00	-	-	A-INL-PG36-N-S	1411264	50
Pg42	-	60.00	-	-	54.00	5.00	-	-	A-INL-PG42-N-S	1411265	25
Pg48	-	64.00	-	-	59.30	5.50	-	-	A-INL-PG48-N-S	1411266	25

Brass cable gland, NPT, ANSI B1.20.1

- Material: brass, nickel-plated
- Seal: neoprene
- Clamping insert: polyamide 6
- O-ring: NBR
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP68, 5 bar
- Strain relief: integrated according to EN 50262



Brass cable gland

QCRV2.E320158

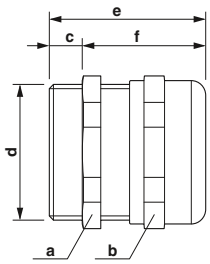
Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g
NPT3/8"	5.00 - 10.00	17.00	19.00	11.50	16.00	34.50	23.00	-
NPT1/2"	10.00 - 14.00	22.00	22.00	13.00	21.00	39.00	26.00	-
NPT3/4"	13.00 - 18.00	30.00	30.00	13.00	29.00	48.50	35.50	-
NPT1"	18.00 - 25.00	40.00	43.00	13.00	32.00	56.00	43.00	-

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INS-NPT3/8-S68L-NNES-S	**1411182**	10
G-INS-NPT1/2-S68L-NNES-S	**1411183**	10
G-INS-NPT3/4-M68L-NNES-S	**1411184**	5
G-INS-NPT1-M68L-NNES-S	**1411185**	5

Brass EMC cable gland, metric, EN 60423

- Material: brass, nickel-plated
- Seal: CR/NBR
- Clamping insert: polyamide 6
- Contact spring: stainless steel
- O-ring: NBR
- Ambient temperature (operation): -20°C ... +100°C
- Degree of protection: IP68
- Strain relief: integrated according to EN 50262



Brass cable gland

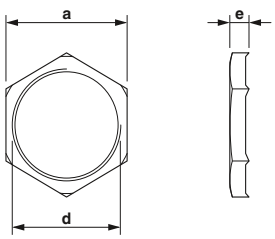
QCRV.E140310 / QCRV2.E140310

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	3.00 - 6.50	14.00	14.00	6.00	12.00	28.00	22.00	-	G-INSEC-M12-S68N-NCRS-S	1411187	10
M16	5.00 - 9.00	17.00	17.00	5.00	16.00	30.00	25.00	-	G-INSEC-M16-S68N-NCRS-S	1411188	10
M20	9.00 - 13.00	22.00	22.00	6.00	20.00	33.50	27.50	-	G-INSEC-M20-S68N-NCRS-S	1411189	5
M25	11.00 - 16.00	27.00	27.00	7.00	25.00	36.50	29.50	-	G-INSEC-M25-S68N-NCRS-S	1411190	5
M32	14.00 - 21.00	34.00	34.00	8.00	32.00	38.00	30.00	-	G-INSEC-M32-M68N-NCRS-S	1411191	5
M40	19.00 - 27.00	43.00	43.00	8.00	40.00	41.00	33.00	-	G-INSEC-M40-M68N-NCRS-S	1411192	5
M50	24.00 - 35.00	55.00	55.00	9.00	50.00	49.50	40.50	-	G-INSEC-M50-L68N-NCRS-S	1411193	1
M63	32.00 - 42.00	65.00	65.00	10.00	63.00	52.50	42.50	-	G-INSEC-M63-L68N-NCRS-S	1411194	1

Ordering data

Brass counter nut, metric, EN 60423, ribbed

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C
- Version: ribbed



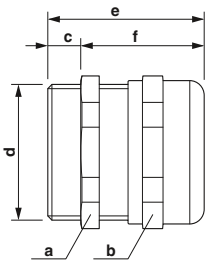
Brass counter nut

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M12	-	15.00	-	-	12.00	4.70	-	-	A-INLE-M12-N-S	1411267	100
M16	-	19.00	-	-	16.00	4.70	-	-	A-INLE-M16-N-S	1411268	100
M20	-	24.00	-	-	20.00	4.70	-	-	A-INLE-M20-N-S	1411269	100
M25	-	30.00	-	-	25.00	5.20	-	-	A-INLE-M25-N-S	1411270	50
M32	-	36.00	-	-	32.00	5.70	-	-	A-INLE-M32-N-S	1411271	50
M40	-	46.00	-	-	40.00	6.50	-	-	A-INLE-M40-N-S	1411272	50
M50	-	57.00	-	-	50.00	6.50	-	-	A-INLE-M50-N-S	1411273	10
M63	-	70.00	-	-	63.00	7.00	-	-	A-INLE-M63-N-S	1411274	10

Ordering data

Brass EMC cable gland, Pg, EN 40430

- Material: brass, nickel-plated
- Seal: neoprene
- Clamping insert: polyamide 6
- Contact spring: copper beryllium
- O-ring: NBR
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP68
- Strain relief: integrated according to EN 50262



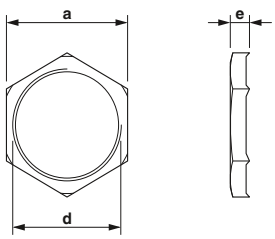
Brass cable gland

QCRV2.E320158

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data: Type	Order No.	Pcs. / Pkt.
Pg7	3.00 - 6.50	14.00	14.00	6.00	12.50	27.00	21.00	-	G-INSEC-PG7-S68N-NNES-S	1411195	10
Pg9	4.00 - 8.00	17.00	17.00	6.00	15.20	29.00	23.00	-	G-INSEC-PG9-S68N-NNES-S	1411196	10
Pg11	5.00 - 10.00	20.00	20.00	6.00	18.60	30.00	24.00	-	G-INSEC-PG11-S68N-NNES-S	1411197	5
Pg13.5	6.00 - 12.00	22.00	22.00	6.50	20.40	30.00	23.50	-	G-INSEC-PG13,5-S68N-NNES-S	1411198	5
Pg16	10.00 - 14.00	24.00	24.00	6.50	22.50	33.90	27.40	-	G-INSEC-PG16-S68N-NNES-S	1411199	5
Pg21	13.00 - 18.00	30.00	30.00	7.20	28.30	38.50	31.30	-	G-INSEC-PG21-M68N-NNES-S	1411200	5
Pg29	18.00 - 25.00	40.00	40.00	8.00	37.00	47.00	39.00	-	G-INSEC-PG29-M68N-NNES-S	1411201	5
Pg36	22.00 - 32.00	50.00	50.00	9.00	47.00	57.00	48.00	-	G-INSEC-PG36-L68N-NNES-S	1411202	5
Pg42	30.00 - 38.00	58.00	58.00	12.00	54.00	60.00	48.00	-	G-INSEC-PG42-L68N-NNES-S	1411203	1
Pg48	34.00 - 44.00	64.00	64.00	14.00	59.30	65.00	51.00	-	G-INSEC-PG48-L68N-NNES-S	1411204	1

Brass counter nut, Pg, EN 40430, ribbed

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C
- Version: ribbed

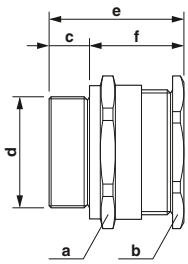


Brass counter nut

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Ordering data: Type	Order No.	Pcs. / Pkt.
Pg7	-	15.00	-	-	12.50	4.70	-	-	A-INLE-PG7-N-S	1411275	100
Pg9	-	18.00	-	-	15.20	4.70	-	-	A-INLE-PG9-N-S	1411276	100
Pg11	-	21.00	-	-	18.60	4.70	-	-	A-INLE-PG11-N-S	1411277	100
Pg13.5	-	23.00	-	-	20.40	4.70	-	-	A-INLE-PG13,5-N-S	1411278	100
Pg16	-	26.00	-	-	22.50	4.70	-	-	A-INLE-PG16-N-S	1411279	100
Pg21	-	32.00	-	-	28.30	5.20	-	-	A-INLE-PG21-N-S	1411280	50
Pg29	-	41.00	-	-	37.00	5.70	-	-	A-INLE-PG29-N-S	1411281	50
Pg36	-	51.00	-	-	47.00	6.50	-	-	A-INLE-PG36-N-S	1411282	50

Brass cable gland, metric, Ex protection

Cable glands for unarmored and braided cables provide flameproof (type “d”), increased safety (type “e”), and restricted breathing (type “nR”) hazardous area protection to IP66, IP67, and IP68.



Brass cable gland

Ex: SIRA13ATEX1068X / IECEx SIR13.0023X

Technical data

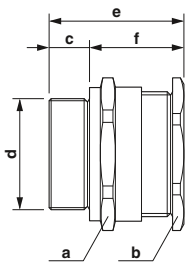
General data	
Cable gland material	Nickel-plated brass
Seal material	Thermoplastic elastomers
O-ring material	Viton
Ambient temperature (operation)	-60°C ... 130°C

Ordering data

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	6.50 - 14.00	27.00	27.00	15.00	20.00	39.00	24.00	-	**G-ESS-M20-S66L-NTES-S**	**1411075**	20
M25	11.10 - 20.00	36.00	36.00	15.00	25.00	41.00	26.00	-	**G-ESS-M25-M66L-NTES-S**	**1411077**	20
M32	17.00 - 26.30	41.00	41.00	15.00	32.00	42.00	27.00	-	**G-ESS-M32-M66L-NTES-S**	**1411079**	10
M40	23.50 - 32.20	50.00	50.00	15.00	40.00	43.00	28.00	-	**G-ESS-M40-L66L-NTES-S**	**1411081**	2
M50	35.60 - 44.10	60.00	60.00	15.00	50.00	45.00	30.00	-	**G-ESS-M50-L66L-NTES-S**	**1411084**	2
M63	47.20 - 56.00	75.00	75.00	15.00	63.00	45.00	30.00	-	**G-ESS-M63-L66L-NTES-S**	**1411086**	2

Stainless steel cable gland, metric, Ex protection

Cable glands for unarmored and braided cables provide flameproof (type “d”), increased safety (type “e”), and restricted breathing (type “nR”) hazardous area protection to IP66, IP67, and IP68.



Stainless steel cable gland

Ex: SIRA13ATEX1068X / IECEx SIR13.0023X

Technical data

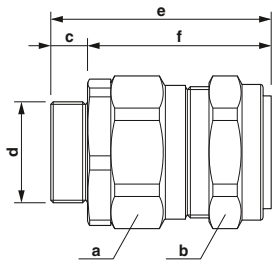
General data	
Cable gland material	High-grade steel
Seal material	Thermoplastic elastomers
O-ring material	Viton
Ambient temperature (operation)	-60°C ... 130°C

Ordering data

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	6.50 - 14.00	27.00	27.00	15.00	20.00	39.00	24.00	-	**G-ESS-M20-S66L-STES-S**	**1411076**	20
M25	11.10 - 20.00	36.00	36.00	15.00	25.00	41.00	26.00	-	**G-ESS-M25-M66L-STES-S**	**1411078**	20
M32	17.00 - 26.30	41.00	41.00	15.00	32.00	42.00	27.00	-	**G-ESS-M32-M66L-STES-S**	**1411080**	10
M40	23.50 - 32.20	50.00	50.00	15.00	40.00	43.00	28.00	-	**G-ESS-M40-L66L-STES-S**	**1411082**	2
M50	35.60 - 44.10	60.00	60.00	15.00	50.00	45.00	30.00	-	**G-ESS-M50-L66L-STES-S**	**1411085**	2
M63	47.20 - 56.00	75.00	75.00	15.00	63.00	45.00	30.00	-	**G-ESS-M63-L66L-STES-S**	**1411087**	2

Brass cable gland, metric, Ex protection

Cable glands for armored cables provide increased safety (type “e”) hazardous area protection to IP66, IP67, and IP68.



Brass cable gland

Ex: SIRA13ATEX1070X / IECEx SIR13.0025X

Technical data

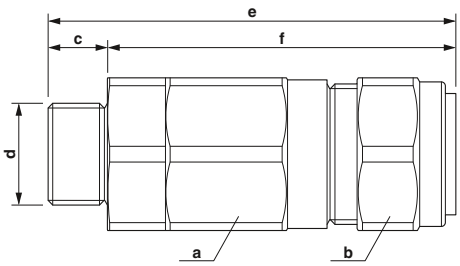
General data	
Cable gland material	Nickel-plated brass
Seal material	Thermoplastic elastomers
O-ring material	Viton
Ambient temperature (operation)	-60°C ... 130°C

Ordering data

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	9.50 - 15.90	24.00	24.00	15.00	20.00	73.50	58.50	-	**G-ESSWU-M20S-S66L-NTES-S**	**1411088**	10
M20	12.50 - 20.90	30.50	30.50	15.00	20.00	75.50	60.50	-	**G-ESSWU-M20-M66L-NTES-S**	**1411090**	10
M25	18.20 - 26.20	37.50	37.50	15.00	25.00	82.50	67.50	-	**G-ESSWU-M25-M66L-NTES-S**	**1411092**	10
M32	23.70 - 33.90	46.00	46.00	15.00	32.00	84.50	69.50	-	**G-ESSWU-M32-L66L-NTES-S**	**1411094**	5
M40	27.90 - 40.40	55.00	55.00	15.00	40.00	93.00	78.00	-	**G-ESSWU-M40-L66L-NTES-S**	**1411097**	1
M50	40.40 - 53.10	70.00	70.00	15.00	50.00	95.50	80.50	-	**G-ESSWU-M50-L66L-NTES-S**	**1411100**	1
M63	54.60 - 65.90	80.00	80.00	15.00	63.00	107.00	92.00	-	**G-ESSWU-M63-L66L-NTES-S**	**1411102**	1

Stainless steel cable gland, metric, Ex protection

Cable glands for armored cables provide flameproof (type “d”), increased safety (type “e”), and restricted breathing (type “nR”) hazardous area protection to IP66, IP67, and IP68.



Stainless steel cable gland

Ex: SIRA13ATEX1073X / IECEx SIR13.0028X

Technical data

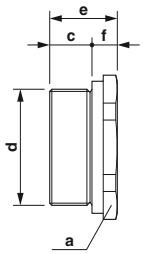
General data	
Cable gland material	High-grade steel
Seal material	Thermoplastic elastomers
O-ring material	Viton
Ambient temperature (operation)	-60°C ... 130°C

Ordering data

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	9.50 - 15.90	24.00	24.00	15.00	20.00	73.50	58.50	-	**G-EDSWU-M20S-S66L-STES-S**	**1411089**	10
M20	12.50 - 20.90	30.50	30.50	15.00	20.00	75.50	60.50	-	**G-EDSWU-M20-M66L-STES-S**	**1411091**	10
M25	18.20 - 26.20	37.50	37.50	15.00	25.00	82.50	67.50	-	**G-EDSWU-M25-M66L-STES-S**	**1411093**	10
M32	23.70 - 33.90	46.00	46.00	15.00	32.00	84.50	69.50	-	**G-EDSWU-M32-L66L-STES-S**	**1411095**	5
M40	27.90 - 40.40	55.00	55.00	15.00	40.00	93.00	78.00	-	**G-EDSWU-M40-L66L-STES-S**	**1411099**	1
M50	40.40 - 53.10	70.00	70.00	15.00	50.00	95.50	80.50	-	**G-EDSWU-M50-L66L-STES-S**	**1411101**	1
M63	54.60 - 65.90	80.00	80.00	15.00	63.00	107.00	92.00	-	**G-EDSWU-M63-L66L-STES-S**	**1411103**	1

Brass screw plug, metric, Ex protection

Screw plugs provide IP66 and IP68 protection when installed with an entry thread ring, sealing unused cable entries in flameproof (type “d”) and increased safety (type “e”) installations.



Brass screw plug

Ex: SIRA01ATEX1284U / IECEx SIR07.0083X

Technical data

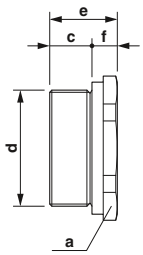
General data	
Material	Nickel-plated brass
Ambient temperature (operation)	-60°C ... 200°C

Ordering data

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	-	24.00	-	15.00	20.00	24.00	9.00	-	**A-EXSH-M20-68L-N-S**	**1411104**	20
M25	-	30.00	-	15.00	25.00	24.00	9.00	-	**A-EXSH-M25-68L-N-S**	**1411107**	20
M32	-	36.00	-	15.00	32.00	24.00	9.00	-	**A-EXSH-M32-68L-N-S**	**1411109**	10
M40	-	46.00	-	15.00	40.00	24.00	9.00	-	**A-EXSH-M40-68L-N-S**	**1411111**	5
M50	-	55.00	-	15.00	50.00	24.00	9.00	-	**A-EXSH-M50-68L-N-S**	**1411113**	2
M63	-	65.00	-	15.00	63.00	24.00	9.00	-	**A-EXSH-M63-68L-N-S**	**1411115**	1

Stainless steel screw plug, metric, Ex protection

Screw plugs provide IP66 and IP68 protection when installed with an entry thread ring, sealing unused cable entries in flameproof (type “d”) and increased safety (type “e”) installations.



Stainless steel screw plug

Ex: SIRA01ATEX1284U / IECEx SIR07.0083X

Technical data

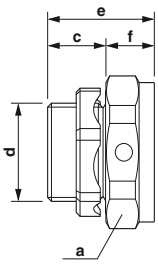
General data	
Material	High-grade steel
Ambient temperature (operation)	-60°C ... 200°C

Ordering data

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	-	24.00	-	15.00	20.00	24.00	9.00	-	**A-EXSH-M20-68L-S-S**	**1411105**	20
M25	-	30.00	-	15.00	25.00	24.00	9.00	-	**A-EXSH-M25-68L-S-S**	**1411108**	20
M32	-	36.00	-	15.00	32.00	24.00	9.00	-	**A-EXSH-M32-68L-S-S**	**1411110**	10
M40	-	46.00	-	15.00	40.00	24.00	9.00	-	**A-EXSH-M40-68L-S-S**	**1411112**	5
M50	-	55.00	-	15.00	50.00	24.00	9.00	-	**A-EXSH-M50-68L-S-S**	**1411114**	2
M63	-	65.00	-	15.00	63.00	24.00	9.00	-	**A-EXSH-M63-68L-S-S**	**1411116**	1

Brass pressure compensation, metric, Ex protection

Breather/drain plugs for increased safety (type “e”) provide superior ventilation for devices. They are designed to act as a pressure compensation element preventing moisture build-up to IP66.



Brass pressure compensation

Ex: SIRA10ATEX1307U / IECEx SIR10.0149U

Technical data

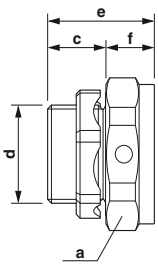
General data	
Material	Nickel-plated brass
Ambient temperature (operation)	-20°C ... 130°C

Ordering data

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	-	30.00	-	15.00	20.00	28.00	13.00	-	**A-EXB-20-66L-N-S**	**1411117**	5
M25	-	36.00	-	15.00	25.00	28.00	13.00	-	**A-EXB-25-66L-N-S**	**1411120**	5

Stainless steel pressure compensation, metric, Ex protection

Breather/drain plugs for increased safety (type “e”) provide superior ventilation for devices. They are designed to act as a pressure compensation element preventing moisture build-up to IP66.



Stainless steel pressure compensation

Ex: SIRA10ATEX1307U / IECEx SIR10.0149U

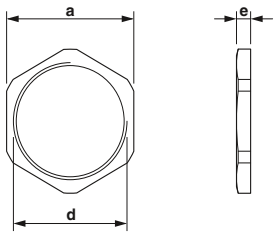
Technical data

General data	
Material	High-grade steel
Ambient temperature (operation)	-20°C ... 130°C

Ordering data

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	-	30.00	-	15.00	20.00	28.00	13.00	-	**A-EXB-20-66L-S-S**	**1411118**	5
M25	-	36.00	-	15.00	25.00	28.00	13.00	-	**A-EXB-25-66L-S-S**	**1411121**	5

Stainless steel counter nut, metric



Stainless steel counter nut

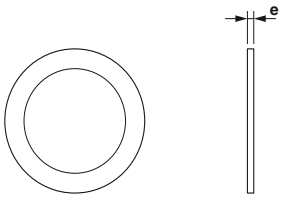
Technical data

General data	
Material	High-grade steel
Ambient temperature (operation)	-70°C ... 220°C

Ordering data

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	-	24.00	-	-	20.00	3.00	-	-	**A-INL-M20-S-S**	**1411249**	10
M25	-	30.00	-	-	25.00	3.50	-	-	**A-INL-M25-S-S**	**1411250**	10
M32	-	36.00	-	-	32.00	4.00	-	-	**A-INL-M32-S-S**	**1411251**	5
M40	-	46.00	-	-	40.00	5.00	-	-	**A-INL-M40-S-S**	**1411252**	5
M50	-	55.00	-	-	50.00	5.00	-	-	**A-INL-M50-S-S**	**1411253**	2
M63	-	70.00	-	-	63.00	6.00	-	-	**A-INL-M63-S-S**	**1411254**	1

Sealing washer, metric



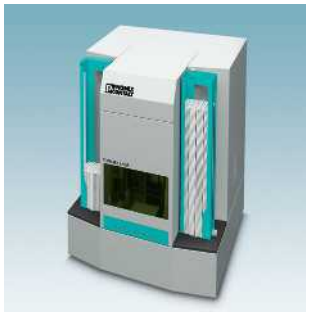
Sealing washer

Technical data

General data	
Material	Nylon
Ambient temperature (operation)	-70°C ... 100°C

Ordering data

Thread type	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	f	g	Type	Order No.	Pcs. / Pkt.
M20	-	-	-	-	-	2.00	-	-	**A-SEW-20-P-W**	**1411283**	20
M25	-	-	-	-	-	2.00	-	-	**A-SEW-25-P-W**	**1411284**	20
M32	-	-	-	-	-	2.00	-	-	**A-SEW-32-P-W**	**1411285**	20
M40	-	-	-	-	-	2.00	-	-	**A-SEW-40-P-W**	**1411286**	20
M50	-	-	-	-	-	2.00	-	-	**A-SEW-50-P-W**	**1411287**	10
M63	-	-	-	-	-	2.00	-	-	**A-SEW-63-P-W**	**1411288**	10



Desktop laser marker

TOPMARK LASER Page 244

Stainless steel or aluminum
laser cable marking

LS-WMTB ... Page 246

Stainless steel or aluminum
laser device marking

LS-EMSP ... Page 250
LS-EMLP ... Page 252
LS-EMP ... Page 254

Plastic laser device marking

LS-EMLP ... Page 256

Laser device marking, laser foil

LS-EML ... Page 262

Terminal marking for terminal blocks
from other manufacturers

UM1-TM ..., UM1U-TM ...,
UM1-TMF ... Page 264

Terminal marking,
marker strips

TMT ... Page 266

UniCard conductor and cable marking

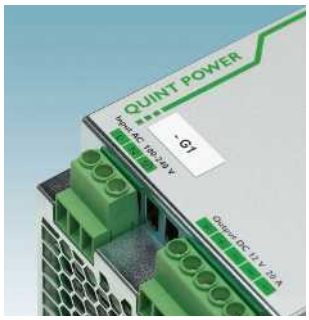
UCT-WMCO ... Page 268
UCT-WMTBA ... Page 270

Plastic cable markers

KMK HP ... Page 272
KMK UV ... Page 274

UniCard device marking, for applications
in process technology and process engineering

UC-EMLP ... EX Page 276
EML ... EX Page 277



UniSheet device marking,
with very high adhesive strength

US-EMLP-HA ... Page 278

System marking, RFID system

Handheld
RFMARK HF / UHF Page 280
Marking
UCT-PMLP ... Page 282
UCT-PMP ... Page 284

Wireless exchange of printing data

MARKING system app and MINI FD BLUETOOTH Page 288

Marking solutions with planning and marking software

Customer-specific printing service
CLIP PROJECT ... Page 290

Crimping tool, portable hand-held device

CRIMPHANDY 1.0 mm Page 292

Customized tool sets and personalized tools

TOOL ... CUS Page 296
CRIMPFOX ... CUS Page 298
WIREFOX ... CUS Page 301

Marking systems, tools, and mounting material

Optimize all of the processes involved in the setup, installation, and maintenance of your control cabinets and switchgear. We offer optimally coordinated products from our marking, tool, and mounting material ranges.

MARKING system

MARKING system provides the perfect solutions for terminal, conductor, cable, device, and system marking.
It places at your disposal the CLIP PROJECT planning and marking software, various printing systems, and a wide variety of marking materials.

TOOL fox

TOOL fox is the complete range of professional processing and measuring tools. Designed for use in all processes in electrical engineering, the tools and automatic devices impress with their optimum handling and quality.

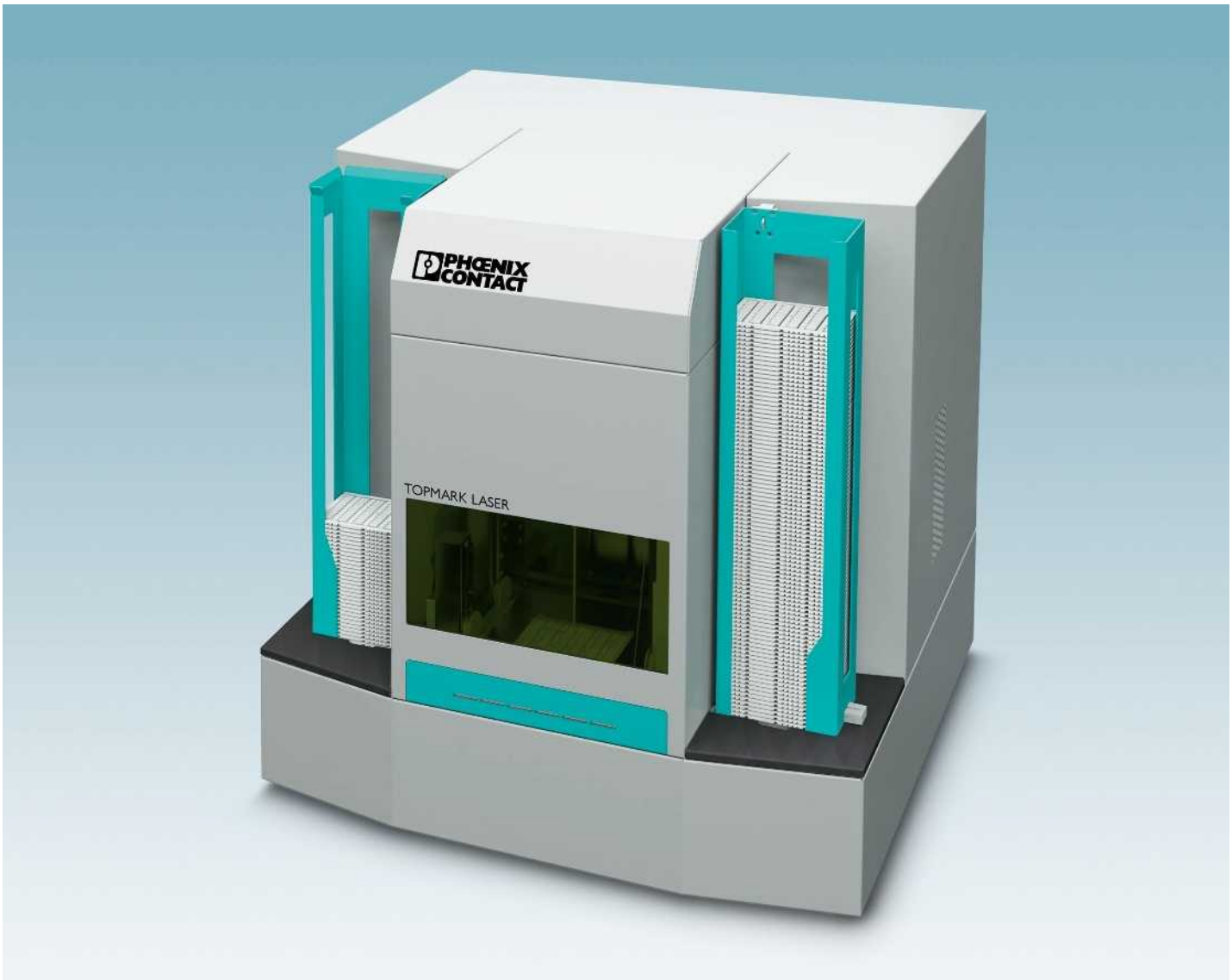
CABINET add-on

CABINET add-on stands for modern control cabinet technology. DIN rails and end brackets ensure the secure attachment of terminal blocks and modules, while shield connection clamps guarantee EMC-compliant wiring and cable ducts bring order to the control cabinet.

Service

Choose the complete range. Working to your specifications, we will manufacture and label terminal strips and complete terminal boxes or modules for direct installation in your application.

TOPMARK LASER - MARKING system



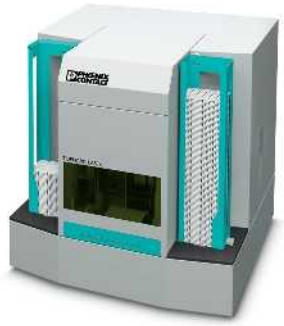
The TOPMARK LASER marking system provides you with the flexibility to implement the requirements of challenging industrial identification. With a comprehensive product range of over 400 markers for your terminal, conductor, cable, and device marking, you will find the ideal solution for your application.

The stainless steel material can be marked in two ways: through material removal (engraving) or annealing marking. The latter involves changing the color of the material while the material surface remains level.

You can easily mark all materials in the UCT product range with the automated material handling of the TOPMARK LASER. The laser marker automatically detects the material sheets fed in. This means that you can carry out marking quickly and effectively - without time-consuming parameter settings.

TOPMARK LASER, desktop laser marker for card material and material sheets

Direct laser marking



Integration in the CLIP PROJECT planning and marking software makes the TOPMARK LASER the fastest desktop laser marker in its class - and the easiest to use. You can now mark all materials without special knowledge of laser technology.

- Wide range of materials comprising stainless steel, aluminum, ABS, polyacrylics, and polycarbonate
- Preset optimized laser parameters are available for all material types
- Automatic material detection enables fast and effective marking
- The material sheet can be easily reused by creating a project code

Technical data

Dimensions		Width	Length	Height
	[mm]	**664**	**630**	**682**
General data				
Temperature range	[°C]	5 ... 40		
Marking method		Direct laser marking		
Laser system		Ytterbium fiber laser, pulsed, 1064 nm		
Laser class		Laser class 1 according to EN 60825-1 classification		
Interfaces		10/100 Mbps Ethernet		
Power supply	[V]	100 ... 240		
Weight	[kg]	98		
Operating systems		MS Windows XP SP3, MS Windows Vista, MS Windows 7 (32/64-bit), MS Windows 8 (32/64-bit)		
Power consumption	[W]	450		
CW laser power (continuous wave)	[W]	20		

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Laser marker and MARKING NOTEBOOK, incl. CLIP PROJECT professional software and installed drivers, user manual, sheet hopper, card hopper and 230 V extraction unit With German operating system and German keyboard		**TOPMARK LASER**	**0831831**	1

Accessories

Carriage, for accommodating TOPMARK LASER, extraction unit, and MARKING NOTEBOOK	**TOPMARK LASER STATION**	**0831835**	1
Sheet hopper, for TOPMARK LASER	**TOPMARK LASER-MAG SHEET**	**0831836**	1
Card hopper, for TOPMARK LASER	**TOPMARK LASER-MAG CARD**	**0831837**	1

Marking material for TOPMARK LASER - MARKING system

Stainless steel and aluminum cable marking for assembly with cable binders

– The LS-WMTB ... product range is available in stainless steel (V4A) or aluminum and includes markers that can be quickly and easily fitted with cable binders
– The LS-WMTB-V4A ... group is particularly characterized by its high resistance to salt water, chloride, and solvents and it is therefore also suitable for the most demanding industrial requirements

– Automatic material detection enables fast and effective marking without time-consuming parameter settings
– The material sheet can be easily reused by creating a project code
– **Designation example: LS-WMTB-V4A (29x8)**
Lettering field size: 29 x 8 mm

– The use of modern laser technology creates highly resistant and permanent marking, which can only be removed by destroying the material
– The LS-WMTB-V4A ... product group can be marked in two ways: by engraving or annealing
– Labeling service: Phoenix Contact can custom-label all markers according to your requirements

Can be marked using:

Direct laser marking

General data
Can be marked with
Material
Wipe resistance
Components

Description
Stainless steel label, for assembly with cable binders, conductor diameter
36-section, > 2.9 mm Ø
16-section, > 4.6 mm Ø
16-section, > 4.6 mm Ø
8-section, > 4.6 mm Ø
Aluminum label, for assembly with cable binders, conductor diameter
36-section, > 2.9 mm Ø
16-section, > 4.6 mm Ø
16-section, > 4.6 mm Ø
8-section, > 4.6 mm Ø
Stainless steel label, for assembly with cable binders, conductor diameter, **marked according to customer specifications**[1])
36-section, > 2.9 mm Ø
16-section, > 4.6 mm Ø
16-section, > 4.6 mm Ø
8-section, > 4.6 mm Ø
Aluminum label, for assembly with cable binders, conductor diameter, **marked according to customer specifications**[1])
36-section, > 2.9 mm Ø
16-section, > 4.6 mm Ø
16-section, > 4.6 mm Ø
8-section, > 4.6 mm Ø

Sheet hopper, for TOPMARK LASER

Notes:

For matching stainless steel cable binders, see page 580 in main catalog 5 or the product area on our website at phoenixcontact.net/products.

[1]) For an ordering example, see page 358 in main catalog 5.

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Stainless steel, material thickness: 0.5 mm

Technical data

TOPMARK LASER
V4A
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-WMTB-V4A (29X8)	0831516	5
LS-WMTB-V4A (40X15)	0831517	5
LS-WMTB-V4A (60X15)	0831518	5
LS-WMTB-V4A (100X15)	0831519	5
LS-WMTB-V4A (29X8) CUS	0831802	1
LS-WMTB-V4A (40X15) CUS	0831803	1
LS-WMTB-V4A (60X15) CUS	0831804	1
LS-WMTB-V4A (100X15) CUS	0831805	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

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Aluminum, material thickness: 0.8 mm

Technical data

TOPMARK LASER
Aluminum
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-WMTB-AL (29X8)	0831500	5
LS-WMTB-AL (40X15)	0831501	5
LS-WMTB-AL (60X15)	0831502	5
LS-WMTB-AL (100X15)	0831503	5
LS-WMTB-AL (29X8) CUS	0831786	1
LS-WMTB-AL (40X15) CUS	0831787	1
LS-WMTB-AL (60X15) CUS	0831788	1
LS-WMTB-AL (100X15) CUS	0831789	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

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Aluminum, black, material thickness: 0.8 mm

Technical data

TOPMARK LASER
Aluminum
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-WMTB-AL (29X8) BK	0831508	5
LS-WMTB-AL (40X15) BK	0831509	5
LS-WMTB-AL (60X15) BK	0831510	5
LS-WMTB-AL (100X15) BK	0831511	5
LS-WMTB-AL (29X8) BK CUS	0831794	1
LS-WMTB-AL (40X15) BK CUS	0831795	1
LS-WMTB-AL (60X15) BK CUS	0831796	1
LS-WMTB-AL (100X15) BK CUS	0831797	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

Marking material for TOPMARK LASER - MARKING system

Stainless steel and aluminum cable marking for assembly with cable binders

– The LS-WMTB ... product range in circular format is available in stainless steel (V4A) or aluminum and includes markers that can be quickly and easily fitted with cable binders
– The LS-WMTB-V4A ... group is particularly characterized by its high resistance to saltwater, chloride, and solvents and it is therefore also suitable for the most demanding industrial requirements

– Automatic material detection enables fast and effective marking without time-consuming parameter settings
– The material sheet can be easily reused by creating a project code
– **Designation example: LS-WMTB-V4A (D25)**
Diameter: 25 mm

– The use of modern laser technology creates highly resistant and permanent marking, which can only be removed by destroying the material
– The LS-WMTB-V4A ... product group can be marked in two ways: by engraving or annealing
– Labeling service: Phoenix Contact can custom-label all markers according to your requirements

Can be marked using:

Direct laser marking

General data
Can be marked with
Material
Wipe resistance
Components

Description
Stainless steel label, round, for assembly with cable binders
30-section, diameter: 25 mm 20-section, diameter: 30 mm
Aluminum label, round, for assembly with cable binders
30-section, diameter: 25 mm 20-section, diameter: 30 mm
Stainless steel label, round, for assembly with cable binders, **labeled according to customer specifications**[1])
30-section, diameter: 25 mm 20-section, diameter: 30 mm
Aluminum label, round, for assembly with cable binders, **labeled according to customer specifications**[1])
30-section, diameter: 25 mm 20-section, diameter: 30 mm

Sheet hopper, for TOPMARK LASER

Notes:

For matching stainless steel cable binders, see page 580 in main catalog 5 or the product area on our website at phoenixcontact.net/products.

[1]) For an ordering example, see page 358 in main catalog 5.

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Stainless steel, material thickness: 0.5 mm

Technical data

TOPMARK LASER
V4A
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-WMTB-V4A (D25)	**0831520**	5
LS-WMTB-V4A (D30)	**0831521**	5
LS-WMTB-V4A (D25) CUS	**0831806**	1
LS-WMTB-V4A (D30) CUS	**0831807**	1

Accessories

TOPMARK LASER-MAG SHEET	**0831836**	1

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Aluminum, material thickness: 0.8 mm

Technical data

TOPMARK LASER
Aluminum
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-WMTB-AL (D25)	**0831504**	5
LS-WMTB-AL (D30)	**0831505**	5
LS-WMTB-AL (D25) CUS	**0831790**	1
LS-WMTB-AL (D30) CUS	**0831791**	1

Accessories

TOPMARK LASER-MAG SHEET	**0831836**	1

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Aluminum, black, material thickness: 0.8 mm

Technical data

TOPMARK LASER
Aluminum
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-WMTB-AL (D25) BK	**0831512**	5
LS-WMTB-AL (D30) BK	**0831513**	5
LS-WMTB-AL (D25) BK CUS	**0831798**	1
LS-WMTB-AL (D30) BK CUS	**0831799**	1

Accessories

TOPMARK LASER-MAG SHEET	**0831836**	1

Marking material for TOPMARK LASER - MARKING system

Stainless steel and aluminum device marking for screwing or riveting

- The LS-EMSP ... product range is available in stainless steel (V4A) or aluminum and includes markers that can be quickly and easily fitted with screws or rivets
- The LS-EMSP-V4A ... group is particularly characterized by its high resistance to saltwater, chloride, and solvents and is therefore also suitable for the most demanding industrial requirements
- The LS-EMSP-V4A ... product group can be permanently marked in two ways: by engraving or annealing
- **Designation example: LS-EMSP-V4A (39x15)**
  Lettering field size: 39 x 15 mm
- Labeling service: Phoenix Contact can custom-label all markers according to your requirements

Notes:
For matching rivets for securing the LS-EMSP-V4A ... and LS-EMSP-AL ..., see page 370 in main catalog 5 or the product area on our website at phoenixcontact.net/products.
For drilling diagrams, visit phoenixcontact.net/products.
[1]) For an ordering example, see page 358 in main catalog 5.
[2]) From lettering field size 110 x 80 to 170 x 180 mm, the material thickness is 1.5 mm.

Can be marked using:

Direct laser marking

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Stainless steel, material thickness: 0.5 mm

Technical data

General data	
Can be marked with	TOPMARK LASER
Material	V4A
Wipe resistance	DIN EN 61010-1 (VDE 0411-1)
Components	Free from silicone, halogen, and cadmium

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Marking label, with mounting holes 3.2 mm in diameter			
24-section	**LS-EMSP-V4A (39X15)**	**0831653**	5
16-section	**LS-EMSP-V4A (50X15)**	**0831654**	5
10-section	**LS-EMSP-V4A (50X30)**	**0831655**	5
6-section	**LS-EMSP-V4A (75,6X54)**	**0831656**	5
2-section	**LS-EMSP-V4A (90X60)**	**0831657**	5
2-section			
2-section			
1-section			
1-section			
Marking label, with mounting holes 3.2 mm in diameter			
10-section, red			
10-section, orange			
10-section, blue			
10-section, green			
6-section, red			
6-section, orange			
6-section, blue			
6-section, green			
Marking label, with mounting holes 3.2 mm in diameter, **marked according to customer specifications**[1])			
24-section	**LS-EMSP-V4A (39X15) CUS**	**0831939**	1
16-section	**LS-EMSP-V4A (50X15) CUS**	**0831940**	1
10-section	**LS-EMSP-V4A (50X30) CUS**	**0831941**	1
6-section	**LS-EMSP-V4A (75,6X54) CUS**	**0831942**	1
2-section	**LS-EMSP-V4A (90X60) CUS**	**0831943**	1
2-section			
2-section			
1-section			
1-section			
Marking label, with mounting holes 3.2 mm in diameter, **marked according to customer specifications**[1])			
10-section, red			
10-section, orange			
10-section, blue			
10-section, green			
6-section, red			
6-section, orange			
6-section, blue			
6-section, green			

Accessories

Sheet hopper, for TOPMARK LASER	**TOPMARK LASER-MAG SHEET**	**0831836**	1

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Aluminum,
material thickness: 0.8 mm²)

Technical data

TOPMARK LASER
Aluminum
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMSP-AL (39X15)	0831615	5
LS-EMSP-AL (50X15)	0831616	5
LS-EMSP-AL (50X30)	0831617	5
LS-EMSP-AL (75,6X54)	0831618	5
LS-EMSP-AL (90X60)	0831619	5
LS-EMSP-AL (110X80)	0831620	5
LS-EMSP-AL (150X80)	0831621	5
LS-EMSP-AL (150X120)	0831622	5
LS-EMSP-AL (170X180)	0831623	5
LS-EMSP-AL (39X15) CUS	0831901	1
LS-EMSP-AL (50X15) CUS	0831902	1
LS-EMSP-AL (50X30) CUS	0831903	1
LS-EMSP-AL (75,6X54) CUS	0831904	1
LS-EMSP-AL (90X60) CUS	0831905	1
LS-EMSP-AL (110X80) CUS	0831906	1
LS-EMSP-AL (150X80) CUS	0831907	1
LS-EMSP-AL (150X120) CUS	0831908	1
LS-EMSP-AL (170X180) CUS	0831909	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

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Aluminum, black,
material thickness: 0.8 mm²)

Technical data

TOPMARK LASER
Aluminum
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMSP-AL (39X15) BK	0831626	5
LS-EMSP-AL (50X15) BK	0831627	5
LS-EMSP-AL (50X30) BK	0831628	5
LS-EMSP-AL (75,6X54) BK	0831629	5
LS-EMSP-AL (90X60) BK	0831630	5
LS-EMSP-AL (110X80) BK	0831631	5
LS-EMSP-AL (150X80) BK	0831632	5
LS-EMSP-AL (150X120) BK	0831633	5
LS-EMSP-AL (170X180) BK	0831634	5
LS-EMSP-AL (39X15) BK CUS	0831912	1
LS-EMSP-AL (50X15) BK CUS	0831913	1
LS-EMSP-AL (50X30) BK CUS	0831914	1
LS-EMSP-AL (75,6X54) BK CUS	0831915	1
LS-EMSP-AL (90X60) BK CUS	0831916	1
LS-EMSP-AL (110X80) BK CUS	0831917	1
LS-EMSP-AL (150X80) BK CUS	0831918	1
LS-EMSP-AL (150X120) BK CUS	0831919	1
LS-EMSP-AL (170X180) BK CUS	0831920	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

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Aluminum, colored,
material thickness: 0.8 mm

Technical data

TOPMARK LASER
Aluminum
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMSP-AL (50X30) RD	0831637	5
LS-EMSP-AL (50X30) OG	0831641	5
LS-EMSP-AL (50X30) BU	0831645	5
LS-EMSP-AL (50X30) GN	0831649	5
LS-EMSP-AL (75,6X54) RD	0831638	5
LS-EMSP-AL (75,6X54) OG	0831642	5
LS-EMSP-AL (75,6X54) BU	0831646	5
LS-EMSP-AL (75,6X54) GN	0831650	5
LS-EMSP-AL (50X30) RD CUS	0831923	1
LS-EMSP-AL (50X30) OG CUS	0831927	1
LS-EMSP-AL (50X30) BU CUS	0831931	1
LS-EMSP-AL (50X30) GN CUS	0831935	1
LS-EMSP-AL (75,6X54) RD CUS	0831924	1
LS-EMSP-AL (75,6X54) OG CUS	0831928	1
LS-EMSP-AL (75,6X54) BU CUS	0831932	1
LS-EMSP-AL (75,6X54) GN CUS	0831936	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

Marking material for TOPMARK LASER - MARKING system

Adhesive aluminum device marking

– The aluminum LS-EMLP-AL ... product range includes self-adhesive device markers with a high adhesive strength
– The use of modern laser technology creates highly resistant and permanent marking, which can only be removed by destroying the material
– Automatic material detection enables fast and effective marking without time-consuming parameter settings
– The material sheet can be easily reused by creating a project code
– **Designation example: LS-EMLP-AL (27x15)**
Lettering field size: 27 x 15 mm
– Labeling service: Phoenix Contact can custom-label all markers according to your requirements

Notes:

[1]) For an ordering example, see page 358 in main catalog 5.

Can be marked using:

Direct laser marking

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Aluminum, material thickness: 0.8 mm

Technical data

General data	
Can be marked with	TOPMARK LASER
Material	Aluminum
Wipe resistance	DIN EN 61010-1 (VDE 0411-1)
Components	Free from silicone, halogen, and cadmium

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Marking label, aluminum, self-adhesive			
40-section	**LS-EMLP-AL (27X15)**	**0831580**	5
35-section	**LS-EMLP-AL (27X18)**	**0831581**	5
24-section	**LS-EMLP-AL (49X15)**	**0831582**	5
16-section	**LS-EMLP-AL (60X15)**	**0831583**	5
10-section	**LS-EMLP-AL (60X30)**	**0831584**	5
6-section	**LS-EMLP-AL (85,6X54)**	**0831585**	5
2-section	**LS-EMLP-AL (100X60)**	**0831586**	5
Marking label, aluminum, self-adhesive			
10-section, red			
10-section, orange			
10-section, blue			
10-section, green			
6-section, red			
6-section, orange			
6-section, blue			
6-section, green			
Marking label, aluminum, self-adhesive, **marked according to customer specifications**[1])			
40-section	**LS-EMLP-AL (27X15) CUS**	**0831866**	1
35-section	**LS-EMLP-AL (27X18) CUS**	**0831867**	1
24-section	**LS-EMLP-AL (49X15) CUS**	**0831868**	1
16-section	**LS-EMLP-AL (60X15) CUS**	**0831869**	1
10-section	**LS-EMLP-AL (60X30) CUS**	**0831870**	1
6-section	**LS-EMLP-AL (85,6X54) CUS**	**0831871**	1
2-section	**LS-EMLP-AL (100X60) CUS**	**0831872**	1
Marking label, aluminum, self-adhesive, **marked according to customer specifications**[1])			
10-section, red			
10-section, orange			
10-section, blue			
10-section, green			
6-section, red			
6-section, orange			
6-section, blue			
6-section, green			

Accessories

Sheet hopper, for TOPMARK LASER			
	TOPMARK LASER-MAG SHEET	**0831836**	1

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Aluminum, black,
material thickness: 0.8 mm

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Aluminum, colored,
material thickness: 0.8 mm

Technical data

TOPMARK LASER
Aluminum
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMLP-AL (27X15) BK	0831589	5
LS-EMLP-AL (27X18) BK	0831590	5
LS-EMLP-AL (49X15) BK	0831591	5
LS-EMLP-AL (60X15) BK	0831592	5
LS-EMLP-AL (60X30) BK	0831593	5
LS-EMLP-AL (85,6X54) BK	0831594	5
LS-EMLP-AL (100X60) BK	0831595	5
LS-EMLP-AL (27X15) BK CUS	0831875	1
LS-EMLP-AL (27X18) BK CUS	0831876	1
LS-EMLP-AL (49X15) BK CUS	0831877	1
LS-EMLP-AL (60X15) BK CUS	0831878	1
LS-EMLP-AL (60X30) BK CUS	0831879	1
LS-EMLP-AL (85,6X54) BK CUS	0831880	1
LS-EMLP-AL (100X60) BK CUS	0831881	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

Technical data

TOPMARK LASER
Aluminum
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMLP-AL (60X30) RD	0831598	5
LS-EMLP-AL (60X30) OG	0831602	5
LS-EMLP-AL (60X30) BU	0831606	5
LS-EMLP-AL (60X30) GN	0831610	5
LS-EMLP-AL (85,6X54) RD	0831599	5
LS-EMLP-AL (85,6X54) OG	0831603	5
LS-EMLP-AL (85,6X54) BU	0831607	5
LS-EMLP-AL (85,6X54) GN	0831611	5
LS-EMLP-AL (60X30) RD CUS	0831884	1
LS-EMLP-AL (60X30) OG CUS	0831888	1
LS-EMLP-AL (60X30) BU CUS	0831892	1
LS-EMLP-AL (60X30) GN CUS	0831896	1
LS-EMLP-AL (85,6X54) RD CUS	0831885	1
LS-EMLP-AL (85,6X54) OG CUS	0831889	1
LS-EMLP-AL (85,6X54) BU CUS	0831893	1
LS-EMLP-AL (85,6X54) GN CUS	0831897	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

Marking material for TOPMARK LASER - MARKING system

Aluminum device marking for snapping into marker carriers

- The aluminum LS-EMP-AL ... product range includes markers that can be quickly and easily fitted into existing CARRIER-EMP ... label frames
- The use of modern laser technology creates highly resistant and permanent marking, which can only be removed by destroying the material
- Automatic material detection enables fast and effective marking without time-consuming parameter settings
- The material sheet can be easily reused by creating a project code
- **Designation example: LS-EMP-AL (27x15)**
  Lettering field size: 27 x 15 mm
- Labeling service: Phoenix Contact can custom-label all markers according to your requirements

Notes:

[1]) For an ordering example, see page 358 in main catalog 5.

Can be marked using:

Direct laser marking

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Aluminum, material thickness: 0.8 mm

Technical data

General data	
Can be marked with	TOPMARK LASER
Material	Aluminum
Wipe resistance	DIN EN 61010-1 (VDE 0411-1)
Components	Free from silicone, halogen, and cadmium

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Marking label, aluminum, can be snapped into marker carriers			
40-section	**LS-EMP-AL (27X15)**	**0831661**	5
35-section	**LS-EMP-AL (27X18)**	**0831662**	5
24-section	**LS-EMP-AL (49X15)**	**0831663**	5
16-section	**LS-EMP-AL (60X15)**	**0831664**	5
10-section	**LS-EMP-AL (60X30)**	**0831665**	5
6-section	**LS-EMP-AL (85,6X54)**	**0831666**	5
2-section	**LS-EMP-AL (100X60)**	**0831667**	5
Marking label, aluminum, can be snapped into marker carriers, **marked according to customer specifications**[1])			
40-section	**LS-EMP-AL (27X15) CUS**	**0831947**	1
35-section	**LS-EMP-AL (27X18) CUS**	**0831948**	1
24-section	**LS-EMP-AL (49X15) CUS**	**0831949**	1
16-section	**LS-EMP-AL (60X15) CUS**	**0831950**	1
10-section	**LS-EMP-AL (60X30) CUS**	**0831951**	1
6-section	**LS-EMP-AL (85,6X54) CUS**	**0831952**	1
2-section	**LS-EMP-AL (100X60) CUS**	**0831953**	1

Accessories

Sheet hopper, for TOPMARK LASER	**TOPMARK LASER-MAG SHEET**	**0831836**	1
Marker carriers, for snap-in labels			
Marker size: 27 x 15 mm	**CARRIER-EMP (27X15)**	**0827451**	80
Marker size: 49 x 15 mm	**CARRIER-EMP (49X15)**	**0827452**	40
Marker size: 60 x 15 mm	**CARRIER-EMP (60X15)**	**0827453**	40
Marker size: 60 x 30 mm	**CARRIER-EMP (60X30)**	**0827454**	30
Marker size: 85 x 54 mm	**CARRIER-EMP (85,6X54)**	**0829365**	10
Marker carriers, for snap-in labels, for buttons and switches 22 mm in diameter			
Marker size: 27 x 15 mm	**CARRIER-EMP 22 (27X15)**	**0827447**	50
Marker size: 27 x 18 mm	**CARRIER-EMP 22 (27X18)**	**0827448**	50

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Aluminum, black, material thickness: 0.8 mm

Technical data

TOPMARK LASER
Aluminum
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMP-AL (27X15) BK	0831669	5
LS-EMP-AL (27X18) BK	0831670	5
LS-EMP-AL (49X15) BK	0831671	5
LS-EMP-AL (60X15) BK	0831672	5
LS-EMP-AL (60X30) BK	0831673	5
LS-EMP-AL (85,6X54) BK	0831674	5
LS-EMP-AL (100X60) BK	0831675	5
LS-EMP-AL (27X15) BK CUS	0831955	1
LS-EMP-AL (27X18) BK CUS	0831956	1
LS-EMP-AL (49X15) BK CUS	0831957	1
LS-EMP-AL (60X15) BK CUS	0831958	1
LS-EMP-AL (60X30) BK CUS	0831959	1
LS-EMP-AL (85,6X54) BK CUS	0831960	1
LS-EMP-AL (100X60) BK CUS	0831961	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1
CARRIER-EMP (27X15)	0827451	80
CARRIER-EMP (49X15)	0827452	40
CARRIER-EMP (60X15)	0827453	40
CARRIER-EMP (60X30)	0827454	30
CARRIER-EMP (85,6X54)	0829365	10
CARRIER-EMP 22 (27X15)	0827447	50
CARRIER-EMP 22 (27X18)	0827448	50

Marking material for TOPMARK LASER - MARKING system

Plastic adhesive device marking

- The LS-EMLP ... product range includes self-adhesive double-layer plastic device markers
- A wide range of different marker sizes is available for custom designs
- Automatic material detection enables fast and effective marking without time-consuming parameter settings
- The material sheet can be easily reused by creating a project code
- **Designation example:**
  LS-EMLP (11x9) SR
  Lettering field size: 11 x 9 mm,
  silver material with black marking

Can be marked using:

Direct laser marking

White, material thickness: 0.8 mm

Technical data

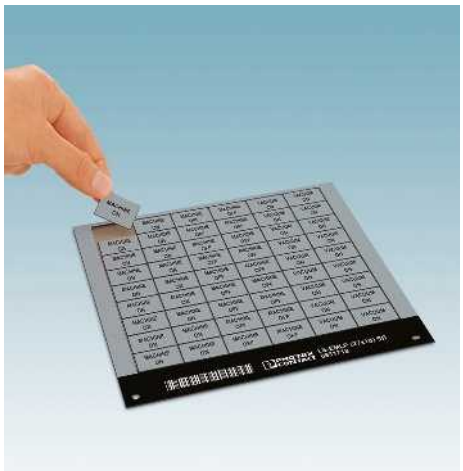
General data		
Can be marked with		TOPMARK LASER
Material		TRANSPLY-ABS
Temperature range	[°C]	-20 ... 85
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone and halogen

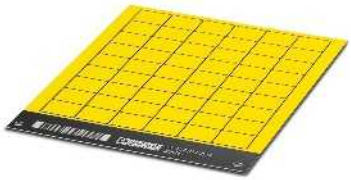
Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Plastic label sheet, self-adhesive, double-layer plastic labels			
1 sheet = 255 labels	**LS-EMLP (11X9) WH**	**0831678**	10
1 sheet = 221 labels	**LS-EMLP (13X9) WH**	**0831679**	10
1 sheet = 220 labels	**LS-EMLP (17X7) WH**	**0831680**	10
1 sheet = 170 labels	**LS-EMLP (17X9) WH**	**0831681**	10
1 sheet = 130 labels	**LS-EMLP (17,5X12) WH**	**0831682**	10
1 sheet = 100 labels	**LS-EMLP (17,5X15) WH**	**0831683**	10
1 sheet = 176 labels	**LS-EMLP (20X7) WH**	**0831684**	10
1 sheet = 160 labels	**LS-EMLP (20X8) WH**	**0831685**	10
1 sheet = 104 labels	**LS-EMLP (22X12) WH**	**0831686**	10
1 sheet = 56 labels	**LS-EMLP (22X22) WH**	**0831687**	10
1 sheet = 120 labels	**LS-EMLP (27X8) WH**	**0831688**	10
1 sheet = 78 labels	**LS-EMLP (27X12,5) WH**	**0831689**	10
1 sheet = 60 labels	**LS-EMLP (27X15) WH**	**0831690**	10
1 sheet = 54 labels	**LS-EMLP (27X18) WH**	**0831691**	10
1 sheet = 36 labels	**LS-EMLP (27X27) WH**	**0831692**	10
1 sheet = 33 labels	**LS-EMLP (45X14) WH**	**0831693**	10
1 sheet = 30 labels	**LS-EMLP (45X15) WH**	**0831694**	10
1 sheet = 30 labels	**LS-EMLP (49X15) WH**	**0831695**	10
1 sheet = 20 labels	**LS-EMLP (60X15) WH**	**0831696**	10
1 sheet = 10 labels	**LS-EMLP (60X30) WH**	**0831697**	10
1 sheet = 6 labels	**LS-EMLP (85,6X54) WH**	**0831698**	10
1 sheet = 2 labels	**LS-EMLP (100X60) WH**	**0831699**	10

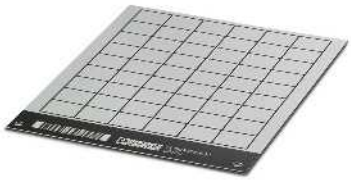
Accessories

Sheet hopper, for TOPMARK LASER			
	TOPMARK LASER-MAG SHEET	**0831836**	1





Yellow, material thickness: 0.8 mm



Silver, material thickness: 0.8 mm

Technical data

TOPMARK LASER
TRANSPLY-ABS
-20 ... 85
DIN EN 61010-1 (VDE 0411-1)
Free from silicone and halogen

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMLP (11X9) YE	0831732	10
LS-EMLP (13X9) YE	0831733	10
LS-EMLP (17X7) YE	0831734	10
LS-EMLP (17X9) YE	0831735	10
LS-EMLP (17,5X12) YE	0831736	10
LS-EMLP (17,5X15) YE	0831737	10
LS-EMLP (20X7) YE	0831738	10
LS-EMLP (20X8) YE	0831739	10
LS-EMLP (22X12) YE	0831740	10
LS-EMLP (22X22) YE	0831741	10
LS-EMLP (27X8) YE	0831742	10
LS-EMLP (27X12,5) YE	0831743	10
LS-EMLP (27X15) YE	0831744	10
LS-EMLP (27X18) YE	0831745	10
LS-EMLP (27X27) YE	0831746	10
LS-EMLP (45X14) YE	0831747	10
LS-EMLP (45X15) YE	0831748	10
LS-EMLP (49X15) YE	0831749	10
LS-EMLP (60X15) YE	0831750	10
LS-EMLP (60X30) YE	0831751	10
LS-EMLP (85,6X54) YE	0831752	10
LS-EMLP (100X60) YE	0831753	10

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

Technical data

TOPMARK LASER
TRANSPLY-ABS
-20 ... 85
DIN EN 61010-1 (VDE 0411-1)
Free from silicone and halogen

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMLP (11X9) SR	0831705	10
LS-EMLP (13X9) SR	0831706	10
LS-EMLP (17X7) SR	0831707	10
LS-EMLP (17X9) SR	0831708	10
LS-EMLP (17,5X12) SR	0831709	10
LS-EMLP (17,5X15) SR	0831710	10
LS-EMLP (20X7) SR	0831711	10
LS-EMLP (20X8) SR	0831712	10
LS-EMLP (22X12) SR	0831713	10
LS-EMLP (22X22) SR	0831714	10
LS-EMLP (27X8) SR	0831715	10
LS-EMLP (27X12,5) SR	0831716	10
LS-EMLP (27X15) SR	0831717	10
LS-EMLP (27X18) SR	0831718	10
LS-EMLP (27X27) SR	0831719	10
LS-EMLP (45X14) SR	0831720	10
LS-EMLP (45X15) SR	0831721	10
LS-EMLP (49X15) SR	0831722	10
LS-EMLP (60X15) SR	0831723	10
LS-EMLP (60X30) SR	0831724	10
LS-EMLP (85,6X54) SR	0831725	10
LS-EMLP (100X60) SR	0831726	10

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

Plastic adhesive device marking, marked according to customer specifications

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White, material thickness: 0.8 mm

- The LS-EMLP ... product range includes self-adhesive double-layer plastic device markers
- A wide range of different marker sizes is available for custom designs
- Automatic material detection enables fast and effective marking without time-consuming parameter settings
- The material sheet can be easily reused by creating a project code
- **Designation example: LS-EMLP (11x9) SR CUS**
  Lettering field size: 11 x 9 mm, silver material with black marking
- Labeling service: Phoenix Contact can custom-label all markers according to your requirements

Notes:

[1]) For an ordering example, see page 358 in main catalog 5.

Technical data

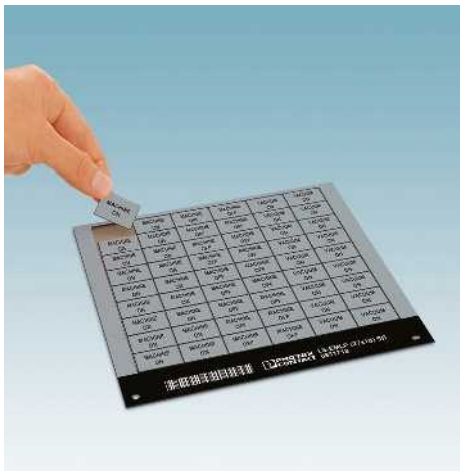
General data		
Material		TRANSPLY-ABS
Temperature range	[°C]	-20 ... 85
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone and halogen

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Plastic label sheet, self-adhesive double-layer plastic labels, **marked according to customer specifications**[1])			
1 sheet = 255 labels	**LS-EMLP (11X9) WH CUS**	**0831964**	1
1 sheet = 221 labels	**LS-EMLP (13X9) WH CUS**	**0831965**	1
1 sheet = 220 labels	**LS-EMLP (17X7) WH CUS**	**0831966**	1
1 sheet = 170 labels	**LS-EMLP (17X9) WH CUS**	**0831967**	1
1 sheet = 130 labels	**LS-EMLP (17,5X12) WH CUS**	**0831968**	1
1 sheet = 100 labels	**LS-EMLP (17,5X15) WH CUS**	**0831969**	1
1 sheet = 176 labels	**LS-EMLP (20X7) WH CUS**	**0831970**	1
1 sheet = 160 labels	**LS-EMLP (20X8) WH CUS**	**0831971**	1
1 sheet = 104 labels	**LS-EMLP (22X12) WH CUS**	**0831972**	1
1 sheet = 56 labels	**LS-EMLP (22X22) WH CUS**	**0831973**	1
1 sheet = 120 labels	**LS-EMLP (27X8) WH CUS**	**0831974**	1
1 sheet = 78 labels	**LS-EMLP (27X12,5) WH CUS**	**0831975**	1
1 sheet = 60 labels	**LS-EMLP (27X15) WH CUS**	**0831976**	1
1 sheet = 54 labels	**LS-EMLP (27X18) WH CUS**	**0831977**	1
1 sheet = 36 labels	**LS-EMLP (27X27) WH CUS**	**0831978**	1
1 sheet = 33 labels	**LS-EMLP (45X14) WH CUS**	**0831979**	1
1 sheet = 30 labels	**LS-EMLP (45X15) WH CUS**	**0831980**	1
1 sheet = 30 labels	**LS-EMLP (49X15) WH CUS**	**0831981**	1
1 sheet = 20 labels	**LS-EMLP (60X15) WH CUS**	**0831982**	1
1 sheet = 10 labels	**LS-EMLP (60X30) WH CUS**	**0831983**	1
1 sheet = 6 labels	**LS-EMLP (85,6X54) WH CUS**	**0831984**	1
1 sheet = 2 labels	**LS-EMLP (100X60) WH CUS**	**0831985**	1

Accessories

Sheet hopper, for TOPMARK LASER			
	TOPMARK LASER-MAG SHEET	**0831836**	1



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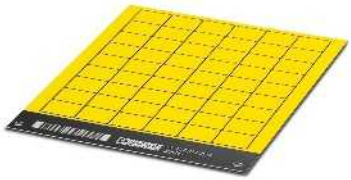

Yellow, material thickness: 0.8 mm

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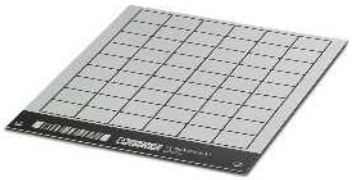

Silver, material thickness: 0.8 mm

Technical data

TRANSPLY-ABS
-20 ... 85
DIN EN 61010-1 (VDE 0411-1)
Free from silicone and halogen

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMLP (11X9) YE CUS	0832018	1
LS-EMLP (13X9) YE CUS	0832019	1
LS-EMLP (17X7) YE CUS	0832020	1
LS-EMLP (17X9) YE CUS	0832021	1
LS-EMLP (17,5X12) YE CUS	0832022	1
LS-EMLP (17,5X15) YE CUS	0832023	1
LS-EMLP (20X7) YE CUS	0832024	1
LS-EMLP (20X8) YE CUS	0832025	1
LS-EMLP (22X12) YE CUS	0832026	1
LS-EMLP (22X22) YE CUS	0832027	1
LS-EMLP (27X8) YE CUS	0832028	1
LS-EMLP (27X12,5) YE CUS	0832029	1
LS-EMLP (27X15) YE CUS	0832030	1
LS-EMLP (27X18) YE CUS	0832031	1
LS-EMLP (27X27) YE CUS	0832032	1
LS-EMLP (45X14) YE CUS	0832033	1
LS-EMLP (45X15) YE CUS	0832034	1
LS-EMLP (49X15) YE CUS	0832035	1
LS-EMLP (60X15) YE CUS	0832036	1
LS-EMLP (60X30) YE CUS	0832037	1
LS-EMLP (85,6X54) YE CUS	0832038	1
LS-EMLP (100X60) YE CUS	0832039	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

Technical data

TRANSPLY-ABS
-20 ... 85
DIN EN 61010-1 (VDE 0411-1)
Free from silicone and halogen

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMLP (11X9) SR CUS	0831991	1
LS-EMLP (13X9) SR CUS	0831992	1
LS-EMLP (17X7) SR CUS	0831993	1
LS-EMLP (17X9) SR CUS	0831994	1
LS-EMLP (17,5X12) SR CUS	0831995	1
LS-EMLP (17,5X15) SR CUS	0831996	1
LS-EMLP (20X7) SR CUS	0831997	1
LS-EMLP (20X8) SR CUS	0831998	1
LS-EMLP (22X12) SR CUS	0831999	1
LS-EMLP (22X22) SR CUS	0832000	1
LS-EMLP (27X8) SR CUS	0832001	1
LS-EMLP (27X12,5) SR CUS	0832002	1
LS-EMLP (27X15) SR CUS	0832003	1
LS-EMLP (27X18) SR CUS	0832004	1
LS-EMLP (27X27) SR CUS	0832005	1
LS-EMLP (45X14) SR CUS	0832006	1
LS-EMLP (45X15) SR CUS	0832007	1
LS-EMLP (49X15) SR CUS	0832008	1
LS-EMLP (60X15) SR CUS	0832009	1
LS-EMLP (60X30) SR CUS	0832010	1
LS-EMLP (85,6X54) SR CUS	0832011	1
LS-EMLP (100X60) SR CUS	0832012	1

Accessories

TOPMARK LASER-MAG SHEET	0831836	1

Marking material for TOPMARK LASER - MARKING system

Plastic adhesive device marking, with hole for switch

- The LS-EMLP 24/ 30/ 32 ... product range includes self-adhesive double-layer plastic device markers with a hole for the switch
- A wide range of different marker sizes is available for custom designs
- Automatic material detection enables fast and effective marking without time-consuming parameter settings
- The material sheet can be easily reused by creating a project code
- **Designation example:**
  LS-EMLP 24 (30x12) WH
  Lettering field size: 30 x 12 mm
  Hole diameter for switch: 24 mm,
  white material with black marking
- Labeling service: Phoenix Contact can custom-label all markers according to your requirements

Notes:

[1]) For an ordering example, see page 358 in main catalog 5.

Can be marked using:

Direct laser marking

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Diameter: 24 mm,
material thickness: 0.8 mm

Technical data

General data		
Can be marked with		TOPMARK LASER
Material		TRANSPLY-ABS
Temperature range	[°C]	-20 ... 85
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone and halogen

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Plastic label sheet, with hole for switch, diameter 24 mm, self-adhesive double-layer plastic labels				
1 sheet = 20 labels	white	**LS-EMLP 24 (30X12) WH**	**0831700**	10
1 sheet = 20 labels	yellow	**LS-EMLP 24 (30X12) YE**	**0831754**	10
1 sheet = 20 labels	silver	**LS-EMLP 24 (30X12) SR**	**0831727**	10
Plastic label sheet, with hole for switch, diameter 30 mm, self-adhesive double-layer plastic labels				
1 sheet = 9 labels	white			
1 sheet = 9 labels	yellow			
1 sheet = 9 labels	silver			
Plastic label sheet, with hole for switch, diameter 32 mm, self-adhesive double-layer plastic labels				
1 sheet = 12 labels	white			
1 sheet = 12 labels	yellow			
1 sheet = 12 labels	silver			
Plastic label sheet, with hole for switch, diameter 24 mm, self-adhesive double-layer plastic labels, **marked according to customer specifications**[1])				
1 sheet = 20 labels	white	**LS-EMLP 24 (30X12) WH CUS**	**0831986**	1
1 sheet = 20 labels	yellow	**LS-EMLP 24 (30X12) YE CUS**	**0832040**	1
1 sheet = 20 labels	silver	**LS-EMLP 24 (30X12) SR CUS**	**0832013**	1
Plastic label sheet, with hole for switch, diameter 30 mm, self-adhesive double-layer plastic labels, **marked according to customer specifications**[1])				
1 sheet = 9 labels	white			
1 sheet = 9 labels	yellow			
1 sheet = 9 labels	silver			
Plastic label sheet, with hole for switch, diameter 32 mm, self-adhesive double-layer plastic labels, **marked according to customer specifications**[1])				
1 sheet = 12 labels	white			
1 sheet = 12 labels	yellow			
1 sheet = 12 labels	silver			

Accessories

Sheet hopper, for TOPMARK LASER	**TOPMARK LASER-MAG SHEET**	**0831836**	1

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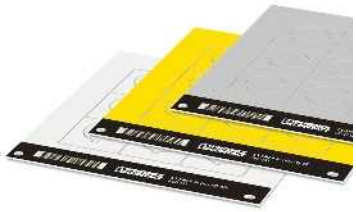

Diameter: 30 mm,
material thickness: 0.8 mm

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Diameter: 32 mm,
material thickness: 0.8 mm

Technical data

TOPMARK LASER
TRANSPLY-ABS
-20 ... 85
DIN EN 61010-1 (VDE 0411-1)
Free from silicone and halogen

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMLP 30 (45X10) WH	**0831701**	10
LS-EMLP 30 (45X10) YE	**0831755**	10
LS-EMLP 30 (45X10) SR	**0831728**	10
LS-EMLP 30 (45X10) WH CUS	**0831987**	1
LS-EMLP 30 (45X10) YE CUS	**0832041**	1
LS-EMLP 30 (45X10) SR CUS	**0832014**	1

Accessories

TOPMARK LASER-MAG SHEET	**0831836**	1

Technical data

TOPMARK LASER
TRANSPLY-ABS
-20 ... 85
DIN EN 61010-1 (VDE 0411-1)
Free from silicone and halogen

Ordering data

Type	Order No.	Pcs. / Pkt.
LS-EMLP 32 (38X14) WH	**0831702**	10
LS-EMLP 32 (38X14) YE	**0831756**	10
LS-EMLP 32 (38X14) SR	**0831729**	10
LS-EMLP 32 (38X14) WH CUS	**0831988**	1
LS-EMLP 32 (38X14) YE CUS	**0832042**	1
LS-EMLP 32 (38X14) SR CUS	**0832015**	1

Accessories

TOPMARK LASER-MAG SHEET	**0831836**	1

Marking material for TOPMARK LASER - MARKING system

Laser foil adhesive device marking

– The LS-EML ... product range includes self-adhesive, double-layer plastic foil labels that can be custom designed
– The laser foil is characterized by its high heat resistance and particularly strong adhesive properties
– Automatic material detection enables fast and effective marking without time-consuming parameter settings
– The material sheet can be easily reused by creating a project code
– **Designation example:**
LS-EML (180x180) BK-WH
Lettering field size: 180 x 180 mm,
can be custom designed,
black material with white marking
– Labeling service: Phoenix Contact can custom-label all markers according to your requirements

Notes:
[1]) For an ordering example, see page 358 in main catalog 5.

Can be marked using:

Direct laser marking

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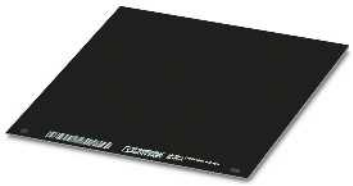

Black-white

Technical data

General data		
Can be marked with		TOPMARK LASER
Material		Polyacrylate
Temperature range	[°C]	-40 ... 300
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone and halogen

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Laser foil, double-layer plastic foil, for custom label design Lettering field size: 180 x 180 mm	**LS-EML (180X180) BK-WH**	**0831784**	10
Laser foil, double-layer plastic foil, for custom label design, **marked according to customer specifications**[1]) Lettering field size: 180 x 180 mm	**LS-EML (180X180) BK-WH CUS**	**0832070**	1

Accessories

Sheet hopper, for TOPMARK LASER	**TOPMARK LASER-MAG SHEET**	**0831836**	1

UM marking for terminals from other manufacturers, strips

Can be marked using:

Thermal transfer for sheets and cards

UV LED technology

Plotter

For a tall marker groove

- The universal UM1-TM ... material marking range includes markers for Weidmüller, Conta-Clip, Klemsan, Wago, and ABB (Entrelec) terminal blocks
- The markers, which are supplied in double strips, can be quickly and easily marked with BLUEMARK ..., THERMOMARK CARD ..., and the CMS-P1-PLOTTER
- The markers support multiline labeling
- The marking strips are easy to fit and can be easily separated if required
- The marking strips are snapped into the magazine in a twist-proof manner by means of a coding pin and fed to the output devices
- The format automatically ensures printing with a high level of positional accuracy

Technical data

General data		
Can be marked with		THERMOMARK CARD PLUS • THERMOMARK CARD • BLUEMARK CLED • CMS-P1-PLOTTER
Material		PC
Inflammability class according to UL 94		V2
Temperature range	[°C]	-40 ... 120
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone, halogen, and cadmium

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
UM1-TM ..., for marking terminal blocks from other manufacturers, Weidmüller, Conta-Clip, Klemsan				
34-section, lettering field size: 3.5 x 12 mm, pitch: 3.5 mm	white	**UM1-TM (3,5X12)**	**0830925**	10
24-section, lettering field size: 5 x 10 mm, pitch: 5 mm	white	**UM1-TM (5X10)**	**0830905**	10
24-section, lettering field size: 5 x 12 mm, pitch: 5 mm	white	**UM1-TM (5X12)**	**0830912**	10
20-section, lettering field size: 6 x 10 mm, pitch: 6 mm	white	**UM1-TM (6X10)**	**0830903**	10
20-section, lettering field size: 6 x 12 mm, pitch: 6 mm	white	**UM1-TM (6X12)**	**0830909**	10
14-section, lettering field size: 8 x 10 mm, pitch: 8 mm	white	**UM1-TM (8X10)**	**0830906**	10
14-section, lettering field size: 8 x 12 mm, pitch: 8 mm	white	**UM1-TM (8X12)**	**0830920**	10
10-section, lettering field size: 12 x 10 mm, pitch: 12 mm	white	**UM1-TM (12X10)**	**0830916**	10
UM1U-TM ..., for marking terminal blocks from other manufacturers, Weidmüller, Conta-Clip, Klemsan, with an offset foot				
24-section, lettering field size: 5 x 10 mm, pitch: 5 mm	white			
20-section, lettering field size: 6 x 10 mm, pitch: 6 mm	white			
UM1-TMF ..., for marking terminal blocks from other manufacturers, Weidmüller, Conta-Clip, Klemsan, Wago, ABB (Entrelec)				
34-section, lettering field size: 3.5 x 5 mm, pitch: 3.5 mm	white			
24-section, lettering field size: 5 x 5 mm, pitch: 5 mm	white			
20-section, lettering field size: 6 x 5 mm, pitch: 6 mm	white			
14-section, lettering field size: 8 x 5 mm, pitch: 8 mm	white			

Accessories

Magazine, for THERMOMARK CARD ... for accommodating UM1-TM ... for accommodating UM1U-TM ... for accommodating UM1-TMF ...	**THERMOMARK CARD-UM-MAG1**	**0831200**	1

For a tall marker groove, with an offset foot

For a flat marker groove

Technical data

THERMOMARK CARD PLUS • THERMOMARK CARD • BLUEMARK CLED • CMS-P1-PLOTTER
PC
V2
-40 ... 120
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
UM1U-TM (5X10)	0830910	10
UM1U-TM (6X10)	0830907	10

Accessories

THERMOMARK CARD-UM-MAG4	0831203	1

Technical data

THERMOMARK CARD PLUS • THERMOMARK CARD • BLUEMARK CLED • CMS-P1-PLOTTER
PC
V2
-40 ... 120
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
UM1-TMF (3,5X5)	0830935	10
UM1-TMF (5X5)	0830902	10
UM1-TMF (6X5)	0830904	10
UM1-TMF (8X5)	0830924	10

Accessories

THERMOMARK CARD-UM-MAG3	0831202	1

Terminal marking, marker strips for tall and flat marker grooves

– The TMT labeling range includes markers for all products with tall and flat marker grooves
– Labeling service: Phoenix Contact can custom-label all TMT markers in accordance with your requirements

Notes:

[1]) For an ordering example, see page 358 in main catalog 5.

[2]) The TMT TOOL snap-in tool can only be used for terminal blocks from Phoenix Contact.

Can be marked using:

Thermal transfer for rolls

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Unlabeled or labeled according to customer specifications

Technical data

General data		
Can be marked with		THERMOMARK ROLL • THERMOMARK ROLL X1 • THERMOMARK X1.1 • THERMOMARK X1.2 • THERMOMARK S1.1
Material		PVC
Material strength		0.50 mm
Inflammability class according to UL 94		V0
Temperature range	[°C]	-30 ... 80
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone and cadmium

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Insert strips, unprinted, 1 roll = 50 m, continuous				
Strip height: 5.5 mm	white	**TMT (EX5,5)R**	**0803062**	1
Strip height: 6.2 mm	white	**TMT (EX6,2)R**	**0803063**	1
Strip height: 6.5 mm	white	**TMT (EX6,5)R**	**0803064**	1
Strip height: 7.5 mm	white	**TMT (EX7,5)R**	**0803065**	1
Strip height: 8 mm	white	**TMT (EX8)R**	**0803066**	1
Strip height: 8.5 mm	white	**TMT (EX8,5)R**	**0803067**	1
Strip height: 9.5 mm	white	**TMT (EX9,5)R**	**0828295**	1
Strip height: 10 mm	white	**TMT (EX10)R**	**0803068**	1
Strip height: 10.5 mm	white	**TMT (EX10,5)R**	**0803070**	1
Strip height: 11 mm	white	**TMT2 (EX11)R**	**0802683**	1
Strip height: 12 mm	white	**TMT (EX12)R**	**0803071**	1
Insert strips, marked according to customer specifications[1])				
Strip height: 5.5 mm	white	**TMT (EX5,5)R CUS**	**0803072**	1
Strip height: 6.2 mm	white	**TMT (EX6,2)R CUS**	**0803073**	1
Strip height: 6.5 mm	white	**TMT (EX6,5)R CUS**	**0803075**	1
Strip height: 7.5 mm	white	**TMT (EX7,5)R CUS**	**0803076**	1
Strip height: 8 mm	white	**TMT (EX8)R CUS**	**0803077**	1
Strip height: 8.5 mm	white	**TMT (EX8,5)R CUS**	**0803078**	1
Strip height: 9.5 mm	white	**TMT (EX9,5)R CUS**	**0803079**	1
Strip height: 10 mm	white	**TMT (EX10)R CUS**	**0803080**	1
Strip height: 10.5 mm	white	**TMT (EX10,5)R CUS**	**0803081**	1
Strip height: 11 mm	white	**TMT2 (EX11)R CUS**	**0830811**	1
Strip height: 12 mm	white	**TMT (EX12)R CUS**	**0803082**	1

Accessories

Locking tool to snap into the TMT... materials[2])	orange	**TMT TOOL**	**0816650**	1

TMT ... terminal marking for terminal blocks from Phoenix Contact and other manufacturers

	TMT (EX5,5)R	TMT (EX6,2)R	TMT (EX6,5)R	TMT (EX7,5)R	TMT (EX8)R	TMT (EX8,5)R	TMT (EX9,5)R	TMT (EX10)R	TMT (EX10,5)R	TMT2 (EX11)R	TMT (EX12)R
TMT- markers, roll	0803062	0803063	0803064	0803065	0803066	0803067	0828295	0803068	0803070	0802683	0803071
Strip height	5.5	6.2	6.5	7.5	8	8.5	9.5	10	10.5	10.8	12
Terminal manufacturer											
Phoenix Contact		■					■				
Fuji Electronics Industry					■			■			
IDEC	■			■			■	■			
KASUGA	■		■				■				
TOGI						■		■			■
WAGO (2001 ...- 2016 ...)										■	
Yoshida Electronics	■		■	■		■		■	■		■

Clip-on UniCard conductor marking

Can be marked using:

Thermal transfer for sheets and cards

UV LED technology

Direct laser marking

PRINTED FOR YOU

32 markers
for conductor diameters of 2 to 2.9 mm

- The UCT-WMCO ... UniCard marking range includes markers for the subsequent marking of conductors by clipping on
- Secure tight fit even in the event of vibrations
- The markers, which are supplied in uniform sheets, can be marked quickly and easily with the TOPMARK LASER, THERMOMARK CARD, THERMOMARK CARD PLUS, and the BLUEMARK... printers
- The format automatically ensures printing with a high level of positional accuracy
- Large-surface labeling in a space-saving design
- The sheets provide space for including function texts
- Labeling service: Phoenix Contact can custom-label all UniCard markers in accordance with your requirements

Notes:

[1]) For an ordering example, see page 358 in main catalog 5.

Technical data

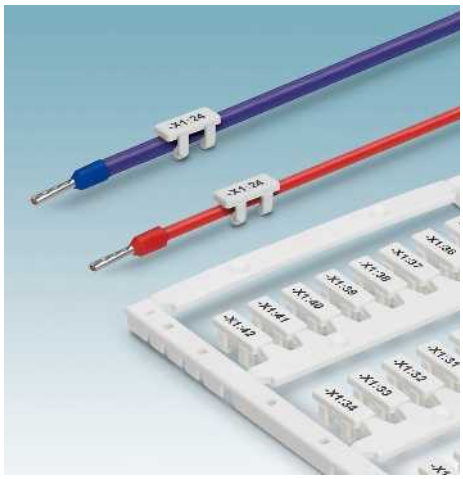
General data		
Can be marked with		THERMOMARK CARD PLUS • THERMOMARK CARD • BLUEMARK CLED • BLUEMARK LED • TOPMARK LASER
Number of individual labels		32
Number of individual labels per strip		8
Material		PC
Inflammability class according to UL 94		V0
Temperature range	[°C]	-40 ... 120
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone, halogen, and cadmium
Conductor diameter range	[mm]	2 ... 2.9
Conductor cross section range	[mm²]	0.5 ... 1.5

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
UniCard, for subsequent labeling of conductors				
Lettering field size: 12 x 4 mm	white	**UCT-WMCO 2,9 (12X4)**	**0830780**	9
Lettering field size: 18 x 4 mm	white	**UCT-WMCO 2,9 (18X4)**	**0830781**	9
UniCard, for subsequent labeling of conductors, **labeled acc. to customer specifications**[1])				
Lettering field size: 12 x 4 mm	white	**UCT-WMCO 2,9 (12X4) CUS**	**0830788**	1
Lettering field size: 18 x 4 mm	white	**UCT-WMCO 2,9 (18X4) CUS**	**0830789**	1

Accessories

Magazine, for THERMOMARK CARD ..., for accommodating: UCT–WMCO ...		**THERMOMARK CARD-UCT-MAG25**	**0802935**	1



PRINTED FOR YOU

32 markers
for conductor diameters of 2.9 to 3.5 mm

Technical data

THERMOMARK CARD PLUS • THERMOMARK CARD • BLUEMARK CLED • BLUEMARK LED • TOPMARK LASER
32
8
PC
V0
-40 ... 120
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium
2.9 ... 3.5
1.5 ... 2.5

Ordering data

Type	Order No.	Pcs. / Pkt.
UCT-WMCO 3,5 (12X4)	**0830782**	7
UCT-WMCO 3,5 (18X4)	**0830783**	7
UCT-WMCO 3,5 (12X4) CUS	**0830790**	1
UCT-WMCO 3,5 (18X4) CUS	**0830791**	1

Accessories

THERMOMARK CARD-UCT-MAG25	**0802935**	1

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32 markers
for conductor diameters of 3.5 to 4.1 mm

Technical data

THERMOMARK CARD PLUS • THERMOMARK CARD • BLUEMARK CLED • BLUEMARK LED • TOPMARK LASER
32
8
PC
V0
-40 ... 120
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium
3.5 ... 4.1
2.5 ... 4

Ordering data

Type	Order No.	Pcs. / Pkt.
UCT-WMCO 4,1 (12X4)	**0830784**	7
UCT-WMCO 4,1 (18X4)	**0830785**	7
UCT-WMCO 4,1 (12X4) CUS	**0830792**	1
UCT-WMCO 4,1 (18X4) CUS	**0830793**	1

Accessories

THERMOMARK CARD-UCT-MAG25	**0802935**	1

PRINTED FOR YOU

32 markers
for conductor diameters of 4.1 to 4.7 mm

Technical data

THERMOMARK CARD PLUS • THERMOMARK CARD • BLUEMARK CLED • BLUEMARK LED • TOPMARK LASER
32
8
PC
V0
-40 ... 120
DIN EN 61010-1 (VDE 0411-1)
Free from silicone, halogen, and cadmium
4.1 ... 4.7
2.5 ... 6

Ordering data

Type	Order No.	Pcs. / Pkt.
UCT-WMCO 4,7 (12X4)	**0830786**	6
UCT-WMCO 4,7 (18X4)	**0830787**	6
UCT-WMCO 4,7 (12X4) CUS	**0830794**	1
UCT-WMCO 4,7 (18X4) CUS	**0830795**	1

Accessories

THERMOMARK CARD-UCT-MAG25	**0802935**	1

UniCard cable marking for assembly with cable binders

- The UCT-WMTBA ... UniCard marking range includes markers that can be secured using standard cable binders
- The markers, which are supplied in uniform sheets, can be marked quickly, easily, and accurately with the TOPMARK LASER, THERMOMARK CARD, THERMOMARK CARD PLUS, and BLUEMARK CLED
- The format automatically ensures printing with a high level of positional accuracy
- For large-surface marking of conductors and cables > 5 mm in diameter
- The sheets provide space for including function texts
- Thanks to their angular shape the markers fit perfectly onto cables
- Labeling service: Phoenix Contact can custom-label all UniCard markers in accordance with your requirements

Notes:
For cable binders up to 5 mm wide.
For matching cable binders, see page 574 onwards in main catalog 5 or the product area on our website at phoenixcontact.net/products.
[1]) For an ordering example, see page 358 in main catalog 5.

Can be marked using:

Thermal transfer for sheets and cards

UV LED technology

Direct laser marking

PRINTED FOR YOU

15 markers for conductor diameter > 5 mm

Technical data

General data		
Can be marked with		THERMOMARK CARD PLUS • THERMOMARK CARD • BLUEMARK CLED • BLUEMARK LED • TOPMARK LASER
Number of individual labels		15
Number of individual labels per strip		5
Material		PC
Inflammability class according to UL 94		V0
Temperature range	[°C]	-40 ... 120
Components		Free from silicone, halogen, and cadmium
Cable diameter range	[mm]	> 5

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
UniCard, for assembly with cable binders				
Lettering field size: 24 x 4 mm	white	**UCT-WMTBA (24X4)**	**1014082**	10
	yellow	**UCT-WMTBA (24X4) YE**	**1014083**	10
Lettering field size: 29 x 6 mm	white			
	yellow			
Lettering field size: 40 x 17 mm	white			
	yellow			
UniCard, for assembly with cable binders, **labeled acc. to customer specifications**[1])				
Lettering field size: 24 x 4 mm	white	**UCT-WMTBA (24X4) CUS**	**1014088**	1
	yellow	**UCT-WMTBA (24X4) YE CUS**	**1014089**	1
Lettering field size: 29 x 6 mm	white			
	yellow			
Lettering field size: 40 x 17 mm	white			
	yellow			

Accessories

Magazine, for THERMOMARK CARD ..., for accommodating: UCT–WMTBA ...		**THERMOMARK CARD-UCT-MAG27**	**0802989**	1

PRINTED FOR YOU

12 markers
for conductor diameter > 6 mm

Technical data

THERMOMARK CARD PLUS • THERMOMARK CARD • BLUEMARK CLED • BLUEMARK LED • TOPMARK LASER
12
4
PC
V0
-40 ... 120
Free from silicone, halogen, and cadmium
> 6

Ordering data

Type	Order No.	Pcs. / Pkt.
UCT-WMTBA (29X6)	**1014084**	10
UCT-WMTBA (29X6) YE	**1014085**	10
UCT-WMTBA (29X6) CUS	**1014090**	1
UCT-WMTBA (29X6) YE CUS	**1014091**	1

Accessories

THERMOMARK CARD-UCT-MAG27	**0802989**	1

PRINTED FOR YOU

3 markers
for conductor diameter > 6 mm

Technical data

THERMOMARK CARD PLUS • THERMOMARK CARD • BLUEMARK CLED • BLUEMARK LED • TOPMARK LASER
3
1
PC
V0
-40 ... 120
Free from silicone, halogen, and cadmium
> 6

Ordering data

Type	Order No.	Pcs. / Pkt.
UCT-WMTBA (40X17)	**1014086**	10
UCT-WMTBA (40X17) YE	**1014087**	10
UCT-WMTBA (40X17) CUS	**1014092**	1
UCT-WMTBA (40X17) YE CUS	**1014093**	1

Accessories

THERMOMARK CARD-UCT-MAG27	**0802989**	1

Plastic cable markers for insert labels, for assembly with cable binders

Notes:

For matching cable binders, see page 574 onwards in main catalog 5 or the product area on our website at phoenixcontact.net/products.

Lettering field size: 25 x 6 mm, for cable diameter > 6 mm

- KMK HP ... plastic cable markers for marking and bundling conductors and cables indoors
- Inflammability class V0 acc. to UL 94
- The KMK HP... cable markers are particularly suitable for use in the railway industry, traffic technology, and building technology thanks to their outstanding material properties
- The KMK... versions have eyelets and are attached with cable binders
- The printed insert label is protected from dirt by the sealing cap
- Labeling service: Phoenix Contact can custom-label all insert labels for plastic cable markers in accordance with your requirements

Technical data

General data		
Material		PC
Inflammability class according to UL 94		V0
Temperature range	[°C]	-40 ... 125
Components		Halogen-free

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Cable marker carrier for cable binder assembly	transparent	**KMK HP (25X6)**	**0830720**	100

Accessories

UniCard, insert strip for KMK... cable marker carriers, can be marked with THERMOMARK CARD... and BLUEMARK CLED Lettering field size: 25 x 6 mm, 15-section Lettering field size: 29 x 8 mm, 15-section Lettering field size: 60 x 15 mm, 3-section Lettering field size: 40 x 17 mm, 3-section	**UCT-EMP (25X6)**	**1014117**	10
UniCard, insert strips for KMK... cable marker carriers, **marked according to customer specifications** Lettering field size: 25 x 6 mm, 15-section Lettering field size: 29 x 8 mm, 15-section Lettering field size: 40 x 17 mm, 3-section Lettering field size: 60 x 15 mm, 3-section	**UCT-EMP (25X6) CUS**	**1014121**	1
UniSheet, 0.5 mm thick, inflammability class V0 according to UL 94 84-section, lettering field size: 25 x 6 mm 48-section, lettering field size: 29 x 8 mm 9-section, lettering field size: 60 x 15 mm 16-section, lettering field size: 40 x 17 mm	**US-EMP (25X6)-1**	**0802754**	10
Insert labels for thermal transfer printer, halogen-free Lettering field size: 25 x 6 mm, 5000 labels per roll Lettering field size: 29 x 8 mm, 5400 labels per roll Lettering field size: 60 x 15 mm, 2500 labels per roll Lettering field size: 40 x 17 mm, 2300 labels per roll	**EMT (25X6)R**	**0817264**	1
Cable binder, inflammability class according to UL 94: V0, halogen-free, temperature range: -40°C ... 85 °C, maximum bundle Ø [mm]/minimum tensile strength [N]			
35 / 130	**WT-HP HF 3,6X140**	**0830982**	100
50 / 220	**WT-HP HF 4,8X200**	**0830983**	100
79 / 220	**WT-HP HF 4,5X290**	**0830984**	100
Magazine, for THERMOMARK CARD ..., for accommodating UCT–EMP ...	**THERMOMARK CARD-UCT-MAG26**	**0802988**	1

Lettering field size: 29 x 8 mm, for cable diameter > 6 mm

Lettering field size: 60 x 15 mm, for cable diameter > 9 mm

Lettering field size: 40 x 17 mm, for cable diameter > 9 mm

Technical data

PC
V0
-40 ... 125
Halogen-free

Ordering data

Type	Order No.	Pcs. / Pkt.
KMK HP (29X8)	0830721	100

Accessories

UCT-EMP (29X8)	1014118	10
UCT-EMP (29X8) CUS	1014122	1
US-EMP (29X8)	0829436	10
EMT (29X8)R	0817277	1
WT-HP HF 3,6X140	0830982	100
WT-HP HF 4,8X200	0830983	100
WT-HP HF 4,5X290	0830984	100
THERMOMARK CARD-UCT-MAG26	0802988	1

Technical data

PC
V0
-40 ... 125
Halogen-free

Ordering data

Type	Order No.	Pcs. / Pkt.
KMK HP (60X15)	0830722	50

Accessories

UCT-EMP (60X15)	1014119	10
UCT-EMP (40X17) CUS	1014124	1
US-EMP (60X15)	0828781	10
EMT (60X15)R	0801846	10
WT-HP HF 3,6X140	0830982	100
WT-HP HF 4,8X200	0830983	100
WT-HP HF 4,5X290	0830984	100
THERMOMARK CARD-UCT-MAG26	0802988	1

Technical data

PC
V0
-40 ... 125
Halogen-free

Ordering data

Type	Order No.	Pcs. / Pkt.
KMK HP (40X17)	0830723	50

Accessories

UCT-EMP (40X17)	1014120	10
UCT-EMP (60X15) CUS	1014123	1
US-EMP (40X17)	0829437	10
EMT (40X17)R	0817293	1
WT-HP HF 3,6X140	0830982	100
WT-HP HF 4,8X200	0830983	100
WT-HP HF 4,5X290	0830984	100
THERMOMARK CARD-UCT-MAG26	0802988	1

Plastic cable markers for insert labels, for assembly with cable binders

- KMK UV ... plastic cable markers for marking and bundling conductors and cables outdoors
- The KMK UV... cable markers are ultra-transparent, impact resistant, and have excellent weathering resistance. At the same time, they also possess outstanding chemical resistance
- The KMK... versions have eyelets and are attached with cable binders
- The printed insert label is protected from dirt by the sealing cap
- Labeling service: Phoenix Contact can custom-label all insert labels for plastic cable markers in accordance with your requirements

Notes:

For matching cable binders, see page 574 onwards in main catalog 5 or the product area on our website at phoenixcontact.net/products.

[1]) WT-UV HF...BK cable binders are weatherproof and UV resistant according to ISO 4892 (after QUV-B 600 hours) for up to 10 years.

Lettering field size: 25 x 6 mm, for cable diameter > 6 mm

Technical data

General data		
Material		PA
Inflammability class according to UL 94		HB
Temperature range	[°C]	-40 ... 100
Components		Halogen-free

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Cable marker carrier for cable binder assembly	transparent	**KMK UV (25X6)**	**1014106**	100

Accessories

UniCard, insert strip for KMK... cable marker carriers, can be marked with THERMOMARK CARD... and BLUEMARK CLED Lettering field size: 25 x 6 mm, 15-section Lettering field size: 29 x 8 mm, 15-section Lettering field size: 60 x 15 mm, 3-section Lettering field size: 40 x 17 mm, 3-section	**UCT-EMP (25X6)**	**1014117**	10
UniCard, insert strips for KMK... cable marker carriers, **marked according to customer specifications** Lettering field size: 25 x 6 mm, 15-section Lettering field size: 29 x 8 mm, 15-section Lettering field size: 40 x 17 mm, 3-section Lettering field size: 60 x 15 mm, 3-section	**UCT-EMP (25X6) CUS**	**1014121**	1
UniSheet, 0.5 mm thick, inflammability class V0 according to UL 94 84-section, lettering field size: 25 x 6 mm 48-section, lettering field size: 29 x 8 mm 9-section, lettering field size: 60 x 15 mm 16-section, lettering field size: 40 x 17 mm	**US-EMP (25X6)-1**	**0802754**	10
Insert labels for thermal transfer printer, halogen-free Lettering field size: 25 x 6 mm, 5000 labels per roll Lettering field size: 29 x 8 mm, 5400 labels per roll Lettering field size: 60 x 15 mm, 2500 labels per roll Lettering field size: 40 x 17 mm, 2300 labels per roll	**EMT (25X6)R**	**0817264**	1
Cable binder, halogen-free, inflammability class according to UL 94: V2, maximum bundle Ø [mm] / min. tensile strength [N][1]) **35 / 130** **50 / 220** **79 / 220**	 **WT-UV HF 3,6X140 BK** **WT-UV HF 4,5X200 BK** **WT-UV HF 4,5X290 BK**	 **3240832** **3240834** **3240835**	 100 100 100
Magazine, for THERMOMARK CARD ..., for accommodating UCT–EMP ...	**THERMOMARK CARD-UCT-MAG26**	**0802988**	1

Lettering field size: 29 x 8 mm, for cable diameter > 6 mm

Lettering field size: 60 x 15 mm, for cable diameter > 9 mm

Lettering field size: 40 x 17 mm, for cable diameter > 9 mm

Technical data

PA
HB
-40 ... 100
Halogen-free

Ordering data

Type	Order No.	Pcs. / Pkt.
KMK UV (29X8)	1014107	100

Accessories

UCT-EMP (29X8)	1014118	10
UCT-EMP (29X8) CUS	1014122	1
US-EMP (29X8)	0829436	10
EMT (29X8)R	0817277	1
WT-UV HF 3,6X140 BK	3240832	100
WT-UV HF 4,5X200 BK	3240834	100
WT-UV HF 4,5X290 BK	3240835	100
THERMOMARK CARD-UCT-MAG26	0802988	1

Technical data

PA
HB
-40 ... 100
Halogen-free

Ordering data

Type	Order No.	Pcs. / Pkt.
KMK UV (60X15)	1014108	50

Accessories

UCT-EMP (60X15)	1014119	10
UCT-EMP (40X17) CUS	1014124	1
US-EMP (60X15)	0828781	10
EMT (60X15)R	0801846	10
WT-UV HF 3,6X140 BK	3240832	100
WT-UV HF 4,5X200 BK	3240834	100
WT-UV HF 4,5X290 BK	3240835	100
THERMOMARK CARD-UCT-MAG26	0802988	1

Technical data

PA
HB
-40 ... 100
Halogen-free

Ordering data

Type	Order No.	Pcs. / Pkt.
KMK UV (40X17)	1014109	50

Accessories

UCT-EMP (40X17)	1014120	10
UCT-EMP (60X15) CUS	1014123	1
US-EMP (40X17)	0829437	10
EMT (40X17)R	0817293	1
WT-UV HF 3,6X140 BK	3240832	100
WT-UV HF 4,5X200 BK	3240834	100
WT-UV HF 4,5X290 BK	3240835	100
THERMOMARK CARD-UCT-MAG26	0802988	1

Adhesive UniCard device marking for applications in process engineering

Can be marked using:

UV

UV LED technology

PRINTED FOR YOU

Unlabeled or labeled according to customer specifications

- The UC-EMLP...-EX UniCard labeling range includes self-adhesive device markers with good adhesive properties
- The marking requirements in terms of legibility, adhesion, and wipe resistance in potentially explosive areas (ATEX), according to IEC/EN 60079-0, can also be ensured following storage in typical gas atmospheres. Phoenix Contact developed these sheets especially for process engineering which is where these requirements typically arise. These sheets meet the requirements for wipe esistance according to DIN EN 61010-1 against aggressive media such as acetone, ethanol, and MEK
- Thanks to the special adhesive, the marker meets the demanding requirements of process engineering
- The markers can be marked quickly, easily, and inexpensively with the BLUEMARK CLED and LED
- By using modern UV LED printing technology, a highly resistant and optimum printing quality can be achieved, which is resistant to solvents and suitable for use even under harsh industrial conditions
- Labeling service: Phoenix Contact can custom-label all markers according to your requirements

Notes:

[1]) For an ordering example, see page 358 in main catalog 5.

Technical data

General data		
Can be marked with		BLUEMARK CLED • BLUEMARK LED
Material		PA
Inflammability class according to UL 94		V2
Temperature range	[°C]	-40 ... 120
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone and halogen

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
UniCard, with self-adhesive plastic labels				
6-section, lettering field size: 22 x 22 mm	white	**UC-EMLP (22X22)-EX**	**0803224**	10
8-section, lettering field size: 27 x 18 mm	white	**UC-EMLP (27X18)-EX**	**0803225**	10
6-section, lettering field size: 27 x 27 mm	white	**UC-EMLP (27X27)-EX**	**0803226**	10
4-section, lettering field size: 49 x 15 mm	white	**UC-EMLP (49X15)-EX**	**0803227**	10
3-section, lettering field size: 60 x 30 mm	white	**UC-EMLP (60X30)-EX**	**0803228**	10
UniCard, with self-adhesive plastic labels, **labeled according to customer specifications**[1])				
6-section, lettering field size: 22 x 22 mm	white	**UC-EMLP (22X22)-EX CUS**	**0803229**	1
8-section, lettering field size: 27 x 18 mm	white	**UC-EMLP (27X18)-EX CUS**	**0803230**	1
6-section, lettering field size: 27 x 27 mm	white	**UC-EMLP (27X27)-EX CUS**	**0803231**	1
4-section, lettering field size: 49 x 15 mm	white	**UC-EMLP (49X15)-EX CUS**	**0803232**	1
3-section, lettering field size: 60 x 30 mm	white	**UC-EMLP (60X30)-EX CUS**	**0803233**	1

Adhesive device marking for applications in process engineering

- The EML...-EX self-adhesive device markers have been specifically developed for marking various types of equipment in the Ex area
- The marking requirements in terms of legibility, adhesion, and wipe resistance in potentially explosive areas (ATEX), according to IEC/EN 60079-0, can also be ensured following storage in typical gas atmospheres. Phoenix Contact developed these labels especially for process engineering, which is where these requirements typically arise. These labels meet the requirements for wipe resistance
  according to DIN EN 61010-1 against aggressive media such as acetone, ethanol, and MEK
- They are only suitable in conjunction with the TM- RIBBON110-EX
- Thanks to the special surface and adhesive, the marker meets the demanding requirements of process engineering
- If high-quality ink ribbons are used, the labeling is resistant to solvents, making it suitable for use even under harsh industrial conditions
- A wide range of marker sizes and colors are available for custom designs
- The special packaging protects rolls that have already been started from the dirt found in industrial environments
- **Designation example:**
  EML (10x4)R-EX
  Lettering field size: 10 x 4 mm
  Type of packaging: roll
- Marking service: Phoenix Contact can custom-mark all EML markers according to your requirements

Notes:

[1]) For an ordering example, see page 358 in main catalog 5.

Can be marked using:

Thermal transfer for rolls

Unlabeled or labeled according to customer specifications

Technical data

General data		
Can be marked with		THERMOMARK ROLL • THERMOMARK ROLL X1 • THERMOMARK X1.1 • THERMOMARK X1.2 • THERMOMARK S1.1
Material		Polyester
Temperature range	[°C]	-40 ... 150
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone and halogen

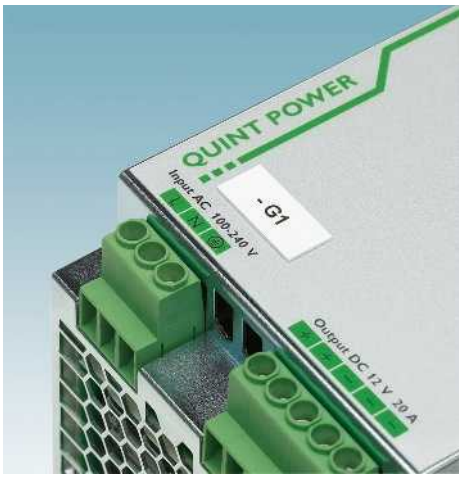
Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Labels				
10,000 labels per roll	white	**EML (10X4)R-EX**	**0803251**	1
2500 labels per roll	white	**EML (15X9)R-EX**	**0803253**	1
2500 labels per roll	white	**EML (20X8)R-EX**	**0803254**	1
2500 labels per roll	white	**EML (30X20)R-EX**	**0803255**	1
1000 labels per roll	white	**EML (40X25)R-EX**	**0803256**	1
400 labels per roll	white	**EML (70X50)R-EX**	**0803257**	1
300 labels per roll	white	**EML (100X40)R-EX**	**0803258**	1
300 labels per roll	white	**EML (100X73)R-EX**	**0803259**	1
250 labels per roll	white	**EML (100X90)R-EX**	**0803260**	1
Labels, labeled according to customer requirements[1])				
8 labels per strip	white	**EML (10X4)R-EX CUS**	**0803261**	1
5 labels per strip	white	**EML (15X9)R-EX CUS**	**0803262**	1
4 labels per strip	white	**EML (20X8)R-EX CUS**	**0803263**	1
3 labels per strip	white	**EML (30X20)R-EX CUS**	**0803264**	1
2 labels per strip	white	**EML (40X25)R-EX CUS**	**0803266**	1
1 label per strip	white	**EML (70X50)R-EX CUS**	**0803267**	1
1 label per strip	white	**EML (100X40)R-EX CUS**	**0803268**	1
1 label per strip	white	**EML (100X73)R-EX CUS**	**0803269**	1
1 label per strip	white	**EML (100X90)R-EX CUS**	**0803270**	1

Accessories

Ink ribbon, length: 300 m, width: 110 mm, color: black	**TM-RIBBON 110-EX**	**0803211**	1

UniSheet device marking for sticking onto rough or textured surfaces



- The US-EMLP-HA ... UniSheet marking range has excellent adhesive properties on rough, textured, and low-energy surfaces, thanks to the special adhesive
- The markers, which are supplied in uniform sheets, can be marked quickly, easily, and cost-effectively using THERMOMARK CARD and THERMOMARK CARD PLUS
- The perforated markers are easy to separate and can be easily fitted
- The sheets provide space for including function texts
- Marking service: Phoenix Contact can custom-mark all US-EMLP-HA ... markers according to your requirements

Can be marked using:

Thermal transfer for sheets and cards

PRINTED FOR YOU

Unlabeled or labeled according to customer specifications

Technical data

General data		
Can be marked with		THERMOMARK CARD PLUS • THERMOMARK CARD
Material		PVC
Inflammability class according to UL 94		V0
Temperature range	[°C]	-30 ... 80
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Silicone-free

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
UniSheet, with self-adhesive plastic labels, 0.5 mm thick				
108-section, lettering field size: 17 x 7 mm	white	**US-EMLP-HA (17X7)**	**0830988**	10
70-section, lettering field size: 20 x 9 mm	white	**US-EMLP-HA (20X9)**	**0830989**	10
4-section, lettering field size: 60 x 30 mm	white	**US-EMLP-HA (60X30)**	**0830990**	10
4-section, lettering field size: 60 x 30 mm	silver	**US-EMLP-HA (60X30) SR**	**0830991**	10
2-section, lettering field size: 85.6 x 54 mm	white	**US-EMLP-HA (85,6X54)**	**0830992**	10
2-section, lettering field size: 85.6 x 54 mm	silver	**US-EMLP-HA (85,6X54) SR**	**0830993**	10
UniSheet, with self-adhesive plastic labels, 0.5 mm thick, **labeled acc. to customer specifications**				
108-section, lettering field size: 17 x 7 mm	white	**US-EMLP-HA (17X7) CUS**	**0830994**	1
70-section, lettering field size: 20 x 9 mm	white	**US-EMLP-HA (20X9) CUS**	**0830995**	1
4-section, lettering field size: 60 x 30 mm	white	**US-EMLP-HA (60X30) CUS**	**0830996**	1
4-section, lettering field size: 60 x 30 mm	silver	**US-EMLP-HA (60X30) SR CUS**	**0830997**	1
2-section, lettering field size: 85.6 x 54 mm	white	**US-EMLP-HA (85,6X54) CUS**	**0830998**	1
2-section, lettering field size: 85.6 x 54 mm	silver	**US-EMLP-HA (85,6X54) SR CUS**	**0830999**	1

Accessories

Magazine, for THERMOMARK CARD..., for accommodating all US materials	**THERMOMARK CARD-US-MAG1**	**5146451**	1

RFMARK RFID system

RFMARK high-frequency handheld

RFMARK HF is a powerful handheld device for contact-free reading and writing of HF transponders. The RFMARK HF can identify and locate HF transponders. Data can be received, transmitted, and scanned on a contact-free basis and without visual contact.

RFMARK ultra-high frequency handheld

The RFMARK UHF is a powerful handheld device which is equipped with a crossed dipole antenna. This allows UHF transponders to be written and read regardless of their position. Bulk detection of 150 transponders per second is also possible.

Dimensions	
	[mm]
General data	
Degree of protection	
Temperature range	[°C]
Weight	[kg]
Frequency	[MHz]
Read/write format	[m]
Memory	
Display	

Description
Handheld, high-frequency range Range up to 0.1 m, depending on the environment
Handheld, ultra-high frequency range Range up to 2.0 m, depending on the environment

Advantages and accessories

Advantages of the RFMARK readers:
- Easy operation via touch screen
- Low power consumption and long battery life
- 1D laser scanner and 2D imager

Matching accessories

You can make optimum use of the RFMARK readers and ensure they are as user-friendly as possible with our reader accessories.

Radio-frequency identification, RFID

Used for contact-free identification, data exchange, and localization of transponders/tags without visual contact. With the aid of an RFID handheld device, which acts as a transmitter and receiver, data is transmitted to and received from a transponder/tag by electromagnetic waves (UHF) or a magnetic field (HF).

Charging and data exchange station, with replacement battery, connection for USB 2.0 and Ethernet, charger
for RFMARK HF, with power supply unit and power cable (EU/UK)
for RFMARK UHF, with power supply unit and power cable (EU/UK/US/CN)
Replacement battery
for RFMARK HF, Li-ion 7.4 V, 2.6 Ah
for RFMARK UHF, Li-ion 3.7 V, 2.26 Ah
Protective bag, with strap, protection against splash water, touch screen operation not possible
for RFMARK HF
for RFMARK UHF
Belt pouch, touch screen can be operated
for RFMARK HF
for RFMARK UHF
Read and write USB stick,
Crossed dipole antenna, range: 1 m

Handheld, high-frequency (HF)

Handheld, ultra-high frequency (UHF)

Technical data

Width	Length	Height
90	**250**	**45**

IP54
-20 ... 55
0.55
13.56
Max. 0.1
256 MB DDR RAM
3.5" color touch screen

Ordering data

Type	Order No.	Pcs. / Pkt.
RFMARK HF	**5148010**	1

Accessories

RFMARK HF POWER LINK STATION	**5148013**	1
RFMARK HF/ACCU	**5148015**	1
RFMARK HF PROTECTION CASE	**5148017**	1
RFMARK HF/BELTPOUCH	**5148018**	1

Technical data

Width	Length	Height
60	**147**	**39**

IP54
-20 ... 55
0.235
868
Max. 2
256 MB DDR RAM
2.2" color touch screen

Ordering data

Type	Order No.	Pcs. / Pkt.
RFMARK UHF	**5148011**	1

Accessories

RFMARK UHF POWER LINK STATION	**5148014**	1
RFMARK UHF/ACCU	**5148016**	1
RFMARK UHF PROTECTION CASE	**5148020**	1
RFMARK UHF/BELTPOUCH	**5148021**	1
RFMARK UHF FD	**5148012**	1

Adhesive system marking with RFID transponder

Can be marked using:

UV LED technology

Unlabeled

Markers

- The UCT-PMLP-RFID ... UniCard labeling range includes self-adhesive markers for system marking, with good adhesive properties
- The markers are integrated in a uniform matrix and can be printed quickly and easily with the BLUEMARK CLED
- The format automatically ensures printing with a high level of positional accuracy
- The wide temperature range means that the labels can be used both indoors and outdoors

Inlays

- The HF transponder inlays comply with ISO 15693 and ISO 18000-3 mode 1
- The UHF transponder inlays comply with EPC Class 1 Gen 2 and ISO 18000-6C

Technical data

General data		
Can be marked with		BLUEMARK CLED
Material		PVC/PC
Temperature range	[°C]	-25 ... 80
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone and cadmium

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
UniCard, self-adhesive plastic label, with integrated HF transponder 1-section, lettering field size: 90 x 38 mm, reading performance: max. 0.1 m, depending on the environment	white	**UCT-PMLP-RFID/HF (90X38)**	**0830956**	10
UniCard, self-adhesive plastic label, with integrated UHF transponder 1-section, lettering field size: 90 x 38 mm, reading performance: max. 2.0 m, depending on the environment	white			

Unlabeled

Technical data

BLUEMARK CLED
PVC/PC
-25 ... 80
DIN EN 61010-1 (VDE 0411-1)
Free from silicone and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
UCT-PMLP-RFID/UHF (90X38)	**0830957**	10

System marking for inserting into marker carriers, with RFID transponder

Can be marked using:

UV LED technology

Unlabeled

Markers

- The UniCard UCT-PMP-RFID ... marking range includes markers for system marking, specially designed to fit into existing CARRIER-PMP (108x38) marker carriers
- The markers are integrated in a uniform matrix and can be printed quickly and easily with the BLUEMARK CLED
- The format automatically ensures printing with a high level of positional accuracy
- The wide temperature range means that the labels can be used both indoors and outdoors
- The CARRIER-PMP ... marker carriers can be equipped with colored PMST markers according to DIN 2403

Inlays

- The HF transponder inlays comply with ISO 15693 and ISO 18000-3 mode 1
- The UHF transponder inlays comply with EPC Class 1 Gen 2 and ISO 18000-6C

Notes:

[1]) RVT-PA...BK rivet for fixing PMST ... marker strips to the CARRIER-PMP ...

Technical data

General data		
Can be marked with		BLUEMARK CLED
Material		PVC/PC
Inflammability class according to UL 94		V0
Temperature range	[°C]	-25 ... 80
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)
Components		Free from silicone and cadmium

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
UniCard, plastic label with integrated HF transponder				
1-section, lettering field size: 90 x 38 mm	white	**UCT-PMP-RFID/HF (90X38)**	**0830954**	10
UniCard, plastic label with integrated UHF transponder				
1-section, lettering field size: 90 x 38 mm	white			
1-section, lettering field size: 90 x 38 mm	orange			
Marking label for conveyed fluids, for equipping CARRIER-PMP ... according to DIN 2403				
	white			
	yellow			
	orange			
	red			
	violet			
	green			
	gray			
	brown			
	blue			
	black			
Marker carriers, for UCT-PMP ... labels that can be inserted				
Carrier size: 108 x 38 mm	black			

Accessories

Mounting strip, can be screwed, for CARRIER-PMP ...				
Plastic body-bound rivet, 3.5 mm diameter[1])				

Unlabeled

For securing with rivets on CARRIER-PMP ...

For mounting with screws, screw clamps, or cable binders

Technical data

BLUEMARK CLED
PVC/PC
V2
-25 ... 80
DIN EN 61010-1 (VDE 0411-1)
Free from silicone and cadmium

Ordering data

Type	Order No.	Pcs. / Pkt.
UCT-PMP-RFID/UHF (90X38)	**0830955**	10
UCT-PMP-RFID/UHF (90X38) OG	**0803048**	10

Accessories

Technical data

-
PVC
V0
-30 ... 80
DIN EN 61010-1 (VDE 0411-1)
Silicone-free

Ordering data

Type	Order No.	Pcs. / Pkt.
PMST (9X38)	**0830960**	100
PMST (9X38) YE	**0830964**	100
PMST (9X38) OG	**0830966**	100
PMST (9X38) RD	**0830962**	100
PMST (9X38) VT	**0830967**	100
PMST (9X38) GN	**0830961**	100
PMST (9X38) GY	**0830963**	100
PMST (9X38) BN	**0830968**	100
PMST (9X38) BU	**0830969**	100
PMST (9X38) BK	**0830965**	100

Accessories

Technical data

-
PA
V2
-40 ... 105
-
Free from silicone and halogen

Ordering data

Type	Order No.	Pcs. / Pkt.
CARRIER-PMP (108X38)	**0830958**	10

Accessories

SCRT 9X16-27	**0830970**	50
SCRT 9X25-40	**0830971**	50
SCRT 9X40-60	**0830972**	25
SCRT 9X60-80	**0830973**	25
SCRT 9X80-100	**0830974**	25
SCRT 9X100-120	**0830975**	25
SCRT 9X140-160	**0830976**	25
SCRT 9X160-180	**0830977**	25
SCRT 9X180-200	**0830978**	25
RVT-PA 3,5 BK	**0830959**	100

System marking for sticking on or inserting into marker carriers

- The UCT-PMLP ... UniCard marking range includes self-adhesive markers for system marking, with good adhesive properties
- The UniCard UCT-PMP ... marking range includes markers for system marking, specially designed to fit into existing CARRIER-PMP (108x38) marker carriers
- The format automatically ensures printing with a high level of positional accuracy
- The wide temperature range means that the labels can be used both indoors and outdoors
- Labeling service: Phoenix Contact can custom-label all UniCard markers in accordance with your requirements
- The CARRIER-PMP ... marker carriers can be equipped with colored PMST markers according to DIN 2403

Notes:

[1]) For an ordering example, see page 358 in main catalog 5.

[2]) RVT-PA...BK rivet for fixing PMST ... marker strips to the CARRIER-PMP ...

Can be marked using:

UV

UV LED technology

PRINTED FOR YOU

For self-adhesion

Technical data

Dimensions		Width	Length	Height
General data				
Can be marked with		BLUEMARK CLED		
Material		PC		
Inflammability class according to UL 94		V0		
Temperature range	[°C]	-40 ... 120		
Wipe resistance		DIN EN 61010-1 (VDE 0411-1)		
Components		Free from silicone and halogen		

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
UniCard, plastic label, for gluing				
1-section, lettering field size: 90 x 38 mm	white	**UCT-PMLP (90X38)**	**0803041**	10
UniCard, plastic label, for gluing, **marked according to customer specifications**[1])				
1-section, lettering field size: 90 x 38 mm	white	**UCT-PMLP (90X38) CUS**	**0803042**	1
UniCard, plastic label				
1-section, lettering field size: 90 x 38 mm	white			
1-section, lettering field size: 90 x 38 mm	blue			
1-section, lettering field size: 90 x 38 mm	violet			
1-section, lettering field size: 90 x 38 mm	yellow			
UniCard, plastic label, **marked according to customer specifications**[1])				
1-section, lettering field size: 90 x 38 mm	white			
1-section, lettering field size: 90 x 38 mm	blue			
1-section, lettering field size: 90 x 38 mm	violet			
1-section, lettering field size: 90 x 38 mm	yellow			
Marking label for conveyed fluids, for equipping CARRIER-PMP ... according to DIN 2403				
	white			
	yellow			
	orange			
	red			
	violet			
	green			
	gray			
	brown			
	blue			
	black			
Marker carriers, for UCT-PMP ... labels that can be inserted				
Carrier size: 108 x 38 mm	black			

Accessories

Mounting strip, can be screwed, for CARRIER-PMP ...				
Plastic body-bound rivet, 3.5 mm diameter[2])				

PRINTED FOR YOU

For inserting into a marker carrier

For securing with rivets on CARRIER-PMP ...

For mounting with screws, screw clamps, or cable binders

Technical data

Width	Length	Height
BLUEMARK CLED		
PC		
V0		
-40 ... 120		
DIN EN 61010-1 (VDE 0411-1)		
Free from silicone and halogen		

Ordering data

Type	Order No.	Pcs. / Pkt.
UCT-PMP (90X38)	**0803039**	10
UCT-PMP (90X38) BU	**0803047**	10
UCT-PMP (90X38) VT	**0803132**	10
UCT-PMP (90X38) YE	**0803133**	10
UCT-PMP (90X38) CUS	**0803040**	1
UCT-PMP (90X38) BU CUS	**8190566**	1
UCT-PMP (90X38) VT CUS	**8190707**	1
UCT-PMP (90X38) YE CUS	**8190708**	1

Accessories

Technical data

Width	Length	Height
-		
PVC		
V0		
-30 ... 80		
DIN EN 61010-1 (VDE 0411-1)		
Silicone-free		

Ordering data

Type	Order No.	Pcs. / Pkt.
PMST (9X38)	**0830960**	100
PMST (9X38) YE	**0830964**	100
PMST (9X38) OG	**0830966**	100
PMST (9X38) RD	**0830962**	100
PMST (9X38) VT	**0830967**	100
PMST (9X38) GN	**0830961**	100
PMST (9X38) GY	**0830963**	100
PMST (9X38) BN	**0830968**	100
PMST (9X38) BU	**0830969**	100
PMST (9X38) BK	**0830965**	100

Accessories

Technical data

Width	Length	Height
-		
PA		
V2		
-40 ... 105		
-		
Free from silicone and halogen		

Ordering data

Type	Order No.	Pcs. / Pkt.
CARRIER-PMP (108X38)	**0830958**	10

Accessories

SCRT 9X16-27	**0830970**	50
SCRT 9X25-40	**0830971**	50
SCRT 9X40-60	**0830972**	25
SCRT 9X60-80	**0830973**	25
SCRT 9X80-100	**0830974**	25
SCRT 9X100-120	**0830975**	25
SCRT 9X140-160	**0830976**	25
SCRT 9X160-180	**0830977**	25
SCRT 9X180-200	**0830978**	25
RVT-PA 3,5 BK	**0830959**	100

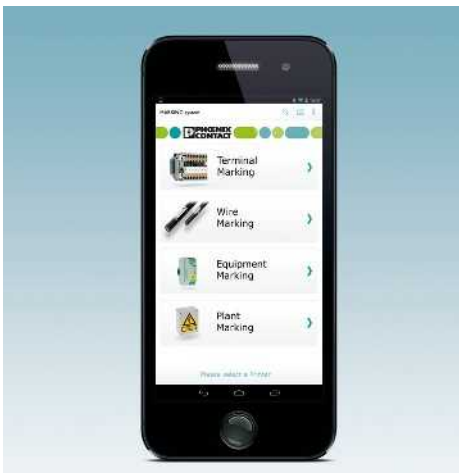
MARKING system app - MARKING system

Material editor

The material editor allows you to create the required markings directly in the application environment via tablet PC or smartphone.

Product scanner

The product scanner allows you to quickly and easily call up technical data for the marking material or directly mark it via the material editor.



Search assistant

With the search assistant, you can carry out a structured, targeted search for suitable marking materials, even without knowledge of this field.

MARKING system app

You can retrofit your THERMOMARK LINE printer with MINI FD BLUETOOTH. MINI FD BLUETOOTH enables reliable, wireless data exchange between THERMOMARK LINE printers and mobile, Bluetooth-capable devices, such as smartphones and tablet PCs. This means that print orders can be conveniently sent to the printer using the MARKING system app.

Notes:

For additional information on the THERMOMARK LINE printers, please refer to the product area on our website at phoenixcontact.net/products or main catalog 5.

Technical data

General data	
Application	USB/Bluetooth
Transmission speed [Mbps]	3

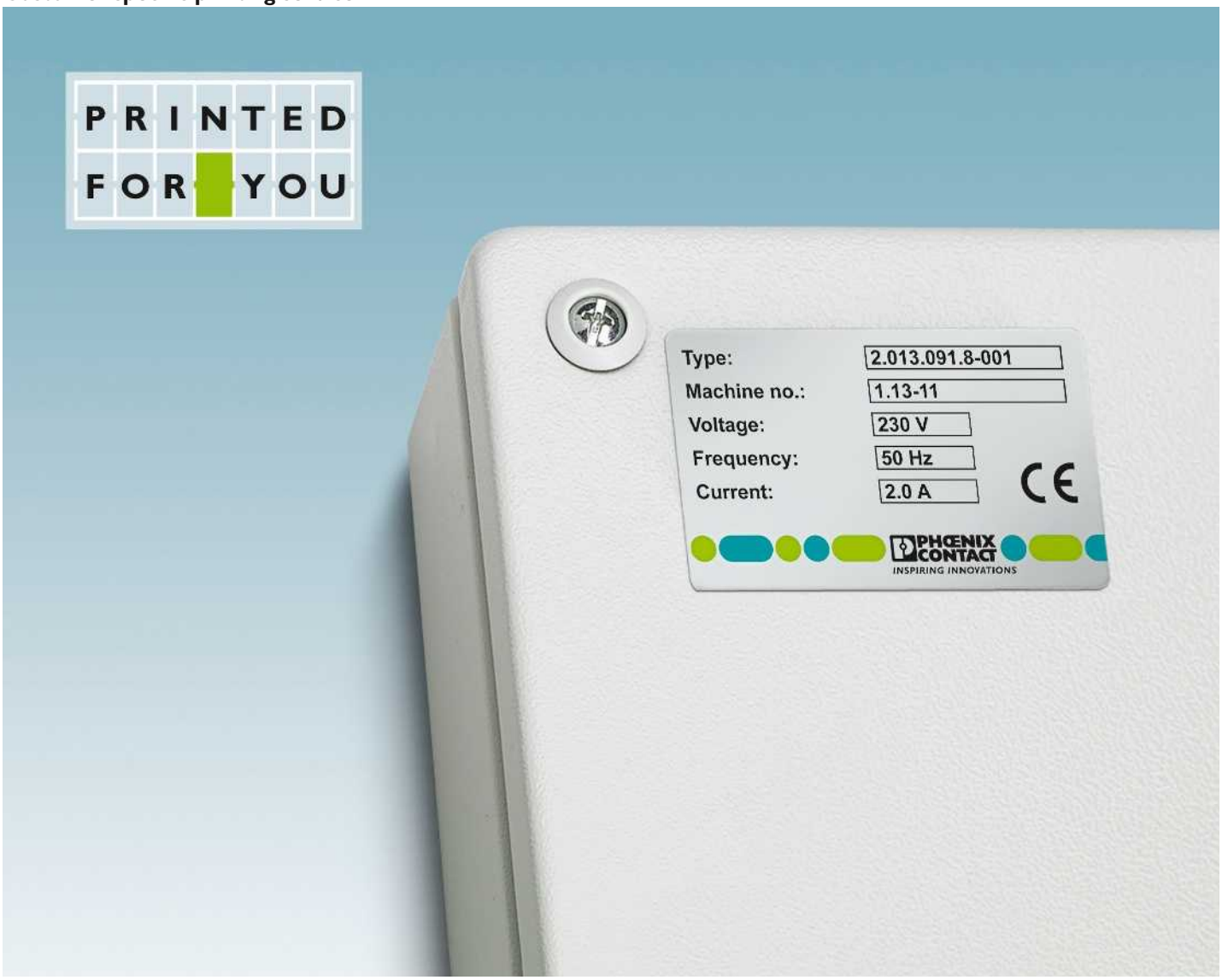
Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Bluetooth USB adapter			
	MINI FD BLUETOOTH	**0830986**	1

Accessories

Thermal transfer printer for cards, incl. European power cable, US power cable, USB cable, DVD with CLIP PROJECT ADVANCED, CD with multilingual user manual/driver/firmware, DIN A5 printed English/German user manual, magazine for UCT–TM materials, magazine for US materials, one unit pack UCT–TM 6, one unit pack US–EMLP (85.6 x 54), one ink ribbon (50-meter sample roll)	**THERMOMARK CARD**	**5146464**	1
	THERMOMARK CARD PLUS	**5146481**	1
Thermal transfer printer for material off the roll, including European power cable, US power cable, USB cable, DVD with CLIP PROJECT ADVANCED, CD with multilingual user manual/driver/firmware, A5 printed English/German user manual, one roll of EML (20x8) labels containing 1000 labels, one ink ribbon (50 meters)	**THERMOMARK ROLL**	**5146477**	1
	THERMOMARK ROLL X1	**5146723**	1
Thermal transfer printer, incl. connecting cable, Windows® printer driver and operating instructions, software	**THERMOMARK X1.2**	**5146231**	1

Customer-specific printing service



Easy ordering process via CLIP PROJECT and e-mail

You can create customer-specific marking quickly and easily via CLIP PROJECT and order via e-mail.

New: color-printed marking solutions

You can use marking materials in UniCard and UniSheet format as well as metal labels for color printing.

We mark marking materials according to your requirements

All materials which can be marked according to customer requirements are indicated with this symbol.

CLIP PROJECT
advanced and professional

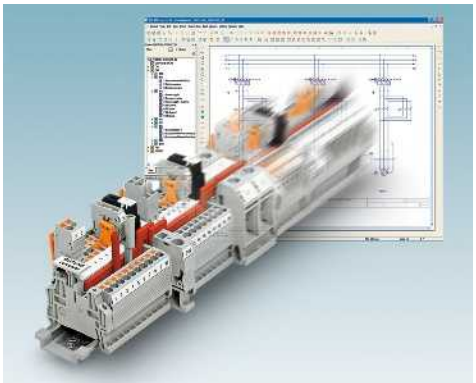
CLIP PROJECT advanced

The CLIP PROJECT advanced program enables the quick planning and configuration of terminal strips for the control cabinet and field as well as custom-marking of terminal blocks, cables, and lines, plus devices and systems:

- The automatic correction function performs a logical test of the terminal strips and automatically adds the necessary accessories such as covers and end brackets
- The terminal strip configurator enables the distributed arrangement of individual terminal strips on different DIN rails
- 3D preview and complete documentation of the assembled DIN rails, such as order and mounting lists
- Numerous sorting and filter functions for efficient management of your print jobs
- One software for all output devices: CLIP PROJECT controls all marking technologies from Phoenix Contact, from the BLUEMARK CLED high-speed printer, the THERMOMARK LINE thermal transfer printer, and the plotter to the TOPMARK LASER desktop laser marker
- Continual extension of the output devices and marking materials via updates
- Automatic Internet update
- Intuitive Windows® user interface
- CLIP PROJECT supports all marking materials from Phoenix Contact, from V4A stainless steel and aluminum to plastics such as polyamide or polycarbonate or foils made of PVC or polyester. These are stored with preset parameters

CLIP PROJECT professional

- The professional version also includes an efficient template designer, which can be used to design signs of your choice and to adapt existing material descriptions
- Graphics, various barcode types, and geometric elements such as squares, circles, and lines can be accessed for design work
- Data can also be imported into the templates from various data sources



Technical data

General data	
Software interface	EPLAN 5.7 EPLAN Electric P8 AUCOTEC ELCAD AUCOTEC Engineering Base AUCOTEC RUPLAN ZUKEN E^3 Bentley Promis-e WSCAD IGE XAO PC-Schematic AUTOMATION SDProget SPAC
System requirements	
Operating systems	MS Windows XP SP3, MS Windows Vista, MS Windows 7 (32/64-bit), MS Windows 8 (32/64-bit)

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
CLIP PROJECT advanced, planning and marking software, German/English/French/Dutch/Italian/Spanish/Russian/Polish/Hungarian/Czech/Turkish/Portuguese/Chinese and Japanese	**CLIP-PROJECT ADVANCED**	**5146040**	1
CLIP PROJECT professional, planning and marking software, with template designer, German/English/French/Dutch/Italian/Spanish/Russian/Polish/Hungarian/Czech/Turkish/Portuguese/Chinese and Japanese	**CLIP-PROJECT PROFESSIONAL**	**5146053**	1

CRIMPHANDY - portable hand-held machine. Stripping and crimping in just one step.

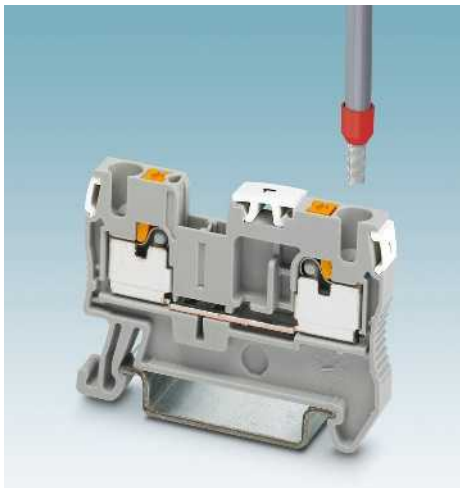
Simply insert the conductor, ...

... stripping and crimping is carried out automatically, ...

... and you're done.

Easy operation thanks to the automatic stripping and crimping function. One tool for both work steps, resulting in time savings of approx. 75%. The device signals the operating states clearly by means of colored LEDs.

Automatic cross-section monitoring prevents faulty crimping as a result of incorrect cross sections. The device displays a corresponding message.



The efficiency is particularly evident when used in combination with the push-in connection terminal block PT: conductors are processed and contacted in no time at all.

Integrated magazine for ferrules in strip form. The automatic feed enables conductors to be crimped one after another.

Easy to remove collecting chamber for discarded insulation. This guarantees a clean working environment. At around just 430 grams, the device can also easily be used inside the control cabinet.

Integrated lithium-ion polymer rechargeable battery for up to 2000 crimps. The fast charger provided charges the battery, which is easy to replace, in just 60 minutes.

CRIMPHANDY, portable hand-held machine, for a 1.0 to 1.5 mm² conductor cross section

The product innovation for switchgear manufacturing – the CRIMPHANDY. With this portable hand-held machine, you can strip and crimp your conductors in under two seconds – 75% less time than before.

- The matching reel ferrules are suitable for use on all modular terminal blocks, particularly those from the CLIPLINE complete system:
- UT screw connection terminal blocks
- ST spring-cage connection terminal blocks
- PT push-in connection terminal blocks
- COMBI plug-in connection solutions

Notes:

An application video can be found in the download area for the relevant product on our website at phoenixcontact.net/products.

1.0 mm² conductor cross section

Technical data

Dimensions		Width	Length	Height
	[mm]	**43**	**205**	**70**
General data				
Weight	[kg]	0.43		
Conductor	[mm²]	- 1		
Working cycle	[s]	< 2		
Compression		Square crimp		

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Portable hand-held machine, battery-powered, for ferrules, 1.0 mm², incl. battery and charger, 100 -240 V, in a robust case			
for standard PVC conductors	**CF CRIMPHANDY 1,0**	**1212465**	1
Portable hand-held machine, battery-powered, for ferrules, 1.5 mm², incl. battery and charger, 100 - 240 V, in a robust case			
for standard PVC conductors			

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Reel ferrules, 1.0 mm², 8 mm, with plastic sleeve, according to DIN 46228-4, 50 pieces per strip, 20 strips per unit pack			
Red, according to DIN 46228-4	**AI 1,0-8 RD-S**	**1212523**	1000
Yellow, special color	**AI 1,0-8 YE-S**	**1212782**	1000
Reel ferrules, 1.5 mm², 8 mm, with plastic sleeve, according to DIN 46228-4, 50 pieces per strip, 20 strips per unit pack			
Black, according to DIN 46228-4			
Red, special color			
Replacement battery, for CF CRIMPHANDY..., Li-ion 7.4 V, 0.76 Ah	**CF CRIMPHANDY/ACCU**	**1212518**	1
Replacement charger, for CF CRIMPHANDY..., 100 - 240 V AC	**CF CRIMPHANDY/CHARGER**	**1212519**	1

1.5 mm² conductor cross section

Technical data		
Width	Length	Height
43	**205**	**70**
0.43 - 1.5 < 2 Square crimp		

Ordering data		
Type	**Order No.**	Pcs. / Pkt.
CF CRIMPHANDY 1,5	**1212466**	1

Accessories		
AI 1,5-8 BK-S	**1212524**	1000
AI 1,5-8 RD-S	**1212781**	1000
CF CRIMPHANDY/ACCU	**1212518**	1
CF CRIMPHANDY/CHARGER	**1212519**	1

CUS tool sets, equipped with tools according to customer requirements

You can put together your own CUS tool set according to your individual requirements
- Six different bags are available, designed for typical applications
- Easily select your tools at phoenixcontact.net/products

Notes:

The CUS tool sets can be put together according to your requirements in the product area on our website at phoenixcontact.net/products.

TOOLS FOR YOU

Tool case, lockable, with straps

Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Toolbox, lockable, with adjustable strap, equipped with: cable cutter, diagonal cutter, micro cutter, stripping and sheath stripping tools, crimping tool set, combination, needle-nose, and water pump pliers, VDE bladed and Phillips screwdrivers, control cabinet key, voltage tester, ferrule box, blades, tape measure, continuity tester, marking tool, ring, open-end, and adjustable wrench set, T-handle hexagonal wrench, safety glasses, hammer, 41-piece ratchet socket wrench set, 1/4"	TOOL-CASE	1212629	1
Toolbox, lockable, with adjustable strap, **equipped with tools according to customer requirements**	TOOL-CASE CUS	1200072	1

CUS tool sets, equipped with tools according to customer requirements

Notes:

The CUS tool sets can be put together according to your requirements in the product area on our website at phoenixcontact.net/products.

TOOLS FOR YOU

Tool bag,
with document and laptop compartments

TOOLS FOR YOU

Tool bag, with strap

Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Tool bag, with adjustable straps, with document and laptop compartments, **equipped with tools according to customer requirements**	TOOL-BAG CUS	1200081	1
Tool bag, with strap, very comfortable to carry thanks to ergonomic shape, **equipped with tools according to customer requirements**	TOOL-CARRIER CUS	1200082	1

CUS tool sets, equipped with tools according to customer requirements

- Individual tool sets, with cutting, stripping, crimping, installation, and testing tools from the TOOL fox tool range
- Rugged and heavy-duty tool bags
- Select from six types of bag and equip these with the required tools at phoenixcontact.net/products

Notes:

The CUS tool sets can be put together according to your requirements in the product area on our website at phoenixcontact.net/products.

TOOLS FOR YOU

Tool belt pouch

Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Tool belt pouch, with two robust internal pockets, **equipped with tools according to customer requirements**	TOOL-BELTPOUCH CUS	1200084	1

CUS tool sets, equipped with tools according to customer requirements

Notes:

The CUS tool sets can be put together according to your requirements in the product area on our website at phoenixcontact.net/products.

TOOLS FOR YOU

Tool case

TOOLS FOR YOU

Wrap-up tool bag

Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Tool case, with elastic straps to hold the tools in place, **equipped with tools according to customer requirements**	TOOL-KIT CUS	1200085	1
Wrap-up tool bag, with slide-in compartments and robust elastic straps to hold the tools in place, **equipped with tools according to customer requirements**	TOOL-WRAP CUS	1200083	1

CRIMPFOX pliers, laser marked according to customer specifications

– Customize your crimping tool!
– You can now use robust laser engraving to mark CRIMPFOX pliers
– Individual laser marking prevents your tools from being mixed up

Notes:
Matching accessories can be found in main catalog 5 or the product area on our website at phoenixcontact.net/products.
[1]) Tools with customer-specific laser marking can be ordered quickly and easily in the product area on our website at phoenixcontact.net/products.

The advantages of our CRIMPFOX tools:
– Consistently high crimping quality
– Unlockable pressure lock
– Marked die stations for precise processing of the relevant cross sections
– Easy work thanks to improved force transfer
– Ergonomically designed, non-slip handles
– CRIMPFOX 6S-F CUS: the self-adjusting die automatically adapts to the connector size

Description
Crimping pliers, for ferrules, according to DIN 46228-1 and -4, five marked die stations, **laser marked according to customer specifications**[1])
Lateral insertion, 0.25 - 6.0 mm², unlockable pressure lock, trapezoidal crimp
Front insertion, 0.5 - 6 mm², square crimp
Crimping pliers, unlockable pressure lock, lateral insertion, oval crimp, **laser marked according to customer specifications**[1])
For insulated cable lugs (light green, red), 0.14 - 1 mm², three marked die stations
For insulated cable lugs (red, blue), 0.75 - 2.5 mm², two marked die stations
Crimping pliers, for uninsulated cable lugs, three marked die stations, 0.34 - 2.5 mm², unlockable pressure lock, lateral insertion, indent crimp, **laser marked according to customer specifications**[1])
Crimping pliers, for uninsulated slip-on sleeves 2.8/4.8/6.3 mm, three marked die stations, B-crimp, 0.1 - 1.5 mm², unlockable pressure lock, lateral insertion, **laser marked according to customer specifications**[1])
Crimping pliers, for ferrules according to DIN 46228-1 and -4, self-adjusting die, trapezoidal crimp, 0.5 - 6 mm², unlockable pressure lock, **laser marked according to customer specifications**[1])
Front insertion
Lateral insertion
Crimping pliers, three marked die stations, 0.75 - 6 mm², oval crimp, unlockable pressure lock, lateral insertion, **laser marked according to customer specifications**[1])
For insulated cable lugs, symmetrical (red, blue, yellow)
For insulated cable lugs, asymmetrical (red, blue, yellow)
Crimping pliers, for ferrules according to DIN 46228-1 and -4, WM crimp, unlockable pressure lock, lateral insertion, **laser marked according to customer specifications**[1])
Three marked die stations, 10 - 25 mm²
Two marked die stations, 35 - 50 mm²

TOOLS FOR YOU

TOOLS FOR YOU

TOOLS FOR YOU

Ordering data		
Type	Order No.	Pcs. / Pkt.
CRIMPFOX 6 CUS	1212767	1
CRIMPFOX 6S-F CUS	1212769	1
CRIMPFOX-RCI 1 CUS	1212772	1
CRIMPFOX-RCI 2,5 CUS	1212773	1
CRIMPFOX-RC 2,5 CUS	1212777	1
CRIMPFOX-SC 1,5 CUS	1212779	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
CRIMPFOX 6T-F CUS	1212771	1
CRIMPFOX 6T CUS	1212770	1

Ordering data		
Type	Order No.	Pcs. / Pkt.
CRIMPFOX-RCI 6 CUS	1212774	1
CRIMPFOX-RCI 6-1 CUS	1212775	1
CRIMPFOX 25R CUS	1212765	1
CRIMPFOX 50R CUS	1212766	1

CRIMPFOX and WIREFOX pliers, laser marked according to customer specifications

– Customize your crimping and stripping tool!
– You can now use robust laser engraving to mark CRIMPFOX and WIREFOX pliers
– Individual laser marking prevents your tools from being mixed up

Notes:
Matching accessories can be found in main catalog 5 or the product area on our website at phoenixcontact.net/products.
[1]) Tools with customer-specific laser marking can be ordered quickly and easily in the product area on our website at phoenixcontact.net/products.

The advantages of our WIREFOX tools:
– The special spring mechanism helps you to work precisely and safely
– Ergonomically designed, non-slip handles
– The WIREFOX pliers automatically adjust to different insulations and conductor diameters
– Highly adjustable limit stop for the stripping length
– Practical integrated wire cutter
– Easily replaceable blade cassettes for different cross sections and insulation

Description
Crimping pliers, for uninsulated cable lugs, three marked die stations, indent crimp, unlockable pressure lock, lateral insertion, **laser marked according to customer specifications**[1])
4 - 10 mm^2
10 - 25 mm^2
Crimping pliers, for uninsulated slip-on sleeves 2.8/4.8/6.3 mm, three marked die stations, 0.5 -6 mm^2, B-crimp, unlockable pressure lock, lateral insertion, **laser marked according to customer specifications**[1])
Crimping pliers, for ferrules according to DIN 46228, unlockable pressure lock, lateral insertion, **laser marked according to customer specifications**[1])
Square crimp, 0.14 – 10 mm^2
HEX crimp, 0.14 – 6 mm^2
Stripping tool, self-adjusting, easily replaceable blade cassettes, stripping length of up to 18 mm, cutting capacity: up to 1.5 mm^2 solid, up to 10 mm^2 stranded, **laser marked according to customer specifications**[1])
For cables and conductors from 0.1 – 4 mm^2, specifically also intended for rubber and other kinds of special insulation
For cables and conductors from 1.5 - 6 mm^2, specifically for short-circuit-proof cables and rubber insulation
For standard cables and conductors from 0.02 - 10 mm^2
For standard cables and conductors from 4 - 16 mm^2

TOOLS FOR YOU

TOOLS FOR YOU

TOOLS FOR YOU

Ordering data

Type	Order No.	Pcs. / Pkt.
CRIMPFOX-RC 10 CUS	1212776	1
CRIMPFOX-RC 25 CUS	1212778	1
CRIMPFOX-SC 6 CUS	1212780	1

Ordering data

Type	Order No.	Pcs. / Pkt.
CRIMPFOX 10S CUS	1212764	1
CRIMPFOX 6H CUS	1212768	1

Ordering data

Type	Order No.	Pcs. / Pkt.
WIREFOX 4 CUS	1212762	1
WIREFOX 6SC CUS	1212763	1
WIREFOX 10 CUS	1212760	1
WIREFOX 16 CUS	1212761	1

Surge protection for special applications
VAL-MS-AR... Page 306

Surge protection for special applications
VAL-MS-T1/T2... Page 307

Surge protection for NEMA
VAL-SQ NP... Page 309

Surge protection for measurement and control technology
PT-IQ-2X2... Page 310

Surge protection for measurement and control technology
PT-IQ-4X1... Page 310

Surge protection for intrinsically safe circuits
PT-IQ...EX Page 312

Surge protection for information technology
PT-IQ... Page 313

Surge protection for telecommunications interfaces
DT-TELE-SHDSL Page 314

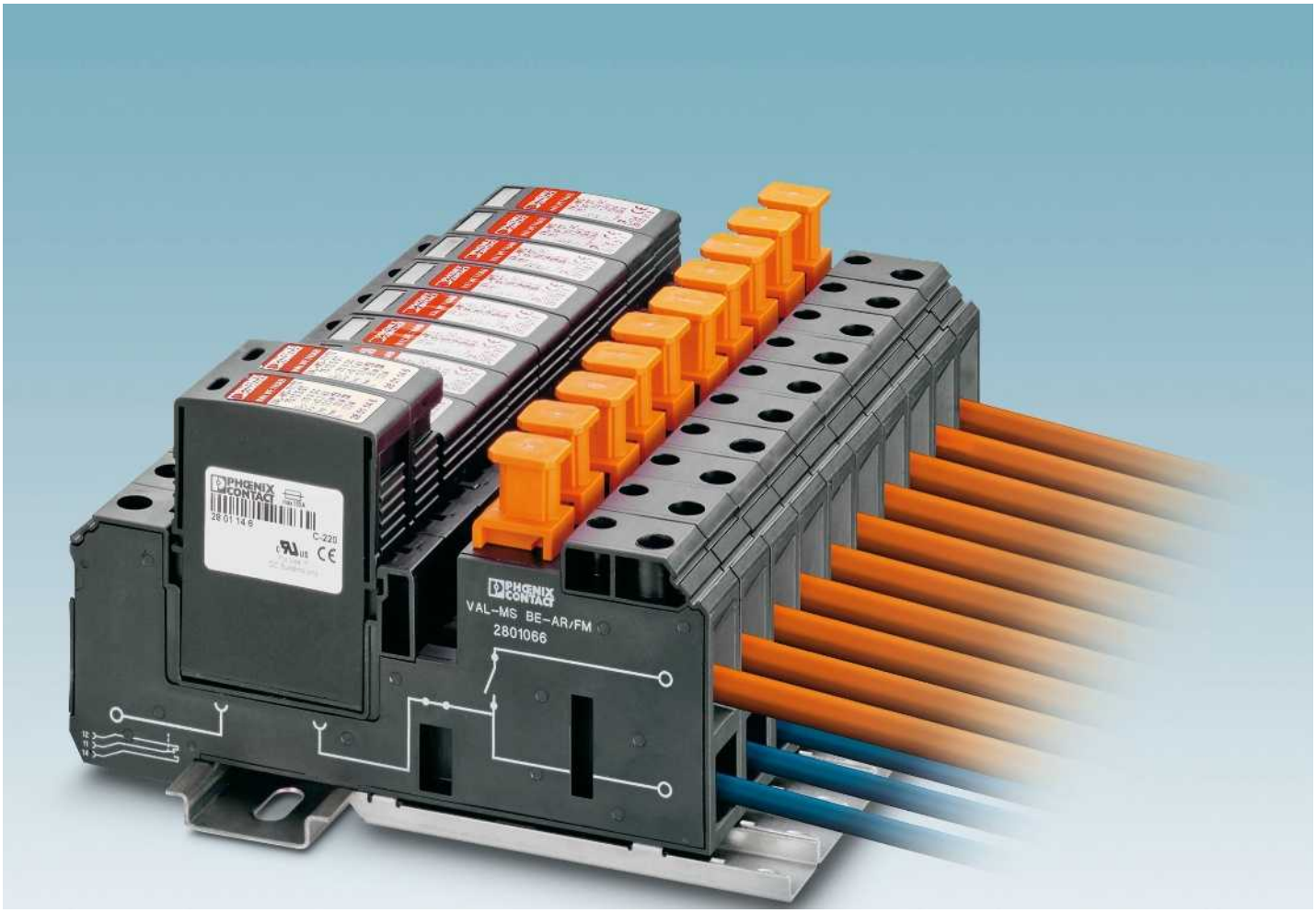
Power supplies
QUINT POWER Page 315

Power supplies
UNO POWER Page 316

Mounting set
BATTERY MOUNTING CASE Page 320

Soldering base element
CB S-BE Page 321

Bridge plug
CB RC BRIDGE Page 321



VAL-MS-AR – surge protection for the American railway industry

The VAL-MS-AR surge protective devices offer reliable, touch-proof protection while also providing a connection block for railway and signaling systems.

The VAL-MS BE-AR... base element has been designed so that the field input and house output connections are on the same side. The ground connection is on the opposite side. The integrated isolator allows you to easily carry out field diagnostics and insulation measurements.

VAL-MS-AR... complies with the practices recommended by AREMA C&S. In contrast to conventional installation with bolts and nuts, the alternative connection technology with base elements and plugs considerably reduces the effort required for installation, tests, and repair measures.

In addition to the standard products, VAL-MS-AR... /FM feature a remote monitoring function. This means that immediate failure or the removal of a protective plug can be signaled via floating contacts.

Features:

- Easy to replace, plug-in surge protection
- Protects systems against direct lightning strikes and coupled surge voltages
- Mechanical status indicator on each protective plug
- Optional remote signaling via floating PDTs
- Integrated isolator for insulation measurements and field diagnostics
- Screw terminal blocks for copper wire up to 4 AWG (25 mm²), solid, stranded, stripped or with sleeves
- Convenient marking options

Field and house connection

Independent terminal points for field and house connection enable wiring from the field side and signal lines with one conductor each. The terminal points are designed for typical wire gauges for railway applications:
House: 20 - 6 AWG (0.5 – 15 mm²),
Field: 18 - 4 AWG (1.5 - 25 mm²).

Disconnect and test point

Integrated isolator for carrying out diagnostics and insulation measurements without tampering with the installation. The disconnect knife remains connected to the field side for testing.

Function monitoring

Each plug has an optical, mechanical status indicator. In the event of a fault, the status is changed via the thermal disconnect device. In the VAL-MS-AR.../FM versions, a floating PDT is thereby switched, so that the status can be remotely indicated.

Protective plug, free of leakage current

VAL-MS...VF... plugs have a series connection consisting of a varistor and a spark gap. The advantage of this component combination is that no leakage currents flow in the passive state and therefore signals are not impaired.

Lightning current plugs with latching

The "T1/T2" plugs are robust enough to cope with direct lightning current. They are heavier than standard plugs and are equipped with latching to keep them in place in the event of vibrations, shocks, and magnetic influences.

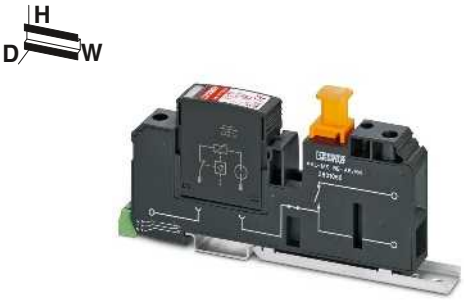
Ground and bridging options

The base elements can be easily bridged together with low impedance using pre-assembled MPB bridges. The terminal points for the ground connection accommodate conductors up to 2 AWG (35 mm²).

VAL-MS-AR surge protection with multifunctional base element

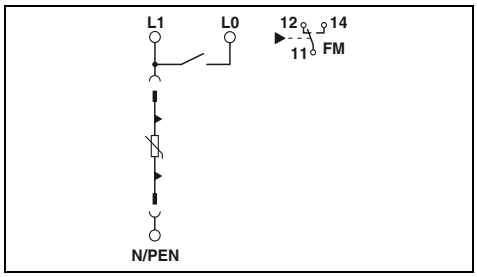
- Base element with isolator for easy field diagnostics and carrying out insulation measurements
- Independent inputs and outputs on one side of the base element, ground connection on the opposite side
- Optical, mechanical status indication for the individual arresters
- Disconnect device on each individual plug
- With or without floating remote indication contact
- Terminal block cases capable of bearing high-current, for solid or stranded conductors that are stripped or with sleeves

Type 1/2 lightning arrester SPD

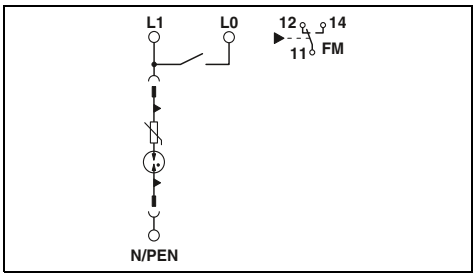


Type 2 hybrid SPD

Total width 17.7 mm



Total width 17.7 mm



Technical data

Electrical data	... 75	... 75 / ... 350
IEC test classification/EN type	I/II/T1/T2	II/T2 / II/T2
Nominal voltage U_N	60 V DC	60 V DC (5 V...48 V AC) / 230 V AC
Maximum continuous operating voltage U_C	-/75 V DC	75 V AC/100 V DC / 350 V AC/-
Impulse discharge curr. I_{imp} (10/350)µs		
Peak value	12.5 kA	3 kA / 3 kA
Charge	6.25 As	- / -
Specific energy	39.00 kJ/Ω	- / -
Nominal discharge current I_n (8/20) µs	12.5 kA	10 kA / 10 kA
Max. discharge current $I_{max.}$ (8/20) µs	50 kA	20 kA / 20 kA
Residual voltage Without reference direction	≤ 0.6 kV (at 5 kA)	≤ 350 V (at 5 kA) / ≤ 1 kV (at 5 kA)
Voltage protection level U_P Without reference direction	≤ 0.7 kV	≤ 1.4 kV / ≤ 1.2 kV
General data		
Dimensions W/H/D	17.7 mm/160 mm/77.5 mm	17.7 mm/160 mm/75 mm
Connection data, Ground solid / stranded / AWG	1.5 ... 35 mm²/1.5 ... 35 mm²/15 - 2	1.5 ... 35 mm²/1.5 ... 35 mm²/15 - 2
Connection data, Field solid/stranded/AWG	1.5 ... 25 mm²/1.5 ... 25 mm²/12 - 4	1.5 ... 25 mm²/1.5 ... 25 mm²/12 - 4
Connection data, House solid/stranded/AWG	0.5 ... 15 mm²/0.5 ... 15 mm²/20 - 6	0.5 ... 15 mm²/0.5 ... 15 mm²/20 - 6
Temperature range	-40°C ... 80°C	-40°C ... 80°C
Inflammability class in acc. with UL 94	V0	V0
Remote indication contact	PDT, 1-pos.	PDT, 1-pos.
Connection data solid / stranded / AWG	0.14 ... 1.5 mm²/0.14 ... 1.5 mm²/28 - 16	0.14 ... 1.5 mm²/0.14 ... 1.5 mm²/28 - 16
Max. operating voltage	250 V AC	250 V AC
Max. operating current	1.5 A AC (250 V AC)/1.5 A DC (30 V DC)	1.5 A AC (250 V AC)/1.5 A DC (30 V DC)

Ordering data

Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
VAL-MS-AR, high-capacity lightning arrester						
without remote indication contact	**VAL-MS-AR-T1/T2 75**	**2801491**	10			
with remote indication contact	**VAL-MS-AR-T1/T2 75/FM**	**2801492**	10			
VAL-MS-AR, hybrid SPD						
without remote indication contact				**VAL-MS-AR 75 VF**	**2801487**	10
with remote indication contact				**VAL-MS-AR 75 VF/FM**	**2801488**	10
without remote indication contact				**VAL-MS-AR 350 VF**	**2801489**	10
with remote indication contact				**VAL-MS-AR 350 VF/FM**	**2801490**	10

Accessories

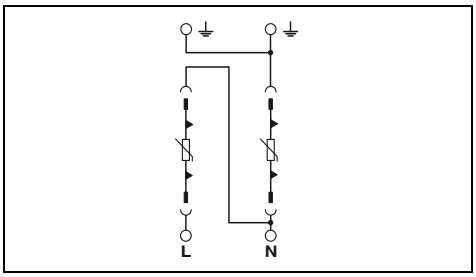
Protective plug, for inserting in base element						
L-N / L-PEN	**VAL-MS-T1/T2 75/12.5 ST**	**2801146**	10	**VAL-MS 75 VF ST**	**2805318**	10
1L-N/PE				**VAL-MS 350 VF ST**	**2856595**	10
Base element, for individual assembly with protective connectors						
with remote indication contact	**VAL-MS BE-AR/FM**	**2801066**	10	**VAL-MS BE-AR/FM**	**2801066**	10
without remote indication contact	**VAL-MS BE-AR**	**2801065**	10	**VAL-MS BE-AR**	**2801065**	10
Plug-in bridge 2-pos.	**FBS 2-18**	**2801068**	10	**FBS 2-18**	**2801068**	10
MPB wiring bridge, 57-pos.	**MPB 18/1-57**	**2809238**	1	**MPB 18/1-57**	**2809238**	1

Lightning and surge arresters for 48 V DC applications

- Suitable for the protection of remote radio heads in telecommunications systems
- Extremely low voltage protection level U_p of < 400 V
- Consistent plug-in arresters, type 1/2
- Secure hold of plugs in the event of high lightning current loads and strong vibrations thanks to latching
- Thermal disconnect device for each individual plug
- Optical, mechanical status indication for the individual arresters
- Mechanical coding of all slots
- With or without floating remote indication contact
- Plugs can be checked with CHECKMASTER

Type 1/2 arrester for 48 V DC applications

Total width 35.6 mm



Technical data

Electrical data	... 48
IEC test classification/EN type	I/II/T1/T2
Nominal voltage U_N	60 V AC
Maximum continuous operating voltage U_C	75 V AC
Impulse discharge curr. I_{imp} (10/350)µs	
Peak value	12.5 kA
Charge	6.25 As
Specific energy	39.00 kJ/Ω
Nominal discharge current I_n (8/20) µs	12.5 kA
Max. discharge current $I_{max.}$ (8/20) µs	30 kA
Voltage protection level U_P	≤ 0.4 kV
Backup fuse max. in acc. with IEC	160 A (gL/gG)
General data	
Dimensions W/H/D	35.6 mm/97 mm/77.5 mm
Connection data solid / stranded / AWG	1.5 ... 35 mm²/1.5 ... 25 mm²/15 - 2
Temperature range	-40°C ... 80°C
Inflammability class in acc. with UL 94	V0
Test standards	IEC 61643-11/EN 61643-11/UL 1449 ed. 3
Remote indication contact	PDT, 1-pos.
Connection data solid / stranded / AWG	0.14 ... 1.5 mm²/0.14 ... 1.5 mm²/28 - 16
Max. operating voltage	250 V AC
Max. operating current	1.5 A AC (250 V AC)/1.5 A DC (30 V DC)

Ordering data

Description	U_C	Type	Order No.	Pcs. / Pkt.
VALVETRAB-MS, varistor-based lightning arrester				
	75 V AC	**VAL-MS-T1/T2 48/12.5/1+1V**	**2801532**	1
	75 V AC	**VAL-MS-T1/T2 48/12.5/1+1V-FM**	**2801533**	1

Accessories

Replacement plug				
	L-N / L-PEN	**VAL-MS-T1/T2 48/12.5 ST**	**2801242**	10
Marking material		ZBN 18..., see Catalog 6, page 63		

VAL-SQ NP... provides modular surge protection for an entire house or a small company. The surge protective device consists of a base element and plug. It has the same base area as two standard 1 inch wide circuit breakers to enable installation in the corresponding distributor boxes. Initial installation must be performed by an electrically skilled person. If necessary, the surge protection plug can be replaced by the house owner.

The status indicator on the plug indicates the state of the surge protection. If the protection fails, the VAL-SQ NP... ST protective plug can be replaced quickly and easily. Up to now, components in all other products of this type had to be replaced by an electrically skilled person in the event of a fault.

The high-performance protective circuit features a discharge capacity of 32 kA per phase. The individual protective paths are protected thermally as well as against overcurrent.

The VAL-SQ NP... is suitable for single-phase 120/240 V applications with common neutral conductor and ground.

Distributor box compatibility

VAL-SQ NP can be used in all distribution boxes for single-phase 120/240 AC SN systems with 1 inch pitch.

VAL-SQ NP... devices are compatible with the following distributor boxes:

Eaton

– BR series (prefix 1BR or B) distributor boxes

Siemens Industry, Inc.

– PL series (prefix P, PW or G)
– ES series (prefix S, SW or G)
– EQ series (prefix E or W)

General Electric Co.

– Powermark Gold series (prefix TL, TM or TP)

Schneider Electric USA Inc./ Square D Co.

– Homeline series (prefix HOM)

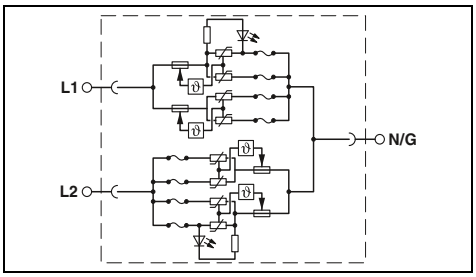
Surge protection for distributor boxes in houses and small businesses

- Installs in NEMA-style distributor boxes with 1-inch pitch
- Uses the same footprint as two standard 1-inch pitch circuit breakers
- Suitable for single-phase 120/240 V AC systems
- 32 kA surge current capacity per phase
- 10 kA (UL) nominal surge discharge current (I_N)
- LEDs provide continuous feedback on the status of each phase
- UL 1449 3rd edition

Notes:

The products are offered exclusively for export outside the European Economic Area (EEA).

SPD for distributor boxes with 1-inch pitch



Technical data

Electrical data		
MCOV	L-L / L-N	350 V/175 V
Nominal voltage U_N		120 V AC
Maximum continuous operating voltage U_C		120 V AC
Voltage Protection Rating (VPR)		
	L-N / L-PE	800 V/-
	N-PE / L-L	-/1200 V
Short-circuit current rating (SCCR)		10 kA
Nominal discharge current I_n		10 kA
General data		
UL Type		type 1
Degree of protection		IP20/NEMA 1
Error/status indicator		LEDs
Temperature range		-55°C ... 70°C
Test standards		UL 1449 3rd edition

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Plug and base assembly, 120/240 V AC single phase for distributor boxes with 1-inch pitch	**VAL-SQ NP 120-2-A 32**	**2800371**	1

Accessories

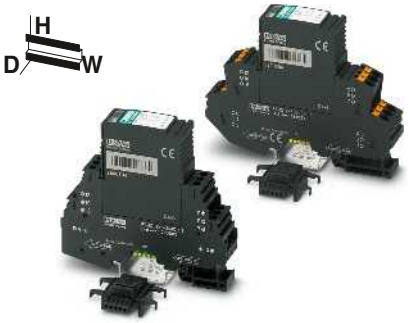
Replacement plug	**VAL-SQ NP 120-2-A 32 ST**	**2800369**	1
Base element	**VAL-SQ NP 120-2-A BE**	**2800749**	1

PLUGTRAB PT-IQ

- Surge protection system
- Multi-level state monitoring
- Collective message about supply and remote module
- Multi-level, floating remote signaling
- System supplied via DIN rail bus
- Up to 28 protection modules per supply module
- Maximum ease of maintenance, thanks to the two-piece design
- Plugs are coded
- Impedance-neutral disconnection of plug for maintenance purposes
- Base element remains an integral part of the installation

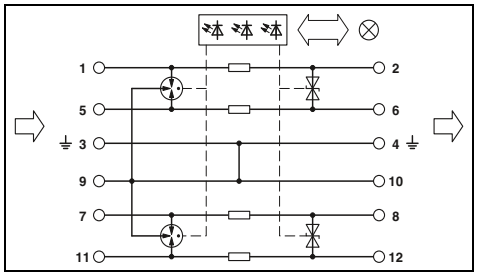
Notes:

For approvals and dimensional drawing, visit phoenixcontact.net/products



2 double conductors (loops), floating, 9/10 connection grounded directly

Total width 17.7 mm



Technical data

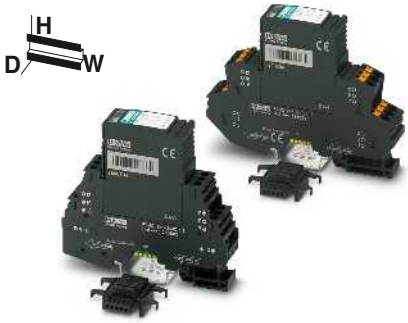
Electrical data		... 5DC	... 48DC
IEC test classification/EN type		C1/C2/C3/D1	C1/C2/C3/D1
Maximum continuous operating voltage U_C		6 V DC/4 V AC	53 V DC/37 V AC
Impulse discharge curr. I_{imp} (10/350)µs	Per path	2.5 kA	2.5 kA
Nominal current I_N		700 mA (up to 50°C)	300 mA
Nominal discharge current I_n (8/20) µs			
	Core-core/core-ground	10 kA/10 kA	10 kA/10 kA
Total surge current (8/20)µs		20 kA	20 kA
Voltage protection level U_P			
	Core-core	≤ 25 V (C3 - 25 A)	≤ 90 V (C3 - 25 A)
	Core-ground	≤ 600 V (C1 - 1 kV/500 A)	≤ 600 V (C1 - 1 kV/500 A)
Resistance per path		1.2 Ω	1.2 Ω
General data			
PT-IQ...PT dimensions W/H/D		17.7 mm/109.3 mm/77.5 mm	
PT-IQ...UT dimensions W/H/D		17.7 mm/91.1 mm/77.5 mm	
Connection data, push-in solid/stranded with ferrule/AWG		0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12	
Connection data solid/stranded with ferrule/AWG		0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12	
Temperature range		-40°C ... 70°C	
Degree of protection in acc. with IEC 60529/EN 60529		IP20	
Inflammability class in acc. with UL 94		V0	
Connection method		Screw connection/push-in connection	
Test standards		EN 61643-21/A1/IEC 61643-21/A1/EN 61000-6-2/ EN 61000-6-2/A1/EN 61000-6-3	
Remote indication contact		Via TBUS	

Ordering data

Description	Voltage U_N	Type	Order No.	Pcs. / Pkt.
MCR-PLUGTRAB, consisting of a plug, base element, and DIN rail bus, with screw connection technology				
	5 V DC	**PT-IQ-2X2-5DC-UT**	**2800807**	1
	48 V DC	**PT-IQ-2X2-48DC-UT**	**2800986**	1
MCR-PLUGTRAB, consisting of a plug, base element, and DIN rail bus, with push-in connection technology				
	5 V DC	**PT-IQ-2X2-5DC-PT**	**2801259**	1
	48 V DC	**PT-IQ-2X2-48DC-PT**	**2801265**	1

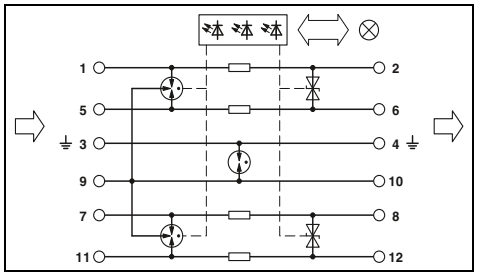
Accessories

Replacement plug			
5 V DC	**PT-IQ-2X2-5DC-P**	**2800802**	1
48 V DC	**PT-IQ-2X2-48DC-P**	**2800810**	1
Marking material	ZB 6, see Catalog 6, page 111		



2 double conductors (loops), floating, 9/10 connection grounded via gas-filled surge

Total width 17.7 mm



Technical data

... 5DC	... 48DC
C1/C2/C3/D1	C1/C2/C3/D1
6 V DC/4 V AC	53 V DC/37 V AC
2.5 kA	2.5 kA
700 mA (up to 50°C)	300 mA
10 kA/10 kA	10 kA/10 kA
20 kA	20 kA
≤ 25 V (C3 - 25 A)	≤ 90 V (C3 - 25 A)
≤ 900 V (C1 - 1 kV/500 A)	≤ 900 V (C1 - 1 kV/500 A)
1.2 Ω	1.2 Ω
17.7 mm/109.3 mm/77.5 mm	
17.7 mm/91.1 mm/77.5 mm	
0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12	
0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12	
-40°C ... 70°C	
IP20	
V0	
Screw connection/push-in connection	
EN 61643-21/A1/IEC 61643-21/A1/EN 61000-6-2/ EN 61000-6-2/A1/EN 61000-6-3	
Via TBUS	

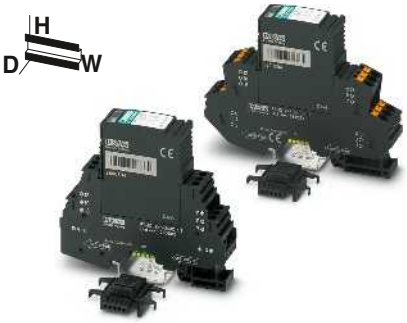
Ordering data

Type	Order No.	Pcs. / Pkt.
PT-IQ-2X2+F-5DC-UT	**2800809**	1
PT-IQ-2X2+F-48DC-UT	**2800987**	1
PT-IQ-2X2+F-5DC-PT	**2801260**	1
PT-IQ-2X2+F-48DC-PT	**2801266**	1

Accessories

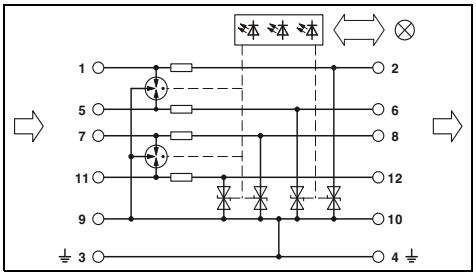
PT-IQ-2X2-5DC-P	**2800802**	1
PT-IQ-2X2-48DC-P	**2800810**	1

ZB 6, see Catalog 6, page 111



4-wire with common reference potential, 9/10 connection grounded directly

Total width 17.7 mm



Technical data

... 5DC
C1/C2/C3/D1
6 V DC/4 V AC
2.5 kA
700 mA (up to 50°C)
-/10 kA
20 kA
-
≤ 25 V (C3 - 25 A)
1.2 Ω
17.7 mm/109.3 mm/77.5 mm
17.7 mm/91.1 mm/77.5 mm
0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12
0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12
-40°C ... 70°C
IP20
V0
Screw connection/push-in connection
EN 61643-21/A1/IEC 61643-21/A1/EN 61000-6-2 / EN 61000-6-2/A1/EN 61000-6-3
Via TBUS

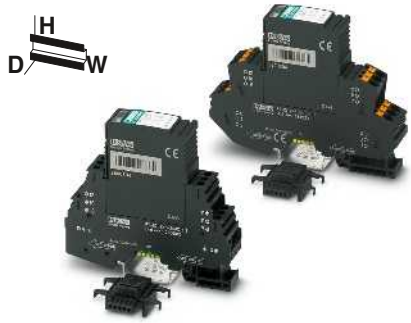
Ordering data

Type	Order No.	Pcs. / Pkt.
PT-IQ-4X1-5DC-UT	**2801215**	1
PT-IQ-4X1-5DC-PT	**2801267**	1

Accessories

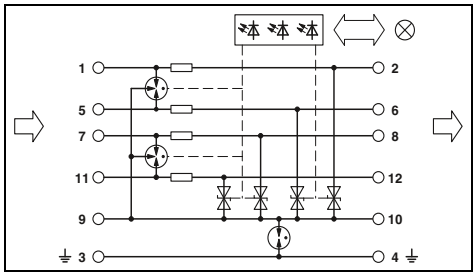
PT-IQ-4X1-5DC-P	**2800811**	1

ZB 6, see Catalog 6, page 111



4-wire with common reference potential, 9/10 connection grounded via gas-filled surge

Total width 17.7 mm



Technical data

... 5DC
C1/C2/C3/D1
6 V DC/4 V AC
2.5 kA
700 mA (up to 50°C)
-/10 kA
20 kA
-
≤ 720 V (C1 - 1 kV/500 A)
1.2 Ω
17.7 mm/109.3 mm/77.5 mm
17.7 mm/91.1 mm/77.5 mm
0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12
0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12
-40°C ... 70°C
IP20
V0
Screw connection/push-in connection
EN 61643-21/A1/IEC 61643-21/A1/EN 61000-6-2/ EN 61000-6-2/A1/EN 61000-6-3
Via TBUS

Ordering data

Type	Order No.	Pcs. / Pkt.
PT-IQ-4X1+F-5DC-UT	**2801216**	1
PT-IQ-4X1+F-5DC-PT	**2801268**	1

Accessories

PT-IQ-4X1-5DC-P	**2800811**	1

ZB 6, see Catalog 6, page 111

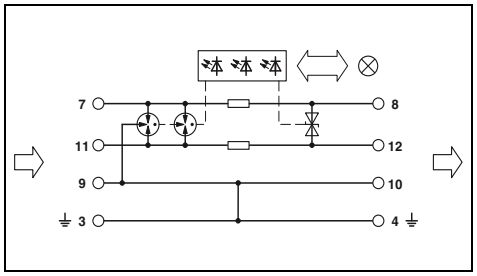
PLUGTRAB PT-IQ EX
With screw connection

- Tailored to the special requirements of intrinsically safe circuits
- Surge protection system
- Multi-level state monitoring
- Collective message about supply and remote module
- Multi-level, floating remote signaling
- System supplied via DIN rail bus
- Up to 10 protection modules per supply module
- Maximum ease of maintenance, thanks to the two-piece design
- Plugs are coded
- Impedance-neutral disconnection of plug for maintenance purposes
- Base element remains an integral part of the installation

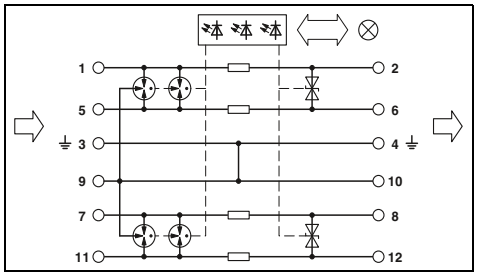
Double conductor (loop), floating, 9/10 connection grounded directly

2 double conductors (loops), floating, 9/10 connection grounded directly

Total width 17.7 mm



Total width 17.7 mm

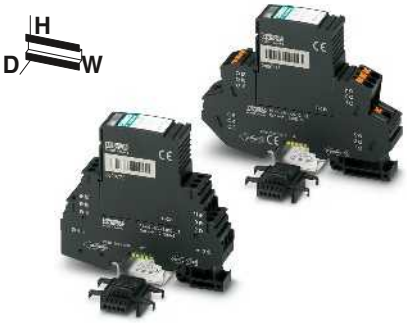


		Technical data	Technical data
Electrical data		... 24DC	... 24DC
IEC test classification/EN type		C1/C2/C3/D1	C1/C2/C3/D1
Maximum continuous operating voltage U_C		30 V DC/21 V AC	30 V DC/21 V AC
Impulse discharge curr. I_{imp} (10/350)µs	Per path	2 kA	2 kA
Nominal current I_N		350 mA	350 mA
Nominal discharge current I_n (8/20) µs	Core-core/core-ground	10 kA/10 kA	10 kA/10 kA
Total surge current (8/20)µs		20 kA	20 kA
Voltage protection level U_P	Core-core	≤ 50 V (C3 - 25 A)	≤ 50 V (C3 - 25 A)
	Core-ground	≤ 1.3 kV (C3 - 100 A)	≤ 1.3 kV (C3 - 100 A)
Cut-off frequency fg (3 dB)	Symmetrical in the 150 Ω system	typ. 1.1 MHz	typ. 1.1 MHz
Resistance per path		1.2 Ω	1.2 Ω
General data			
Dimensions W/H/D		17.7 mm/91.1 mm/77.5 mm	17.7 mm/91.1 mm/77.5 mm
Connection data solid/stranded with ferrule/AWG		0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12	0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12
Temperature range		-40°C ... 70°C	-40°C ... 70°C
Degree of protection in acc. with IEC 60529/EN 60529		IP20	IP20
Inflammability class in acc. with UL 94		V0	V0
Test standards		EN 61643-21/A1/IEC 61643-21/A1/EN 61000-6-2/ EN 61000-6-2/A1/EN 61000-6-3	EN 61643-21/A1/IEC 61643-21/A1/EN 61000-6-2/ EN 61000-6-2/A1/EN 61000-6-3
Remote indication contact		Via TBUS	Via TBUS

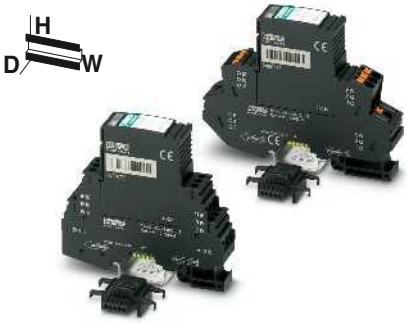
Description	Voltage U_N	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
MCR-PLUGTRAB, consisting of a plug, base element, and DIN rail bus, with screw connection technology							
	24 V DC	**PT-IQ-1X2-EX-24DC-UT**	**2801512**	1	**PT-IQ-2X2-EX-24DC-UT**	**2801513**	1
Accessories							
Replacement plug							
24 V DC		**PT-IQ-1X2-EX-24DC-P**	**2801514**	1	**PT-IQ-2X2-EX-24DC-P**	**2801515**	1
Separating plate							
for DIN rail NS35/7.5		**PT-IQ-EX-L-PP**	**2905023**	1	**PT-IQ-EX-L-PP**	**2905023**	1
for DIN rail NS35/15		**PT-IQ-EX-H-PP**	**2905024**	1	**PT-IQ-EX-H-PP**	**2905024**	1
Marking material		ZB 6, see Catalog 6, page 111			ZB 6, see Catalog 6, page 111		

PLUGTRAB PT-IQ

- Surge protection system
- Multi-level state monitoring
- Collective message about supply and remote module
- Multi-level, floating remote signaling
- System supplied via DIN rail bus
- Up to 28 protection modules per supply module
- Maximum ease of maintenance thanks to the two-piece design
- Plugs are coded
- Impedance-neutral disconnection of plug for maintenance purposes
- Base element remains an integral part of the installation

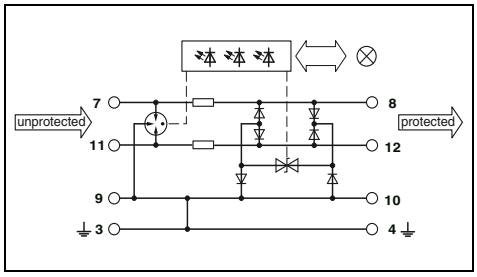


3-wire with common reference potential, 9/10 connection grounded directly

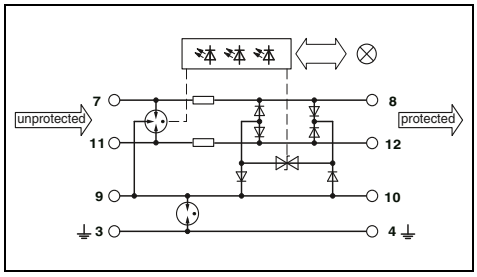


3-wire with common reference potential, 9/10 connection grounded via gas-filled surge

Total width 17.7 mm



Total width 17.7 mm



Technical data

Electrical data		... 5DC	... 12DC
IEC test classification/EN type		C1/C2/C3/D1	C1/C2/C3/D1
Maximum continuous operating voltage U_C		6 V DC/4 V AC	15 V DC/10 V AC
Impulse discharge curr. I_{imp} (10/350)µs	Per path	2.5 kA	2.5 kA
Nominal current I_N		600 mA (up to 40°C)	600 mA (up to 40°C)
Nominal discharge current I_n (8/20) µs	Core-core/core-ground	10 kA/10 kA	10 kA/10 kA
Total surge current (8/20)µs		20 kA	20 kA
Voltage protection level U_P			
	Core-core	≤ 30 V (C3 - 25 A)	≤ 40 V (C3 - 25 A)
	Core-ground	≤ 30 V (C3 - 25 A)	≤ 40 V (C3 - 25 A)
Cut-off frequency fg (3 dB)	Symmetrical in the 150 Ω system	> 60 MHz	> 60 MHz
General data			
PT-IQ...PT dimensions W/H/D		17.7 mm/109.3 mm/77.5 mm	
PT-IQ...UT dimensions W/H/D		17.7 mm/91.1 mm/77.5 mm	
Connection data, push-in solid/stranded with ferrule/AWG		0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12	
Connection data solid/stranded with ferrule/AWG		0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12	
Temperature range		-40°C ... 70°C	
Degree of protection in acc. with IEC 60529/EN 60529		IP20	
Inflammability class in acc. with UL 94		V0	
Connection method		Screw connection/push-in connection	
Test standards		EN 61643-21/A1/IEC 61643-21/A2/EN 61000-6-2/A1/ EN 61000-6-3	

Technical data

Electrical data		... 5DC	... 12DC
IEC test classification/EN type		C1/C2/C3/D1	C1/C2/C3/D1
Maximum continuous operating voltage U_C		6 V DC/4 V AC	15 V DC/10 V AC
Impulse discharge curr. I_{imp} (10/350)µs	Per path	2.5 kA	2.5 kA
Nominal current I_N		600 mA (up to 40°C)	600 mA (up to 40°C)
Nominal discharge current I_n (8/20) µs	Core-core/core-ground	10 kA/10 kA	10 kA/10 kA
Total surge current (8/20)µs		20 kA	20 kA
Voltage protection level U_P			
	Core-core	≤ 30 V (C3 - 25 A)	≤ 40 V (C3 - 25 A)
	Core-ground	≤ 900 V (C3 - 25 A)	≤ 900 V (C3 - 25 A)
Cut-off frequency fg (3 dB)	Symmetrical in the 150 Ω system	> 60 MHz	> 60 MHz
General data			
PT-IQ...PT dimensions W/H/D		17.7 mm/109.3 mm/77.5 mm	
PT-IQ...UT dimensions W/H/D		17.7 mm/91.1 mm/77.5 mm	
Connection data, push-in solid/stranded with ferrule/AWG		0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12	
Connection data solid/stranded with ferrule/AWG		0.2 ... 4 mm²/0.2 ... 2.5 mm²/24 - 12	
Temperature range		-40°C ... 70°C	
Degree of protection in acc. with IEC 60529/EN 60529		IP20	
Inflammability class in acc. with UL 94		V0	
Connection method		Screw connection/push-in connection	
Test standards		EN 61643-21/A1/IEC 61643-21/A2/EN 61000-6-2/A1/ EN 61000-6-3	

Ordering data

Description	Voltage U_N	Type	Order No.	Pcs. / Pkt.
MCR-PLUGTRAB, consisting of a plug, base element, and DIN rail bus, with screw connection technology				
	5 V DC	**PT-IQ-3-PB-UT**	**2800785**	1
	12 V DC	**PT-IQ-3-HF-12DC-UT**	**2800786**	1
MCR-PLUGTRAB, consisting of a plug, base element, and DIN rail bus, with push-in connection technology				
	5 V DC	**PT-IQ-3-PB-PT**	**2801286**	1
	12 V DC	**PT-IQ-3-HF-12DC-PT**	**2801288**	1

Ordering data

Type	Order No.	Pcs. / Pkt.
PT-IQ-3-PB+F-UT	**2800994**	1
PT-IQ-3-HF+F-12DC-UT	**2800995**	1
PT-IQ-3-PB+F-PT	**2801287**	1
PT-IQ-3-HF+F-12DC-PT	**2801289**	1

Accessories

	Type	Order No.	Pcs. / Pkt.
Replacement plug			
5 V DC	**PT-IQ-3-PB-P**	**2800783**	1
12 V DC	**PT-IQ-3-HF-12DC-P**	**2800784**	1
Marking material	ZB 6, see Catalog 6, page 111		

Accessories

	Type	Order No.	Pcs. / Pkt.
Replacement plug			
5 V DC	**PT-IQ-3-PB-P**	**2800783**	1
12 V DC	**PT-IQ-3-HF-12DC-P**	**2800784**	1
Marking material	ZB 6, see Catalog 6, page 111		

Notes:

For approvals and dimensional drawing, visit phoenixcontact.net/products

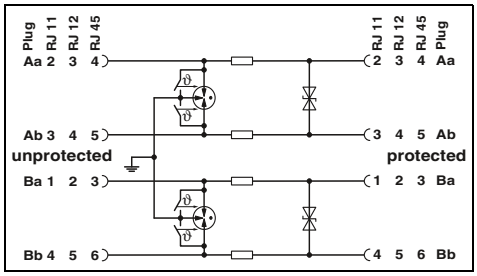
Attenuation characteristics at phoenixcontact.net/products

Surge protection for SHDSL telecommunications interfaces

- Protection for two SHDSL ports
- Connection: RJ45 (RJ12/RJ11) and plug-in screw terminal block (COMBICON)
- Alternatively, can be snapped onto a DIN rail
- Protective circuit:
  Course/fine protection combination between all cables of signal wire pairs, as well as common mode voltage coarse protection between all signal wires and ground
- Separate ground connection line
- The adapter included enables conversion from RJ45 to RJ11 and RJ12
  (for contacting, see circuit diagram)

Attachment plug for two SHDSL interfaces (ports)

Total width 25 mm



Technical data

Electrical data		
IEC test classification/EN type		B2/C1/C2/C3/D1
Maximum continuous operating voltage U_C		185 V DC
Nominal current I_N		≤ 380 mA (25°C)
Nominal discharge current I_n (8/20) µs		
	Core-core/core-ground	≤ 5 kA/≤ 5 kA
Total surge current (8/20)µs		10 kA
Voltage protection level U_P		
	Core-core/core-ground	≤ 250 V (C1 - 500 A)/≤ 580 V (C1 - 500 A)
Cut-off frequency fg (3 dB)		
In a 100 Ω system	Core-core	25 MHz
General data		
Dimensions W/H/D		25 mm/103 mm/63 mm
Connection data solid / stranded / AWG		0.14 ... 1.5 mm²/0.14 ... 1.5 mm²/28 - 16
Temperature range		-40°C ... 85°C
Degree of protection in acc. with IEC 60529/EN 60529		IP20
Connection method		RJ45/Combicon
Test standards		IEC 61643-21

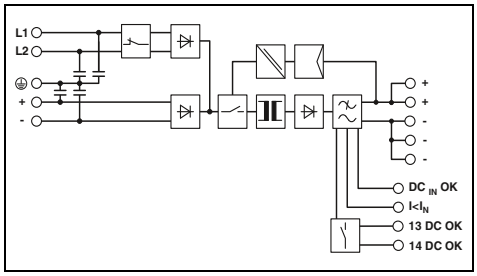
Ordering data

Description	Type	Order No.	Pcs. / Pkt.
DATATRAB adapter, protective adapter with RJ45 and screw connection for two SHDSL telecommunications interfaces	**DT-TELE-SHDSL**	**2801593**	1

QUINT POWER power supplies - with maximum functionality

- AC and DC input in a single device
- Specially designed for connection to two outer conductors of a three-phase system and to a DC intermediate circuit voltage of an inverter; typical applications include injection molding machines.
- Starts up with two-phase AC voltage or DC voltage. In the event of a mains failure connected 24 V loads continue to be supplied using the kinetic energy of the motor. In this way, the motor acts as a generator and supplies energy to the intermediate circuits as long as it is moving.
- Fast tripping of standard circuit breakers with dynamic power reserve SFB (selective fuse breaking) technology with up to 6 times the nominal current for 20 ms
- Reliably start difficult loads with the static POWER BOOST power reserve
- Preventive function monitoring warns against critical operating states before errors occur.

Power supply with two separate input circuits for frequency inverters
2 AC, 1 DC/24 V DC, 20 A



Technical data

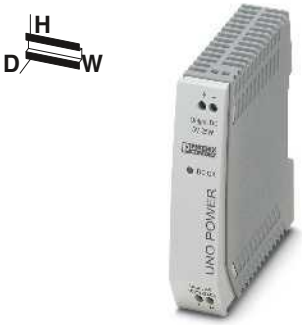
Input data of AC	
Nominal input voltage range	2x 400 V AC ... 500 V AC
Input voltage range AC	2x 360 V AC ... 575 V AC
Frequency range	45 Hz ... 65 Hz
Current consumption (nominal load)	2.5 A (400 V AC)/2.1 A (500 V AC)
Inrush current limitation at 25°C (typ.) / I^2t	< 85 A/< 1.5 A^2s
Mains buffering (I_N, typ.)	> 20 ms (400 V AC)
Input data of DC	
Nominal input voltage range	600 V DC
Input voltage range DC	450 V DC ... 840 V DC
Max. current consumption	approx. 0.9 A (600 V DC)
Output data	
Nominal output voltage	24 V DC ±1%
Setting range of the output voltage	18 V DC ... 29.5 V DC (U_{IN} ≥ 360 V AC/480 V DC) 18 V DC ... 26 V DC (< 480 V DC)
Output current/POWER BOOST/SFB (20 ms)	20 A/26 A/120 A
Magnetic fuse tripping	-
Can be connected in parallel/series	Yes/Yes
Max. power dissipation (no load/nominal load)	11 W/51 W
Efficiency (typ.)	> 92% (600 V DC)
Residual ripple	< 50 mV_{PP}
Signaling	
Signaling DC OK	LED, relay contact
Boost signaling	LED, active switching output
General data	
Weight/dimensions W x H x D	2 kg/120 x 130 x 125 mm
Spacing when mounting	Alignable: 5 mm horizontally, 15 mm next to active components, 50 mm vertically
Connection method	Screw connection
Input connection data (solid/stranded/AWG)	0.2 - 6 mm^2/0.2 - 4 mm^2/24 - 10
Output connection data (solid/stranded/AWG)	0.2 - 6 mm^2/0.2 - 4 mm^2/12 - 10
Signal connection data (solid/stranded/AWG)	0.2 - 6 mm^2/0.2 - 4 mm^2/24 - 10
Degree of protection/protection class	IP20/I
MTBF (EN 29500, 40°C)	> 500000 h
Ambient temperature (operation)	-25°C ... 70°C (> 60°C derating)
Standards/regulations	
Insulation voltage input/output	2 kV AC (routine test)/1.5 kV AC (type test)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Electrical safety	EN 60950-1/VDE 0805 (SELV)
Electronic equipm. for electrical power installations	EN 50178/VDE 0160 (PELV)
Safe isolation	DIN VDE 0100-410
UL approvals	UL applied for

Ordering data

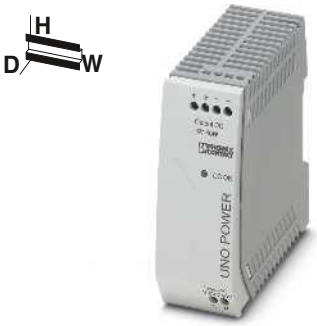
Description	Type	Order No.	Pcs. / Pkt.
DC-DC converter, primary switched mode	**QUINT-PS/2AC/1DC/24DC/20**	**2320830**	1

UNO POWER power supplies - with basic functionality

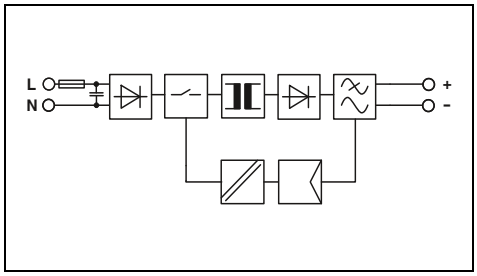
- Save energy, thanks to particularly low idling losses and a high degree of efficiency
- Save space in the control cabinet through compact housing with high power density
- Robust and reliable at temperatures from -25 to 70°C

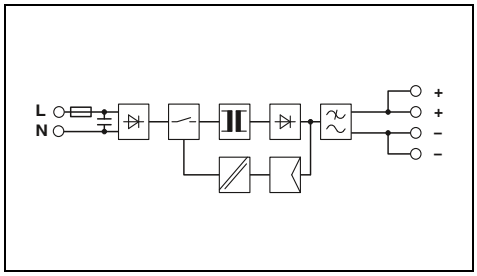


Power supply, 1 AC, 5 DC, 25 W



Power supply, 1 AC, 5 DC, 40 W



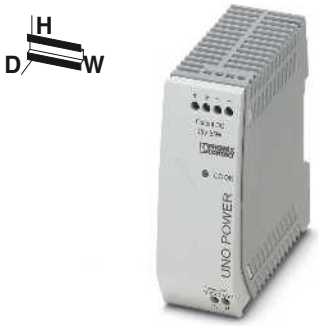


	Technical data	Technical data
Input data		
Nominal input voltage range	100 V AC ... 240 V AC	100 V AC ... 240 V AC
Input voltage range AC/DC	85 V AC ... 264 V AC	85 V AC ... 264 V AC
Frequency range	45 Hz ... 65 Hz	45 Hz ... 65 Hz
Current consumption (nominal load)	0.5 A (120 V AC)/0.3 A (230 V AC)	0.7 A (120 V AC)/0.5 A (230 V AC)
Inrush current limitation at 25°C (typ.) / I^2t	< 30 A/< 0.5 A^2s	< 30 A/< 0.5 A^2s
Mains buffering (I_N, typ.)	> 35 ms (120 V AC)/> 135 ms (230 V AC)	> 30 ms (120 V AC)/> 120 ms (230 V AC)
Output data		
Nominal output voltage	5 V DC ±1%	5 V DC ±1%
Output current	5 A	8 A
Can be connected in parallel/series	Yes, with redundancy module/Yes	Yes, with redundancy module/Yes
Max. power dissipation (no load/nominal load)	< 0.3 W/< 4.5 W	< 0.3 W/< 7.5 W
Efficiency (typ.)	> 84%	> 85% (for 230 V AC and nominal values)
Residual ripple	< 40 mV_{PP}	< 100 mV_{PP}
Signaling		
Signaling DC OK	LED	LED
General data		
Weight/dimensions W x H x D	0.15 kg/22.5 x 90 x 84 mm	0.21 kg/35 x 90 x 84 mm
Spacing when mounting	Alignable: 0 mm horizontally, 30 mm vertically	Alignable: 0 mm horizontally, 30 mm vertically
Connection method	Screw connection	Screw connection
Connection data solid / stranded / AWG	0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 14	0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 14
Degree of protection / Protection class	IP20/II	IP20/II
MTBF (EN 29500, 40°C)	> 500000 h	> 500000 h
Ambient temperature (operation)	-25°C ... 70°C (> 55° C derating)	-25°C ... 70°C (> 55° C derating)
Standards/regulations		
Insulation voltage input/output	3 kV AC (routine test)/4 kV AC (type test)	3 kV AC (routine test)/4 kV AC (type test)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC	Conformance with EMC Directive 2004/108/EC
Electrical safety	IEC 60950-1/VDE 0805 (SELV)	IEC 60950-1/VDE 0805 (SELV)
Electronic equipm. for electrical power installations	EN 50178/VDE 0160 (PELV)	EN 50178/VDE 0160 (PELV)
Safe isolation	DIN VDE 0100-410	DIN VDE 0100-410
UL approvals	UL/C-UL listed UL 508, UL/C-UL Recognized UL 60950	UL/C-UL listed UL 508, UL/C-UL Recognized UL 60950
Limitation of harmonic line currents	EN 61000-3-2	EN 61000-3-2

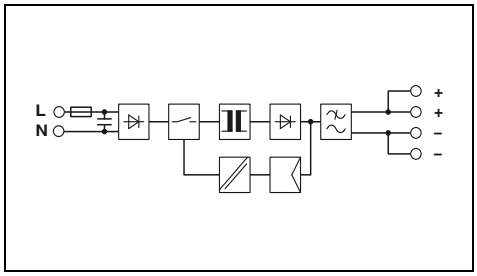
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Power supply, primary-switched, 1-phase						
	UNO-PS/1AC/ 5DC/ 25W	**2904374**	1	**UNO-PS/1AC/ 5DC/ 40W**	**2904375**	1

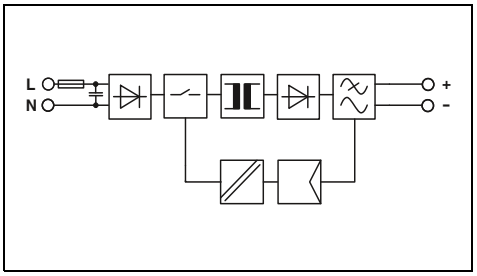
Power supply, 1 AC, 12 DC, 100 W

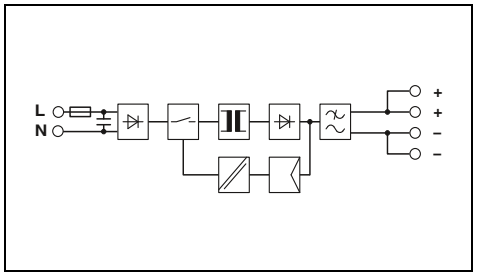
Power supply, 1 AC, 15 DC, 30 W



Power supply, 1 AC, 15 DC, 55 W







Technical data

	100 V AC ... 240 V AC 85 V AC ... 264 V AC 45 Hz ... 65 Hz 1.7 A (120 V AC)/1 A (230 V AC) < 30 A/< 1.5 A^2s > 20 ms (120 V AC)/> 85 ms (230 V AC)
	12 V DC ±1% 8.3 A Yes, with redundancy module/Yes < 0.4 W/< 12 W > 89.5% < 75 mV_{PP}
	LED
	0.34 kg/55 x 90 x 84 mm Alignable: 0 mm horizontally, 30 mm vertically Screw connection 0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 14 IP20/II > 500000 h -25°C ... 70°C (> 55° C derating)
	3 kV AC (routine test)/4 kV AC (type test) Conformance with EMC Directive 2004/108/EC IEC 60950-1/VDE 0805 (SELV) EN 50178/VDE 0160 (PELV) DIN VDE 0100-410 UL/C-UL listed UL 508, UL/C-UL Recognized UL 60950
	EN 61000-3-2

Ordering data

Type	Order No.	Pcs. / Pkt.
UNO-PS/1AC/12DC/100W	**2902997**	1

Technical data

	100 V AC ... 240 V AC 85 V AC ... 264 V AC 45 Hz ... 65 Hz 0.6 A (120 V AC)/0.4 A (230 V AC) < 30 A/< 0.3 A^2s > 20 ms (120 V AC)/> 115 ms (230 V AC)
	15 V DC ±1% 2 A Yes, with redundancy module/Yes < 0.3 W/< 4.6 W > 87% (for 230 V AC and nominal values) < 40 mV_{PP}
	LED
	0.15 kg/22.5 x 90 x 84 mm Alignable: 0 mm horizontally, 30 mm vertically Screw connection 0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 14 IP20/II > 500000 h -25°C ... 70°C (> 55° C derating)
	3 kV AC (routine test)/4 kV AC (type test) Conformance with EMC Directive 2004/108/EC IEC 60950-1/VDE 0805 (SELV) EN 50178/VDE 0160 (PELV) DIN VDE 0100-410 UL/C-UL listed UL 508, UL/C-UL Recognized UL 60950
	EN 61000-3-2

Ordering data

Type	Order No.	Pcs. / Pkt.
UNO-PS/1AC/15DC/30W	**2903000**	1

Technical data

	100 V AC ... 240 V AC 85 V AC ... 264 V AC 45 Hz ... 65 Hz 1 A (120 V AC)/0.6 A (230 V AC) < 25 A/< 0.5 A^2s > 25 ms (120 V AC)/> 90 ms (230 V AC)
	15 V DC ±1% 3.7 A Yes, with redundancy module/Yes < 0.3 W/< 7 W > 88.5% (for 230 V AC and nominal values) < 50 mV_{PP}
	LED
	0.21 kg/35 x 90 x 84 mm Alignable: 0 mm horizontally, 30 mm vertically Screw connection 0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 14 IP20/II > 500000 h -25°C ... 70°C (> 55° C derating)
	3 kV AC (routine test)/4 kV AC (type test) Conformance with EMC Directive 2004/108/EC IEC 60950-1/VDE 0805 (SELV) EN 50178/VDE 0160 (PELV) DIN VDE 0100-410 UL/C-UL listed UL 508, UL/C-UL Recognized UL 60950
	EN 61000-3-2

Ordering data

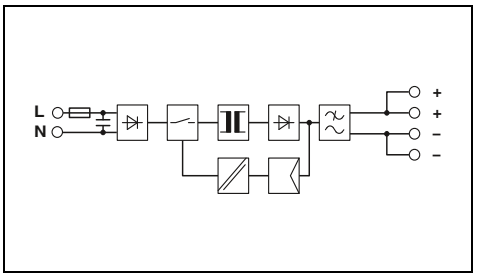
Type	Order No.	Pcs. / Pkt.
UNO-PS/1AC/15DC/ 55W	**2903001**	1

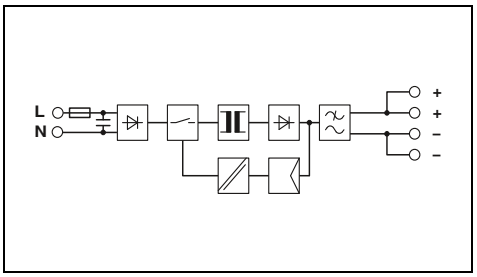
UNO POWER power supplies - with basic functionality

- Save energy, thanks to particularly low idling losses and a high degree of efficiency
- Save space in the control cabinet through compact housing with high power density
- Robust and reliable at temperatures from -25 to 70°C

Power supply, 1 AC, 15 DC, 100 W

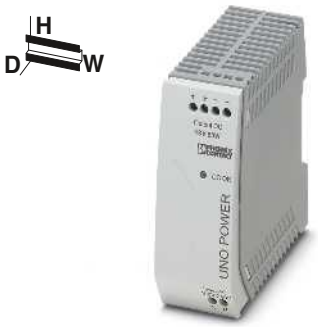
Power supply, 1 AC, 24 DC, 90 W NEC Class 2





	Technical data	Technical data
Input data		
Nominal input voltage range	100 V AC ... 240 V AC	100 V AC ... 240 V AC
Input voltage range AC/DC	85 V AC ... 264 V AC	85 V AC ... 264 V AC
Frequency range	45 Hz ... 65 Hz	45 Hz ... 65 Hz
Current consumption (nominal load)	1.7 A (120 V AC)/1 A (230 V AC)	1.5 A (120 V AC)/1 A (230 V AC)
Inrush current limitation at 25°C (typ.) / I^2t	< 30 A/< 1.5 A^2s	< 40 A/< 1.5 A^2s
Mains buffering (I_N, typ.)	> 20 ms (120 V AC)/> 85 ms (230 V AC)	> 25 ms (120 V AC)/> 100 ms (230 V AC)
Output data		
Nominal output voltage	15 V DC ±1%	24 V DC ±1%
Output current	6.67 A	3.75 A
Can be connected in parallel/series	Yes, with redundancy module/Yes	Yes, with redundancy module/Yes
Max. power dissipation (no load/nominal load)	< 0.4 W/< 12 W	< 0.5 W/< 12 W
Efficiency (typ.)	> 89% (for 230 V AC and nominal values)	> 88.5% (for 230 V AC and nominal values)
Residual ripple	< 75 mV_{PP}	< 45 mV_{PP}
Signaling		
Signaling DC OK	LED	LED
General data		
Weight/dimensions W x H x D	0.34 kg/55 x 90 x 84 mm	0.34 kg/55 x 90 x 84 mm
Spacing when mounting	Alignable: 0 mm horizontally, 30 mm vertically	Alignable: 0 mm horizontally, 30 mm vertically
Connection method	Screw connection	Screw connection
Connection data solid / stranded / AWG	0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 12	0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 14
Degree of protection / Protection class	IP20/II	IP20/II
MTBF (EN 29500, 40°C)	> 500000 h	> 500000 h
Ambient temperature (operation)	-25°C ... 70°C (> 55° C derating)	-25°C ... 70°C (> 55° C derating)
Standards/regulations		
Insulation voltage input/output	3 kV AC (routine test)/4 kV AC (type test)	3 kV AC (routine test)/4 kV AC (type test)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC	Conformance with EMC Directive 2004/108/EC
Electrical safety	IEC 60950-1/VDE 0805 (SELV)	IEC 60950-1/VDE 0805 (SELV)
Electronic equipm. for electrical power installations	EN 50178/VDE 0160 (PELV)	EN 50178/VDE 0160 (PELV)
Safe isolation	DIN VDE 0100-410	DIN VDE 0100-410
UL approvals	UL/C-UL listed UL 508, UL/C-UL Recognized UL 60950	UL/C-UL listed UL 508, UL/C-UL Recognized UL 60950, NEC Class 2 as per UL 1310
Limitation of harmonic line currents	EN 61000-3-2	EN 61000-3-2

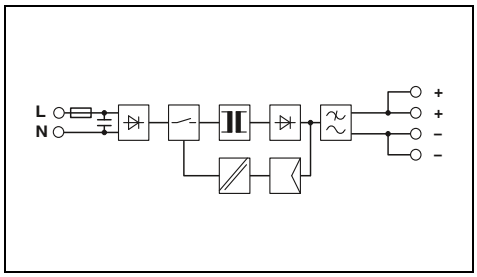
Description	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Power supply, primary-switched, 1-phase						
	UNO-PS/1AC/15DC/100W	**2903002**	1	**UNO-PS/1AC/24DC/ 90W/C2LPS**	**2902994**	1

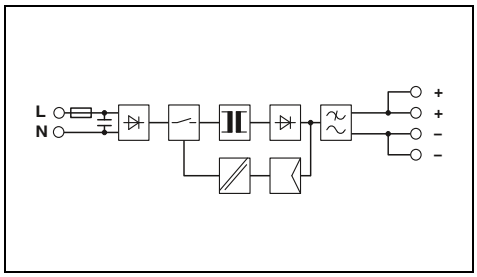


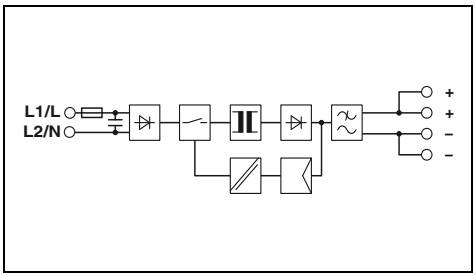
Power supply,
1 AC, 48 DC, 60 W

Power supply,
1 AC, 48 DC, 100 W

Power supply,
2 AC, 24 DC, 90 W
NEC Class 2







Technical data

100 V AC ... 240 V AC
85 V AC ... 264 V AC
45 Hz ... 65 Hz
1 A (120 V AC)/0.6 A (230 V AC)
< 30 A/< 0.5 A^2s
> 20 ms (120 V AC)/> 90 ms (230 V AC)

48 V DC ±1%
1.25 A
Yes, with redundancy module/Yes
< 0.4 W/< 7 W
> 90% (for 230 V AC and nominal values)
< 35 mV_{PP}

LED

0.21 kg/35 x 90 x 84 mm
Alignable: 0 mm horizontally, 30 mm vertically
Screw connection
0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 14
IP20/II
> 500000 h
-25°C ... 70°C (> 55° C derating)

3 kV AC (routine test)/4 kV AC (type test)
Conformance with EMC Directive 2004/108/EC
IEC 60950-1/VDE 0805 (SELV)
EN 50178/VDE 0160 (PELV)
DIN VDE 0100-410
UL/C-UL listed UL 508, UL/C-UL Recognized UL 60950

EN 61000-3-2

Ordering data

Type	Order No.	Pcs. / Pkt.
UNO-PS/1AC/48DC/ 60W	**2902995**	1

Technical data

100 V AC ... 240 V AC
85 V AC ... 264 V AC
45 Hz ... 65 Hz
1.7 A (120 V AC)/1 A (230 V AC)
< 40 A/< 1.4 A^2s
> 25 ms (120 V AC)/> 90 ms (230 V AC)

48 V DC ±1%
2.08 A
Yes, with redundancy module/Yes
< 0.4 W/< 11 W
> 90% (for 230 V AC and nominal values)
< 40 mV_{PP}

LED

0.34 kg/55 x 90 x 84 mm
Alignable: 0 mm horizontally, 30 mm vertically
Screw connection
0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 14
IP20/II
> 500000 h
-25°C ... 70°C (> 55° C derating)

3 kV AC (routine test)/4 kV AC (type test)
Conformance with EMC Directive 2004/108/EC
IEC 60950-1/VDE 0805 (SELV)
EN 50178/VDE 0160 (PELV)
DIN VDE 0100-410
UL/C-UL listed UL 508, UL/C-UL Recognized UL 60950

EN 61000-3-2

Ordering data

Type	Order No.	Pcs. / Pkt.
UNO-PS/1AC/48DC/100W	**2902996**	1

Technical data

2x 400 V AC ... 500 V AC
264 V AC ... 575 V AC
45 Hz ... 65 Hz
0.6 A (400 V AC)/0.5 A (500 V AC)
< 30 A/< 0.5 A^2s
> 65 ms (400 V AC)/> 100 ms (500 V AC)

24 V DC ±1%
3.75 A/3.38 A
Yes, with redundancy module/Yes
< 0.7 W/< 12 W
> 89.5%
< 50 mV_{PP}

LED

0.32 kg/55 x 90 x 84 mm
Alignable: 0 mm horizontally, 30 mm vertically
Screw connection
0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 14
IP20/II
> 500000 h
-25°C ... 70°C (> 55° C derating)

3 kV AC (routine test)/4 kV AC (type test)
Conformance with EMC Directive 2004/108/EC
IEC 60950-1/VDE 0805 (SELV)
EN 50178/VDE 0160 (PELV)
DIN VDE 0100-410
UL/C-UL listed UL 508, UL/C-UL Recognized UL 60950,
NEC Class 2 as per UL 1310
EN 61000-3-2

Ordering data

Type	Order No.	Pcs. / Pkt.
UNO-PS/2AC/24DC/90W/C2LPS	**2904371**	1

Mounting set

– Used for mounting power storage devices that cannot be mounted on DIN rails
– Suitable for wall and surface mounting

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
Mounting set			
	BATTERY MOUNTING CASE	2320458	1

Accessories for device circuit breakers

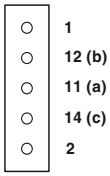
Base element
– For accommodating CB TM.../CB E.... device circuit breakers
– PCB module
– Codable

Bridge plug
– Signal contact bridging
– For equipping reserve spaces

Base element for the PCB

Plug for bridging contacts 11 to 14

Total width 12.3 mm



Total width 12.3 mm

	Technical data	Technical data
Electrical data - bridge plug		
Auxiliary contacts		
Operating voltage U_{max}	-	277 V AC/80 V DC
Operating current I_{max}	-	1 A
Electrical data - base element		
Rated surge voltage	2.5 kV	-
Rated insulation voltage U_i	80 V DC	-
Main circuit		
Rated voltage	80 V DC/277 V AC	-
Rated current I_n	16 A	-
Remote indication circuit		
Rated voltage	80 V DC/277 V AC	-
Rated current I_n	1 A	-
General data		
Dimensions W/H/D	12.3 mm/34.8 mm/36.4 mm	12.3 mm/45 mm/52 mm
Ambient temperature (operation)	-30°C ... 60°C	-30°C ... 60°C
Degree of protection in acc. with IEC 60529/EN 60529	IP30 (plug-in area with plugged-in device)/IP00 (connection area)	IP30 (actuation area)/IP00 (connection area)
Inflammability class in acc. with UL 94	V0	V0
Connection method	Solder connection	Spade connection
Test standards	DIN EN 50155/IEC 60068-2	IEC 60068-2

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Soldering base element, for accommodating device circuit breakers	**CB S-BE**	**2905067**	30			
Bridge plug, for bridging contacts 11 to 14 for CB base elements				**CB RC BRIDGE**	**2801616**	1

Highly compact signal conditioners - MINI Analog Pro
– 3-way signal conditioners
Page 326

Highly compact signal conditioners - MINI Analog Pro
– Temperature transducers for resistance thermometers and thermocouples
Page 330

Highly compact signal conditioners - MINI Analog Pro
– Potiposition transducers
Page 334

Highly compact signal conditioners - MINI Analog Pro
– Supply components, fault monitoring module, marking material
Page 336

Signal conditioners with PL d and SIL functional safety - MACX Safety
– Repeater power supply
Page 342
– Temperature transducers
Page 343

Signal conditioners with PL d and SIL functional safety - MACX Safety
– Repeater power supplies, Ex i
Page 344
– Temperature transducers, Ex i
Page 346

Energy and power measuring technology
– Software for usage data acquisition
Page 348
– Software for data logging
Page 349

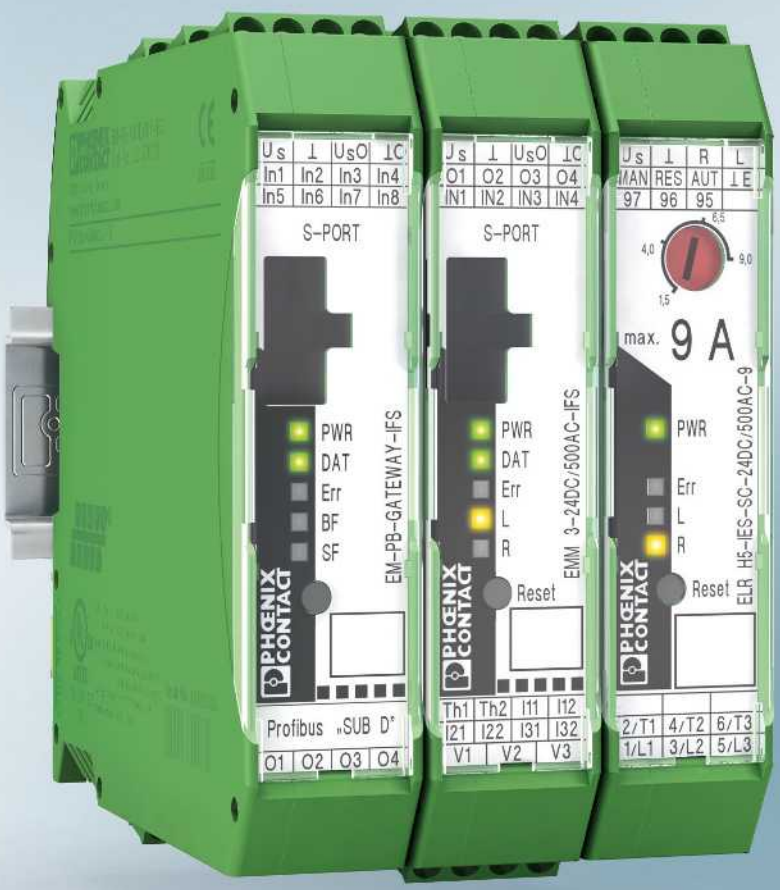
Energy and power measuring technology
– Pressure sensor with IO-Link
Page 350

Current and voltage measuring technology
– PACT RCP... current transformers for retrofitting
Page 353

Programmable logic relay system - PLC logic
– Logic modules
Page 356
– Accessories
Page 358

Relay modules - RIFLINE complete
– Fully mounted RIF-0 relay modules with solid-state relay and push-in connection
Page 362

Relay modules - RIFLINE complete
– Fully mounted RIF-1 relay modules with relay with detectable manual operation, status LED, and push-in connection
Page 364



Relay modules - PLC series
– With integrated solid-state relay

Page 366

VARIOFACE system cabling
– VIP power cabling
Universal front adapters for SIMATIC® S7-300

Page 368

VARIOFACE system cabling
– VIP I/O modules

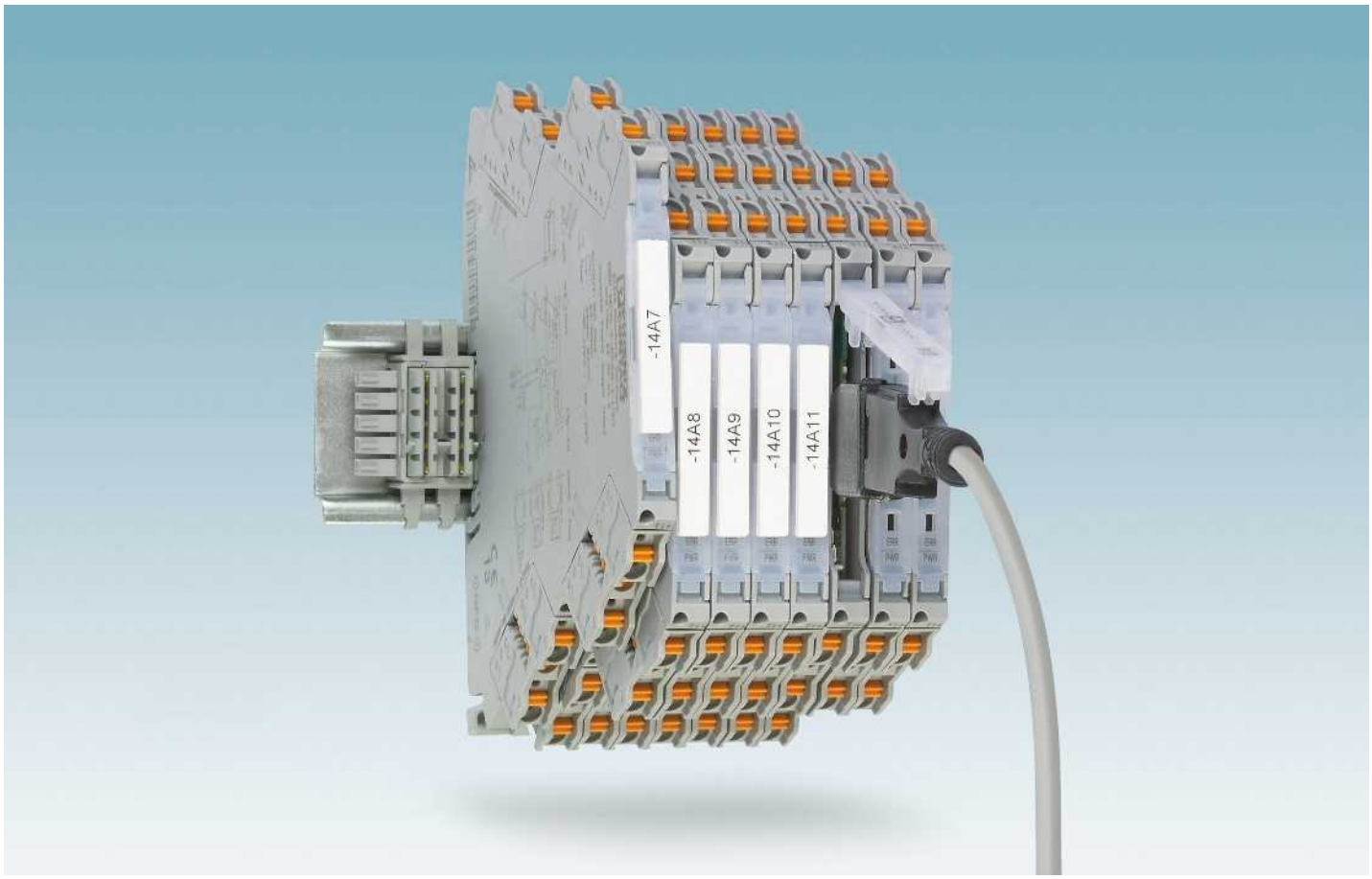
Page 370

– VIP interface module for Emerson DeltaV

Page 372

VARIOFACE wiring interface
– VIP potential distributor with fuses

Page 373



Easier than ever but slim as before

The new highly compact MINI Analog Pro signal conditioners offer the easiest installation and startup in a confined space.

Easily accessible terminal points, current measurement during operation, and the unique FASTCON Pro plug-in connection technology make your work considerably easier.

Choose the right MINI Analog signal conditioner for your application:

Analog IN/OUT

– Universal and standard 3-way signal conditioners
– 3-way repeater power supplies

Temperature

– Universal measuring transducers for resistance thermometers and thermocouples

Universal potiposition transducer

– Potiposition transducers with automatic potentiometer detection

Accessories

– Supply components
– Fault monitoring module
– Marking material
– Surge protection, see Catalog 6

Easy installation in a confined space

– Thanks to the front orientation, all terminal points are easily visible and accessible at all times – this not only saves time, but also space above and below devices
– All conductors can be fed individually and in any order, regardless of whether you start wiring from the input or output side
– The FASTCON Pro connection terminal blocks can be inserted and removed in any order

Measure current signals during operation

You can conveniently measure signals for startup and servicing during operation, thanks to integrated test disconnect terminal blocks:

– The circuit does not have to be separated in order to integrate the measuring device in the signal circuit
– By setting the plug to the disconnect position, signal circuits can be easily interrupted during servicing and startup

Numerous parameterization options

Easy DIP switch configuration

Many of the MINI Analog modules can be configured: the basic functions can be easily set using DIP switches – without the need for any software.

PC configuration for extended function and monitoring

For extended functionality, you can configure the modules conveniently with the S port interface on your PC using one of the free software solutions.

Smart configuration without accessories

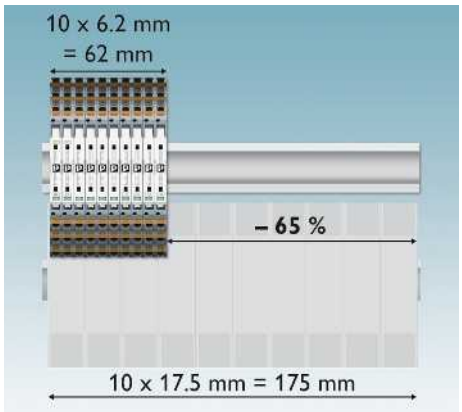
Place your smartphone on the device and establish a wireless connection via near field communication (NFC). Depending on the device type, the free MINI Analog Pro app offers different functions.

App functions via NFC communication

Access to information
– Access module information

DIP switch setting help
– Access module information
– Display DIP switch setting help on the smartphone

Configuration via NFC
– Access module information
– Display DIP switch setting help
– Wireless configuration via smartphone



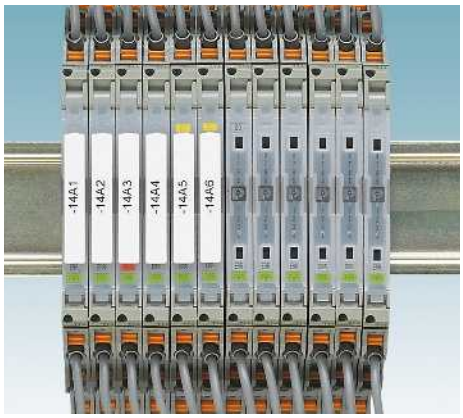
Space savings of up to 65%
– Compared to other signal conditioners on the market with design widths up to 17.5 mm.

Easy installation
– Easily visible and accessible terminal points and FASTCON Pro plug-in connection terminal blocks.

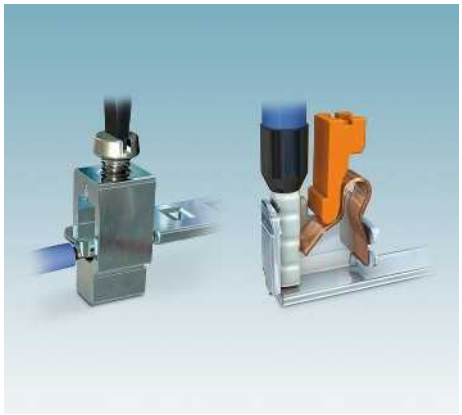
Power bridging and fault monitoring
– The DIN rail connector simplifies supply and enables group error monitoring via remote diagnostics.

Easy to start up and control
– Measure current signals during operation, without disconnecting current loops, plus optional disconnect function.

Numerous parameterization options
– Easy configuration via DIP switches as well as extended configuration via software or smartphone app without additional accessories.

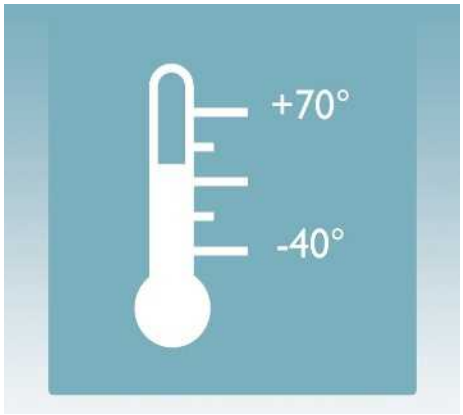


Easy maintenance
– Large-surface marking areas for complete loop identification using standard marking material as well as constantly visible status LEDs in every module.



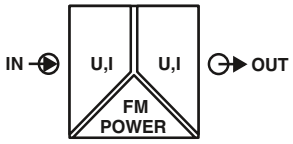
Choice of connection technology
– Wiring with screw connection or fast and tool-free push-in technology.

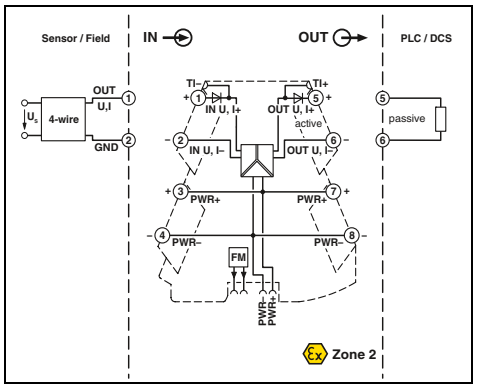
Optimum signal quality
– The latest transmission technology and safe electrical isolation between input, output, and supply with 3 kV test voltage.



Suitable for any application
– Extended supply voltage and temperature range as well as multifunctional device types.

Analog IN / Analog OUT
3-way signal conditioner





Ex n

NFC

Configurable,
Up to 144 signal combinations

- Configurable, ultra-compact signal conditioner for electrical isolation, conversion, amplification, and filtering of standard analog signals
- Plug-in connection system
- Safe 3-way isolation
- Standard signal combinations configurable via DIP switches
- Power supply and fault monitoring possible via DIN rail connector
- Status LED

Ex:
Housing width 6.2 mm

Technical data

Input data	U input	I input
Input signal	0 V ... 5 V 1 V ... 5 V -5 V ... 5 V 0 V ... 10 V 2 V ... 10 V -10 V ... 10 V 0 V ... 20 V 4 V ... 20 V -20 V ... 20 V 0 V ... 24 V 4.8 V ... 24 V -24 V ... 24 V 0 V ... 30 V 6 V ... 30 V -30 V ... 30 V	0 mA ... 20 mA 4 mA ... 20 mA -20 mA ... 20 mA
Input resistance	> 1000 kΩ	approx. 63 Ω
Output data	U output	I output
Output signal	0 V ... 5 V 1 V ... 5 V -5 V ... 5 V 0 V ... 10 V 2 V ... 10 V -10 V ... 10 V	0 mA ... 20 mA 4 mA ... 20 mA
Maximum output signal		22 mA
No-load voltage		< 17 V
Short-circuit current	< 32 mA	
Load R_B	≥ 10 kΩ	≤ 600 Ω (at 20 mA)
Ripple	< 20 mV_{PP} (at 600 Ω)	< 20 mV_{PP} (at 600 Ω)
General data	U output	I output
Supply voltage U_B	9.6 V DC ... 30 V DC	
Nominal supply voltage	24 V DC	
Current consumption	25 mA (current output, at 24 V DC incl. load)	54 mA (current output, at 12 V DC incl. load)
Power consumption		≤ 800 mW (at I_{OUT} = 20 mA, 9.6 V DC, 600 Ω load)
Maximum transmission error	≤ 0.1% (of final value)	
Temperature coefficient	0.01%/K	
Limit frequency (3 dB)	30 Hz (via DIP switch)	
Step response (10-90%)	< 8.5 ms (with 30 Hz filter)	
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1	
Test voltage, input/output/supply	3 kV (50 Hz, 1 min.)	
Degree of protection	IP20	
Ambient temperature (operation)	-40°C ... 70°C	
Mounting	Any	
Housing material	PBT	
Dimensions W/H/D	6.2/110.5/120.5 mm	
Push-in connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/26 - 12	
Screw connection solid/stranded/AWG	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/26 - 16	
EMC note	Class A product, see page 443	
Conformance / approvals		
Conformance	CE-compliant	
ATEX	Ex II 3 G Ex nA IIC T4 Gc X	
UL, USA / Canada	508 listing applied for Class I, Div. 2, Groups A, B, C, D T5 applied for	
GL	GL applied for	

Ordering data

Description		Type	Order No.	Pcs. / Pkt.
3-way signal conditioner, for electrical isolation of analog signals				
Standard configuration	Push-in connection	**MINI MCR-2-UI-UI-PT**	**2902040**	1
Standard configuration	Screw connection	**MINI MCR-2-UI-UI**	**2902037**	1
Order configuration	Push-in connection	**MINI MCR-2-UI-UI-PT-C**	**2902039**	1
Order configuration	Screw connection	**MINI MCR-2-UI-UI-C**	**2902036**	1

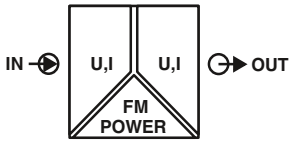
Order key for MINI-MCR-2-UI-UI...C 3-way signal conditioner (standard configuration entered as an example)

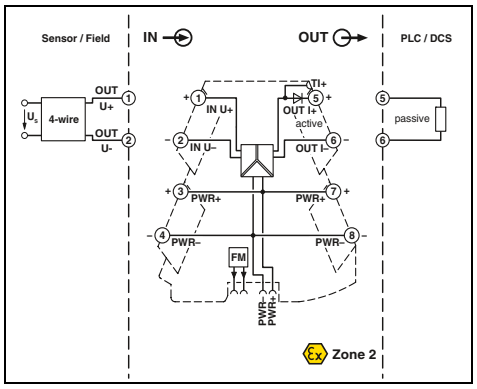
Order No.	Input	Output	Cut-off frequency
2902036 /	IN03 /	OUT01 /	5K
2902036 ≙ MINI-MCR-2-UI-UI-C 2902039 ≙ MINI-MCR-2-UI-UI-PT-C	IN 01 ≙ 0...20 mA IN 02 ≙ 4...20 mA IN 03 ≙ 0...10 V IN 04 ≙ 2...10 V IN 05 ≙ 0...5 V IN 06 ≙ 1...5 V IN 21 ≙ -5...5 V IN 22 ≙ -10...10 V IN 23 ≙ -20...20 V IN 32 ≙ 0...20 V IN 35 ≙ -20...20 mA IN 38 ≙ 0...24 V IN 39 ≙ 0...30 V IN 80 ≙ -30...30 V IN 93 ≙ -24...24 V IN 94 ≙ 4.8...24 V IN 95 ≙ 6...30 V IN 96 ≙ 4...20 V	OUT 01 ≙ 0...20 mA OUT 02 ≙ 4...20 mA OUT 03 ≙ 0...10 V OUT 04 ≙ 2...10 V OUT 05 ≙ 0...5 V OUT 06 ≙ 1...5 V OUT 13 ≙ -5...5 V OUT 14 ≙ -10...10 V	30 Hz 5 kHz

Signal combinations for MINI-MCR-2-UI-UI-... signal conditioners

	Output							
Input	0...20 mA	4...20 mA	0...5 V	1...5 V	-5...5 V	0...10 V	2...10 V	-10...10 V
0...20 mA	X	X	X	X	X	X	X	X
4...20 mA	X	X	X	X	X	X	X	X
-20...20 mA	X	X	X	X	X	X	X	X
0...5 V	X	X	X	X	X	X	X	X
1...5 V	X	X	X	X	X	X	X	X
-5...5 V	X	X	X	X	X	X	X	X
0...10 V	X	X	X	X	X	X	X	X
2...10 V	X	X	X	X	X	X	X	X
-10...10 V	X	X	X	X	X	X	X	X
0...20 V	X	X	X	X	X	X	X	X
4...20 V	X	X	X	X	X	X	X	X
-20...20 V	X	X	X	X	X	X	X	X
0...24 V	X	X	X	X	X	X	X	X
4.8...24 V	X	X	X	X	X	X	X	X
-24...24 V	X	X	X	X	X	X	X	X
0...30 V	X	X	X	X	X	X	X	X
6...30 V	X	X	X	X	X	X	X	X
-30...30 V	X	X	X	X	X	X	X	X

Analog IN / Analog OUT
3-way signal conditioner





Ex n

NFC

With fixed signal combinations

- Highly compact signal conditioner for electrical isolation, conversion, amplification, and filtering of standard analog signals
- Fixed signal combinations
- Plug-in connection system
- Safe 3-way isolation
- Power supply and fault monitoring possible via DIN rail connector
- Status LED

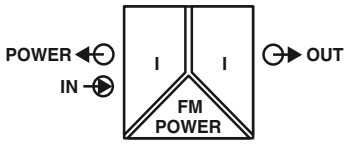
Technical data

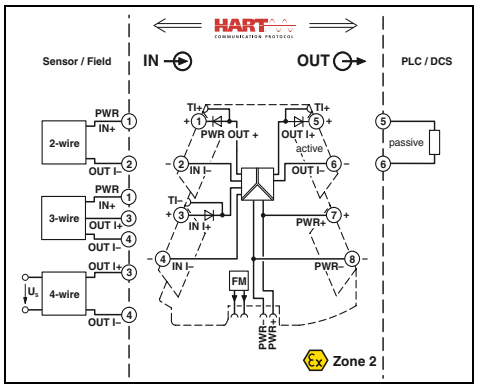
Input data	U input	I input
Input resistance	approx. 100 kΩ	approx. 63 Ω
Output data	U output	I output
Maximum output signal	11 V	22 mA
No-load voltage		< 17 V
Short-circuit current	< 15 mA	
Load R_B	≥ 10 kΩ	≤ 600 Ω (at 20 mA)
Ripple	< 20 mV_{PP} (at 10 kΩ)	< 20 mV_{PP} (at 600 Ω)
General data		
Supply voltage U_B	9.6 V DC ... 30 V DC	
Nominal supply voltage	24 V DC	
Typ. current consumption	25 mA (at 24 V DC)	
Maximum transmission error	0.1% (of final value)	
Temperature coefficient	0.01%/K	
Limit frequency (3 dB)	approx. 30 Hz	
Step response (10-90%)	approx. 10 ms	
Degree of protection	IP20	
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1	
Test voltage, input/output/supply	3 kV (50 Hz, 1 min.)	
Ambient temperature (operation)	-40°C ... 70°C	
Housing material	PBT	
Dimensions W/H/D	6.2/110.5/120.5 mm	
Push-in connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/26 - 12	
Screw connection solid/stranded/AWG	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/26 - 16	
EMC note	Class A product, see page 443	
Conformance / approvals		
Conformance	CE-compliant	
ATEX	Ex II 3 G Ex nA IIC T4 Gc X	
UL, USA / Canada	508 listing applied for Class I, Div. 2, Groups A, B, C, D T5 applied for	
GL	GL applied for	

Ordering data

Description	Input signal	Output signal	Type	Order No.	Pcs. / Pkt.
3-way signal conditioner, for electrical isolation of analog signals					
Push-in connection	0 ... 10 V	0 ... 20 mA	**MINI MCR-2-U-I0-PT**	**2902023**	1
Screw connection	0 ... 10 V	0 ... 20 mA	**MINI MCR-2-U-I0**	**2902022**	1
Push-in connection	0 ... 10 V	4 ... 20 mA	**MINI MCR-2-U-I4-PT**	**2902030**	1
Screw connection	0 ... 10 V	4 ... 20 mA	**MINI MCR-2-U-I4**	**2902029**	1
Push-in connection	0 ... 20 mA	0 ... 10 V	**MINI MCR-2-I0-U-PT**	**2902001**	1
Screw connection	0 ... 20 mA	0 ... 10 V	**MINI MCR-2-I0-U**	**2902000**	1
Push-in connection	4 ... 20 mA	0 ... 10 V	**MINI MCR-2-I4-U-PT**	**2902003**	1
Screw connection	4 ... 20 mA	0 ... 10 V	**MINI MCR-2-I4-U**	**2902002**	1
Push-in connection	0 ... 20 mA, 4 ... 20 mA	0 ... 20 mA, 4 ... 20 mA	**MINI MCR-2-I-I-PT**	**2901999**	1
Screw connection	0 ... 20 mA, 4 ... 20 mA	0 ... 20 mA, 4 ... 20 mA	**MINI MCR-2-I-I**	**2901998**	1
Push-in connection	0 ... 10 V, -10 ... 10 V	0 ... 10 V, -10 ... 10 V	**MINI MCR-2-U-U-PT**	**2902043**	1
Screw connection	0 ... 10 V, -10 ... 10 V	0 ... 10 V, -10 ... 10 V	**MINI MCR-2-U-U**	**2902042**	1

Analog IN / Analog OUT repeater power supplies





Repeater power supply with HART transmission

Ex n

NFC

- Highly-compact repeater power supply for electrical isolation, conversion, amplification, and filtering of standard analog signals
- Supply of 2-wire and passive 3-wire sensors
- Can also be used as an isolator without supply
- Plug-in connection system
- Safe 3-way isolation
- Bidirectional HART transmission as an option
- Power supply and fault monitoring possible via DIN rail connector
- Status LED

Housing width 6.2 mm

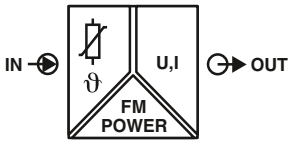
Technical data

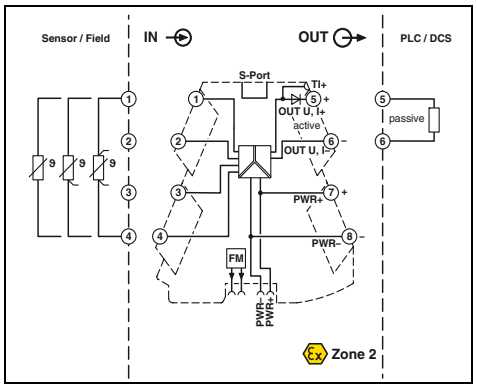
Input data	
Input signal	0 ... 20 mA, isolator operation/4 ... 20 mA
Input resistance	approx. 68 Ω
Transmitter supply voltage	> 19.5 V
Output data	
Output signal	0 ... 20 mA/4 ... 20 mA
Maximum output signal	
No-load voltage	< 20 V
Load R_B	≤ 600 Ω (at 20 mA)
Ripple	< 20 mV_{PP} (at 600 Ω)
General data	
Supply voltage U_B	9.6 V DC ... 30 V DC
Nominal supply voltage	24 V DC
Current consumption	25 mA (at 24 V DC and in isolator operation)
Power consumption	≤ 1400 mW (at I_{OUT} = 20 mA, 9.6 V DC, 600 Ω load)
Maximum transmission error	0.1% (of final value)
Temperature coefficient	0.01%/K,
Limit frequency (3 dB)	> 1.75 kHz (typ.)
Communication	HART specification in both operating modes (RPSS isolator/RPSS repeater power supply)
Step response (10-90%)	< 200 µs (typ.)
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
Test voltage, input/output/supply	
Degree of protection	IP20
Ambient temperature (operation)	-40°C ... 70°C
Mounting	Any
Housing material	PBT
Dimensions W/H/D	6.2/110.5/120.5 mm
Push-in connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/26 - 12
Screw connection solid/stranded/AWG	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/26 - 16
EMC note	Class A product, see page 443
Conformance / approvals	
Conformance	CE-compliant
ATEX	Ex II 3 G Ex nA IIC T4 Gc X
UL, USA / Canada	508 listing applied for Class I, Div. 2, Groups A, B, C, D T5 applied for
GL	GL applied for

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Repeater power supply with HART transmission			
Push-in connection	**MINI MCR-2-RPSS-I-I-PT**	**2902015**	1
Screw connection	**MINI MCR-2-RPSS-I-I**	**2902014**	1

Temperature
Temperature transducers for resistance thermometers





Universal measuring transducer for resistance thermometers

Ex: Ex
Housing width 6.2 mm

- Universally configurable, highly compact temperature transducer for electrical isolation, conversion, amplification, and filtering of resistance thermometer and remote resistance-type sensor signals
- For 2, 3 or 4-wire sensors according to IEC 751, JIS, GOST

- Plug-in connection system
- Safe 3-way isolation
- Standard signal combinations configurable via DIP switches
- Freely configurable via software or smartphone app
- Power supply and fault monitoring possible via DIN rail connector
- Status and error indicator LEDs

Technical data

Input data		
Input signal (can be configured using DIP switches)	Pt, Ni, Cu sensors : 2, 3, 4-wire	
Temperature range	-200°C ... 850°C (range depending on the sensor type)	
Measuring range span	≥ 20 K	
Linear resistance measuring range	0 Ω ... 4000 Ω (Minimum measuring span: 10% of the selected measuring range)	
Output data	U output	I output
Output signal	0 ... 5 V/1 ... 5 V	0 ... 20 mA/4 ... 20 mA
	0 ... 10 V/10 ... 0 V	20 ... 0 mA/20 ... 4 mA
Maximum output signal	approx. 12.3 V	24.6 mA
Load R_B	≥ 10 kΩ	≤ 600 Ω (at 20 mA)
Ripple	< 20 mV_{PP}	< 20 mV_{PP} (at 600 Ω)
General data		
Supply voltage U_B	9.6 V DC ... 30 V DC	
Current consumption	32 mA (at 24 V DC)	
Power consumption	≤ 850 mW (at I_{OUT} = 20 mA, 9.6 V DC, 600 Ω load)	
Transmission error	0.1% * 350 K/set measuring range; 0.1% > 350 K (Pt/Ni) 0.3% * 200 K/set measuring range; 0.3% > 200 K (Cu)	
Temperature coefficient	0.01%/K	
Step response (0–99%)	Typ. 200 ms (2-wire) Typ. 500 ms (3-wire) Typ. 500 ms (4-wire)	
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1	
Test voltage, input/output/supply	3 kV (50 Hz, 1 min.)	
Ambient temperature (operation)	-40°C ... 70°C	
Housing material	PBT	
Dimensions W/H/D	6.2/110.5/120.5 mm	
Push-in connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/26 - 12	
Screw connection solid/stranded/AWG	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/26 - 16	
EMC note	Class A product, see page 443	
Conformance / approvals		
Conformance	CE-compliant	
ATEX	Ex II 3 G Ex nA IIC T4 Gc X	
UL, USA / Canada	508 listing applied for Class I, Div. 2, Groups A, B, C, D T5 applied for	
GL	GL applied for	

Ordering data

Description		Type	Order No.	Pcs. / Pkt.
Temperature transducers for resistance thermometers				
Standard configuration	Push-in connection	**MINI MCR-2-RTD-UI-PT**	**2902052**	1
Standard configuration	Screw connection	**MINI MCR-2-RTD-UI**	**2902049**	1
Order configuration	Push-in connection	**MINI MCR-2-RTD-UI-PT-C**	**2902051**	1
Order configuration	Screw connection	**MINI MCR-2-RTD-UI-C**	**2902048**	1

Accessories

Programming adapter for configuring modules with S-PORT interface	**IFS-USB-PROG-ADAPTER**	**2811271**	1

Order key for MINI-MCR-2-RTD-UI...C temperature transducer (standard configuration entered as an example)

Order No.	Sensor type	Connection technology	Measuring range Start	Measuring range End	Measuring unit	Output Output signal	Output Start	Output End
2902048 /	**PT100** /	**3** /	**-50** /	**150** /	**C** /	**I** /	**4.0** /	**20.0** / ...
2902048 ≙ MINI-MCR-2-RTD-UI-C 2902051 ≙ MINI-MCR-2-RTD-UI-PT-C	PT100 ≙ Pt 100 IEC 751 PT200 ≙ Pt 200 IEC 751 PT500 ≙ Pt 500 IEC 751 PT1000 ≙ Pt 1000 IEC 751 PT100G ≙ Pt 100 GOST 6651-2009 (α = 0.00394) PT1000G ≙ Pt 1000 GOST 6651-2009 (α = 0.00394) PT100J ≙ Pt 100 JIS C1604/1997 PT1000J ≙ Pt 1000 JIS C1604/1997 NI100 ≙ Ni 100 DIN 43760 NI1000 ≙ Ni 1000 DIN 43760 CU50 ≙ Cu 50 GOST 6651-2009 (α = 0.00428) CU100 ≙ Cu 100 GOST 6651-2009 (α = 0.00428) CU53 ≙ Cu 53 GOST 6651-2009 (α = 0.00426)	2 ≙ 2-wire 3 ≙ 3-wire 4 ≙ 4-wire	freely selectable between -200°C...850°C (measuring range limits depend on sensor type)	freely selectable between -200°C...850°C (measuring range limits depend on sensor type)	C ≙ °C F ≙ °F	I ≙ I U ≙ U	0.0 ≙ 0 mA I: freely selectable between 0.0...21 mA U: freely selectable between 0.0...10.5 V	20.0 ≙ 20 mA I: freely selectable between 0.0...21 mA U: freely selectable between 0.0...10.5 V

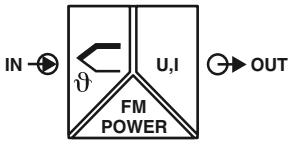
Failure information

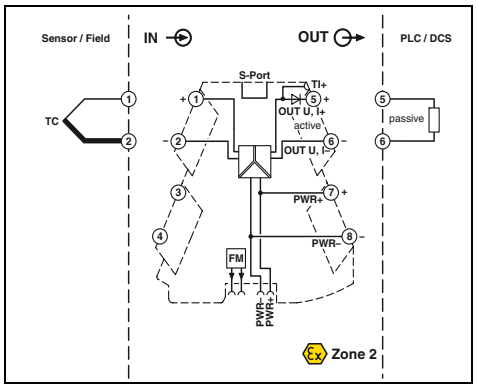
... /	Behavior in the event of an error	Open circuit	Short circuit	Overrange	Underrange
	NE43DO /	**0.0** /	**0.0** /	**0.0** /	**0.0**
	FD ≙ Freely definable	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (signal type corresponds to selected output signal)	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (signal type corresponds to selected output signal)	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (signal type corresponds to selected output signal)	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (signal type corresponds to selected output signal)
	Note: failure information according to NE 43 can only be selected for 4...20 mA output				
	NE43UP ≙ NE 43 upscale NE43DO ≙ NE 43 downscale NE430 ≙ NE 43 0 mA NE43UD ≙ NE 43 upscale/downscale	21.5 mA 3.5 mA 0 mA 3.5 mA	21.5 mA 3.5 mA 0 mA 3.5 mA	21.5 mA 3.5 mA 0 mA 21.5 mA	21.5 mA 3.5 mA 0 mA 21.5 mA

Sensor types and measuring ranges for MINI-MCR-2-RTD-UI-... temperature transducers

Sensor type	Standard	Measuring range	Smallest measuring span	Adjustable using:
Pt100	IEC 751 = GOST 6651-2009 (α = 0.00385)	-200°C ... +850°C	20 K	DIP switch
Pt200	IEC 751 = GOST 6651-2009 (α = 0.00385)	-200°C ... +850°C	20 K	DIP switch
Pt500	IEC 751 = GOST 6651-2009 (α = 0.00385)	-200°C ... +850°C	20 K	Software or smartphone app
Pt1000	IEC 751 = GOST 6651-2009 (α = 0.00385)	-200°C ... +850°C	20 K	Software or smartphone app
Pt100	GOST 6651-2009 (α = 0.00391)	-200°C ... +850°C	20 K	Software or smartphone app
Pt1000	GOST 6651-2009 (α = 0.00391)	-200°C ... +850°C	20 K	Software or smartphone app
Pt100	JIS C1604-1997	-200°C ... +850°C	20 K	Software or smartphone app
Pt1000	JIS C1604-1997	-200°C ... +850°C	20 K	Software or smartphone app
Ni100	DIN 43760	-60°C ... +250°C	20 K	Software or smartphone app
Ni1000	DIN 43760	-60°C ... +250°C	20 K	Software or smartphone app
Cu50	GOST 6651-2009 (α = 0.0428)	-180°C ... +200°C	20 K	Software or smartphone app
Cu100	GOST 6651-2009 (α = 0.0428)	-180°C ... +200°C	20 K	Software or smartphone app
Cu53	GOST 6651-2009 (α = 0.0426)	-50°C ... +180°C	20 K	Software or smartphone app
Customer-specific characteristic curves		-200°C ... +850°C	20 K	Software or smartphone app

Temperature
Temperature transducers for thermocouples





Ex n

Universal measuring transducer for thermocouples

- Universally configurable, highly compact temperature transducer for electrical isolation, conversion, amplification, and filtering of thermocouple signals
- For thermocouples according to IEC 584 and GOST
- Internal cold junction compensation
- Plug-in connection system
- Safe 3-way isolation
- Standard signal combinations configurable via DIP switches
- Freely configurable via software or smartphone app
- Power supply and fault monitoring possible via DIN rail connector
- Status and error indicator LEDs

Ex:
Housing width 6.2 mm

Technical data

Input data		
Input signal (can be configured using DIP switches)	B, E, J, K, N, R, S, T, L, U, A-1, A-2, A-3, M, L	
Temperature range	-250°C ... 2500°C (range depending on the sensor type)	
Measuring range span	min. 50 K	
Output data	U output	I output
Output signal (configurable using the DIP switch)	0 ... 5 V/1 ... 5 V 0 ... 10 V/10 ... 0 V	0 ... 20 mA/4 ... 20 mA 20 ... 0 mA/20 ... 4 mA
Maximum output signal	approx. 12.3 V	24.6 mA
No-load voltage		< 17.5 V
Short-circuit current	< 31.5 mA	
Load R_B	≥ 10 kΩ	≤ 600 Ω (at 20 mA)
Ripple	< 20 mV_{PP}	< 20 mV_{PP} (at 600 Ω)
General data		
Supply voltage U_B	9.6 V DC ... 30 V DC	
Current consumption	32 mA (at 24 V DC)	
Power consumption	≤ 850 mW (at I_{OUT} = 20 mA, 9.6 V DC, 600 Ω load)	
Transmission error	0.1% * 600 K/set measuring range; 0.1% > 600 K (E, J, K, N, T, L, U, M Gost, L Gost) 0.2% * 600 K/set measuring range; 0.2% > 600 K (B, R, S, A1, A2, A3)	
Cold junction errors	(0,2 K * ΔT) (typ. < 2 K)	
Temperature coefficient	≤ 0.01%/K	
Step response (0–99%)	Typ. 400 ms	
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1	
Test voltage, input/output/supply	3 kV (50 Hz, 1 min.)	
Ambient temperature (operation)	-40°C ... 70°C	
Housing material	PBT	
Dimensions W/H/D	6.2/110.5/120.5 mm	
Push-in connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/26 - 12	
Screw connection solid/stranded/AWG	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/26 - 16	
EMC note	Class A product, see page 443	
Conformance / approvals		
Conformance	CE-compliant	
ATEX	II 3 G Ex nA IIC T4 Gc X	
UL, USA / Canada	508 listing applied for Class I, Div. 2, Groups A, B, C, D T5 applied for	
GL	GL applied for	

Ordering data

Description		Type	Order No.	Pcs. / Pkt.
Temperature transducers for thermocouples				
Standard configuration	Push-in connection	**MINI MCR-2-TC-UI-PT**	**2905249**	1
Standard configuration	Screw connection	**MINI MCR-2-TC-UI**	**2902055**	1
Order configuration	Push-in connection	**MINI MCR-2-TC-UI-PT-C**	**2905248**	1
Order configuration	Screw connection	**MINI MCR-2-TC-UI-C**	**2902053**	1

Accessories

Programming adapter for configuring modules with S-PORT interface	**IFS-USB-PROG-ADAPTER**	**2811271**	1

Order key for MINI-MCR-2-TC-UI...C temperature transducer (standard configuration entered as an example)

Order No.	Sensor type	Cold junction compensation	Measuring range Start	Measuring range End	Measuring unit	Output Output signal	Output Start	Output End
2902048 /	**J** /	**1** /	**-200** /	**1200** /	**C** /	**I** /	**4.0** /	**20.0** / ...
2902253 ≙ MINI-MCR-2-TC-UI-C 2905248 ≙ MINI-MCR-2-TC-UI-PT-C	B ≙ B IEC 584-1 (Pt30Rh-Pt6Rh) E ≙ E IEC 584-1 (NiCr-CuNi) J ≙ J IEC 584-1 (Fe-CuNi) K ≙ K IEC 584-1 (NiCr-Ni) N ≙ N IEC 584-1 (NiCrSi-NiSi) R ≙ R IEC 584-1 (Pt13Rh-Pt) S ≙ S IEC 584-1 (Pt10Rh-Pt) T ≙ T IEC 584-1 (Cu-CuNi) L ≙ L DIN 43760 (Fe-CuNi) U ≙ U DIN 43760 (Cu-CuNi) A1G ≙ A-1 GOST 8.585-2001 A2G ≙ A-2 GOST 8.585-2001 A3G ≙ A-3 GOST 8.585-2001 MG ≙ M GOST 8.585-2001 LG ≙ L GOST 8.585-2001	0 ≙ OFF 1 ≙ ON	freely selectable between -250°C...2500°C (measuring range limits depend on sensor type)	freely selectable between -250°C...2500°C (measuring range limits depend on sensor type)	C ≙°C F ≙ °F	I ≙ I U ≙ U	0.0 ≙ 0 mA I: freely selectable between 0.0...21 mA U: freely selectable between 0.0...10.5 V	20.0 ≙ 20 mA I: freely selectable between 0.0...21 mA U: freely selectable between 0.0...10.5 V

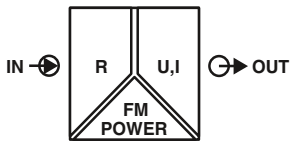
Failure information

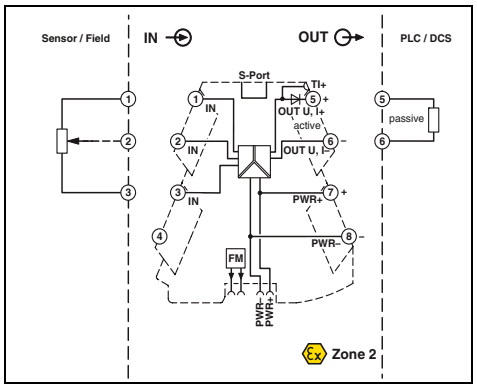
... /	Behavior in the event of an error	Open circuit	Overrange	Underrange
	NE43DO /	**0.0** /	**0.0** /	**0.0**
	FD ≙ Freely definable	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (signal type corresponds to selected output signal)	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (signal type corresponds to selected output signal)	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (signal type corresponds to selected output signal)
	Note: failure information according to NE 43 can only be selected for 4...20 mA output			
	NE43UP ≙ NE 43 upscale NE43DO ≙ NE 43 downscale NE430 ≙ NE 43 0 mA NE43UD ≙ NE 43 upscale/downscale	21.5 mA 3.5 mA 0 mA 3.5 mA	21.5 mA 3.5 mA 0 mA 21.5 mA	21.5 mA 3.5 mA 0 mA 21.5 mA

Sensor types and measuring ranges for MINI-MCR-2-TC-UI-... temperature transducers

Sensor type	Standard	Measuring range	Smallest measuring span	Adjustable using:
B	IEC 584-1	+500°C ... +1820°C	50 K	Software or smartphone app
E	IEC 584-1	-230°C ... +1000°C	50 K	Software or smartphone app
J	IEC 584-1	-210°C ... +1200°C	50 K	DIP switch
K	IEC 584-1	-250°C ... +1372°C	50 K	DIP switch
N	IEC 584-1	-200°C ... +1300°C	50 K	Software or smartphone app
R	IEC 584-1	-50°C ... +1768°C	50 K	Software or smartphone app
S	IEC 584-1	-50°C ... +1768°C	50 K	Software or smartphone app
T	IEC 584-1	-200°C ... +400°C	50 K	Software or smartphone app
L	DIN 43710	-200°C ... +900°C	50 K	Software or smartphone app
U	DIN 43710	-200°C ... +600°C	50 K	Software or smartphone app
A-1	GOST 8.585	0°C ... +2500°C	50 K	Software or smartphone app
A-2	GOST 8.585	0°C ... +1800°C	50 K	Software or smartphone app
A-3	GOST 8.585	0°C ... +1800°C	50 K	Software or smartphone app
M	GOST 8.585	-200°C ... +100°C	50 K	Software or smartphone app
L	GOST 8.585	-200°C ... +800°C	50 K	Software or smartphone app
Customer-specific characteristic curves		-250°C ... +2500°C	50 K	Software or smartphone app

Potentiometers, potiposition transducers





Ex n

Configurable, automatic potentiometer detection

- Universally configurable, highly compact potiposition transducer for electrical isolation, conversion, amplification, and filtering of potentiometer signals
- For potentiometers from 100 Ω to 100 kΩ
- Automatic potentiometer detection without manual adjustment
- Plug-in connection system
- Safe 3-way isolation
- Standard signal combinations configurable via DIP switches
- Freely configurable via software or smartphone app
- Power supply and fault monitoring possible via DIN rail connector
- Status and error indicator LEDs

Ex: Ⓔx
Housing width 6.2 mm

Technical data

Input data		
Potentiometer	100 Ω ... 100 kΩ	
Reference voltage source	-	
Output data	U output	I output
Output signal	1 ... 5 V/10 ... 0 V 0 ... 5 V/0 ... 10 V	0 ... 20 mA/4 ... 20 mA 20 ... 0 mA/20 ... 4 mA
Maximum output signal	approx. 12.3 V	24.6 mA
No-load voltage		< 17.5 V
Short-circuit current	< 31.5 mA	
Load R_B	≥ 10 kΩ	≤ 600 Ω (at 20 mA)
Ripple	< 20 mV_{PP} (at 10 kΩ)	< 20 mV_{PP}
Behavior in the event of a sensor error	(configurable)	
General data		
Supply voltage U_B	9.6 V DC ... 30 V DC	
Nominal supply voltage	24 V DC	
Current consumption	33 mA (at 24 V DC)	
Power consumption	≤ 850 mW (at I_{OUT} = 20 mA, 9.6 V DC, 600 Ω load)	
Maximum transmission error	< 0.1% (R < 240 Ω = < 0,2%)	
Temperature coefficient	0.01%/K	
Step response (0–99%)	-	
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1	
Test voltage, input/output/supply	3 kV (50 Hz, 1 min.)	
Degree of protection	IP20	
Ambient temperature (operation)	-40°C ... 70°C	
Mounting	Any	
Housing material	PBT	
Dimensions W/H/D	6.2/110.5/120.5 mm	
Push-in connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/26 - 12	
Screw connection solid/stranded/AWG	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/26 - 16	
EMC note	Class A product, see page 443	
Conformance / approvals		
Conformance	CE-compliant	
ATEX	Ⓔx II 3 G Ex nA IIC T4 Gc X	
UL, USA / Canada	508 listing applied for Class I, Div. 2, Groups A, B, C, D T5 applied for	
GL	GL applied for	

Ordering data

Description		Type	Order No.	Pcs. / Pkt.
Potiposition transducer				
Standard configuration	Push-in connection	**MINI MCR-2-POT-UI-PT**	**2902017**	1
Standard configuration	Screw connection	**MINI MCR-2-POT-UI**	**2902016**	1
Order configuration	Push-in connection	**MINI MCR-2-POT-UI-PT-C**	**2905006**	1
Order configuration	Screw connection	**MINI MCR-2-POT-UI-C**	**2905005**	1

Accessories

Programming adapter for configuring modules with S-PORT interface	**IFS-USB-PROG-ADAPTER**	**2811271**	1

Order key for MINI-MCR-2-POT-UI...C 3-way signal conditioner (standard configuration entered as an example)

Order No.	Automatic potentiometer detection	Output Output signal	Start	End	Filter	Open circuit detect	
2905005 /	**AUTO** /	**I**	**4.0**	**20.0** /	**1** /	**ON** /	...
2905005 ≙ MINI-MCR-2-POT-UI-C 2905006 ≙ MINI-MCR-2-POT-UI-PT-C	AUTO ≙ ON OFF ≙ OFF	I ≙ I U ≙ U	0.0 ≙ 0 mA I: freely selectable between 0.0...21 mA U: freely selectable between 0.0...10.5 V	20.0 ≙ 20 mA I: freely selectable between 0.0...21 mA U: freely selectable between 0.0...10.5 V	1 2 3 4 5 6 7 8 9 10	ON ≙ ON OFF ≙ OFF	

Failure information

... /	Behavior in the event of an error	Open circuit slider	Input open (no potentiometer connected)	Overrange	Underrange
	NE43DO /	**0.0** /	**0.0** /	**0.0** /	**0.0**
	FD ≙ Freely definable	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (only if open circuit detection is on) (signal type corresponds to selected output signal)	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (signal type corresponds to selected output signal)	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (signal type corresponds to selected output signal)	0.0 ≙ 0 mA I: freely selectable between 0.0...21.5 mA U: freely selectable between 0.0...11 V (signal type corresponds to selected output signal)
	Note: failure information according to NE 43 can only be selected for 4...20 mA output				
	NE43UP ≙ NE 43 upscale NE43DO ≙ NE 43 downscale NE430 ≙ NE 43 0 mA NE43UD ≙ NE 43 upscale/downscale	21.5 mA 3.5 mA 0 mA 3.5 mA	21.5 mA 3.5 mA 0 mA 3.5 mA	21.5 mA 3.5 mA 0 mA 21.5 mA	21.5 mA 3.5 mA 0 mA 21.5 mA

Accessories
ME 6,2 TBUS... DIN rail connector

- For bridging the supply voltage
- Reduces wiring costs
- Module replacement without interrupting the supply to the remaining modules (hot swappable)
- One DIN rail connector for two MINI Analog modules
- Only distinguished by color coding

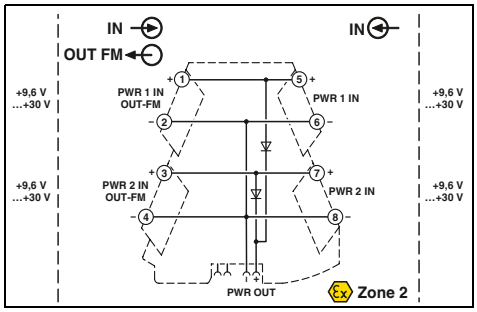
For bridging the supply voltage

For bridging the supply voltage

Description	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
DIN rail connector (TBUS), for bridging the supply voltage, can be snapped onto 35 mm DIN rails as per EN 60715, with UL approval						
Color: green	**ME 6,2 TBUS-2 1,5/5-ST-3,81 GN**	**2869728**	10			
Color: gray				**ME 6,2 TBUS-2 1,5/5-ST-3,81 GY**	**2695439**	10

Accessories
Power terminal blocks

- Power terminal block for supplying the supply voltage to the DIN rail connector
- Plug-in connection system
- Increased output current of 3.2 A
- Monitoring of supplies in combination with the fault monitoring module
- Flexible redundant supply from one or both module sides
- Status and error indicator LEDs



Ex n

NFC

Redundant supply for existing 24 V

Technical data	
Input data/output data	
Input voltage range	9.9 V DC ... 30 V DC
Output voltage	(Input voltage - 0.3 V)
Output current	≤ 3.2 A
General data	
Ambient temperature (operation)	-40°C ... 70°C
Housing material	PBT
EMC note	Class A product, see page 443
Conformance / approvals	
Conformance	CE-compliant
ATEX	Ex II 3 G Ex nA IIC T4 Gc X
UL, USA / Canada	508 listing applied for Class I, Div. 2, Groups A, B, C, D T5 applied for
GL	GL applied for

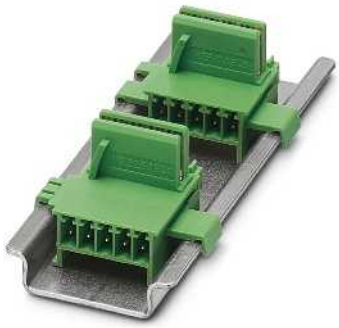
Description	Ordering data: Type	Order No.	Pcs. / Pkt.
MINI Analog Pro power terminal block			
Push-in connection	**MINI MCR-2-PTB-PT**	**2902067**	1
Screw connection	**MINI MCR-2-PTB**	**2902066**	1

Accessories
ME 17,5 TBUS-... DIN rail connector

– For bridging the supply voltage when using a MINI POWER system power supply

Notes:

If the system power supply is used, two ME 17,5 TBUS DIN rail connectors are required. This allows you to establish the connection to the ME 6,2 TBUS DIN rail connector of the MINI Analog system and provide an effective power supply.



For system power supply

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
DIN rail connector, for bridging the supply voltage, can be snapped onto 35 mm DIN rails as per EN 60715, with UL approval, two pieces are required per system power supply	ME 17,5 TBUS 1,5/ 5-ST-3,81 GN	2709561	10

Accessories
System power supply

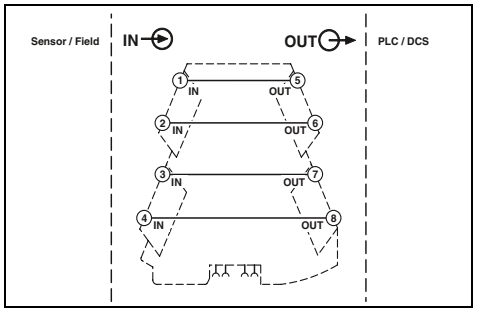
– For supplying the supply voltage via the DIN rail connector where AC voltages are available
– 100 ... 240 V AC nominal input voltage range
– 24 V DC output voltage
– For up to 60 MINI Analog modules
– For up to 1.5 A, secondary
– Status and error signaling via diagnostic LEDs

For applications with local voltages of over 100 V

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
System power supply, primary-switched, with zone 2 approval. Further information can be found in Catalog 6, Surge protection and power supplies.	MINI-PS-100-240AC/24DC/1.5/EX	2866653	1
System power supply, primary-switched (not for zone 2!) Further information can be found in Catalog 6, Surge protection and power supplies.	MINI-SYS-PS-100-240AC/24DC/1.5	2866983	1

Accessories
Feed-through terminal blocks

- Feed-through terminal block for 1:1 forwarding of signals that are already electrically isolated in the MINI Analog Pro group
- Plug-in connection system



Ex n

NFC

1:1 connection

Technical data

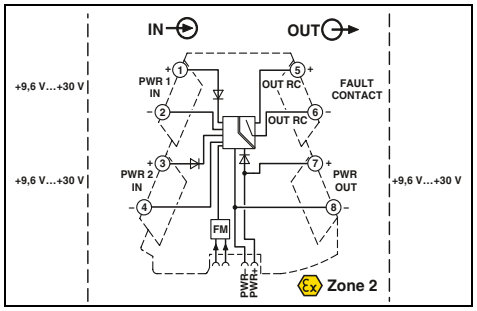
General data	
Degree of protection	IP20
Ambient temperature (operation)	-40°C ... 70°C
Mounting	Any
Housing material	PBT
Dimensions W/H/D	6.2/110.5/120.5 mm
Screw connection solid/stranded/AWG	0.2 ... 1.5 mm²/0.2 ... 1.5 mm²/26 - 16
Conformance / approvals	
Conformance	CE-compliant
ATEX	Ex II 3 G Ex nA IIC T4 Gc X
GL	GL applied for

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
MINI Analog Pro feed-through terminal block			
Screw connection	**MINI MCR-2-TB**	**2902068**	1

Accessories
Error message modules

- Fault monitoring module for evaluating and reporting group errors from the fault monitoring system
- Monitoring of up to 115 connected MINI Analog Pro modules
- Plug-in connection system
- Monitoring of supply voltages of MINI MCR-2-PTB(-PT) power terminal blocks
- Drawing off the supply is possible
- Fault signaling via an N/C contact
- Status and error indicator LEDs



Ex n

NFC

Group error message and supply monitoring

Technical data

Input data/output data	
Input signal	9.9 V DC ... 30 V DC
Output signal	9.6 V DC ... 29.7 V DC
Switching output	
Max. switching voltage	30 V DC
Max. switching current	50 mA
General data	
Test voltage input/output	1.5 kV AC (50 Hz, 1 min.)
EMC note	Class A product, see page 443
Conformance / approvals	
Conformance	CE-compliant
ATEX	Ex II 3 G Ex nA IIC T4 Gc X
UL, USA / Canada	508 listing applied for Class I, Div. 2, Groups A, B, C, D T5 applied for
GL	GL applied for

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
MINI Analog Pro error signaling module			
Push-in connection	**MINI MCR-2-FM-RC-PT**	**2904508**	1
Screw connection	**MINI MCR-2-FM-RC**	**2904504**	1

Accessories
Programming adapter

IFS-USB-PROG-ADAPTER programming adapter for configuring Phoenix Contact INTERFACE modules with S-PORT interface.

The adapter is used with FDT/DTM software or ANALOG-CONF software. For programming MACX Analog and MINI Analog.

	Technical data
General data	
EMC note	Class A product, see page 443

Description	Type	Order No.	Pcs. / Pkt.
Programming adapter for configuring modules with S-PORT interface	**IFS-USB-PROG-ADAPTER**	**2811271**	1

Accessories
Marking label for transparent cover

- Snap-in labels and adhesive labels with large-area for marking
- For snapping into or sticking onto MINI Analog Pro covers, without overlapping the status and error LEDs
- The sheets can be marked quickly and easily using the BLUEMARK CLED and the THERMOMARK CARD...
- They can also be custom printed according to customer requirements

Description	Color	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
UniCard, can be labeled with THERMOMARK CARD and BLUEMARK							
Lettering field size: 30 x 5 mm	white	**UCT-EM (30X5)**	**0801505**	10			
Lettering field size: 30 x 5 mm	white	**UCT-EM (30X5) CUS**	**0801589**	1			
10-section, lettering field size: 15 x 5 mm	white	**UC-EMLP (15X5)**	**0819301**	10			
10-section, lettering field size: 15 x 5 mm	white	**UC-EMLP (15X5) CUS**	**0824550**	1			
Self-adhesive marker strips, unprinted, continuous, material off the roll, for marking with thermal transfer printer, can be separated using cutter, pitch as desired, strip length of up to 1000 mm, 10 strips, strip height of 5.0 mm, 1 roll = 90 m	white				**SK 5,0 WH:REEL**	**0805221**	1

Integrate analog signals safely

Integrate analog signals easily into your safety application according to the Machinery Directive. The MACX Safety analog signal conditioners are certified according to EN ISO 13849-1 with performance level PL d.

Ex i signals

MACX Safety Ex enables the easy and safe processing of intrinsically safe analog signals according to the Machinery Directive.

Cost savings

– Direct safe shutdown without an additional safety controller or in conjunction with a small-scale controller from Phoenix Contact offers a clear cost advantage
– Further cost savings can be made thanks to easy configuration and easy integration in the safety chain
– Versions with push-in technology save installation time

Choose the right MACX Safety signal conditioner for your application:

Analog IN

– 4...20 mA repeater power supplies and input signal conditioners with 2 electrically isolated outputs

Temperature

– Universal temperature transducers for resistance thermometers, resistance-type sensors, potentiometers, thermocouples, and mV sources – with safe limit value relay

Functional safety – from the initial idea to the finished product

Phoenix Contact meets the requirements of functional safety according to IEC 61508 in a standardized development process. Here, all fault avoidance and fault control measures are taken into consideration, from the very development and production of a device right up to device operation. The devices are examined by an independent test center.

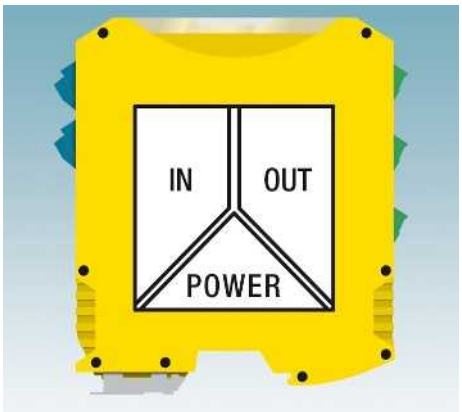
DIN rail connector-compatible

The DIN rail connector enables the modular bridging of the 24 V supply voltage.

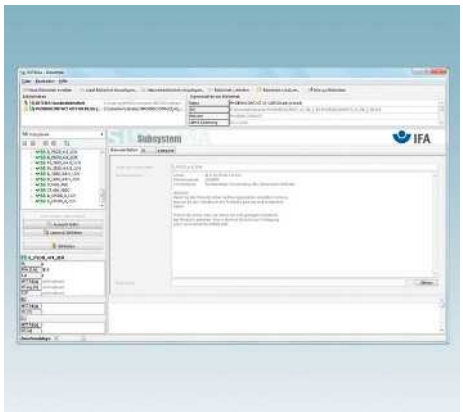
Wide range supply

The modules featuring a wide range supply (...-UP) can be used in all power supply networks the world over without the need for additional power supply units.

Safe and reliable functions
– Consistent PL d and SIL certification. This ensures the highest level of reliability and safety for your systems.



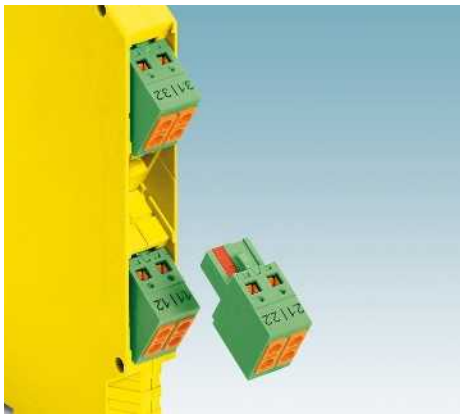
Precise transmission and high operational reliability
– Thanks to patented transmission concept
– Safe electrical isolation.



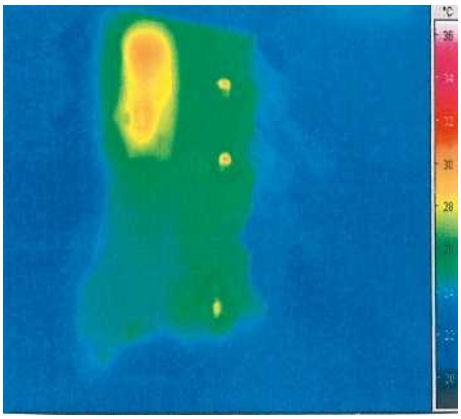
Easy integration with Sistema
– Easy integration into the safety chain via Sistema. The required data is already stored in Sistema.

Easy configuration and monitoring
– Easy configuration and monitoring with the ANALOG-CONF stand-alone software with integrated monitoring function or with FDT/DTM.

Easy to combine
– Analog signals, whether passive or active, can be easily combined with other safety modules.

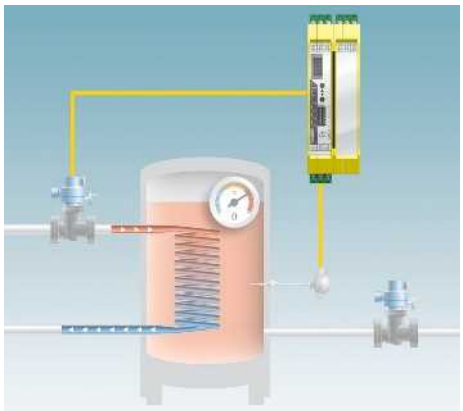


Easy-maintenance connection technology
– Plug-in connection terminal blocks with screw connection or fast push-in technology – coded, with integrated sockets.



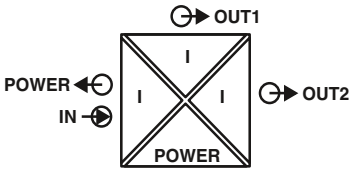
Precise transmission, long service life
– Patented circuit concepts ensure precise signal transmission and minimal self-heating.

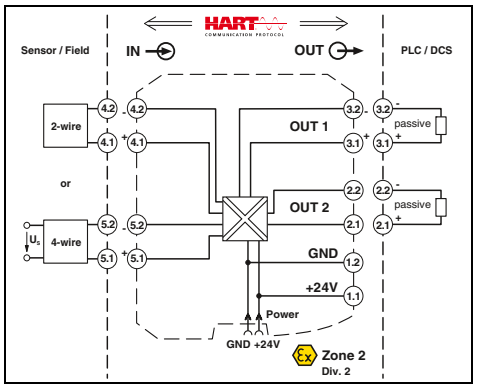
Even for the Ex area
– Maximum explosion protection for all Ex zones with the MACX Safety Ex range as associated intrinsically safe equipment and for installation in zone 2.



Direct safety shutdown
– Simple and direct shutdown for small applications is possible without an expensive safety controller or in conjunction with a small-scale controller.

Analog IN
Repeater power supplies





Ex n

PL EN ISO 13849

Repeater power supply and input signal conditioner, with two electrically isolated outputs

- 4...20 mA input, powered and not powered
- Two electrically isolated 4...20 mA (active) outputs
- PL d according to EN ISO 13849-1
- Up to SIL 2 according to EN 61508
- Installation in zone 2 possible
- Plug-in screw and push-in connection technology
- 4-way electrical isolation
- Bidirectional HART communication possible
- Power supply via DIN rail connector possible

Housing width 12.5 mm

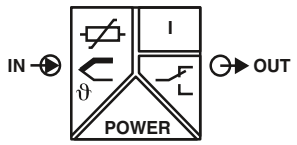
Technical data

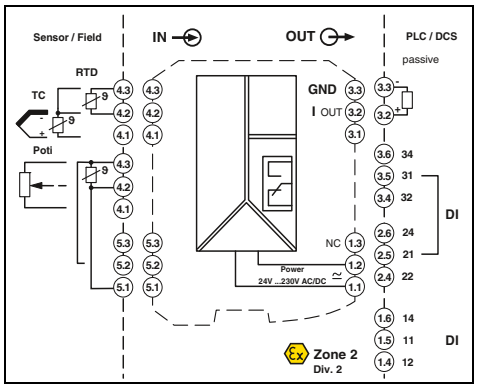
Input data	
Input signal	4 mA ... 20 mA/4 mA ... 20 mA
Transmitter supply voltage	> 21.5 V (at 20 mA)
Voltage drop	< 3.9 V (in input signal conditioner operation)
Output data	
Output signal (per output)	4 mA ... 20 mA (active)
Load	< 450 Ω (at 20 mA)
Output ripple	< 20 mV_{rms}
General data	
Supply voltage range	19.2 V DC ... 30 V DC (24 V DC (-20% ... +25%))
Current consumption	< 75 mA (at 24 V DC)
Power dissipation	< 1.45 W (at 24 V DC/20 mA)
Temperature coefficient	< 0.01%/K
Step response (10-90%)	< 1.3 ms (for 4 mA ... 20 mA step)
Transmission error, typical	< 0.05% (of final value)
Maximum transmission error	< 0.1% (of final value)
Under-/overload range	According to NE 43
Electrical isolation	
Input/output/power supply	300 V_{rms} (rated insulation voltage (surge voltage category II; pollution degree 2, safe isolation as per EN 61010-1)) 2.5 kV (50 Hz, 1 min., test voltage)
Output 1/output 2	1.5 kV AC (50 Hz, 1 min., test voltage)
Ambient temperature range	-20°C ... 60°C (any mounting position)
Status indication	Green LED (PWR supply voltage)
SMART communication (per output)	Yes
Protocols supported	HART
Housing material	PA 66-FR
Dimensions W/H/D	12.5/99/114.5 mm
Screw connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/24 - 14
Spring-cage connection (solid/stranded/AWG)	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/24 - 16
EMC note	Class A product, see page 443
Conformance / approvals	
Conformance	CE-compliant, additionally EN 61326
ATEX	Ex II 3 G Ex nA IIC T4 Gc X
SIL in accordance with IEC 61508	2
Performance level according to ISO 13849	PLd

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Repeater power supplies and input signal conditioners, signal duplicator, with performance level			
Screw connection	**MACX PL-RPSSI-2I**	**2904961**	1
Spring-cage connection	**MACX PL-RPSSI-2I-SP**	**2904962**	1

Temperature, temperature transducer





Ex n

PL
EN ISO 13849

Universal, with limit value relays, wide range power supply

Ex:
Housing width 35 mm

- Input for resistance thermometers, thermocouples, resistance-type sensors, potentiometers, mV sources
- A safety-related limit value relay, by bridging two relays
- Differential measurement possible with Pt 100
- An additional limit value relay for non-safety-related function
- PL d according to EN ISO 13849-1
- Up to SIL 2 according to EN 61508
- Configuration via software (ANALOG-CONF or FDT/DTM)
- Cold junction compensation with separate plug
- Wide range power supply 19.2 ... 253 V AC/DC
- Status indicators for supply voltage, cable, sensor, and module errors
- Installation in zone 2 possible
- Plug-in screw and push-in connection technology

Technical data

Input data	
Resistance thermometers	Pt, Ni, Cu sensors: 2, 3, 4-wire
Thermocouple sensors	B, E, J, K, N, R, S, T, L, U, CA, DA, A1G, A2G, A3G, MG, LG
Resistor	0 Ω ... 50 kΩ
Potentiometer	0 Ω ... 50 kΩ
Voltage	-1000 mV ... 1000 mV
Output data	
Output signal	4 mA ... 20 mA
Maximum output signal	22 mA
Load R_B	≤ 600 Ω (at 20 mA)
Behavior in the event of a sensor error	According to NE 43 or freely configurable
Switching output	Relay output
Contact type	2 PDT
Contact material	$AgSnO_2$, hard gold-plated
Max. switching voltage	250 V AC (250 V DC)
Max. switching current	2 A (250 V AC)/2 A (28 V DC)
General data	
Supply voltage range	24 V ... 230 V AC/DC (-20%/+10%, 50/60 Hz)
Power consumption	< 2.4 W
Temperature coefficient	0.01%/K
Maximum transmission error	0.1% (e.g. for Pt 100, 300 K span, 4 ... 20 mA)
Electrical isolation	
Input/output/power supply	300 V_{rms} (rated insulation voltage (surge voltage category II; pollution degree 2, safe isolation as per EN 61010-1)) 2.5 kV (50 Hz, 1 min., test voltage)
Input/output	375 V (peak value in accordance with EN 60079-11)
Input/power supply	375 V (peak value in accordance with EN 60079-11)
Input/switching output	375 V (peak value in accordance with EN 60079-11)
Ambient temperature range	-20°C ... 65°C
Humidity	Typ. 5% ... 95% (non-condensing)
Housing material	PA 66-FR
Inflammability class in acc. with UL 94	V0
Dimensions W/H/D	35/99/114.5 mm
Screw connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/24 - 14
Spring-cage connection (solid/stranded/AWG)	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/24 - 16
EMC note	Class A product, see page 443
Conformance / approvals	
Conformance	CE-compliant
ATEX	II 3 G Ex nA nC ic IIC T4 Gc X
IECEx	Ex nA nC ic IIC T4 Gc X
SIL in accordance with IEC 61508	2
Performance level according to ISO 13849	PLd

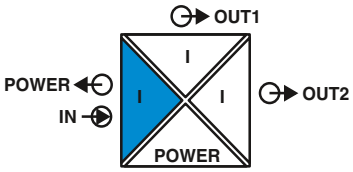
Ordering data

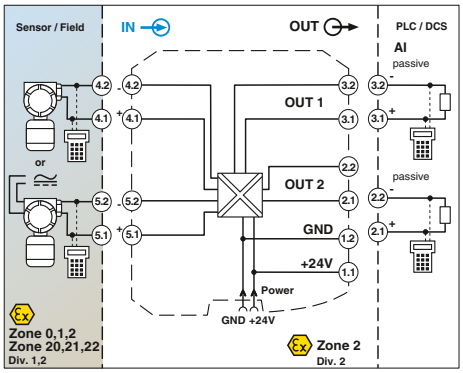
Description	Type	Order No.	Pcs. / Pkt.
Temperature transducer and threshold value switch with performance level			
Screw connection	**MACX PL-T-UIREL-UP**	**2904901**	1
Spring-cage connection	**MACX PL-T-UIREL-UP-SP**	**2904903**	1

Accessories

Programming adapter for configuring modules with S-PORT interface	**IFS-USB-PROG-ADAPTER**	**2811271**	1
Plug with 50 Ω resistor, for current signals between +20 mA and -20 mA	**MACX MCR-I20**	**2905680**	1

Analog IN
Repeater power supply, Ex i





Repeater power supply and input signal conditioner, with two electrically isolated outputs

- 4...20 mA input, [Ex ia], powered and not powered
- Two electrically isolated 4...20 mA (active) outputs
- PL d according to EN ISO 13849-1
- Up to SIL 2 according to EN 61508
- Installation in zone 2 possible
- Plug-in screw and push-in connection technology
- 4-way electrical isolation
- Bidirectional HART communication possible
- Power supply via DIN rail connector possible

Housing width 12.5 mm

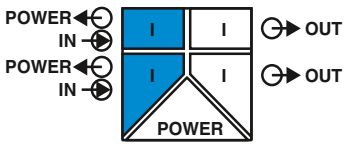
Technical data

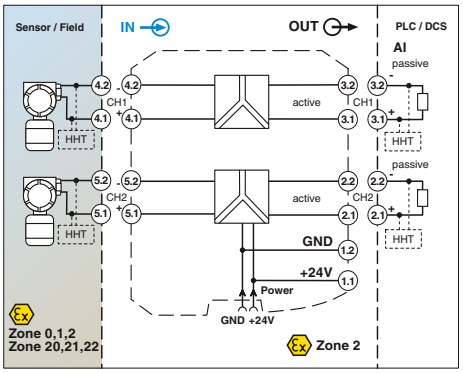
Input data	
Input signal	4 mA ... 20 mA/4 mA ... 20 mA
Transmitter supply voltage	> 16 V (at 20 mA)
Voltage drop	< 3.9 V (in input signal conditioner operation)
Output data	
Output signal (per output)	4 mA ... 20 mA (active)
Load	< 450 Ω (at 20 mA)
Output ripple	< 20 mV_{rms}
General data	
Supply voltage range	19.2 V DC ... 30 V DC (24 V DC (-20% ... +25%))
Current consumption	< 75 mA (24 V DC/ 20 mA)
Power dissipation	< 1.45 W (24 V DC/ 20 mA)
Temperature coefficient	< 0.01%/K
Step response (10-90%)	< 1.3 ms (for 4 mA ... 20 mA step)
Transmission error, typical	< 0.05% (of final value)
Maximum transmission error	< 0.1% (of final value)
Under-/overload range	According to NE 43
Electrical isolation	
Input/output/power supply	300 V_{rms} (rated insulation voltage (surge voltage category II; pollution degree 2, safe isolation as per EN 61010-1)) 2.5 kV (50 Hz, 1 min., test voltage)
Input/output	375 V (peak value in accordance with EN 60079-11)
Input/power supply	375 V (peak value in accordance with EN 60079-11)
Output 1/output 2	1.5 kV AC (50 Hz, 1 min., test voltage)
Ambient temperature range	-20°C ... 60°C (any mounting position)
Status indication	Green LED (PWR supply voltage)
SMART communication (per output)	Yes
Protocols supported	HART
Housing material	PA 66-FR
Dimensions W/H/D	12.5/99/114.5 mm
Screw connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/24 - 14
Spring-cage connection (solid/stranded/AWG)	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/24 - 16
EMC note	Class A product, see page 443
Safety data as per ATEX	
Max. output voltage U_o	25.2 V
Max. output current I_o	93 mA
Max. output power P_o	587 mW
Maximum voltage U_m	253 V AC (125 V DC)
Conformance / approvals	
Conformance	CE-compliant, additionally EN 61326
ATEX	Ex II (1) G [Ex ia Ga] IIC/IIB Ex II (1) D [Ex ia Da] IIIC Ex II 3 (1)G Ex nA [ia Ga] IIC/IIB T4 Gc
IECEx	[Ex ia Ga] IIC/IIB, [Ex ia Da], Ex nA [ia Ga] IIC/IIB T4 Gc
SIL in accordance with IEC 61508	2
Performance level according to ISO 13849	PLd

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Repeater power supplies and input signal conditioners, signal duplicator, with performance level, intrinsically safe input			
Screw connection	**MACX PL-EX-RPSSI-2I**	**2904959**	1
Spring-cage connection	**MACX PL-EX-RPSSI-2I-SP**	**2904960**	1

Analog IN
Repeater power supply, Ex i





2-channel repeater power supply

Ex:
Housing width 12.5 mm

- 2-channel
- 4...20 mA input, [Ex ia], powered
- 4 ... 20 mA output (active)
- PL d according to EN ISO 13849-1
- Up to SIL 3 according to IEC 61508
- Installation in zone 2 possible
- Plug-in screw and push-in connection technology
- 3-way electrical isolation, per channel
- Bidirectional HART communication possible
- Power supply via DIN rail connector possible

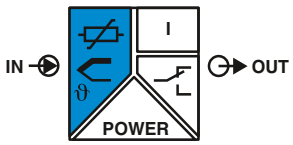
Technical data

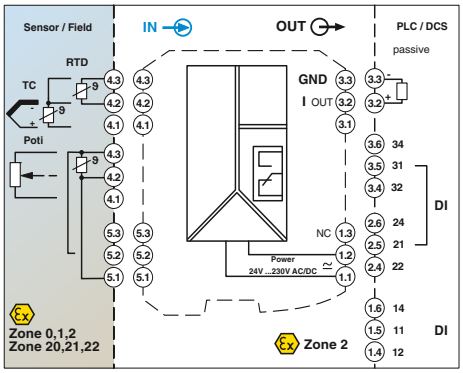
Input data	per channel
Input signal	4 mA ... 20 mA
Transmitter supply voltage	> 16 V (at 20 mA)
Underload/overload signal range	0 mA ... 24 mA
Output data	per channel
Output signal	4 mA ... 20 mA (active)
Load	≤ 450 Ω (20 mA)
Underload/overload signal range	0 mA ... 24 mA
General data	
Supply voltage range	19.2 V DC ... 30 V DC (24 V DC (-20% ... +25%))
Current consumption	< 100 mA (24 V/20 mA)
Power dissipation	< 1.4 W (at 24 V DC/20 mA)
Temperature coefficient	< 0.01%/K
Step response (10-90%)	< 1.3 ms (for 4 mA ... 20 mA step)
Transmission error, typical	< 0.05% (of final value)
Maximum transmission error	< 0.1% (of final value)
Electrical isolation	
Input/output, power supply	300 V_{rms} (rated insulation voltage (surge voltage category II; pollution degree 2, safe isolation as per EN 61010-1)) 2.5 kV (50 Hz, 1 min., test voltage)
Input/output	375 V (peak value in accordance with EN 60079-11)
Input/power supply	375 V (peak value in accordance with EN 60079-11)
Output 1/output 2/ power supply	1.5 kV (50 Hz, 1 min., test voltage)
Ambient temperature range	-20°C ... 60°C (any mounting position)
Status indication	Green LED (supply voltage)
SMART communication	Yes
Signal bandwidth	as per HART specifications
Protocols supported	HART
Housing material	PA 66-FR
Dimensions W/H/D	12.5/99/114.5 mm
Screw connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/24 - 14
Spring-cage connection (solid/stranded/AWG)	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/24 - 16
EMC note	Class A product, see page 443
Safety data as per ATEX	
Max. output voltage U_o	25.2 V
Max. output current I_o	93 mA
Max. output power P_o	587 mW
Maximum voltage U_m	253 V AC (125 V DC)
Conformance / approvals	
Conformance	CE-compliant, additionally EN 61326
ATEX	II (1) G [Ex ia Ga] IIC/IIB II (1) D [Ex ia Da] IIIC II 3(1) G Ex nA [ia Ga] IIC T4 Gc
IECEx	[Ex ia Ga] IIC/IIB, [Ex ia Da] IIIC, Ex nA [ia Ga] IIC T4 Gc
SIL in accordance with IEC 61508	3
Performance level according to ISO 13849	PLd

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Repeater power supply, two-channel, with performance level, intrinsically safe input			
Screw connection	**MACX PL-EX-RPSS-2I-2I**	**2904963**	1
Spring-cage connection	**MACX PL-EX-RPSS-2I-2I-SP**	**2904964**	1

Temperature
Temperature transducer, Ex i





Universal, with limit value relays, wide range power supply

- Input for resistance thermometers, thermocouples, resistance-type sensors, potentiometers, mV sources, [Ex ia]
- Differential measurement possible with Pt 100
- A safety-related limit value relay, by bridging two relays
- An additional limit value relay for non-safety-related function
- PL d according to EN ISO 13849-1
- Up to SIL 2 according to EN 61508
- Configuration via software (ANALOG-CONF or FDT/DTM)
- Cold junction compensation with separate plug
- Wide range power supply 19.2 ... 253 V AC/DC
- Status indicators for supply voltage, cable, sensor, and module errors
- Installation in zone 2 possible
- Plug-in screw and push-in connection technology

Housing width 35 mm

Technical data

Input data	
Resistance thermometers	Pt, Ni, Cu sensors: 2, 3, 4-wire
Thermocouple sensors	B, E, J, K, N, R, S, T, L, U, CA, DA, A1G, A2G, A3G, MG, LG
Resistor	0 Ω ... 50 kΩ
Potentiometer	0 Ω ... 50 kΩ
Voltage	-1000 mV ... 1000 mV
Output data	
Output signal	4 mA ... 20 mA
Maximum output signal	22 mA
Load R_B	≤ 600 Ω (20 mA)
Behavior in the event of a sensor error	According to NE 43 or freely configurable
Switching output	Relay output
Contact type	2 PDT
Contact material	$AgSnO_2$, hard gold-plated
Max. switching voltage	250 V AC (250 V DC)
Max. switching current	2 A (250 V AC)/2 A (28 V DC)
General data	
Supply voltage range	24 V ... 230 V AC/DC (-20%/+10%, 50/60 Hz)
Power consumption	< 2.4 W
Temperature coefficient	0.01%/K
Maximum transmission error	0.1% (e.g. for Pt 100, 300 K span, 4 ... 20 mA)
Electrical isolation	
Input/output/power supply	2.5 kV (50 Hz, 1 min., test voltage)
Input/output	375 V (peak value in accordance with EN 60079-11)
Input/power supply	375 V (peak value in accordance with EN 60079-11)
Input/switching output	375 V (peak value in accordance with EN 60079-11)
Output/supply	300 V_{rms} (rated insulation voltage (surge voltage category II; pollution degree 2, safe isolation as per EN 61010-1))
Ambient temperature range	-20°C ... 65°C
Humidity	Typ. 5% ... 95% (non-condensing)
Housing material	PA 66-FR
Inflammability class in acc. with UL 94	V0
Dimensions W/H/D	35/99/114.5 mm
Screw connection solid/stranded/AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/24 - 14
Spring-cage connection (solid/stranded/AWG)	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/24 - 16
EMC note	Class A product, see page 443
Safety data as per ATEX	
Max. output voltage U_o	6 V
Max. output current I_o	7.4 mA
Max. output power P_o	11 mW
Conformance / approvals	
Conformance	CE-compliant
ATEX	Ex II (1) G [Ex ia Ga] IIC Ex II (1) D [Ex ia Da] IIIC Ex II 3 G Ex nA nC ic IIC T4 Gc X
IECEx	[Ex ia Ga] IIC, [Ex ia Da] IIIC, Ex nA nC ic IIC T4 Gc X
SIL in accordance with IEC 61508	2
Performance level according to ISO 13849	PLd

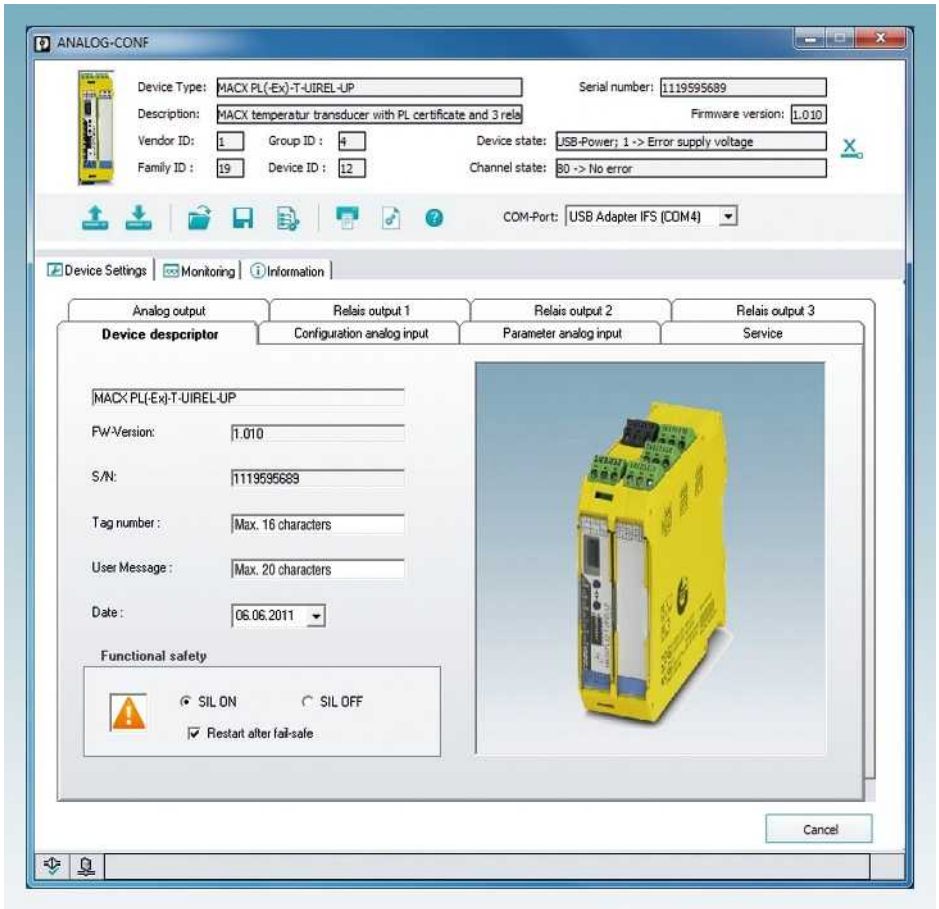
Ordering data

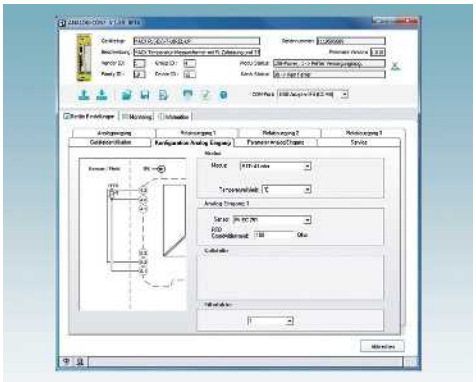
Description	Type	Order No.	Pcs. / Pkt.
Temperature transducer with threshold value switch, with performance level, intrinsically safe input			
Screw connection	**MACX PL-EX-T-UIREL-UP**	**2904910**	1
Spring-cage connection	**MACX PL-EX-T-UIREL-UP-SP**	**2904912**	1

Accessories

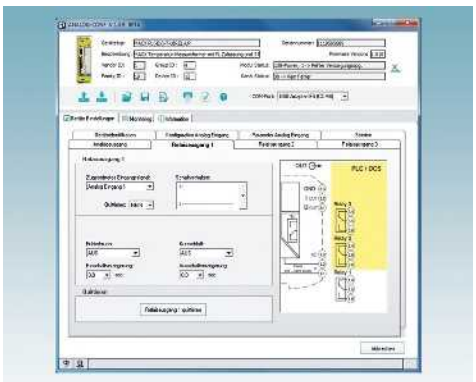
Programming adapter for configuring modules with S-PORT interface	**IFS-USB-PROG-ADAPTER**	**2811271**	1
Plug with 50 Ω resistor, for current signals between +20 mA and -20 mA	**MACX MCR-EX-I20**	**2905679**	1

Configuration software
ANALOG-CONF and FDT/DTM

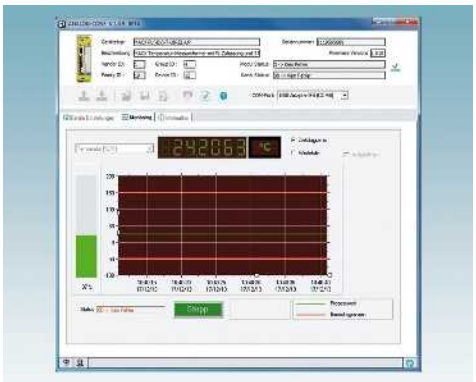




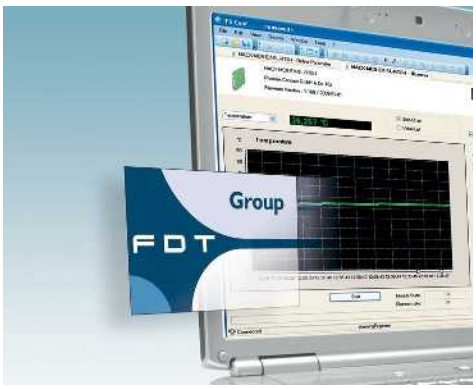
Input configuration with indication of the pin assignment



Relay configuration



Monitoring function



Configuration with FDT/DTM

ANALOG-CONF

The user-friendly ANALOG-CONF software allows you to quickly and clearly configure the temperature modules. The pin assignment for the input and output is directly displayed. You have access to the complete range of configurable parameters. You have the option to pre-configure parameters and then import them into any number of temperature transducers or read the data from the device and directly display the settings and measured values.

FDT/DTM

Configuration is also possible via the FDT/DTM universal configuration tool. The DTM files can simply be downloaded in the download area for the item.

The following parameters can be configured:

– Restart following failsafe

Input:
– Resistance thermometer
– Thermocouples
– Potentiometer
– Remote resistance-type sensor
– Voltage signals ±1 V
– User characteristic curve
– Additional analog signals
– Filter
– Cold junction

Analog output:
– Type of fault signaling

Switching outputs:
– Acknowledgement, switching behavior
– Switch-on/off delay

Monitoring:
– Representation in diagram or value list, recording possible

Service:
– Reset, password protection, display DIP switch position
– and much more

Software for acquisition of usage data

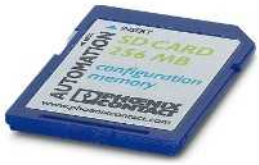
The EMwise software from Phoenix Contact is the efficient solution for acquiring energy data regarding heat, cold, air or electricity in conjunction with a small-scale controller.

Integrate up to 24 digital inputs, 8 analog channels, 50 EMpro energy meters, 30 M-bus counters, and 4 IO-Link measuring sensors.

A web-based interface is available for system parameterization. Each device/channel can be configured individually, without any programming knowledge. The configuration is saved to a file and can be reused for identical systems.

Your advantages:
- Startup without programming knowledge
- Direct parameterization of predefined sensors

Three software versions, suitable for every application:
- EMWISE IMPULS: for up to 16 digital signals
- EMWISE IMP ANALOG: for up to 16 digital and 6 analog signals
- EMWISE EXTENDED: for up to 24 digital and 8 analog signals, EMpro energy meters, M-bus counters, M-bus level converters, IO-Link sensors



Technical data

See phoenixcontact.net/products

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Program and configuration memory, plug-in, 2 GB with license key and application program for reading from measuring devices via pulses	**SD FLASH 2GB EMWISE IMPULS**	**2701745**	1
Program and configuration memory, plug-in, 2 GB with license key and application program for reading from measuring devices via pulses and analog values	**SD FLASH 2GB EMWISE IMP ANALOG**	**2701746**	1
Program and configuration memory, plug-in, 2 GB with license key and application program for reading from measuring devices via pulses, analog values, M-bus, Modbus RTU, and IO-Link	**SD FLASH 2GB EMWISE EXTENDED**	**2701747**	1

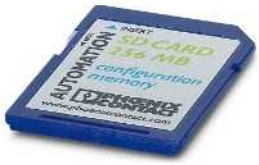
Software for data logging

Turn your controller into a data logger. The SD FLASH 512MB ILDLC FLEX memory card from Phoenix Contact provides all the software needed to extend your PLC for use as a data logger. The software contains the familiar application from the FLEX data logger kit.

In conjunction with the ILC 151 GSM/GPRS small-scale controller, 3 digital and 4 analog input or output terminal blocks can be mounted. The mounted terminals are automatically detected and started up by the controller. Different PCP channels can also be selected during parameterization.

Your advantages:

– Send digital and analog status information via SMS or e-mail or write it to an SQL database
– Startup without programming knowledge



Technical data

See phoenixcontact.net/products

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
SD FLASH card with data logger FLEX application			
	SD FLASH 512MB ILDLC FLEX	**2701873**	1

Pressure sensor with IO-Link

Pressure sensors from Phoenix Contact detect the operating pressure of gas media in a range from -1 to 10 bar. The overload-proof ceramic measuring cell is designed for in excess of 100 million cycles and enables a high switching point accuracy. The pressure switch offers the option of using the set switching points via two switching outputs or reading all process data via the IO-Link interface.

Your advantages:
- IO-Link communication
- Parameterization, diagnostics, and process value monitoring via IO-Link
- Programmable function
- 4-character alphanumeric display

IO-Link

Technical data

Pressure monitoring	
Measuring range	-1 bar ... 10 bar (minimum burst pressure 150 bar)
Pressure resistance	75 bar
Process connection	G1/4 I
Supply for module electronics	
Connection method	M12 connector
No. of pos.	4
Supply voltage range	18 V DC ... 36 V DC
Current draw	< 35 mA
Digital outputs	
Number of outputs	2 (OUT1 = switching output, OUT2 = switching output or diagnostic output)
Connection method	M12 connectors, assigned four times
Delay time	0.3 s (operational readiness)
IO-Link	
Specification	V1.1
Transmission speed	(38.4 kbaud)
General data	
Weight	263 g
Width	34 mm
Height	91.5 mm
Depth	48 mm
Degree of protection	IP65
Protection class	III
Ambient temperature (operation)	-25°C ... 80°C
Ambient temperature (storage/transport)	-40°C ... 100°C
Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6	20g (10 Hz ... 2000 Hz)

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Pressure switch with indicator, G1/4 I process connection, IO-Link communication	**PSK APS7004IOL**	**2700710**	1

Current transformers for retrofitting
PACT RCP

Fast installation without removing system parts

Eight different current measuring ranges from 100 to 4000 A

Fast installation in a confined space

PACT current transformers for retrofitting can be conveniently mounted where there is not enough space for split core current transformers. System downtimes are reduced as system parts do not have to be removed for installation.

Simply place the handy Rogowski coil quickly around power rails and circular conductors. The measuring transducer connected downstream supplies the same typical secondary currents as a standard current transformer.

Your advantages:

- High system availability due to reduced downtimes: fast installation without removing system parts
- Transform alternating currents up to 4000 A using a single measuring system
- Space saving and handy, as the current strength does not affect the size and weight of the coil
- Safe installation and operation: no dangerous open circuit voltages
- Harmonics and transients detected with phase accuracy with a large frequency spectrum from 10 to 5000 Hz
- Rogowski coil secured on power rails and circular conductors thanks to professional holding device

Detect harmonics and transients with a large frequency spectrum from 10 to 5000 Hz

Professional holding device for power rails

Current transformers for retrofitting PACT RCP

- Practical handling due to the flexible measuring coil for opening
- Universal application possibilities through 8 different current measuring ranges in one device: (0 ... 100/ ... / ... /4,000 A)
- The large bandwidth (10 ... 5,000 Hz) enables harmonics and transients to be detected
- It is not possible for dangerous open circuit voltages to occur
- The bracket ensures optimum alignment of the measuring coil to the power rail
- Low space requirement in the control cabinet

Current transformer for subsequent installation in the field

Technical data

Measuring coil input data	
Frequency range	10 Hz ... 5000 Hz
Input signal	Sine
Position error	< 1% (the measuring coil is at right angles to the live connector.)
Measuring coil signal output	
Output signal (at 50 Hz)	100 mV (no load, at 1,000 A)
General data, measuring coil	
Length of signal cable	3000 mm
Rated insulation voltage	1000 V AC (rms CAT III) 600 V AC (rms CAT IV)
Test voltage	10.45 kV (DC/1 min.)
Ambient temperature (operation)	-30°C ... 80°C (measuring coil)
Ambient temperature (storage/transport)	-40°C ... 90°C (measuring coil)
Measuring transducer input data	
Measuring ranges (current) via DIP switch	100 A 250 A 400 A 630 A 1000 A 1500 A 2000 A 4000 A
Phase angle	< 1 °
Measuring transducer signal input	
Input signal (at 50 Hz)	100 mV (1000 A)
Measuring transducer signal output	
Current output signal	1 A AC (effective at sine)
Miscellaneous data for measuring transducer	
Nominal supply voltage	24 V DC -20 % ... +25 %
Nominal supply voltage range	19.2 V DC ... 30 V DC
Transmission error, maximum	≤ 0.5% (from the range end value)
Linearity error	< 0.5% (from the range end value)
Frequency range	45 Hz ... 65 Hz
Degree of protection	IP20
Test voltage	1.5 kV AC (supply/input and output)
Dimensions W/H/D	22.5/70.4/85 mm
Ambient temperature (operation)	-20°C ... 70°C (measuring transducer)
Ambient temperature (storage/transport)	-25°C ... 85°C (measuring transducer)
General data for the set	
Altitude	< 2000 m
Permissible humidity (operation)	5% ... 95% (non-condensing)
Approvals / conformities	
Standards/specifications	IEC 61010-1 IEC 61010-031 IEC 61010-2-031 IEC 61010-2-032

Ordering data

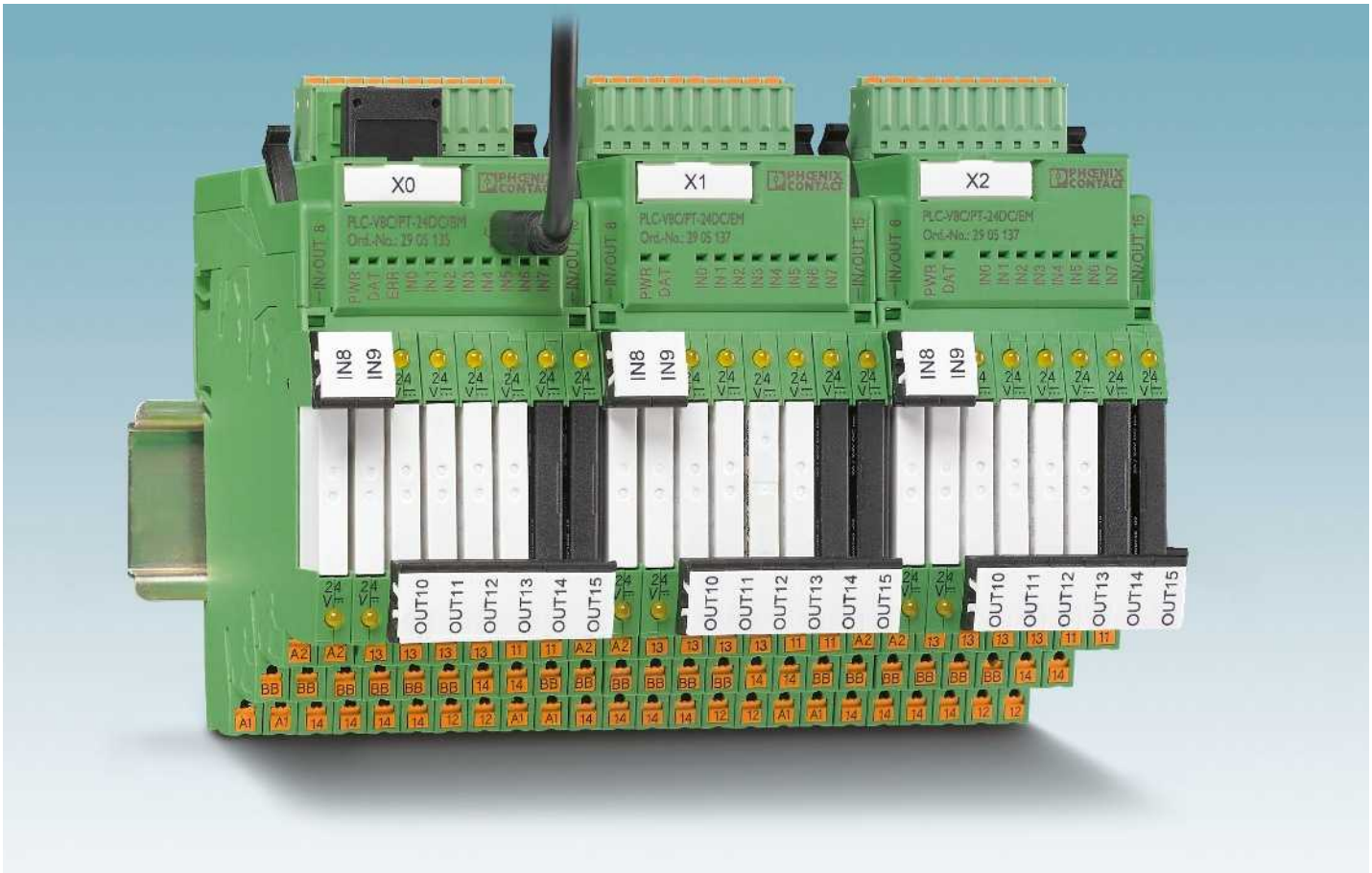
Description	Type	Order No.	Pcs. / Pkt.
Current transformer for retrofitting, set consisting of Rogowski coil and measuring transducer, output signal: 1 A AC (effective for sine)			
Length of measuring coil 300 mm	**PACT RCP-4000A-1A-D95**	**2904921**	1
Length of measuring coil 450 mm	**PACT RCP-4000A-1A-D140**	**2904922**	1
Length of measuring coil 600 mm	**PACT RCP-4000A-1A-D190**	**2904923**	1

Accessories

Holding device for power rail	**PACT RCP-CLAMP**	**2904895**	1

Recommendations for the use of coil lengths and power rail dimensions

Power rail [mm x mm]	Diameter/ coil length [mm]	1 power rail per phase	2 power rails per phase	3 power rails per phase
30 x 10	95/300	X	X	
40 x 10	95/300	X	X	
40 x 10	140/450			X
50 x 10	95/300	X		
50 x 10	140/450		X	X
60 x 10	95/300	X		
60 x 10	140/450		X	X
60 x 10	140/450	X	X	X
100 x 10	140/450	X	X	
100 x 10	190/600			X
120 x 10	140/450	X		
120 x 10	190/600		X	X
160 x 10	190/600	X	X	X



Extremely compact control

The PLC logic programmable logic relay system is the extremely compact way to carry out small automation tasks easily and flexibly. It consists of the PLC-V8C logic modules, the PLC-INTERFACE relay system, and the LOGIC+ software. The logic modules are simply plugged into a row of eight PLC-INTERFACE terminal blocks and combine the logic and interface level in one unit. Depending on the switching requirements, plug-in electromechanical and solid-state relays can be combined in order to flexibly switch and control the I/O signals.

PLC logic processes digital and analog input signals as well as logic functions and timer modules - and replaces conventional switching and control devices. Up to 16 I/O signals can be processed using the stand-alone logic modules - that's with a design width of just 50 mm. If more I/O signals are required, a maximum of 48 I/O signals can be linked using the basic and extension modules.

Switching and controlling with plug-in relays

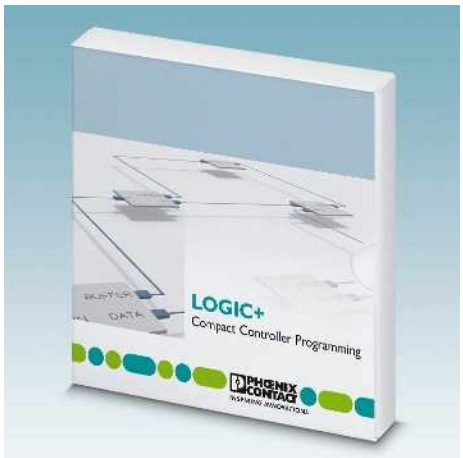
- PLC logic brings together the standard combination of logic module and separate plug-in relay and eliminates the wiring effort and additional switching elements
- Convenient connections with screw or push-in connection technology, which also accommodate return conductors, remove the need for separate potential terminal blocks
- Each relay channel can be freely configured as an input or output. PLC logic therefore perfectly adapts to fit the application at hand

Intuitive programming

Programming is quick and easy with the intuitive LOGIC+ programming software. Ladder (LD) and function block diagrams (FBD) can be created by selecting the relevant functions and their connection using drag & drop. The graphical representation of PLC logic in the hardware editor supports intuitive operation. The programs created can be simulated offline on the PC and tested online during operation. Basic functions, such as AND, OR, NOT, etc. are complemented by special functions, such as counters, seven-day timers, timer modules, and mathematical functions, to name a few.

Logic module with plug-in relays

PLC logic combines a logic module and plug-in relay and eliminates the wiring effort and additional switching elements. Each relay channel can be flexibly equipped with an electromechanical or a solid-state relay. PLC logic processes 16 I/O signals with just one logic module and boasts an extremely compact design width of just 50 mm.



Intuitive programming with LOGIC+

- Function block diagram or ladder diagram
- Numerous integrated function blocks
- Specific function blocks are available to download
- Hardware view in the program
- Download free of charge at www.phoenixcontact.com.

Standard programming cable

PLC logic is connected to a PC via a standard micro USB cable. The drivers for PLC logic are automatically installed on connection by means of plug and play.

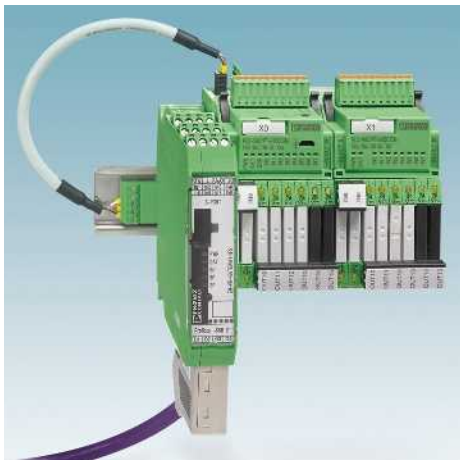
Easily connect extension modules

The basic module and the extension module are connected via integrated connectors - no tools required. A maximum of two extension modules can be connected to a basic module. This means that PLC logic can work with up to 48 I/Os.

Saving and copying data

PLC logic programs are saved by the memory block or can be easily copied to other devices.

If settings such as time or date are required on the new device, these values can be configured via the integrated web server. The new device does not need access to the LOGIC+ software for this.



Integration into PROFIBUS DP

Adaptable fieldbus gateways, available as an option, can be used to integrate PLC logic into a PROFIBUS DP network. This enables communication with a higher-level controller for remote control, diagnostics, and visualization purposes.

DTM device drivers and GSD files for configuring the gateway can be downloaded free of charge at www.phoenixcontact.com.

Logic modules

PLC-V8C are the plug-in logic modules which form the PLC logic relay system in conjunction with the narrow 6.2 mm PLC-INTERFACE terminal blocks. Eight freely selectable PLC-INTERFACE terminal blocks must be separately ordered for each logic module. You can find an overview of matching PLC-INTERFACE terminal blocks on page 360.

All logic modules feature these properties:

– 8 integrated digital inputs (of which two inputs are configurable as analog inputs), connection via connector with screw or push-in connection technology
– A further 8 channels can be configured with matching PLC-INTERFACE terminal blocks as digital inputs or outputs
– Programming with the LOGIC+ software

PLC-V8C.../SAM

– Stand-alone logic module with 16 I/Os, not extendable
– Connection to PC via micro USB socket
– Integrated realtime clock (RTC)
– Accommodates external IFS-CONFSTICK memory block

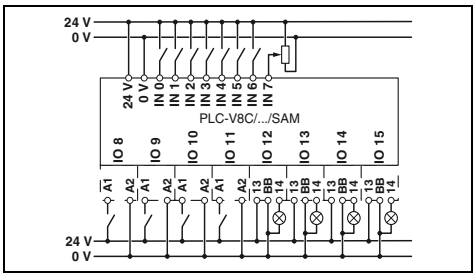
PLC-V8C.../BM

– Basic logic module with 16 I/Os, can be extended with a maximum of two extension modules (PLC-V8C.../EM) to 48 I/Os
– Connection to PC via micro USB socket
– Integrated realtime clock (RTC)
– Accommodates external IFS-CONFSTICK memory block
– Optional connection to PROFIBUS-GATEWAY-IFS

PLC-V8C.../EM

– Extension logic module with 16 I/Os, for extending the basic module

Stand-alone module



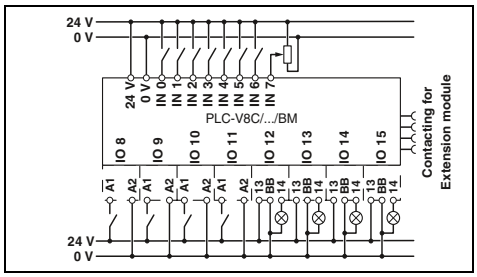
	Technical data
Supply	
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 26.4 V DC
Max. input current at U_N	120 mA
Input data (digital)	
Number of inputs	8 (2 configurable as analog)
Input voltage	24 V DC
Description of the input	EN 61131-2, type 3
Input current 0-signal	< 1 mA
Input current 1-signal	Typ. 2.5 mA
Input data (analog)	
Number of inputs	2 (IN6 and IN7 are configurable as analog)
Input voltage range	0 V ... 10 V
Input resistance	> 4 kΩ
Input data (PLC-INTERFACE)	
Number of inputs	≤ 8
Output data (for controlling PLC-INTERFACE)	
Number of outputs	≤ 8
Nominal voltage	24 V DC
Nominal current	9 mA
Realtime clock (basic module only)	
Buffer time (capacitor)	24 h (capacitor)
Realtime clock accuracy	±2 s/d
General data	
Ambient temperature (operation)	-20°C ... 45°C
Ambient temperature (storage/transport)	-20°C ... 70°C
Permissible humidity (operation)	90%
Air and creepage distances between the power circuits	DIN EN 50178
Rated insulation voltage	50 V
Rated surge voltage	0.8 kV
Insulation	Basic insulation
Mounting type	Can be plugged onto 8 x PLC-INTERFACE
Degree of protection	IP20
Screw connection solid/stranded/AWG	0.14 - 1.5 mm²/0.14 - 1.5 mm²/28 - 16
Push-in connection solid/stranded/AWG	0.14 - 1.5 mm²/0.14 - 1.5 mm²/26 - 16

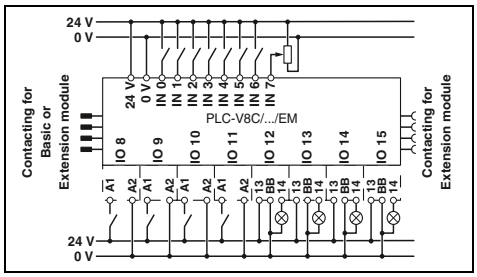
Ordering data

Description	Type	Order No.	Pcs. / Pkt.
PLC-V8C plug-in logic modules			
With screw connection	**PLC-V8C/SC-24DC/SAM**	**2905082**	1
With push-in connection	**PLC-V8C/PT-24DC/SAM**	**2905136**	1

Basic module

Extension module





Technical data	Technical data
24 V DC	24 V DC
19.2 V DC ... 26.4 V DC	19.2 V DC ... 26.4 V DC
120 mA	65 mA
8 (2 configurable as analog)	8 (2 configurable as analog)
24 V DC	24 V DC
EN 61131-2, type 3	EN 61131-2, type 3
< 1 mA	< 1 mA
Typ. 2.5 mA	Typ. 2.5 mA
2 (IN6 and IN7 are configurable as analog)	2 (IN6 and IN7 are configurable as analog)
0 V ... 10 V	0 V ... 10 V
> 4 kΩ	> 4 kΩ
≤ 8	≤ 8
≤ 8	≤ 8
24 V DC	24 V DC
9 mA	9 mA
24 h (capacitor)	-
±2 s/d	-
-20°C ... 45°C	-20°C ... 45°C
-20°C ... 70°C	-20°C ... 70°C
90%	90%
DIN EN 50178	DIN EN 50178
50 V	50 V
0.8 kV	0.8 kV
Basic insulation	Basic insulation
Can be plugged onto 8 x PLC-INTERFACE	Can be plugged onto 8 x PLC-INTERFACE
IP20	IP20
0.14 - 1.5 mm²/0.14 - 1.5 mm²/28 - 16	0.14 - 1.5 mm²/0.14 - 1.5 mm²/28 - 16
0.14 - 1.5 mm²/0.14 - 1.5 mm²/26 - 16	0.14 - 1.5 mm²/0.14 - 1.5 mm²/26 - 16

Ordering data

Type	Order No.	Pcs. / Pkt.
PLC-V8C/SC-24DC/BM	**2903094**	1
PLC-V8C/PT-24DC/BM	**2905135**	1

Ordering data

Type	Order No.	Pcs. / Pkt.
PLC-V8C/SC-24DC/EM	**2903095**	1
PLC-V8C/PT-24DC/EM	**2905137**	1

Accessories
Programming cable and memory block

– The programming cable (MICRO USB B to USB A) is used to connect PLC logic to a PC, length: 2 m
– PLC logic programs are saved by the memory block or can be easily copied to other devices

	Technical data	Technical data
General data		
EMC note		Class A product, see page 443

		Ordering data			Ordering data		
Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Programming cable		**CAB-USB A/MICRO USB B/2,0M**	**2701626**	1			
Multi-functional memory block for the INTERFACE system - Flat design					**IFS-CONFSTICK**	**2986122**	1

Accessories
Gateway to PROFIBUS DP

The gateways are connected to the PLC-V8C.../BM PLC logic basic modules via the ME 22,5 TBUS... DIN rail connector and the PLC-V8C/CAB... connecting cable.

The gateways are connected to a PC and configured via the integrated S-PORT interface and the IFS-USB-DATACABLE.

	Technical data	Technical data
General data		
EMC note	Class A product, see page 443	

		Ordering data			Ordering data		
Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
IFS gateway for PROFIBUS DP	green	**EM-PB-GATEWAY-IFS**	**2297620**	1			
Programming adapter for configuring modules with S-PORT interface Cable length: 3 m		**IFS-USB-DATACABLE**	**2320500**	1			
DIN rail connector	green	**ME 22,5 TBUS 1,5/ 5-ST-3,81 GN**	**2707437**	50			
Connecting cable for connecting PLC logic with the ME 22,5 TBUS DIN rail connector, cable length: 0.3 m					**PLC-V8C/CAB/TBUS/0,3M**	**2905263**	1

Accessories
PLC logic starter kit

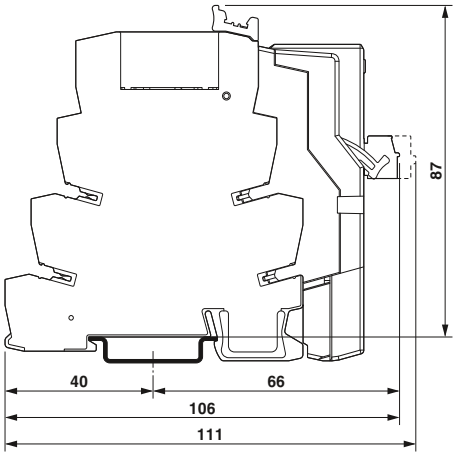
The PLC logic starter kit contains all the components needed to get started quickly and easily with PLC logic with push-in connection technology and 8 inputs and 8 outputs.

– PLC-V8C-PT/24DC/BM plug-in logic module
– PLC-RPT-24DC/1/ACT eight relay output terminal blocks
– Micro USB programming cable
– Software LOGIC+
– "PLC logic quick start guide" poster

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
PLC logic starter kit 1, 8 integrated inputs (24 V DC) and 8 outputs via PLC-INTERFACE (switching capacity 250 V AC/DC, max. 6 A)		PLC-LOGIC-STARTERKIT1	2905504	1

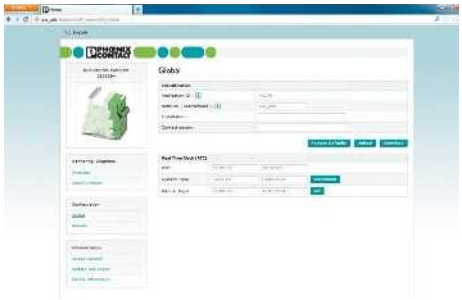
Dimensional drawing



Selection table for PLC-INTERFACE

	Push-in connection		Screw connection	
Relay output	**Type**	**Order No.**	**Type**	**Order No.**
1 PDT, output data 6 A, 250 V AC/DC	PLC-RPT-24DC/21	2900299	PLC-RSC-24DC/21	2966171
1 PDT, output data 50 mA, 36 V DC, gold contact	PLC-RPT-24DC/21AU	2900306	PLC-RSC-24DC/21AU	2966265
1 N/O contact, output data 6 A, 250 V AC/DC, actuator type	PLC-RPT-24DC/1/ACT	2900312	PLC-RSC-24DC/1/ACT	2966210
1 N/O contact with switch, output data 6 A, 250 V AC/DC	PLC-RPT-24UC/1/S/H	2900328	PLC-RSC-24UC/1/S/H	2982236
Solid-state relay output				
Output data 100 mA, 3 V DC - 48 V DC	PLC-OPT-24DC/48DC/100	2900352	PLC-OSC-24DC/48DC/100	2966728
Output data 3 A, 3 V DC - 33 V DC	PLC-OPT-24DC/24DC/2	2900364	PLC-OSC-24DC/24DC/2	2966634
Output data 750 mA, 24 V AC - 253 V AC	PLC-OPT-24DC/230AC/1	2900369	PLC-OSC-24DC/230AC/1	2967840
Output data 3 A, 3 V DC - 33 V DC, actuator type	PLC-OPT-24DC/24DC/2/ACT	2900376	PLC-OSC-24DC/24DC/2/ACT	2966676
Output data 750 mA, 24 V AC - 253 V AC, actuator type			PLC-OSC-24DC/230AC/1/ACT	2967947
Output data 1 A, 12 V DC - 300 V DC	PLC-OPT-24DC/300DC/1	2900383	PLC-OSC-24DC/300DC/1	2980678
Output data 10 A, 3 V DC - 33 V DC	PLC-OPT-24DC/24 DC/10/R	2900398	PLC-OSC-24DC/24DC/10/R	2982702
Output data 500 mA, 3 V DC - 48 V DC, electronic PDT	PLC-OPT-24DC/48DC/500/W	2900378	PLC-OSC-24DC/48DC/500/W	2980636
Output data, TTL, 50 mA, 5 V DC	PLC-OPT-24DC/TTL	2900363	PLC-OSC-24DC/TTL	2982728
Relay input				
Input voltage 24 V DC	PLC-RPT-24DC/1AU/SEN	2900313	PLC-RSC-24DC/1AU/SEN	2966317
Input voltage 120 V AC/DC	PLC-RPT-120UC/1AU/SEN	2900314	PLC-RSC-120UC/1AU/SEN	2966320
Input voltage 230 V AC/DC	PLC-RPT-230UC/1AU/SEN	2900315	PLC-RSC-230UC/1AU/SEN	2966333
Input voltage 5 V DC (basic terminal block without relay)			PLC-BSC- 5DC/ 1/SEN	2980267
Relay for 5 V DC basic terminal block			REL-MR-4,5DC/21AU	2961370
Solid-state relay input				
Input voltage 24 V DC	PLC-OPT-24DC/48DC/100/V8C/SEN	2904693	PLC-OSC-24DC/48DC/100/V8C/SEN	2904690
Input voltage 120 V AC/DC	PLC-OPT-120UC/48DC/100/V8C/SEN	2904694	PLC-OSC-120UC/48DC/100/V8C/SEN	2904691
Input voltage 230 V AC/DC	PLC-OPT-230UC/48DC/100/V8C/SEN	2904695	PLC-OSC-230UC/48DC/100/V8C/SEN	2904692
Dummy or reserve				
Basic terminal block output	PLC-BPT-24DC/21	2900445	PLC-BSC-24DC/21	2966016
Basic terminal block input	PLC-BPT-24DC/1/SEN	2900262	PLC-BSC-24DC/1/SEN	2966061

LOGIC+ programming software



Integrated web server

PLC logic basic settings are easily configured via the integrated web server. The LOGIC+ software does not need to be installed in order to do so.

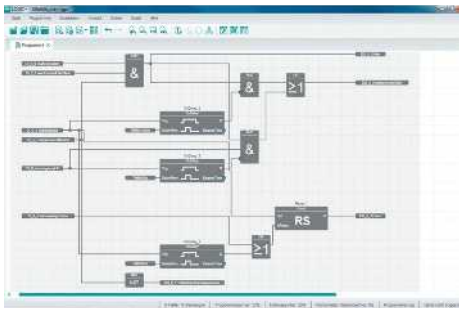
– Time and date
– Password and access control
– Firmware update
– Status indicators for inputs and outputs
– General device information

LOGIC+ user interface

– Clear separation in program editor, toolbox, hardware view, and signaling window
– All elements can be easily placed using drag & drop
– Notes and errors are highlighted in color in the program editor

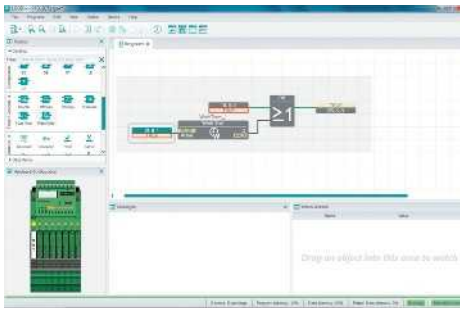
Hardware configurator

– Each relay channel can be configured as an input or output with an electromechanical or a solid-state relay
– Clear assignment of the inputs and outputs thanks to the graphical representation of the hardware connections



Function blocks

– Basic functions: AND, OR, NOT, XOR
– Mathematical functions: add, divide, multiply, subtract, generate absolute value
– Positive and negative edge detection
– RS and SR flip-flops
– Switch-on and switch-off delay, pulse encoder, pulse stretching, weekly clock timer
– Up and down counter
– Analog and digital comparators
– Special functions, e.g., solar altitude calculations are available for download



Simulation and online values

Offline simulation:
– Simulation of the created program directly in LOGIC+
– Virtualization of the values in the program editor, hardware view, and in the observation window

Online values:
– Representation of the program running on the hardware in LOGIC+ with online values
– Overwriting of values from LOGIC+

Example programs

Numerous application examples make it easy to get started with LOGIC+. These include:

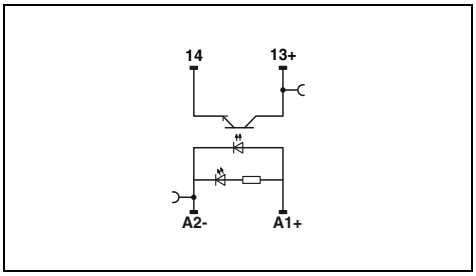
– Underground garage ventilation
– Conveyor belt
– Pumping plant
– Two-way control
– Tips for creating shift registers or surge relays

Fully mounted RIF-0 relay modules

Fully mounted RIF-0 relay modules, consisting of:
- Relay base with push-in connection
- Solid-state relays
- Relay ejector lever on the housing

The advantages:
- Status LED integrated into the base
- RTIII sealed solid-state relay
- Zero voltage switch at AC output
- Professional bridging of adjacent modules saves wiring time

Max. DC voltage output of 3 A

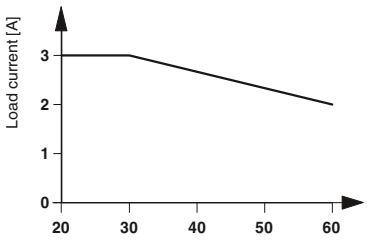


Technical data

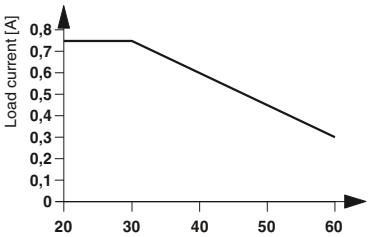
Input data		①
Rated actuating voltage range with reference to U_C		0.8 - 1.2
Switching level (with reference to U_C)	1 signal ("H")	> 0.8
	0 signal ("L")	< 0.4
Rated actuating current I_C	[mA]	8.5
Typ. switch-on time at U_N	[ms]	0.02
Typ. switch-off time at U_N	[ms]	0.3
Transmission frequency f_{limit}	[Hz]	300
Input circuit DC		Yellow LED, free-wheeling diode
Output data		
Max. switching voltage		33 V DC
Min. switching voltage		3 V DC
Max. inrush current		15 A (10 ms)
Min./max. switching current		-/3 A (see derating curve)
Output protection		Protection against polarity reversal, surge protection
Voltage drop at max. limiting continuous current		< 200 mV
Leakage current in off state		-
Phase angle (cos φ)		-
Max. load value		-
General data		
Test voltage input/output		2.5 kV_{rms} (50 Hz, 1 min.)
Ambient temperature (operation)		-25°C ... 60°C
Standards/regulations		DIN EN 50178
Pollution degree/surge voltage category		2/III
Connection data solid/stranded/AWG		0.14 - 1.5 mm^2/0.14 - 1.5 mm^2/26 - 16
Dimensions	W / H / D	6.2 mm/93 mm/66 mm
EMC note		Class A product, see page 443

Ordering data

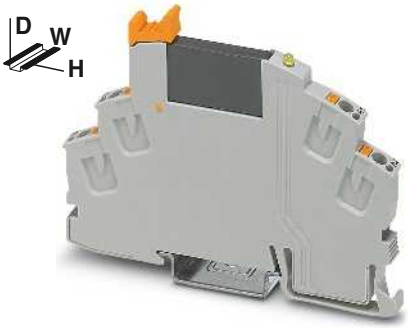
Description	Rated actuating voltage U_C	Type	Order No.	Pcs. / Pkt.
Coupling relay modules with solid-state relay and push-in connection ①	24 V DC	**RIF-0-OPT-24DC/24DC/2**	**2905293**	10



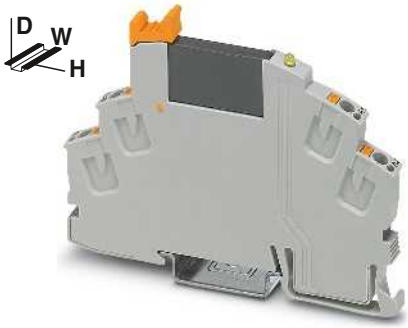
Derating curve for RIF-0-OPT-24DC/24DC/2



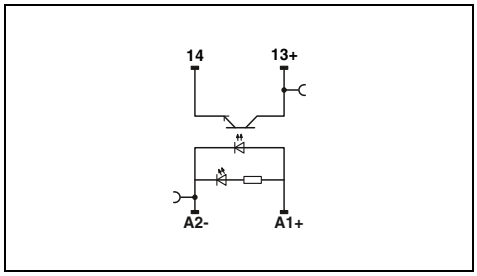
Derating curve for RIF-0-OPT-24DC/230AC/1

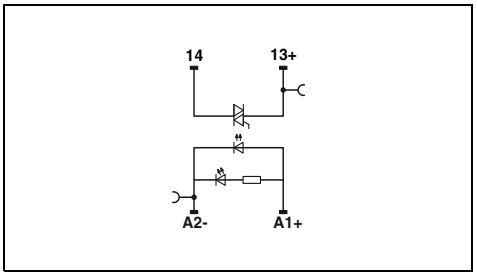


Max. DC voltage output of 100 mA



Max. AC voltage output of 750 mA





Technical data

①	
0.8 -	0.8 -
1.2	1.2
> 0.8	> 0.8
< 0.4	< 0.4
8.5	8
0.02	10
0.3	10
300	10
Yellow LED, free-wheeling diode	Yellow LED, free-wheeling diode
48 V DC	253 V AC
3 V DC	24 V AC
-	30 A (10 ms)
-/100 mA	10 mA/0.75 A (see derating curve)
Protection against polarity reversal, surge protection	RCV circuit
< 1 V	< 1 V
-	1 mA (in off state)
-	0.5
-	4.5 A^2s (tp = 10 ms, at 25°C)
2.5 kV_{rms} (50 Hz, 1 min.)	2.5 kV_{rms} (50 Hz, 1 min.)
-25°C ... 60°C	-25°C ... 60°C
DIN EN 50178	DIN EN 50178
2/III	2/III
0.14 - 1.5 mm^2/0.14 - 1.5 mm^2/26 - 16	0.14 - 1.5 mm^2/0.14 - 1.5 mm^2/26 - 16
6.2 mm/93 mm/66 mm	6.2 mm/93 mm/66 mm
Class A product, see page 443	Class A product, see page 443

Ordering data

Type	Order No.	Pcs. / Pkt.
RIF-0-OPT-24DC/48DC/100	**2905294**	10

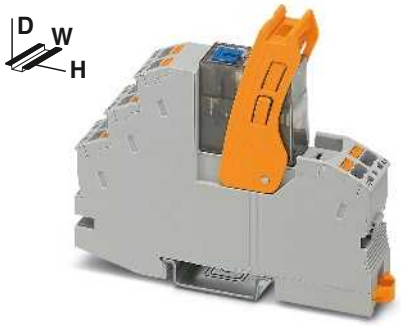
Ordering data

Type	Order No.	Pcs. / Pkt.
RIF-0-OPT-24DC/230AC/1	**2905295**	10

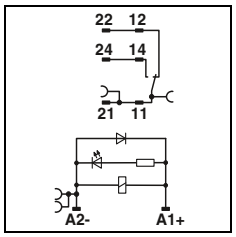
Fully mounted RIF-1 relay modules

Fully mounted RIF-1 relay modules, consisting of:
- Relay base with push-in connection
- 1 or 2 PDT relays with detectable manual operation
- Relay retaining bracket
- Input module/interference suppr. module (AC types only)

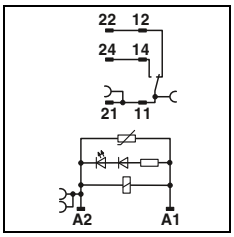
The advantages:
- Relay with lockable manual operation and status LED
- With DC types, free-wheeling diode is integrated into relay
- Mechanical switch position indicator
- Professional bridging of adjacent modules saves wiring time



RIF-1 relay module with 1 PDT relay



DC coils



AC coils

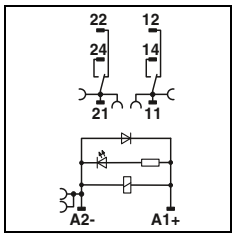
Technical data

Input data		①	②
Permissible range (with reference to U_N)		see diagram	
Typ. input current at U_N	[mA]	18	4.5
Typ. response time at U_N	[ms]	9	4 - 12
Typ. release time at U_N	[ms]	10	4 - 20
Input circuit AC		Yellow LED, varistor	
Input circuit DC		Yellow LED, damping diode	
Output data			
Contact type		1 PDT	
Contact material		AgNi	
Max. switching voltage		250 V AC/DC	
Min. switching voltage		12 V (at 10 mA)	
Limiting continuous current		(see diagram)	
Max. inrush current		32 A (20 ms, N/O contact)	
Min. switching current		10 mA (at 12 V)	
General data			
Test voltage (winding / contact)		4 kV_{rms} (50 Hz, 1 min.)	
Ambient temperature (operation), AC		-40°C ... 50°C	
Ambient temperature (operation), DC		-40°C ... 70°C	
Nominal operating mode		100% operating factor	
Mechanical service life		Approx. 5 x 10^6 cycles	
Standards/regulations		DIN EN 50178, IEC 62103	
Pollution degree/surge voltage category		2/III	
Mounting position/mounting		Any/in rows with zero spacing	
Connection data solid/stranded/AWG		0.14 - 1.5 mm^2/0.14 - 1.5 mm^2/26 - 16	
Dimensions	W / H / D	16 mm/93 mm/75 mm	
EMC note		Class A product, see page 443	

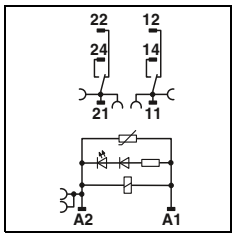
Ordering data

Description		Input voltage U_N	Type	Order No.	Pcs. / Pkt.
Coupling relay modules with power contact relay with manual operation and push-in connection					
	①	24 V DC	**RIF-1-RPT-LDP-24DC/1X21MS**	**2905289**	10
	②	230 V AC	**RIF-1-RPT-LV-230AC/1X21MS**	**2905290**	10

RIF-1 relay module with 2 PDT relay



DC coils



AC coils

Technical data

①	②
see diagram	
18	4.5
9	4 - 12
10	4 - 20
Yellow LED, varistor	
Yellow LED, damping diode	

2 PDT
AgNi
250 V AC/DC
12 V (at 10 mA)
(see diagram)
16 A (20 ms, N/O contact)
10 mA (at 12 V)

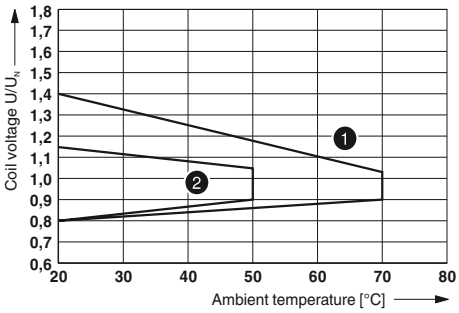
4 kV_{rms} (50 Hz, 1 min.)
-40°C ... 50°C
-40°C ... 70°C
100% operating factor
Approx. 5 x 10^6 cycles
DIN EN 50178, IEC 62103
2/III
Any/in rows with zero spacing
0.14 - 1.5 mm^2/0.14 - 1.5 mm^2/26 - 16
16 mm/93 mm/75 mm
Class A product, see page 443

Ordering data

Type	Order No.	Pcs. / Pkt.
RIF-1-RPT-LDP-24DC/2X21MS	**2905291**	10
RIF-1-RPT-LV-230AC/2X21MS	**2905292**	10

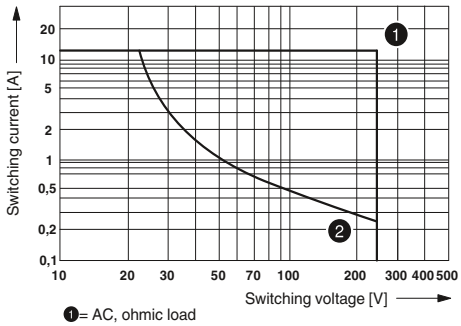
RIF-1-RPT.../1X21... (1 PDT)

Operating voltage range



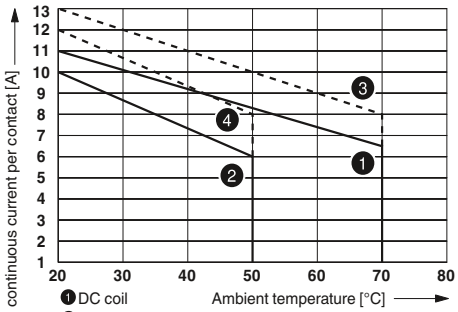
❶ DC coils
❷ AC coils

Interrupting rating



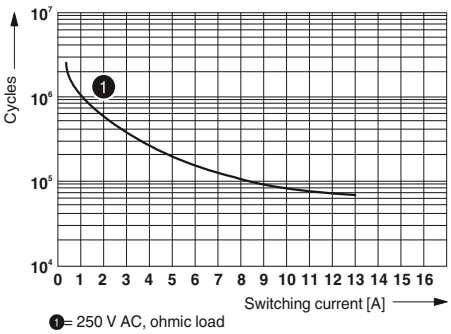
❶ = AC, ohmic load
❷ = DC, ohmic load

Contact derating



❶ DC coil
❷ AC coil
❸ DC coil, jumper between 11 and 21
❹ AC coil, jumper between 11 and 21

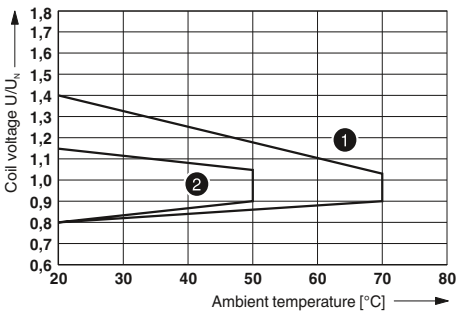
Electrical service life



❶ = 250 V AC, ohmic load

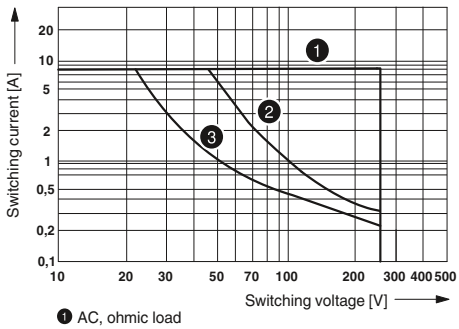
RIF-1-RPT.../2X21... (2 PDTs)

Operating voltage range



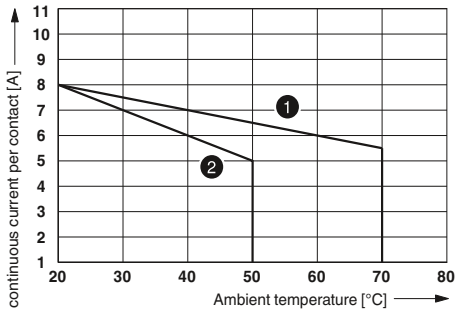
❶ DC coils
❷ AC coils

Interrupting rating



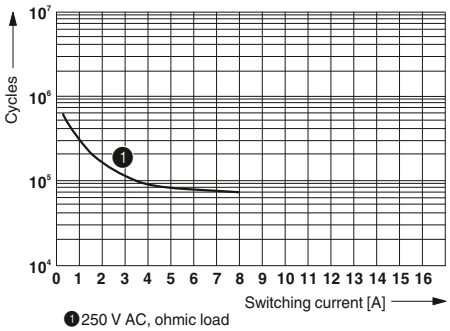
❶ AC, ohmic load
❷ DC, ohmic load, contacts in series
❸ DC, ohmic load

Contact derating



❶ DC coil
❷ AC coil

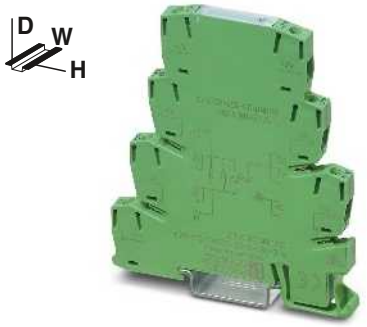
Electrical service life



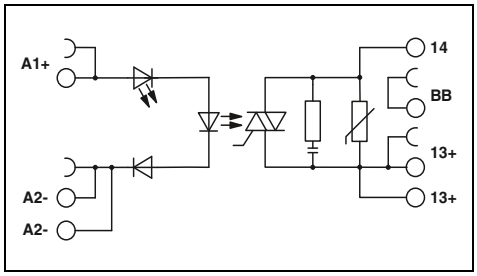
❶ 250 V AC, ohmic load

PLC RELAY with an integrated solid-state relay

6.2 mm narrow solid-state relay for switching AC loads
– Status display
– Protection circuits in input and output
– Wear-free
– Switching capacity up to 230 V AC/2.4 A
– Screw and push-in connection technology



Solid-state power relay with AC voltage output of 2.4 A, max.

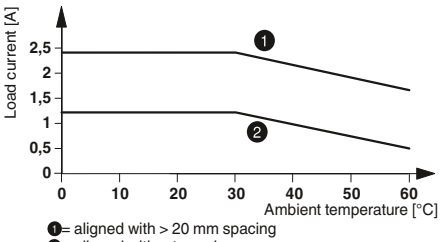


Technical data

Input data		①
Rated actuating voltage range with reference to U_C		0.8 - 1.2
Switching level (with reference to U_C)	1 signal ("H")	> 0.8
	0 signal ("L")	< 0.4
Rated actuating current I_C	[mA]	8
Typ. switch-on time at U_N	[ms]	10
Typ. switch-off time at U_N	[ms]	10
Transmission frequency f_{limit}	[Hz]	10
Input circuit DC		Yellow LED, protection against polarity reversal, surge protection
Output data		
Max. switching voltage		253 V AC
Min. switching voltage		24 V AC
Max. inrush current		250 A (20 ms)
Min./max. switching current		10 mA/2.4 A (see derating)
Output protection		RCV circuit
Voltage drop at max. limiting continuous current		< 1 V
Leakage current in off state		< 1 mA
Phase angle (cos φ)		-
Max. load value		340 A^2s (tp = 10 ms, at 25°C)
General data		
Rated insulation voltage		260 V AC
Rated surge voltage		4 kV
Insulation		Basic insulation
Ambient temperature (operation)		-25°C ... 60°C
Standards/regulations		DIN EN 50178
Pollution degree/surge voltage category		2/III
Connection data solid/stranded/AWG		0.14 - 2.5 mm^2/0.14 - 2.5 mm^2/26 - 14
Dimensions	W / H / D	6.2 mm/80 mm/86 mm
EMC note		Class A product, see page 443

Ordering data

Description	Rated actuating voltage U_C	Type	Order No.	Pcs. / Pkt.
PLC INTERFACE, with **screw connection** ①	24 V DC	**PLC-OSC- 24DC/230AC/2.4/ACT**	**2904631**	10
PLC-INTERFACE, with push-in connection ①	24 V DC	**PLC-OPT- 24DC/230AC/2.4/ACT**	**2904632**	10



❶= aligned with > 20 mm spacing
❷= aligned without spacing

Load current as a function of the ambient temperature
Operating time: 100% operating factor

VIP - power cabling
Universal front adapters for SIMATIC® S7-300

Four connection options are available:

– Connection of 40-pos. modules via four cables, each with a 10-pos. COMBI connector
– Connection of 20-pos. modules via two cables, each with a 10-pos. COMBI connector
– Connection of 40-pos. modules via 40 individual wires in rope structure (not assembled)
– Connection of 20-pos. modules via 20 individual wires in rope structure (not assembled)

The front adapters have the following features:

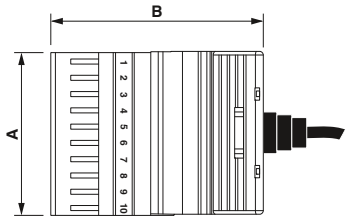
– Can be screwed on/snapped in with the I/O module
– Suitable for all common S7-300 modules, up to max. 250 V AC/DC, 6 A
– Universal 1:1 connection
– Numerically marked wires/connectors

Combination example:

A front adapter with punched-on 10-pos. COMBI connectors can be combined with the following modular terminal blocks for field connection:

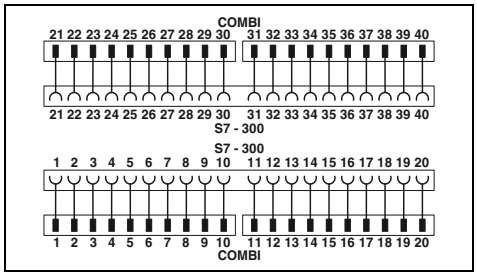
– 3045017 UT 2,5/1P
– 3210033 PT 2,5/1P
– 3040012 ST 2,5/1P
– 3040766 ST 2,5-TWIN-MT/1P

You can find further versions, accessories, and combination options in Catalog 3 “Modular terminal blocks” in the “Plug-in COMBI connection solutions” section, or online at phoenixcontact.net/products.



	A	B
...4X10COMBI...	52	70
...2X10COMBI...		
...4X10 PT...	35	62
...2X10 PT...		

Front adapter with punched-on connectors for 40 plug-in modular terminal blocks



Technical data

Max. perm. operating voltage		≤ 250 V AC/DC
Max. perm. current carrying capacity per path		6 A (per single wire at 40°C) 4 A (per single wire at 60°C)
Max. perm. total current		20 A (per cable at 40°C) 16 A (per cable at 60°C)
Rated surge voltage		4 kV
Insulation		Basic insulation
Max. conductor resistance		39 Ω/km
Conductor cross section		AWG 21/0.5 mm²
Conductor structure: stranded wires / material		16/Cu uninsulated
Outside diameter		9 mm
Ambient temperature range		-20°C ... 60°C
Standards/regulations		DIN EN 50178,
Connection method	Front adapter	Can be plugged onto 40-pin I/O modules
	System cable	COMBICON connectors SP-H 2,5/10

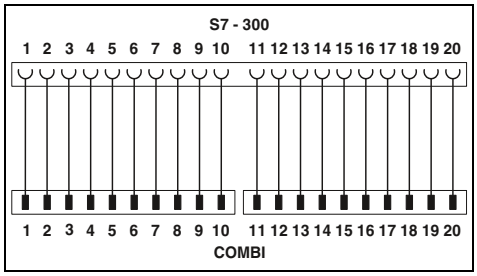
Ordering data

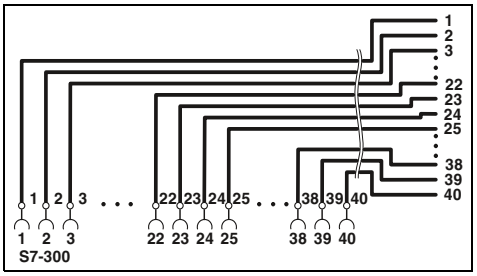
Description	Cable length	Type	Order No.	Pcs. / Pkt.
VIP - power adapter, for universal connection of the SIMATIC S7-300				
	0.5 m	**VIP-PA-PWR/4X10COMBI/ 0,5M/S7**	**2904702**	1
	1 m	**VIP-PA-PWR/4X10COMBI/ 1,0M/S7**	**2904703**	1
	1.5 m	**VIP-PA-PWR/4X10COMBI/ 1,5M/S7**	**2904704**	1
	2 m	**VIP-PA-PWR/4X10COMBI/ 2,0M/S7**	**2904705**	1
	2.5 m	**VIP-PA-PWR/4X10COMBI/ 2,5M/S7**	**2904706**	1
	3 m	**VIP-PA-PWR/4X10COMBI/ 3,0M/S7**	**2904707**	1
	4 m	**VIP-PA-PWR/4X10COMBI/ 4,0M/S7**	**2904708**	1
	5 m	**VIP-PA-PWR/4X10COMBI/ 5,0M/S7**	**2904709**	1
	6 m	**VIP-PA-PWR/4X10COMBI/ 6,0M/S7**	**2904710**	1
	8 m	**VIP-PA-PWR/4X10COMBI/ 8,0M/S7**	**2904711**	1
	10 m	**VIP-PA-PWR/4X10COMBI/10,0M/S7**	**2904712**	1

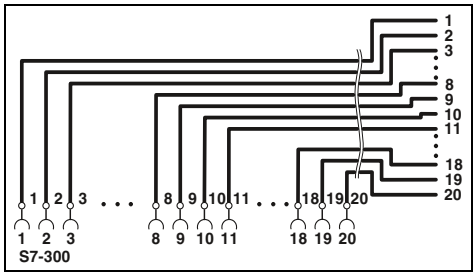
Front adapter with punched-on connectors for 20 plug-in modular terminal blocks

Front adapter with 40 open cable ends

Front adapter with 20 open cable ends







Technical data

≤ 250 V AC/DC
6 A (per single wire at 40°C)
4 A (per single wire at 60°C)
20 A (per cable at 40°C)
16 A (per cable at 60°C)
4 kV
Basic insulation
39 Ω/km
AWG 21/0.5 mm²
16/Cu uninsulated
9 mm
-20°C ... 60°C
DIN EN 50178,
Can be plugged onto 20-pin I/O modules
COMBICON connectors SP-H 2,5/10

Ordering data

Type	Order No.	Pcs. / Pkt.
VIP-PA-PWR/2X10COMBI/ 0,5M/S7	2904713	1
VIP-PA-PWR/2X10COMBI/ 1,0M/S7	2904714	1
VIP-PA-PWR/2X10COMBI/ 1,5M/S7	2904715	1
VIP-PA-PWR/2X10COMBI/ 2,0M/S7	2904716	1
VIP-PA-PWR/2X10COMBI/ 2,5M/S7	2904717	1
VIP-PA-PWR/2X10COMBI/ 3,0M/S7	2904718	1
VIP-PA-PWR/2X10COMBI/ 4,0M/S7	2904719	1
VIP-PA-PWR/2X10COMBI/ 5,0M/S7	2904720	1
VIP-PA-PWR/2X10COMBI/ 6,0M/S7	2904721	1
VIP-PA-PWR/2X10COMBI/ 8,0M/S7	2904722	1
VIP-PA-PWR/2X10COMBI/10,0M/S7	2904723	1

Technical data

≤ 250 V AC/DC
6 A (per single wire at 40°C)
4 A (per single wire at 60°C)
20 A (per cable at 40°C)
16 A (per cable at 60°C)
2.3 kV
Basic insulation
39 Ω/km
AWG 21/0.5 mm²
16/Cu uninsulated
13 mm
-20°C ... 60°C
DIN EN 50178,
Can be plugged onto 40-pin I/O modules
Open cable end

Ordering data

Type	Order No.	Pcs. / Pkt.
VIP-PA-PWR/40XOE/ 1,0M/S7	2904731	1
VIP-PA-PWR/40XOE/ 2,0M/S7	2904732	1
VIP-PA-PWR/40XOE/ 3,0M/S7	2904733	1
VIP-PA-PWR/40XOE/ 4,0M/S7	2904734	1
VIP-PA-PWR/40XOE/ 6,0M/S7	2904735	1
VIP-PA-PWR/40XOE/ 8,0M/S7	2904736	1
VIP-PA-PWR/40XOE/10,0M/S7	2904737	1

Technical data

≤ 250 V AC/DC
6 A (per single wire at 40°C)
4 A (per single wire at 60°C)
20 A (per cable at 40°C)
16 A (per cable at 60°C)
2.3 kV
Basic insulation
39 Ω/km
AWG 21/0.5 mm²
16/Cu uninsulated
9 mm
-20°C ... 60°C
DIN EN 50178,
Can be plugged onto 20-pin I/O modules
Open cable end

Ordering data

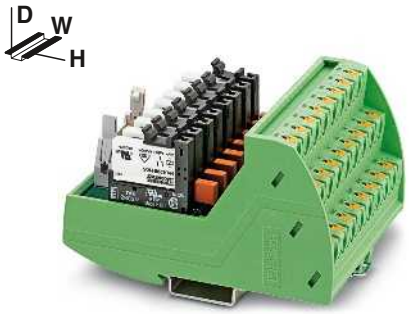
Type	Order No.	Pcs. / Pkt.
VIP-PA-PWR/20XOE/ 1,0M/S7	2904724	1
VIP-PA-PWR/20XOE/ 2,0M/S7	2904725	1
VIP-PA-PWR/20XOE/ 3,0M/S7	2904726	1
VIP-PA-PWR/20XOE/ 4,0M/S7	2904727	1
VIP-PA-PWR/20XOE/ 6,0M/S7	2904728	1
VIP-PA-PWR/20XOE/ 8,0M/S7	2904729	1
VIP-PA-PWR/20XOE/10,0M/S7	2904730	1

VIP output module

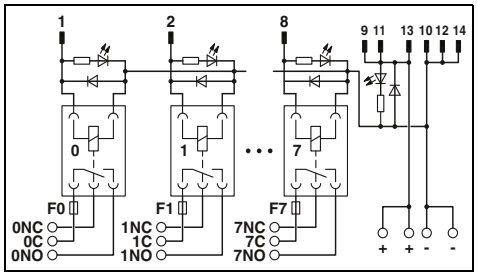
These VIP VARIOFACE output modules are used in combination with the respective front adapters. Like the front adapters, the modules are connected via 14-pos. system cables.

Features:

- Plug-in miniature relays, each with a PDT contact
- LED status display for each signal path and supply voltage
- Free-wheeling diode for each signal path
- Push-in connection



Output module with 8 miniature relays, 1 PDT and fuse per output circuit



Technical data

Coil side		
Operating voltage U_N		24 V DC
Typ. input current at U_N		9 mA
Typ. response time at U_N		5 ms
Typ. release time at U_N		8 ms
Input circuit		Free-wheeling diode
Status display/channel		Yellow LED
Connection method		IDC/FLK pin strip (2.54 mm)
No. of pos.		14
Contact side		
Contact type		Single contact, 1-PDT
Contact material		AgSnO
Max. switching voltage		250 V AC/DC
Min. switching voltage		12 V AC/DC
Limiting continuous current		5 A (observe derating)
Min. switching current		10 mA
Max. interrupting rating:	24 V DC	140 W
	48 V DC	20 W
	60 V DC	18 W
	110 V DC	23 W
	220 V DC	40 W
	250 V AC	1500 VA
Connection method		Push-in connection
Connection data solid/stranded/AWG		0.14 ... 2.5 mm^2/0.14 ... 2.5 mm^2/26 - 14
General data		
Ambient temperature (operation)		-20°C ... 60°C
Nominal operating mode		100% operating factor
Mechanical service life		2 x 10^7 cycles
Standards/regulations		DIN EN 50178
Mounting position		Any
Mounting		In rows with zero spacing
Dimensions	H / D	109.8 mm/63 mm
EMC note		Class A product, see page 443

Ordering data

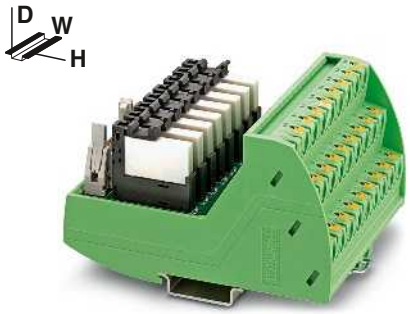
Description	Module width W	Type	Order No.	Pcs. / Pkt.
VARIOFACE output module, with eight miniature relays, plugged, for 24 V DC (incl. relays)	87.6	**VIP-8RPT-24DC/21/D0/FU/PLC**	**2903601**	1

VIP input module

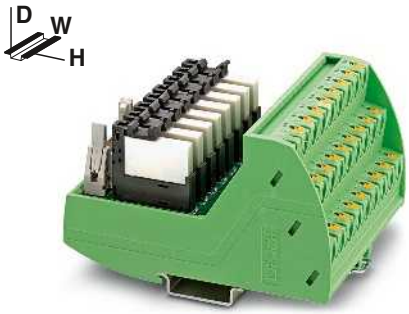
These VIP VARIOFACE input modules are used in combination with the respective front adapters. Like the front adapters, the modules are connected via 14-pos. system cables.

Features:

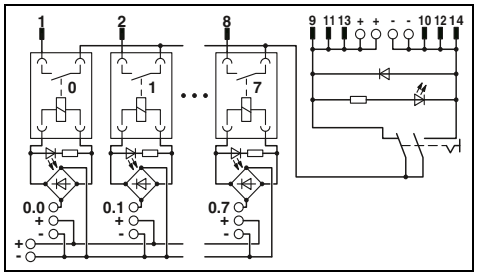
- Plug-in miniature relays, each with an N/O contact
- LED status display for each signal path and supply voltage
- Free-wheeling diode for each signal path
- Push-in connection

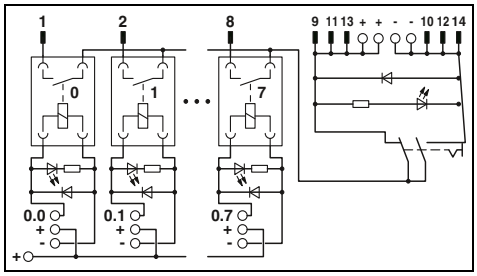


Digital input module with 8 channels for 24 V DC



Digital input module with 8 channels for 120 V AC





	Technical data	Technical data
Coil side		
Operating voltage U_N	24 V DC ±10% (Supply, 2 A)	120 V AC ±10% (Supply, 2 A)
Typ. input current at U_N	9 mA (per channel)	3.5 mA (per channel)
Typ. response time at U_N	5 ms	6 ms
Typ. release time at U_N	8 ms	15 ms
Input circuit	Free-wheeling diode	Free-wheeling diode
Status display/channel	Yellow LED	Yellow LED
Connection method	Push-in connection	Push-in connection
Connection data solid/stranded/AWG	0.14 ... 2.5 mm^2/0.14 ... 2.5 mm^2/26 - 14	0.14 ... 2.5 mm^2/0.14 ... 2.5 mm^2/26 - 26
Contact side		
Contact type	1 N/O contact	1 N/O contact
Contact material	AgSnO, hard gold-plated	AgSnO, hard gold-plated
Limiting continuous current	50 mA	50 mA
Connection method	IDC/FLK pin strip (2.54 mm)	IDC/FLK pin strip (2.54 mm)
No. of pos.	14	14
General data		
Ambient temperature (operation)	-20°C ... 60°C	-20°C ... 60°C
Nominal operating mode	100% operating factor	100% operating factor
Mechanical service life	2 x 10^7 cycles	2 x 10^7 cycles
Standards/regulations	DIN EN 50178	DIN EN 50178
Mounting position	Any	Any
Mounting	In rows with zero spacing	In rows with zero spacing
Dimensions H / D	109.8 mm/63 mm	109.8 mm/63 mm
EMC note	Class A product, see page 443	Class A product, see page 443

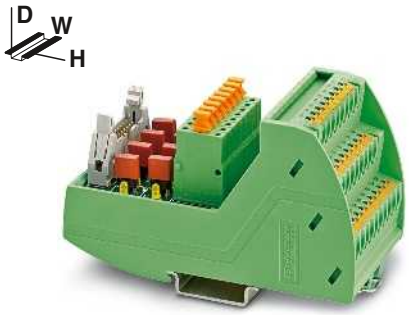
Description	Module width W	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
VARIOFACE interface module, for eight channels,							
24 V DC (incl. relays)	92.7	**VIP-8RPT-24DC/1AU/DI/PLC**	**2903600**	1			
120 V AC (incl. relays)	92.7				**VIP-8RPT-120AC/1AU/DI/PLC**	**2904576**	1

Emerson DeltaV
VIP controller board with fuses for 8 channels

System-specific interface module for use in combination with the respective system cables. The controller board is connected to 8-channel modules through 16-position "mass termination blocks" with flat ribbon cable connection.

Features:

- Fuse per channel
- Separate equipotential terminals per channel
- Knife disconnection for each channel
- Push-in connection



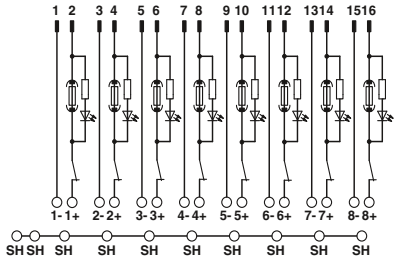
Interface module with fuses for 16-pos. mass termination block

Technical data

Max. perm. operating voltage		24 V DC
Max. perm. current (per branch)		63 mA (in as supplied state, with one 63 mA fuse)
Ambient temperature (operation)		-20°C ... 60°C
Mounting position		Any
Standards/regulations		DIN EN 50178,
Connection method	Field level	Push-in connection
	Controller level	IDC/FLK pin strip (2.54 mm)
Connection data solid/stranded/AWG		0.14 ... 2.5 mm²/0.14 ... 2.5 mm²/26 - 14
Dimensions	H / D	109.8 mm/63 mm

Ordering data

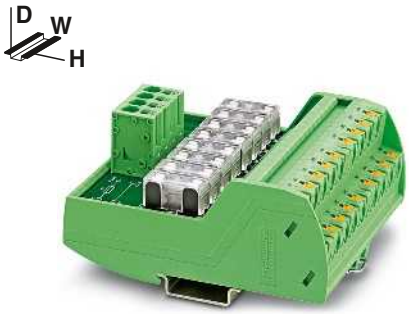
Description	No. of pos.	Module width W	Type	Order No.	Pcs. / Pkt.
Interface module for 16-pos. mass termination block					
	16	57.1 mm	**VIP-PT/FLK16/DS/FU/LED/AN/DV**	**2903599**	1



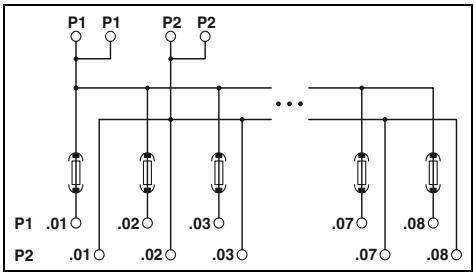
Connection scheme VIP-PT/FLK16/DS/FU/LED/AN/DV

VIP potential distributor with fuses

The VIP-2/PT/PDM-2/16/FU 6.3A module has the following features:
– Two potential levels
– P1 potential has 6.3 A fusing
– Separate supply
– Consecutive labeling
– Push-in connection



Push-in connection and 2 potential levels



Technical data

Operating voltage	250 V AC/DC
Max. perm. current (per branch)	6.3 A (fuse limited)
Total current	30 A (per potential)
Ambient temperature (operation)	-20°C ... 60°C
Mounting position	Any
Standards/regulations	IEC 60664, DIN EN 50178, IEC 62103
Supply connection data solid/stranded/AWG	0.2 - 10 mm^2/0.2 - 6 mm^2/24 - 8
Distribution connection data solid/stranded/AWG	0.14 - 2.5 mm^2/0.14 - 2.5 mm^2/26 - 14
Dimensions H / D	109.8 mm/51 mm

Ordering data

Description	No. of pos.	Module width W	Type	Order No.	Pcs. / Pkt.
VARIOFACE module with 2 busbars for potential distribution					
- 2 power terminal blocks/8 distributor blocks		97.70	**VIP-2/PT/PDM-2/16/FU 6.3A**	**2903603**	1

Industrial Ethernet

Power over Ethernet switch Page 376
Lean Managed Switch Page 378
Smart Managed Switches Page 379
Advanced Managed Switches Page 380

Industrial Ethernet

Redundancy modules acc. to IEC 61850/IEEE 1613 Page 382
Managed Switches acc. to IEC 61850/IEEE 1613 Page 383
Media module Page 386

Industrial Ethernet

WLAN access point Page 387

Industrial communication technology

Media converters for Ethernet applications in realtime Page 388
COM server for extreme fields of application Page 390
Patch panel Page 392

Industrial communication technology

Remote signaling and remote control system Page 394

Industrial communication technology

Fast connection plugs Page 396

Industrial communication technology

Wireless system for license-free use in Europe Page 398

Process infrastructure

Device couplers for field devices Page 399

Functional Safety

Multifunctional safety relays Page 400

Configurable safety modules

Safe relay extension module Page 402

Functional Safety

Safe I/O modules Page 404

Functional Safety

Safe analog value processing Page 406

I/O systems — Axioline F

Bus coupler Page 408
Digital and analog input and output modules Page 410
Temperature recording modules Page 414

I/O systems — Inline

M-bus master terminal Page 416

HMIs and industrial PCs

HMIs for maritime applications Page 418

HMIs and industrial PCs

Box PCs Page 420
Panel PCs Page 422
Outdoor panel PCs Page 424
IP65 panel PCs Page 426

Software

Visualization app Page 428
Multiplexer function for retrofitting Page 429

Controllers

Standard logic modules Page 430
Programmable logic relay system Page 354

Power over Ethernet switch

Gigabit switch

The FL SWITCH 1708 M12 POE offers a unique combination of a high degree of protection, gigabit transmission, and Power over Ethernet.

The IP67 switches can be installed in a distributed manner and enable connection of Power over Ethernet devices with gigabit transmission.

Features:

- Connection via gigabit M12 plug CAT6A
- Flexible use of PoE devices thanks to powerful 30 W PoE ports (IEEE 802.3at)
- -40°C ... +70°C ambient temperature
- Gigabit support
- Jumbo frames with up to 9720 bytes
- Rugged metal housing
- IP67 protection
- Easy panel mounting

Ethernet

8 ports (M12 socket), for wall mounting

Technical data

Ethernet interface	
Number of ports	8 (M12 socket)
Transmission speed	10/100/1000 Mbps
Connection method	M12 connector, 8-pos.
Function	
Basic functions	Store-and-forward switch, 10/100/1000 Mbps, auto negotiation, complies with standard IEEE 802.3, 4 priority classes according to IEEE 802.1p, PoE according to IEEE 802.3at/802.3af, jumbo frames up to 9720 bytes
Status and diagnostic indicators	3 status LEDs per Ethernet port: LINK, Activity, and PoE status. Supply voltage U_{S1} and U_{S2} (redundant supply voltage) as well as FAIL. PoE Power Status.
Network expansion parameters	
Cascading depth	Network, linear, and star structure: any
Maximum conductor length (twisted pair)	100 m
Power supply	
Supply voltage	24 V DC (M12 connector)
Residual ripple	3.6 V_{PP}
Supply voltage range	18 V DC ... 32 V DC
Typical current consumption	300 mA (at U_S = 24 V DC)
General data	
Weight	2300 g
Width	176 mm
Height	112 mm
Depth	100 mm
Degree of protection	IP65/IP66/IP67
Ambient temperature (operation)	-40°C ... 70°C (non-condensing)
Permissible humidity (operation)	10% ... 95%
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2:2005

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Gigabit Power-over-Ethernet switch			
	FL SWITCH 1708 M12 POE	**2701883**	1

Managed switches

Lean Managed Switch

Maximum possible diagnostics in the minimum amount of space. The compact Ethernet switch is optimized for PROFINET applications in standard machine production.

The switch supports the functions required by PROFINET Class A, such as PTCP filter and Quality of Service. In addition, the Lean Managed Switch features important management functions such as a broadcast limiter, port mirroring, as well as the non-proprietary redundancy protocol RSTP.

Ethernet

8 RJ45 ports

Features:

- Compact housing
- PROFINET support
- RSTP
- PTCP filter
- Web-based management, SNMP
- Configuration can be stored externally
- Configurable alarm contact

Technical data

Ethernet interface	
Number of ports	8 (RJ45 ports)
Transmission speed	10/100 Mbps
Connection method	RJ45
Other connections	
Serial (RS-232)	RS-232-C, 6-pos. MINI-DIN socket (PS/2)
Function	
Basic functions	Store-and-forward switch complies with IEEE 802.3 2, priority classes according to IEEE 802.1 P, TCP/IP protocol, BootP-compatible, port mirroring, integrated web server function, multicast filtering, IGMP snooping, VLAN, Rapid Spanning Tree (RSTP), DHCP server, PTCP filter
Supported browsers	Internet Explorer 5.5 or higher
SNMP – Simple Network Management Protocol	Supported SNMP-MIBs: Enterprise, MIB II, Bridge
Redundancy	Rapid Spanning Tree 802.1w, Fast Ring Detection
Status and diagnostic indicators	2 status LEDs per Ethernet port: Link and Status Activity, 100 Mbps, full duplex, supply voltage U_{S1} and U_{S2} (redundant supply voltage)
Network expansion parameters	
Cascading depth	Network, linear, and star structure: any
Maximum conductor length (twisted pair)	100 m
Power supply	
Supply voltage	24 V DC
Residual ripple	3.6 V_{PP}
Supply voltage range	18.5 V DC ... 30.5 V DC
Typical current consumption	250 mA (at U_S = 24 V DC)
General data	
Weight	230 g
Width	45 mm
Height	99 mm
Depth	112 mm
Degree of protection	IP20
Ambient temperature (operation)	0°C ... 55°C
Permissible humidity (operation)	30% ... 95% (non-condensing)
EMC note	Class A product, see page 443
Noise emission	EN 61000-6-3/-4
Noise immunity	EN 61000-6-2:2005

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Lean Managed Switch			
	FL SWITCH LM 8TX-B	**2989446**	1

Smart Managed Switches

The Smart Managed Narrow switch **FL SWITCH SMN 8TX-PN** is an Ethernet switch suitable for industrial applications with eight Fast Ethernet ports in RJ45 format. The switch is optimized for use in PROFINET RT and EtherNet/IP™ applications.

The switch has PROFINET mode activated by default. You can easily and quickly switch to EtherNet/IP™ or universal mode using the SMART button.

Ethernet

PROFI NET

8 RJ45 ports

Features:
- Narrow design
- VLANs
- RSTP
- MRP client
- MRP master with FL MEM PLUG/MRM configuration memory as an option
- Web-based management, SNMP
- PROFINET device function
- LLDP

Technical data

Ethernet interface	
Number of ports	8 (RJ45 ports)
Transmission speed	10/100 Mbps
Connection method	RJ45
Other connections	
Serial (RS-232)	RS-232-C, 6-pos. MINI-DIN socket (PS/2)
Function	
Basic functions	Store-and-forward switch complies with IEEE 802.3 4 priority classes in acc. with IEEE 802.1 P TCP/IP protocol, BootP-capable, port-mirroring, integrated web server function, multicast filtering, IGMP snooping, VLAN, Rapid Spanning Tree (RSTP), PROFINET Device, Media Redundancy Protocol (MRP).
Status and diagnostic indicators	2 status LEDs per Ethernet: LINK and selectable Status Activity, 100 Mbps, full duplex, supply voltage U_{S1} and U_{S2} (redundant supply voltage) and FAIL. FD/FO LED indicates duplex mode for Twisted-Pair ports and the system reserve for optical interfaces.
Network expansion parameters	
Cascading depth	Network, linear, and star structure: any
Maximum conductor length (twisted pair)	100 m
Power supply	
Supply voltage	24 V DC
Residual ripple	3.6 V_{PP}
Supply voltage range	18 V DC ... 32 V DC
Typical current consumption	320 mA (at U_S = 24 V DC)
General data	
Weight	720 g
Width	56 mm
Height	133 mm
Depth	125 mm
Degree of protection	IP20
Ambient temperature (operation)	0°C ... 55°C (non-condensing)
Permissible humidity (operation)	5% ... 95% (non-condensing)
Noise emission	EN 61000-6-3 +A11
Noise immunity	EN 61000-6-2:2005

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Smart Managed Narrow Switch			
	FL SWITCH SMN 8TX-PN	**2989501**	1

Accessories

Configuration memory, replaceable	**FL MEM PLUG**	**2891259**	1
Configuration memory, can be replaced with MRM function	**FL MEM PLUG/MRM**	**2891275**	1

Advanced Managed Switches

The automation switches in the 7000 series are the first switches to support direct integration into a Device Level Ring (DLR). Direct integration of the switches into the DLR is a considerable advantage when installing and operating EtherNet/IP™ networks.

Up to six devices can be integrated into a DLR via the FL SWITCH 7000. In system networks, the switches allow the redundant rings to be connected to the higher-level networking level. In this way, you can create networks with minimal switch-over times of less than three milliseconds (< 3 ms).

The Managed Switches of the 7000 series communicate directly via the Common Industrial Protocol (CIP) in the EtherNet/IP™ network. Via CIP, you can integrate the switch into an EtherNet/IP™ control system from where it can be configured and diagnosed.

Pure copper versions and versions with up to three fiberglass ports are available for flexible use.

Features:

– Narrow design
– -40°C ... +70°C ambient temperature
– VLANs
– Common Industrial Protocol (CIP)
– Device Level Ring (DLR)
– RSTP
– Web-based management

Ethernet

EtherNet/IP

8 RJ45 ports

Technical data

Ethernet interface	
Number of ports	8 (RJ45 ports)
Transmission speed	10/100 Mbps
Connection method	RJ45
Fiber optic interface	
Number of ports	-
Transmission speed	-
Connection method	-
Transmission length	-
Fiber optic interface	
Number of ports	-
Transmission speed	-
Connection method	-
Transmission length	-
Function	
Basic functions	Store-and-forward switch complies with IEEE 802.3, 8 priority classes in acc. with IEEE 802.1 P (QoS), N:1 port mirroring, IGMP snooping, VLANs, Rapid Spanning Tree (RSTP), Large Tree Support, Fast Ring Detection (FRD), link aggregation (802.3ad), MAC-based port security, DHCP option 82, LLDP, ACD, Device Level Ring (DLR), Common Industrial Protocol (CIP)
Status and diagnostic indicators	2 status LEDs per Ethernet: LINK and selectable status LED: activity, 100 Mbps, full duplex. Supply voltage: U_{S1} and U_{S2} (redundant supply voltage) and FAIL. EtherNet/IP™ status LED: Net, Mod
Network expansion parameters	
Cascading depth	Network, linear, and star structure: any
Maximum conductor length (twisted pair)	100 m
Power supply	
Supply voltage	24 V DC
Residual ripple	3.6 V_{PP}
Supply voltage range	12 V DC ... 60 V DC
Typical current consumption	350 mA (at U_S = 24 V DC)
General data	
Weight	900 g
Width	60 mm
Height	130 mm
Depth	135.5 mm
Degree of protection	IP20
Ambient temperature (operation)	-40°C ... 70°C
Permissible humidity (operation)	10% ... 95% (non-condensing)
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2:2005

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Advanced Managed Switch - 8 RJ45 ports - 6 RJ45 ports, 2 SC FO ports (multi-mode) - 5 RJ45 ports, 2 SC fiber optic ports (multi-mode), 1 SC fiber optic port (single-mode	**FL SWITCH 7008-EIP**	**2701418**	1

Accessories

Parameterization memory, replaceable	**SD FLASH 512MB**	**2988146**	1

Ethernet

EtherNet/IP

6 RJ45 ports and
2 fiber optic ports (multi-mode)

Technical data

6 (RJ45 ports) 10/100 Mbps RJ45
2 (SC multi-mode) 100 Mbps (full duplex) SC 11000 m (fiberglass with F-G 62.5/125 0.7 dB/km F1000)
- - - -
Store-and-forward switch complies with IEEE 802.3, 8 priority classes in acc. with IEEE 802.1 P (QoS), N:1 port mirroring, IGMP snooping, VLANs, Rapid Spanning Tree (RSTP), Large Tree Support, Fast Ring Detection (FRD), link aggregation (802.3ad), MAC-based port security, DHCP option 82, LLDP, ACD, Device Level Ring (DLR), Common Industrial Protocol (CIP) 2 status LEDs per Ethernet: LINK and selectable status LED: activity, 100 Mbps, full duplex. Supply voltage: U_{S1} and U_{S2} (redundant supply voltage) and FAIL. EtherNet/IP™ status LED: Net, Mod
Network, linear, and star structure: any 100 m
24 V DC 3.6 V_{PP} 12 V DC ... 60 V DC 470 mA (at U_S = 24 V DC)
990 g 60 mm 130 mm 135.5 mm IP20 -40°C ... 70°C 10% ... 95% (non-condensing) EN 61000-6-4 EN 61000-6-2:2005

Ordering data

Type	Order No.	Pcs. / Pkt.
FL SWITCH 7006/2FX-EIP	**2701419**	1

Accessories

SD FLASH 512MB	**2988146**	1

Ethernet

EtherNet/IP

5 RJ45 ports and
1 fiber optic port (multi-mode),
2 fiber optic ports (single-mode)

Technical data

5 (RJ45 ports) 10/100 Mbps RJ45
1 (SC multi-mode) 100 Mbps (full duplex) SC 11000 m (fiberglass with F-G 62.5/125 0.7 dB/km F1000)
2 (SC single-mode) 100 Mbps (full duplex) SC 36000 m (fiberglass with F-G 9/125 0.36 dB/km)
Store-and-forward switch complies with IEEE 802.3, 8 priority classes in acc. with IEEE 802.1 P (QoS), N:1 port mirroring, IGMP snooping, VLANs, Rapid Spanning Tree (RSTP), Large Tree Support, Fast Ring Detection (FRD), link aggregation (802.3ad), MAC-based port security, DHCP option 82, LLDP, ACD, Device Level Ring (DLR), Common Industrial Protocol (CIP) 2 status LEDs per Ethernet: LINK and selectable status LED: activity, 100 Mbps, full duplex. Supply voltage: U_{S1} and U_{S2} (redundant supply voltage) and FAIL. EtherNet/IP™ status LED: Net, Mod
Network, linear, and star structure: any 100 m
24 V DC 3.6 V_{PP} 12 V DC ... 60 V DC 520 mA (at U_S = 24 V DC)
1000 g 60 mm 130 mm 135.5 mm IP20 -40°C ... 70°C 10% ... 95% (non-condensing) EN 61000-6-4 EN 61000-6-2:2005

Ordering data

Type	Order No.	Pcs. / Pkt.
FL SWITCH 7005/FX-2FXSM-EIP	**2701420**	1

Accessories

SD FLASH 512MB	**2988146**	1

Redundancy modules according to IEC 61850/IEEE 1613

Energy networks rely on particularly high fault tolerance. The new PRP redundancy modules enable parallel redundancy without switch-over time in the event of a fault. You can therefore ensure maximum availability of your network.

Interruption-free communication

- The FL RED 2000E redundancy module is equipped with the Parallel Redundancy Protocol (PRP)
- Interoperability in high-availability networks is possible, as required in the energy sector
- The system continues to operate in the case of redundancy without switch-over time

Robust design

- Developed according to the requirements of IEC 61850-3 and IEEE 1613: complies with the high requirements for network technology in this area
- Robust to withstand voltage fluctuations due to a wide input voltage range of 18 V DC ... 58 V DC
- Rugged metal housing
- -40°C ... 70°C operating termperature

Easy handling

- Design of a high-availability network without configuration
- LED indicators provide on-site information regarding the status of the network and redundancy
- Alarm signal contact indicates the status of the module and network

Ethernet

IEC 61850-3

Redundancy module

Technical data

	FL RED 2003E PRP	FL RED 2001E PRP 2LC
Ethernet interface		
Number of ports	3 (RJ45 ports)	1 (RJ45 port)
Transmission speed	10/100 Mbps	
Transmission length	100 m (per segment)	
Fiber optic interface		
Interface	-	Ethernet FO
Number of ports	-	2
Transmission speed	-	100 Mbps (full duplex)
Connection method	-	LC
Transmission length	-	2 km (per segment)
Function		
Basic functions	Ethernet redundancy module for the Parallel Redundancy Protocol	
Status and diagnostic indicators	LEDs: U_{S1}, U_{S2} (redundant voltage supply), link and activity per port	
Power supply		
Supply voltage	24 V DC (redundant) 48 V DC (redundant)	
Residual ripple	3.6 V_{PP}	
Supply voltage range	18 V DC ... 58 V DC	
Typical current consumption	250 mA (@24 V DC)	
General data		
Weight		
Width	40 mm	
Height	100 mm	
Depth	109 mm	
Degree of protection	IP20	
Ambient temperature (operation)	-40°C ... 70°C	
Permissible humidity (operation)	10% ... 95% (non-condensing)	
Noise emission	EN 61000-6-4	
Noise immunity	IEC 61850-3, IEEE 1613, EN 61000-6-2: 2005	

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Redundancy module			
- 3 RJ45 ports	**FL RED 2003E PRP**	**2701863**	1
- 1 RJ45 port, 2 LC fiber optic ports (multi-mode)	**FL RED 2001E PRP 2LC**	**2701864**	1

Managed Switches according to IEC 61850/IEEE 1613

Ethernet switches control Ethernet traffic and maximize uptime. Operation in extreme environments is assured with a wide temperature range and an electrical noise immunity up to four times that of normal industrial switches.

Features:

- DIN rail mounting
- Mix IEEE and Extended Ring redundancy options which provide 15 ms recovery time for hundreds of switches
- Comprehensive IEEE security and performance functions
- Unique web customization, diagnostic viewing mode and, help pages simplify maintenance
- Optional PRP redundancy modules provide 0 ms recovery times

Ethernet

IEC 61850-3

16 RJ45 ports

Technical data

	FL SWITCH 3016E	FL SWITCH 3012E-2SFX
Ethernet interface		
Number of ports	16 (RJ45 ports)	12 (RJ45 ports)
Transmission speed	10/100 Mbps (with auto negotiation)	
Fiber optic interface		
Number of ports	-	2 (FO ports)
Transmission speed	-	100 Mbps (full duplex)
Connection method	-	SFP ports
Function		
Basic functions	Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts	
Status and diagnostic indicators	LEDs: U_{S1}, U_{S2} (redundant voltage supply), link and activity per port	
Network expansion parameters		
Cascading depth	Network, linear, and star structure: any	
Maximum conductor length (twisted pair)	100 m	
Power supply		
Supply voltage	24 V DC	
Residual ripple	3.6 V_{PP}	
Supply voltage range	12 V DC ... 48 V DC	
Typical current consumption	312 mA (24 V DC)	
General data		
Weight		
Width	66 mm	
Height	173 mm	
Depth	140 mm	
Degree of protection	IP20	
Ambient temperature (operation)	-40°C ... 70°C	
Permissible humidity (operation)	5% ... 95% (non-condensing)	
EMC note	Class A product, see page 443	
Noise emission	EN 61000-6-4	
Noise immunity	IEC 61850-3, IEEE 1613, EN 61000-6-2: 2005	

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Managed switch			
- 16 RJ45 ports	**FL SWITCH 3016E**	**2891066**	1
- 12 RJ45 and 2 SFP FO ports	**FL SWITCH 3012E-2SFX**	**2891067**	1

Accessories

Redundancy module			
- 3 RJ45 ports	**FL RED 2003E PRP**	**2701863**	1
- 1 RJ45 port, 2 LC fiber optic ports (multi-mode)	**FL RED 2001E PRP 2LC**	**2701864**	1

Managed Switches according to IEC 61850/IEEE 1613, 19" rack-mount

The FL SWITCH 4800E line of managed switches combines 24 ports of 10/100 Mbps device connections with four 10/100/1000 Mbps uplink ports for a total of 28 ports. Application flexibility is assured with different mixes of copper/fiber and fiber types, gigabit fiber/copper "combination" ports and modular power supplies. Operation in extreme environments is assured with a wide temperature range and an electrical noise immunity up to four times that of normal industrial switches.

Features:

- All switches have four Gigabit RJ45/SFP combination ports for supervisory or high throughput field network connections
- Flexible cabling using eight or 24 10/100 Mbps RJ45 connections with up to 16 fiber (100 Mbps) fiber connections
- Mix IEEE and Extended Ring redundancy options which provide 15 ms recovery time for hundreds of switches
- Optional PRP redundancy modules provide 0 ms recovery times
- Comprehensive IEEE security and performance functions
- Unique web customization, diagnostic viewing mode and help pages simplify maintenance
- Supports up to two modular, hot-swappable power supplies for maximum power flexibility and uptime
- Electrical noise immunity per IEC 61850-3 and IEEE 1613

Notes:

[1]) Requires the installation of at least one FL SWITCH 4800E-P1 or FL SWITCH 4800E-P5 for operation.

Ethernet

IEC 61850-3

24 RJ45 ports and 4 gigabit combo (SFP or RJ45) ports

Technical data

Ethernet interface	
Number of ports	24 (RJ45 ports)
Transmission speed	10/100 Mbps
Ethernet (RJ45/FO combo)	
Interface	Ethernet (RJ45/FO combo)
Connection method	RJ45, shielded or SFP module (LC)
Note on connection method	Auto negotiation and autocrossing (RJ45 interface)
Fiber optic interface	
Number of ports	-
Transmission speed	-
Connection method	-
Transmission length	-
Function	
Basic functions	Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts
Status and diagnostic indicators	LEDs: U_{S1}, U_{S2} (redundant voltage supply), link and activity per port
Network expansion parameters	
Cascading depth	Network, linear, and star structure: any
Maximum conductor length (twisted pair)	100 m
Power supply	
Power supply connection	From FL SWITCH 4800E-P...
Supply voltage	-
Nominal input voltage range	-
General data	
Weight	4494 g
Width	442 mm
Height	44 mm
Depth	375 mm
Degree of protection	IP20
Ambient temperature (operation)	-40°C ... 70°C
Permissible humidity (operation)	5% ... 95% (non-condensing)
Noise emission	EN 61000-6-4
Noise immunity	IEC 61850-3, IEEE 1613, EN 61000-6-2: 2005

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Managed switch, 19-inch rack mounted - 24 RJ45 and 4 GB combo ports	**FL SWITCH 4824E-4GC[1])**	**2891072**	1
Managed switch, 19-inch rack mounted with 8 RJ45 and 4 GB combo ports - 16 fiber optic (LC duplex) ports - 16 fiber optic (LC single-mode) ports - 16 fiber optic (SC duplex) ports - 16 fiber optic (SC single-mode) ports			

Accessories

Power supply, modular redundant			
- 48 V DC nominal	**FL SWITCH 4800E-P1**	**2891075**	1
- 230 V nominal	**FL SWITCH 4800E-P5**	**2891076**	1
Redundancy module			
- 3 RJ45 ports	**FL RED 2003E PRP**	**2701863**	1
- 1 RJ45 port, 2 LC fiber optic ports (multi-mode)	**FL RED 2001E PRP 2LC**	**2701864**	1

Ethernet

IEC 61850-3

**8 RJ45 ports,
4 gigabit combo (SFP or RJ45) ports,
and 16 LC FO ports**

Technical data

FL SWITCH 4808E-16FX LC-4GC[1])	FL SWITCH 4808E-16FX SM LC-4GC[1])	
8 (RJ45 ports)		
10/100 Mbps		
Ethernet (RJ45/FO combo)		
RJ45, shielded or SFP module (LC)		
Auto negotiation and autocrossing (RJ45 interface)		
16 (multi-mode)	16 (single-mode)	
100 Mbps (full duplex)		
LC		
2 km (typical)	40 km (typical)	
Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts		
LEDs: U_{S1}, U_{S2} (redundant voltage supply), link and activity per port		
Network, linear, and star structure: any		
100 m		
From FL SWITCH 4800E-P...		
-		
-		
4706 g	4700 g	
442 mm		
44 mm		
375 mm		
IP20		
-40°C ... 70°C		
5% ... 95% (non-condensing)		
EN 61000-6-4		
IEC 61850-3, IEEE 1613, EN 61000-6-2: 2005		

Ordering data

Type	Order No.	Pcs. / Pkt.
FL SWITCH 4808E-16FX LC-4GC[1])	**2891073**	1
FL SWITCH 4808E-16FX SM LC-4GC[1])	**2891074**	1

Accessories

FL SWITCH 4800E-P1	**2891075**	1
FL SWITCH 4800E-P5	**2891076**	1
FL RED 2003E PRP	**2701863**	1
FL RED 2001E PRP 2LC	**2701864**	1

Ethernet

IEC 61850-3

**8 RJ45 ports,
4 gigabit combo (SFP or RJ45) ports,
and 16 SC FO ports**

Technical data

FL SWITCH 4808E-16FX-4GC[1])	FL SWITCH 4808E-16FX SM-4GC[1])	
8 (RJ45 ports)		
10/100 Mbps		
Ethernet (RJ45/FO combo)		
RJ45, shielded or SFP module (LC)		
Auto negotiation and autocrossing (RJ45 interface)		
16 (multi-mode)	16 (single-mode)	
100 Mbps (full duplex)		
SC		
2 km (typical)	40 km (typical)	
Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts		
LEDs: U_{S1}, U_{S2} (redundant voltage supply), link and activity per port		
Network, linear, and star structure: any		
100 m		
From FL SWITCH 4800E-P...		
-		
-		
4470 g	4680 g	
442 mm		
44 mm		
375 mm		
IP20		
-40°C ... 70°C		
5% ... 95% (non-condensing)		
EN 61000-6-4		
IEC 61850-3, IEEE 1613, EN 61000-6-2: 2005		

Ordering data

Type	Order No.	Pcs. / Pkt.
FL SWITCH 4808E-16FX-4GC[1])	**2891079**	1
FL SWITCH 4808E-16FX SM-4GC[1])	**2891080**	1

Accessories

FL SWITCH 4800E-P1	**2891075**	1
FL SWITCH 4800E-P5	**2891076**	1
FL RED 2003E PRP	**2701863**	1
FL RED 2001E PRP 2LC	**2701864**	1

IEC 61850-3

Power supply modules for 4800E switches

Technical data

FL SWITCH 4800E-P1	FL SWITCH 4800E-P5
-	
-	
-	
-	
-	
-	
-	
-	
-	
-	
-	
-	
48 V DC	230 V AC/DC
36 V DC ... 75 V DC	88 V DC ... 370 V DC 90 V AC ... 264 V AC
836 g	884 g
150 mm	
40 mm	
193 mm	
IP20	
-40°C ... 75°C	
5% ... 95% (non-condensing)	
-	
-	

Ordering data

Type	Order No.	Pcs. / Pkt.

Accessories

FL SWITCH 4800E-P1	**2891075**	1
FL SWITCH 4800E-P5	**2891076**	1

Fiber optic interface module

Rugged, small form-factor pluggable (SFP) modules provide a variety of fiber optic interfaces. They are inserted into SFP sockets on managed switches, customizing both quantity and type of fiber used.

Features:

– Supports 100 Mbps full duplex fiber communication
– Electrical noise immunity per IEC 61850-3 and IEEE 1613
– Wide temperature range

IEC 61850-3

SFP modules for transmission ranges up to 40 km

Technical data

	FL SFP FX	FL SFP FX SM
Fiber optic interface		
Number of ports	1 (LC multi-mode)	1 (LC single-mode)
Wavelength	1300 nm	
Transmission length	Typ. 2 km	Typ. 40 km
Function		
Basic functions	SFP module as FO port	
Power supply		
Power supply connection	via SFP slot	
General data		
Ambient temperature (operation)	-40°C ... 85°C (non-condensing)	
Permissible humidity (operation)	30% ... 95% (non-condensing)	

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Small form pluggable (SFP) fiber module (100 Mbps)			
- Multi-mode (2 km)	**FL SFP FX**	**2891081**	1
- Single-mode (40 km)	**FL SFP FX SM**	**2891082**	1

WLAN access point

The latest generation of WLAN modules offers maximum reliability, data throughput, and range.

Faster
– The new high-speed WLAN 5100 brings WLAN 802.11n to industrial applications and with it a data rate of up to 300 Mbps

Configuration
– Central cluster management enables the entire wireless network to be set up in just minutes

More reliable
– MiMo technology with three antennas for wireless communication that is more robust, faster, and covers a wider range

WLAN

WLAN access point/client 2.4 GHz, 5 GHz
802.11 a, b, g, n
Approval for Japan

	Technical data
Wireless interface	
Wireless standard	IEEE 802.11
Frequency band	2.4 GHz/5 GHz
Antenna connection method	RSMA (female)
Number	3
Antenna	
Assembly instructions	Antennas not included in scope of supply
Ethernet ports	
Number	2
Connection method	RJ45 socket
Power supply for module electronics	
Supply voltage	24 V DC
Connection method	Via COMBICON
Supply voltage range	10 V DC ... 36 V DC
Supply current	200 mA
Security	
	802.11i WPA PSK (preshared key) WPA2 AES TKIP Supports 802.1X/RADIUS MAC filter
Function	
Operating modes	Access point/client adapter/repeater/WDS bridge
Basic functions	SNMP (V2/V3), CLI, WPS, DHCP, DCP, BootP, HTTP, HTTPS, Syslog, SD card, dual FW image, 1 x DI, 1 x DO, 2 x Ethernet 10/100 Mbit, auto crossover, auto negotiation, MODE button
Configuration	Cluster management, web-based management, WPS
General data	
Weight	418 g
Width	40 mm
Height	109 mm
Depth	109 mm
Degree of protection	IP20
Ambient temperature (operation)	-25°C ... 60°C (extended temperature range on request)
Permissible humidity (operation)	10% ... 95% (non-condensing)
Air pressure (operation)	800 hPa ... 1080 hPa (up to 2000 m above mean sea level)
Shock in acc. with EN 60068-2-27/IEC 60068-2-27	30g
Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6	5g

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Wireless LAN Access Point - Approval for Japan	**FL WLAN 5102**	**2701850**	1

Accessories

Parameterization memory, Flash card without license	**SD FLASH 2GB**	**2988162**	1

Media converters

FL MC 2000T... media converters optimize the performance and reliability of industrial Ethernet applications and are optimized for use in extreme environments. Selectable port settings provide usability with a wider range of devices. Selectable low latency (700 ns) allows the media converter to be used in time-critical applications. Configurable link monitoring diagnostics increase network reliability.

Features:

- Optional multi-mode or single-mode SC duplex fiber optic connection at 100 Mbps
- DIP switch selectable auto negotiate or fixed port settings, data rate and half or full duplex
- DIP switch selectable store-and-forward or pass-through mode (low latency, 700 ns)
- Alarm contact provides power and link status diagnostics
- Link fault pass through (LFP) function for easy connection monitoring
- Wide operating temperature range (-40°C... 75°C)

Ethernet

Multi-mode fiberglass
SC duplex or B-FOC (ST®) connection

Technical data

Supply		
Supply voltage		12 V DC ... 48 V DC
Nominal current consumption		110 mA (24 V DC)
FO interface		
Wavelength		1310 nm
Transmission length Incl. 3 dB system reserve		9.6 km (fiberglass with F-G 50/125 0.7 dB/km F1200)
Signal LEDs		LNK/ACT
Switching output		Floating relay output
Ethernet interface		
Connection method		RJ45 socket, shielded
Transmission speed		10/100 Mbps
Link through		Link fault pass through
MDI-/MDI-X switchover		Auto-MDI(X)
Signal LEDs		LNK/ACT, 100
General data		
Ambient temperature (operation)		-40°C ... 75°C
Test voltage		500 V DC
Dimensions	W / H / D	28 mm/110 mm/70 mm

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
FO converter, for converting 10/100 BASE-TX to:			
Multi-mode fiberglass (1300 nm), SC duplex connection	**FL MC 2000T SC**	**2891315**	1
Multi-mode fiberglass (1300 nm), B-FOC (ST®) connection	**FL MC 2000T ST**	**2891316**	1
FO converter, for converting 10/100 BASE-TX to:			
Single-mode fiberglass (1300 nm), SC duplex connection			
Single-mode fiberglass (1300 nm), LC duplex connection			

Ethernet

Single-mode fiberglass
SC duplex connection

Technical data

12 V DC ... 48 V DC 110 mA (24 V DC)
1310 nm 20 km (fiberglass with F-G 9/125 0.3 dB/km) LNK/ACT Floating relay output
RJ45 socket, shielded 10/100 Mbps Link fault pass through Auto-MDI(X) LNK/ACT, 100
-40°C ... 75°C 500 V DC 28 mm/110 mm/70 mm

Ordering data

Type	Order No.	Pcs. / Pkt.
FL MC 2000T SM20 SC	**2891317**	1

Ethernet

Single-mode fiberglass
SC duplex connection

Technical data

12 V DC ... 48 V DC 110 mA (24 V DC)
1310 nm 40 km (fiberglass with F-G 9/125 0.3 dB/km) LNK/ACT Floating relay output
RJ45 socket, shielded 10/100 Mbps Link fault pass through Auto-MDI(X) LNK/ACT, 100
-40°C ... 75°C 500 V DC 28 mm/110 mm/70 mm

Ordering data

Type	Order No.	Pcs. / Pkt.
FL MC 2000T SM40 SC	**2891318**	1

Ethernet

IEC 61850-3

Single-mode fiberglass
LC duplex connection

Technical data

12 V DC ... 57 V DC 110 mA (24 V DC)
1300 nm 40 km (typical) LNK/ACT Floating relay output
RJ45 socket, shielded 100 Mbps Link fault pass through Auto-MDI(X) LNK/ACT, 100
-40°C ... 75°C 500 V DC 30 mm/130 mm/100 mm

Ordering data

Type	Order No.	Pcs. / Pkt.
FL MC 2000E SM40 LC	**2891156**	1

COM server for extreme fields of application

The **FL COMSERVER...232/422/485-T** offer extended temperature and supply voltage ranges. This means that you can now integrate serial RS-232/422/485 interfaces in existing Ethernet networks, even under extreme ambient conditions. Implement functions such as cable replacement, network integration or a Modbus gateway with ease.

Both devices extend the existing FL COMSERVER product range.

– FL COMSERVER BASIC 232/422/485 (Order No.: 2313478)
– FL COMSERVER UNI 232/422/485 (Order No.: 2313452)
– FL COMSERVER WLAN 232/422/485 (Order No.: 2313559)
– FL COMSERVER PRO 232/422/485 (Order No.: 2313465)

Cable replacement

Two devices in combination tunnel serial connections via Ethernet, using either the TCP or UDP protocol.

Network integration

You can integrate automation devices such as controllers or frequency inverters into a network using corresponding programming and diagnostics software. COM diversion software creates a virtual COM port on the PC and transmits the data to the FL COMSERVER.

Modbus gateway

The integrated Modbus gateway function provided in FL COMSERVER UNI converts serial Modbus ASCII or RTU data into Modbus TCP. Naturally, the conversion process also works in the opposite direction.

Features of the T versions

– Extended temperature range −40°C to +70°C
– Supply voltage 12 ... 30 V AC/DC
– Serial interfaces: RS-232, RS-422, RS-485
– 10/100 Base-T(X) interface
– Software for virtual COM ports supplied as standard
– 3-way electrical isolation VCC // RS-232/RS-422/RS-485 // network
– Configuration via web-based management

FL COMSERVER UNI...-T

– Supports TCP, UDP, Modbus TCP/RTU/ASCII
– Can be used exactly as required on Modbus master or slave

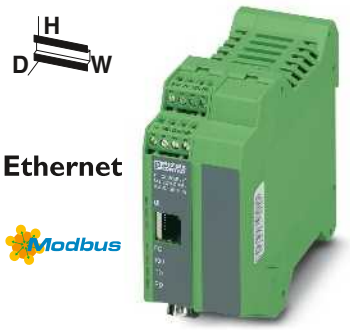
FL COMSERVER BAS...-T

– Best-value version
– Supports TCP and UDP

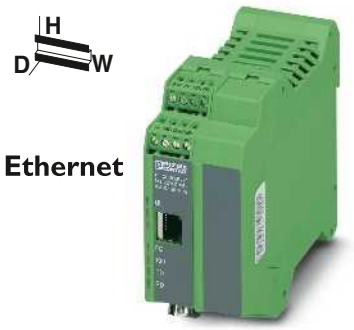
Supply	
Supply voltage	
Nominal current consumption	
Serial port	
Interfaces	
Connection method	RS-232 RS-422 RS-485
Data format/encoding	
Data flow control/protocols	
Transmission speed	
Termination resistor	
Ethernet interface	
Connection method	
Transmission speed	
Transmission length	
Supported protocols	
Auxiliary protocols	
Functions	
Management	
General data	
Ambient temperature (operation)	
Electrical isolation	
Test voltage	
Electromagnetic compatibility	
Standards/regulations	
Dimensions	W / H / D
Conformance / approvals	
ATEX	

Description
FL COMSERVER...232/422/485, for converting serial interfaces to Ethernet. COM port redirector software and additional software supplied as standard
TCP, UDP, MODBUS, PPP
TCP, UDP

D-SUB plug, with screw connection - 9-pos., socket	
RS-232-D-SUB cable, length: 2 m - 9-pos. socket on 9-pos. socket - 9-pos. socket on 25-pos. socket	
Patch cable, CAT5, preassembled	3 m
Shield connection clamp for RS-485/422 operation	



Universal device - Modbus gateway between RTU/ASCII and TCP



Basic version for redirector operation - TCP and UDP

Technical data

12 V AC/DC ... 30 V AC/DC (observe derating)
100 mA (24 V DC)

RS-232, RS-422, RS-485
D-SUB-9 plug
Plug-in/screw connection via COMBICON
Plug-in/screw connection via COMBICON
UART/NRZ: 7/8 bit data, 1/2 bit stop, 1 bit parity

Software handshake, Xon/Xoff, or hardware handshake RTS/CTS // 3964 R compatible, Modbus RTU/ASCII

0.3; 0.6; 1.2; 2.4; 4.8; 7.2; 9.6; 19.2; 38.4; 57.6; 115.2; 187.5; 230.4 kbps
390 Ω/180 Ω/390 Ω (configurable)

RJ45 socket, shielded
10/100 Mbps, auto negotiation
≤ 100 m (shielded twisted pair)
TCP/IP, UDP, Modbus (TCP, RTU/ASCII), PPP
ARP, DHCP, BOOTP, SNMP, RIP, RARP, HTTP, TFTP

Web-based management, SNMP, emergency exit with Telnet and serial

-40°C ... 70°C (free-standing, 40mm space on all sides)

DIN EN 50178 (VCC // Ethernet // Serial)
1.5 kV_{rms} (50 Hz, 1 min.)
Conformance with EMC Directive 2004/108/EC
EN 50121-4
45 mm/99 mm/116 mm

Ex II 3G Ex nA IIC T4 Gc X

Ordering data

Type	Order No.	Pcs. / Pkt.
FL COMSERVER UNI 232/422/485-T	**2904817**	1

Accessories

SUBCON 9/F-SH	**2761499**	1
PSM-KA9SUB9/BB/2METER	**2799474**	1
PSM-KA 9 SUB 25/BB/2METER	**2761059**	1
FL CAT5 PATCH 3,0	**2832292**	10
ME-SAS	**2853899**	10

Technical data

12 V AC/DC ... 30 V AC/DC (observe derating)
100 mA (24 V DC)

RS-232, RS-422, RS-485
D-SUB-9 plug
Plug-in/screw connection via COMBICON
Plug-in/screw connection via COMBICON
UART/NRZ: 7/8 bit data, 1/2 bit stop, 1 bit parity

Software handshake, Xon/Xoff, or hardware handshake RTS/CTS // 3964 R compatible, Modbus RTU/ASCII

0.3; 0.6; 1.2; 2.4; 4.8; 7.2; 9.6; 19.2; 38.4; 57.6; 115.2; 187.5; 230.4 kbps
390 Ω/180 Ω/390 Ω (configurable)

RJ45 socket, shielded
10/100 Mbps, auto negotiation
≤ 100 m (shielded twisted pair)
TCP/IP, UDP
ARP, DHCP, BOOTP, SNMP, RIP, RARP, HTTP, TFTP

Web-based management, SNMP, emergency exit with Telnet and serial

-40°C ... 70°C (free-standing, 40mm space on all sides)

DIN EN 50178 (VCC // Ethernet // Serial)
1.5 kV_{rms} (50 Hz, 1 min.)
Conformance with EMC Directive 2004/108/EC
EN 50121-4
45 mm/99 mm/116 mm

Ex II 3G Ex nA IIC T4 Gc X

Ordering data

Type	Order No.	Pcs. / Pkt.
FL COMSERVER BAS 232/422/485-T	**2904681**	1

Accessories

SUBCON 9/F-SH	**2761499**	1
PSM-KA9SUB9/BB/2METER	**2799474**	1
PSM-KA 9 SUB 25/BB/2METER	**2761059**	1
FL CAT5 PATCH 3,0	**2832292**	10
ME-SAS	**2853899**	10

Passive patch panel for the DIN rail

Ethernet

The mini patch panels provide a convenient alternative to on-site assembly of RJ45 plugs.

The cross-control-cabinet field cabling is simply connected to screw connection terminal blocks or RJ45 sockets, depending on the version selected.

The connection to the termination devices is then completed using pre-assembled RJ45 patch cables.

The new patch panels extend the product range of passive connection fields with new properties.

General features

– CAT5e
– 10/100 Mbps
– Mounted on DIN rails

FL-PP-RJ45/RJ45-B

Ethernet interface module with two RJ45 sockets as basic version with compact design and extended temperature range.

– Two RJ45 sockets
– 8-pin assignment: 1:1
– Extended temperature range -40°C to 85°C
– Narrow design W/H/D: 22.5 mm/78 mm/44 mm

FL-PP-RJ45-SCC/...

Y-splitter for transmission of two individual network connections with 10/100 Mbps via a CAT cable with eight wires.

– Spring-cage connection terminal blocks
– Option of shield contacting on DIN rail via jumpers
– For **FL-PP-.../SC041:** two RJ45 sockets, vertical
– For **FL-PP-.../SC045:** two RJ45 sockets, horizontal

Technical data

General data	
Cable impedance	100 Ω
Transmission speed	10/100 Mbps
Connection line	twisted pair, shielded, CAT5 or better
Transmission length	100 m (including patch cables)
Plug connection	RJ45 CAT5
Insertion/withdrawal cycles	≤ 2500
Degree of protection	IP20
Housing material	PA 6.6-FR
Weight	33 g

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Patch panel, two RJ45 sockets (1:1 assignment), **extended temperature range,** CAT5, 10/100 Mbps, DIN rail mounting, IP20, consistent shield, width 22.5 mm	**FL-PP-RJ45/RJ45-B**	**2904933**	10
Cable sharing module, two RJ45 sockets with Ethernet assignment, to 8 spring-cage connection terminal blocks, CAT5e, 10/100 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers			
- Cable outlet at the front, width 52 mm	**FL-PP-RJ45-SCC/SC041**	**2903532**	1
- Cable outlet at the top, width 56 mm	**FL-PP-RJ45-SCC/SC045**	**2904577**	1

Remote signaling and remote control system

Alarm and remote control via the mobile phone network

Use the mobile phone network, monitor analog and digital values, and switch relays remotely using the TC mobile I/O product range.

Depending on the product version, data is transmitted via SMS, e-mail, GPRS or ODP protocol.

Thanks to the large voltage range and the different inputs, the signaling system is suitable for use in a wide range of applications.

Features:

- Event-controlled or continual communication
- 4 digital inputs
- 2 analog inputs (current/voltage)
- 4 relay outputs, switchable via mobile phone
- Alarming in case of voltage failure via SMS
- Configuration via USB and web browser
- Standard SIM card
- Compact design: 4 pitches (DIN 43880)
- Cover can be sealed
- Numerous helpful software functions

Applications:

- Machine, building and system monitoring
- Pumps, sewage treatment plants, water supply
- Light controllers, remote switching systems
- Lifts, doors
- Alarm and domestic engineering
- Climate and ventilation engineering
- Battery monitoring up to 60 V
- Railway applications according to EN 50121-4

Communication via SMS and e-mail, 2 additional analog inputs

Technical data

Supply		
Supply voltage		10 V DC ... 60 V DC
Supply voltage		-
Nominal current consumption		110 mA (24 V DC)
Stand-by current consumption		40 mA (stand by)
USB interface		USB 2.0
Connection method		Mini-USB type B, 5-pos.
Transmission length		≤ 3 m (only for configuration and diagnostics)
Mobile phone network		
Frequencies		850 MHz (2 W (EGSM))/900 MHz (2 W (EGSM)) / 1800 MHz (1 W (EGSM))/1900 MHz (1 W (EGSM))
Digital input		
Number of inputs		4
Analog input		
Number of inputs		2
Signal range		0 V DC ... 60 V DC/0 mA ... 20 mA/4 mA ... 20 mA (configurable)
Resolution		15 bit
Accuracy		± 0.1%
Switching output		
Contact type		4 x N/O contact
Max. switching voltage		60 V
Limiting continuous current		6 A
General data		
Ambient temperature (operation)		-25°C ... 70°C (for derating, see technical documentation)
Approvals for countries		EU, other countries in preparation
Electromagnetic compatibility		Conformance with EMC Directive 2004/108/EC
Dimensions	W / H / D	72 mm/90 mm/62 mm
ATEX		Ex II 3 G Ex nA nC IIC T4 Gc X

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Compact signaling system, for mobile phone networks, monitors inputs, switches relay outputs - Analog and digital inputs - Digital inputs	**TC MOBILE I/O X200**	**2903805**	1

Accessories

Multi-band antenna for UMTS and quad band GSM, with omnidirectional characteristic, 2 m antenna cable with SMA round plug, degree of protection: IP65, dimensions: 76 x 20 mm	**PSI-GSM/UMTS-QB-ANT**	**2313371**	1
Multiband antenna for external panel and external mast mounting for UMTS and quad-band GSM, with omnidirectional characteristics, 5 m antenna cable with SMA round plug	**PSI-GSM/UMTS-ANT-OMNI-2-5**	**2900982**	1
Antenna extension cable for UMTS and quad-band GSM, 5 m long, antenna cable with SMA plug and SMA coupling	**PSI-CAB-GSM/UMTS- 5M**	**2900980**	1
Antenna extension cable for UMTS and quad-band GSM, 10 m long, antenna cable with SMA plug and SMA coupling	**PSI-CAB-GSM/UMTS-10M**	**2900981**	1
Power supply unit, primary-switched	**STEP-PS/ 1AC/24DC/0.75**	**2868635**	1
USB connecting cable (individual) for configuration	**CABLE-USB/MINI-USB-3,0M**	**2986135**	1
Surge protection for UMTS and quad-band GSM antenna, with SMA plug and SMA coupling	**CSMA-LAMBDA/4-2.0-BS-SET**	**2800491**	1

Communication via SMS and e-mail, with wide range power supply

Communication via ODP protocol, 2 additional analog inputs

Communication via ODP protocol, with wide range power supply

Technical data

-	
93 V AC ... 250 V AC (47.5 Hz ... 63 Hz)	
30 mA (230 V AC)	
10 mA (stand by)	
USB 2.0	
Mini-USB type B, 5-pos.	
≤ 3 m (only for configuration and diagnostics)	
850 MHz (2 W (EGSM))/900 MHz (2 W (EGSM))/ 1800 MHz (1 W (EGSM))/1900 MHz (1 W (EGSM))	
4	
-	
-	
-	
-	
4 x N/O contact	
60 V	
5 A	
-25°C ... 70°C (for derating, see technical documentation)	
EU, other countries in preparation	
Conformance with EMC Directive 2004/108/EC	
72 mm/90 mm/62 mm	
Ex II 3 G Ex nA nC IIC T4 Gc X	

Ordering data

Type	Order No.	Pcs. / Pkt.
TC MOBILE I/O X200 AC	2903806	1

Accessories

PSI-GSM/UMTS-QB-ANT	2313371	1
PSI-GSM/UMTS-ANT-OMNI-2-5	2900982	1
PSI-CAB-GSM/UMTS- 5M	2900980	1
PSI-CAB-GSM/UMTS-10M	2900981	1
STEP-PS/ 1AC/24DC/0.75	2868635	1
CABLE-USB/MINI-USB-3,0M	2986135	1
CSMA-LAMBDA/4-2.0-BS-SET	2800491	1

Technical data

10 V DC ... 60 V DC	
-	
110 mA (24 V DC)	
40 mA (stand by)	
USB 2.0	
Mini-USB type B, 5-pos.	
≤ 3 m (only for configuration and diagnostics)	
850 MHz (2 W (EGSM))/900 MHz (2 W (EGSM))/ 1800 MHz (1 W (EGSM))/1900 MHz (1 W (EGSM))	
4	
2	
0 V DC ... 60 V DC/0 mA ... 20 mA/4 mA ... 20 mA (configurable)	
15 bit	
± 0.1%	
4 x N/O contact	
250 V AC	
6 A	
-25°C ... 70°C (for derating, see technical documentation)	
EU, other countries in preparation	
Conformance with EMC Directive 2004/108/EC	
72 mm/90 mm/62 mm	
Ex II 3 G Ex nA nC IIC T4 Gc X	

Ordering data

Type	Order No.	Pcs. / Pkt.
TC MOBILE I/O X300	2903807	1

Accessories

PSI-GSM/UMTS-QB-ANT	2313371	1
PSI-GSM/UMTS-ANT-OMNI-2-5	2900982	1
PSI-CAB-GSM/UMTS- 5M	2900980	1
PSI-CAB-GSM/UMTS-10M	2900981	1
STEP-PS/ 1AC/24DC/0.75	2868635	1
CABLE-USB/MINI-USB-3,0M	2986135	1
CSMA-LAMBDA/4-2.0-BS-SET	2800491	1

Technical data

-	
93 V AC ... 250 V AC (48 Hz ... 62 Hz)	
30 mA (230 V AC)	
10 mA (stand by)	
USB 2.0	
Mini-USB type B, 5-pos.	
≤ 3 m (only for configuration and diagnostics)	
850 MHz (2 W (EGSM))/900 MHz (2 W (EGSM))/ 1800 MHz (1 W (EGSM))/1900 MHz (1 W (EGSM))	
4	
-	
-	
-	
-	
4 x N/O contact	
250 V AC	
5 A	
-25°C ... 70°C (for derating, see technical documentation)	
EU, other countries in preparation	
Conformance with EMC Directive 2004/108/EC	
72 mm/90 mm/62 mm	
Ex II 3 G Ex nA nC IIC T4 Gc X	

Ordering data

Type	Order No.	Pcs. / Pkt.
TC MOBILE I/O X300 AC	2903808	1

Accessories

PSI-GSM/UMTS-QB-ANT	2313371	1
PSI-GSM/UMTS-ANT-OMNI-2-5	2900982	1
PSI-CAB-GSM/UMTS- 5M	2900980	1
PSI-CAB-GSM/UMTS-10M	2900981	1
STEP-PS/ 1AC/24DC/0.75	2868635	1
CABLE-USB/MINI-USB-3,0M	2986135	1
CSMA-LAMBDA/4-2.0-BS-SET	2800491	1

SUBCON-PLUS-M12-
fast connection

The new SUBCON-PLUS fast connection plugs with M12 connection ensure error-free installation of bus systems, thanks to the use of fully-tested components, such as cables and connection plugs.

The innovative housing concept is lightweight yet offers optimum mechanical protection against environmental influences. This means that the fast connection plugs are ideal, even in applications subject to vibration.

The unique SPEEDCON fast locking system on the M12 connections offers reliable connection with just half a turn.

Features:

- Easy startup, plug and play
- Error-free installation, particularly in standard machine production
- Quick connection thanks to M12-SPEEDCON fast locking system
- Low weight
- Termination using M12 termination resistor
- Adapter between IP20 and IP67 environments
- For PROFIBUS and CANopen® systems

90° version, long, suitable for Siemens S7

Technical data

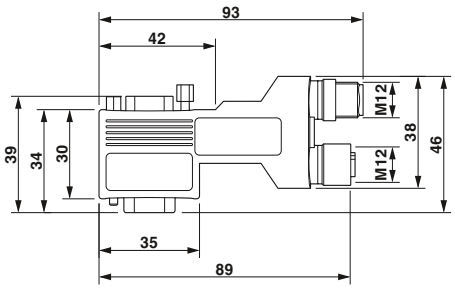
General data		
Cable entry		90° (left)
Ambient temperature (operation)		-30°C ... 80°C
Degree of protection		IP40
Housing material		Polyamide
Number of positions		5
Termination resistor		(separately via M12 termination resistor)
SUBCON fixing		4-40 UNC 0.4 Nm
Dimensions	W / H / D	16 mm/41 mm/93 mm

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Fast connection plugs, for PROFIBUS systems, Pin assignment 3, 5, 6, 8			
- Standard version	**SUBCON-PLUS-PROFIB/90X/M12**	**2902729**	1
Pg version with programming connection	**SUBCON-PLUS-PROFIB/90X/PG/M12**	**2902728**	1
Fast connection plugs, for CAN-based systems, Pin assignment 2, 3, 5, 7, 9			
- Standard version	**SUBCON-PLUS-CAN/90X/M12**	**2902731**	1
Pg version with programming connection	**SUBCON-PLUS-CAN/90X/PG/M12**	**2902730**	1

Accessories

PROFIBUS termination resistor			
- M12 pin design	**SAC-5P-M12MS PB TR**	**1507803**	5
- M12 socket design	**SAC-5P-M12FS PB TR**	**1403911**	1
PROFIBUS bus cable, Straight socket, shielded, M12 B-coded, 2-pos., Straight pin, shielded, M12 B-coded, 2-pos.			
- Cable length 1 m	**SAC-2P-MSB/ 1,0-910/FSB SCO**	**1518122**	1
- Variable cable length	**SAC-2P-MSB-FSB SCO/910/...**	**1538092**	1
DeviceNet™/CANopen® termination resistor			
- M12 pin design	**SAC-5P-M12MS CAN TR**	**1507816**	5
- M12 socket design	**SAC-5P-M12FS CAN TR**	**1529344**	5
DeviceNet™/CANopen® bus cable, Straight socket, shielded, M12 A-coded, 5-pos., Straight pin, shielded, M12 A-coded, 5-pos.			
- Cable length 1 m	**SAC-5P-MS/ 1,0-920/FS SCO**	**1518274**	1
- Variable cable length	**SAC-5P-MS-FS SCO/920/...**	**1538157**	1



SUBCON-PLUS...90X...M12 dimensional drawing, long 90° version

90° version, short, universal

35° version, universal

Technical data

90° (left)	
-30°C ... 80°C	
IP40	
Polyamide	
5	
(separately via M12 termination resistor)	
4-40 UNC 0.4 Nm	
16 mm/41 mm/72 mm	

Ordering data

Type	Order No.	Pcs. / Pkt.
SUBCON-PLUS-PROFIB/90/M12	2902318	1
SUBCON-PLUS-PROFIB/90/PG/M12	2902317	1
SUBCON-PLUS-CAN/90/M12	2902323	1
SUBCON-PLUS-CAN/90/PG/M12	2902322	1

Accessories

SAC-5P-M12MS PB TR	1507803	5
SAC-5P-M12FS PB TR	1403911	1
SAC-2P-MSB/ 1,0-910/FSB SCO	1518122	1
SAC-2P-MSB-FSB SCO/910/...	1538092	1
SAC-5P-M12MS CAN TR	1507816	5
SAC-5P-M12FS CAN TR	1529344	5
SAC-5P-MS/ 1,0-920/FS SCO	1518274	1
SAC-5P-MS-FS SCO/920/...	1538157	1

Technical data

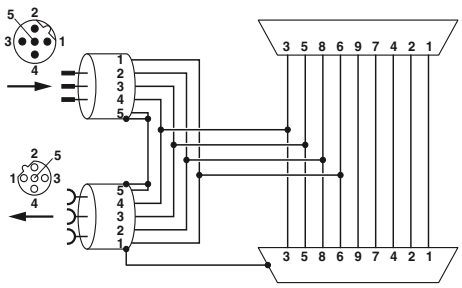
35° (left)	
-30°C ... 80°C	
IP40	
Polyamide	
5	
(separately via M12 termination resistor)	
4-40 UNC 0.4 Nm	
16 mm/48 mm /80 mm	

Ordering data

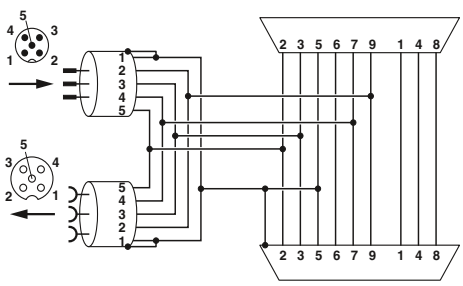
Type	Order No.	Pcs. / Pkt.
SUBCON-PLUS-PROFIB/35/M12	2902320	1
SUBCON-PLUS-PROFIB/35/PG/M12	2902319	1
SUBCON-PLUS-CAN/35/M12	2902325	1
SUBCON-PLUS-CAN/35/PG/M12	2902324	1

Accessories

SAC-5P-M12MS PB TR	1507803	5
SAC-5P-M12FS PB TR	1403911	1
SAC-2P-MSB/ 1,0-910/FSB SCO	1518122	1
SAC-2P-MSB-FSB SCO/910/...	1538092	1
SAC-5P-M12MS CAN TR	1507816	5
SAC-5P-M12FS CAN TR	1529344	5
SAC-5P-MS/ 1,0-920/FS SCO	1518274	1
SAC-5P-MS-FS SCO/920/...	1538157	1



SUBCON-PLUS-PROFIB/...M12 function block diagram



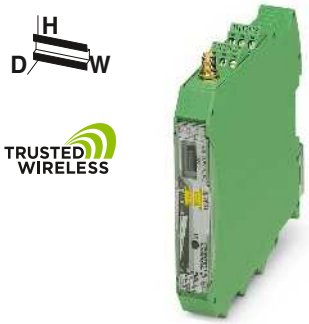
SUBCON-PLUS-CAN/...M12 function block diagram

Wireless system for license-free use in Europe

The RAD-868-IFS wireless module is suitable for license-free use in Europe.

Features:

- Trusted Wireless 2.0 wireless technology
- 868 MHz frequency band
- Adjustable transmission power up to 500 mW
- Range of up to several kilometers
- Integrated RS-232 and RS-485 interface
- Distribute signals at the turn of a switch (I/O mapping)
- Can be easily extended with up to 32 I/O extension modules via T-connector
- Optionally transmits I/O signals or serial data



868 MHz wireless transceiver, can be extended with I/O extension modules

Housing width 17.5 mm

Technical data

Wireless path		
Direction	Bi-directional	
Frequency range	869.4 MHz ... 869.65 MHz	
Transmission power	≤ 500 mW (default setting, adjustable)	
Security	128-bit data encryption	
Connection method	RSMA (female)	
Serial port	RS-232	RS-485
Connection method	COMBICON plug-in screw terminal block	COMBICON plug-in screw terminal block
Serial transmission speed	0.3 ... 115.2 kbit/s	0.3 ... 187.5 kbit/s
Termination resistor (switchable via DIP switches)	-	390 Ω/150 Ω/390 Ω
Analog output	RSSI voltage output	
Signal range	0 V ... 3 V	
Digital output	RF link relay output	
Contact type	PDT	
Switching voltage	30 V AC/60 V DC	
Switching current	500 mA	
General data		
Supply voltage	19.2 V DC ... 30.5 V DC	
Degree of protection	IP20	
Ambient temperature range	-40°C ... 70°C	
Permissible humidity (operation)	20% ... 85%	
Housing material	PA 6.6-FR	
Dimensions W / H / D	17.5/99/114.5 mm	
Screw connection solid / stranded / AWG	0.2 ... 2.5 mm^2/0.2 ... 2.5 mm^2/24 - 14	
Conformance / approvals		
Conformance	CE compliance (R&TTE directive 1999/5/EC)	
ATEX	Ex II 3 G Ex nA nC IIC T4 Gc X	

Ordering data

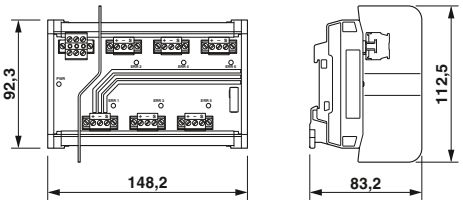
Description	Type	Order No.	Pcs. / Pkt.
Wireless module			
	RAD-868-IFS	**2904909**	1

Accessories

Memory stick, for saving custom configuration data	**RAD-MEMORY**	**2902828**	1
USB cable, for diagnostics and extended configuration	**RAD-CABLE-USB**	**2903447**	1

Device couplers for field devices

- Couple field devices and provide short-circuit current limiting
- Provide non-sparking and FISCO ic spur connections
- Single-sided connection configuration simplifies wiring in field housing
- Diagnostic LEDs indicate DC OK and errors at the spur connection
- Fulfills the requirements of EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2005, and EN 60079-15:2010.



Device couplers for 6 and 12 spurs

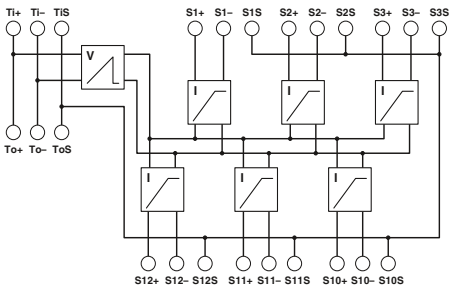
Ex:

Technical data

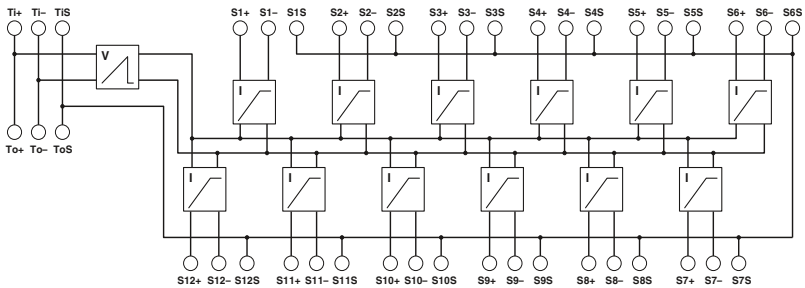
Supply		FB-6SP	FB-12SP
Supply voltage range		10.5 V DC ... 32 V DC (input on trunk line side)	
Rated current		≤ 2 A	
Nominal current consumption		4.8 mA	6.5 mA
Fieldbus interface			
Rated voltage		≤ 32 V (each spur)	≤ 32 V (each spur)
Rated current		38 mA	38 mA
Termination resistor		100 Ω, external removable plug included	
General data		FB-6SP	FB-12SP
Screw connection solid / stranded / AWG		0.2 - 2.5 mm²/0.2 - 2.5 mm²/24 - 12	
Weight		240 g	395 g
Dimensions	W / H / D	148.2 mm/112.5 mm/83.5 mm	254.1 mm/112.5 mm/83.5 mm
Degree of protection		IP20	
Ambient temperature (operation)		-50°C ... 90°C	
Max. permissible relative humidity (operation)		< 95% (non-condensing)	
Conformance / approvals			
NE		NE21	
ATEX		Sira 13ATEX4247X; Ex II 3(3)G Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs Ex nA [nL] IIC T4 Gc; Ex II 3G Ex ic IIC T4 Gc, FISCO ic	
IECEx		SIR 08.0110X; Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs; Ex nA [nL] IIC T4 Gc; Ex ic IIC T4 Gc, FISCO ic	
CSA, USA/Canada		Class I, Div. 2, Groups A, B, C, D; Ex nA [nL] IIC T4; Class I, Zone 2, AEx nA [nC] IIC T4	
Fieldbus Foundation		FF-846	

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Device coupler, for Foundation Fieldbus and PROFIBUS PA			
- 6 spurs	**FB-6SP**	**2316307**	1
- 12 spurs	**FB-12SP**	**2316310**	1



Connection diagram: FB-6SP



Connection diagram: FB-12SP

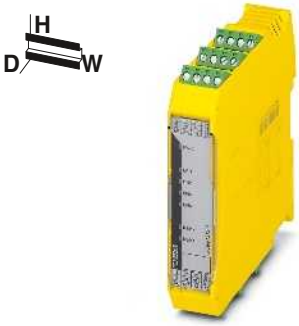
Multifunctional safety relays

You can easily implement three safety functions, such as emergency stop, safety door or light grid monitoring, with the PSR-MXF device range – and all using a single device.

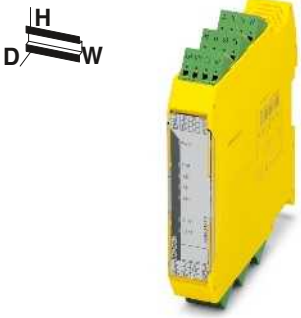
In total, there are four function versions available each with three connection methods.

Features:

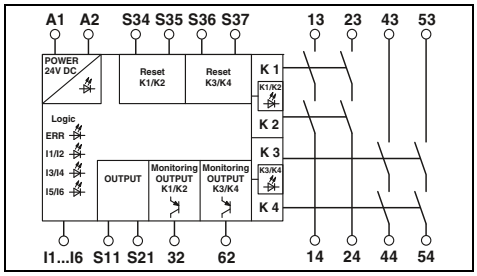
- Up to cat. 4/PL e according to EN ISO 13849-1
- Up to SIL 3 according to IEC 61508
- Up to SILCL 3 according to EN 62061
- Low housing width of only 22.5mm
- No software configuration required

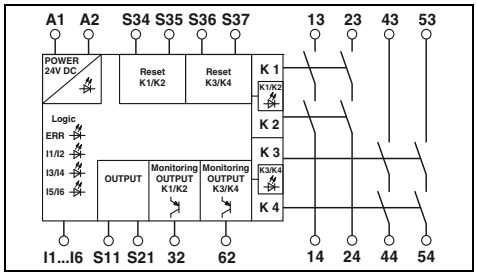


Screw connection



Spring-cage connection

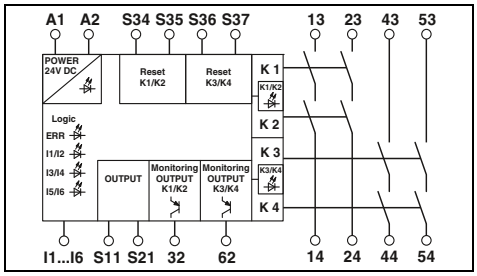




	Technical data	Technical data
Input data		
Nominal input voltage U_N	24 V DC	24 V DC
Permissible range (with reference to U_N)	0.85 ... 1.1	0.85 ... 1.1
Typ. current consumption (with reference to U_N)	125 mA (with actuated relays)/55 mA (two-channel 24 V/0 V + max. 200 mA control (message outputs 32/62) with non-actuated relays)	125 mA (with actuated relays)/55 mA (two-channel 24 V/0 V + max. 200 mA control (message outputs 32/62) with non-actuated relays)
Recovery time	1 s (availability time after activation of sensor circuit: 100ms)	1 s (availability time after activation of sensor circuit: 100ms)
Output data		
Contact type	4 enabling current paths 2 semiconductor alarm outputs	4 enabling current paths 2 semiconductor alarm outputs
Contact material	AgCuNi, +0.2 -0.4 µm Au	AgCuNi, +0.2 -0.4 µm Au
Max./min. switching voltage	250 V AC/DC/10 V AC/DC	250 V AC/DC/10 V AC/DC
Limiting continuous current	6 A (N/O contact), max. 100 mA (Alarm output (24 V DC))	6 A (N/O contact), max. 100 mA (Alarm output (24 V DC))
Max./min. inrush current	6 A/10 mA	6 A/10 mA
Min. switching power	0.1 W	0.1 W
Switching capacity (360/h cycles)	5 A (0.1 Hz; DC13; 24 V)	5 A (0.1 Hz; DC13; 24 V)
Switching capacity (3600/h cycles)	3 A (AC15; 230 V)	3 A (AC15; 230 V)
Short-circuit protection of the output circuits	6 A gL/gG NEOZED (N/O contact), 4 A gL/gG NEOZED (for low-demand applications)	6 A gL/gG NEOZED (N/O contact), 4 A gL/gG NEOZED (for low-demand applications)
General data		
Ambient temperature range	-20°C ... 45°C (see derating curve)	-20°C ... 45°C (see derating curve)
Air and creepage distances between the circuits	DIN EN 50178/VDE 0160	DIN EN 50178/VDE 0160
Rated surge voltage/insulation	4 kV/basic isolation (safe isolation, reinforced insulation and 6 kV between input circuit, enabling current paths and safety circuit 1 (13/14, 23/24) and safety circuit 2 (43/44, 53/54).)	4 kV/basic isolation (safe isolation, reinforced insulation and 6 kV between input circuit, enabling current paths and safety circuit 1 (13/14, 23/24) and safety circuit 2 (43/44, 53/54).)
Dimensions W / H / D	22.5 mm/112.2 mm/114.5 mm	22.5 mm/117.4 mm/114.5 mm
Screw connection Solid/stranded/AWG	0.2 - 2.5 mm²/0.2 - 2.5 mm²/24 - 12	0.2 - 1.5 mm²/0.2 - 1.5 mm²/24 - 16
EMC note	Class A product, see page 443	Class A product, see page 443

Description	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Multi-functional safety relay, three safety functions, one and two-channel, two local shutdown levels						
- Emergency stop and safety door monitoring	**PSR-SCP- 24DC/MXF1/4X1/2X2/B**	**2902725**	1	**PSR-SPP-24DC/MXF1/4X1/2X2/B**	**2902726**	1
- Emergency stop and magnetic switch monitoring	**PSR-SCP-24DC/MXF2/4X1/2X2/B**	**2903254**	1	**PSR-SPP-24DC/MXF2/4X1/2X2/B**	**2903255**	1
- Emergency stop, safety door, and light grid monitoring	**PSR-SCP-24DC/MXF3/4X1/2X2/B**	**2903257**	1	**PSR-SPP-24DC/MXF3/4X1/2X2/B**	**2903258**	1
- Emergency stop, magnetic switch, and light grid monitoring	**PSR-SCP-24DC/MXF4/4X1/2X2/B**	**2903260**	1	**PSR-SPP-24DC/MXF4/4X1/2X2/B**	**2903261**	1

Push-in connection



Technical data

24 V DC
0.85 ... 1.1
125 mA (with actuated relays)/55 mA (two-channel 24 V/0 V + max. 200 mA control (message outputs 32/62) with non-actuated relays)

1 s (availability time after activation of sensor circuit: 100ms)

4 enabling current paths
2 semiconductor alarm outputs
AgCuNi, +0.2 -0.4 µm Au
250 V AC/DC/10 V AC/DC
6 A (N/O contact), max. 100 mA (Alarm output (24 V DC))

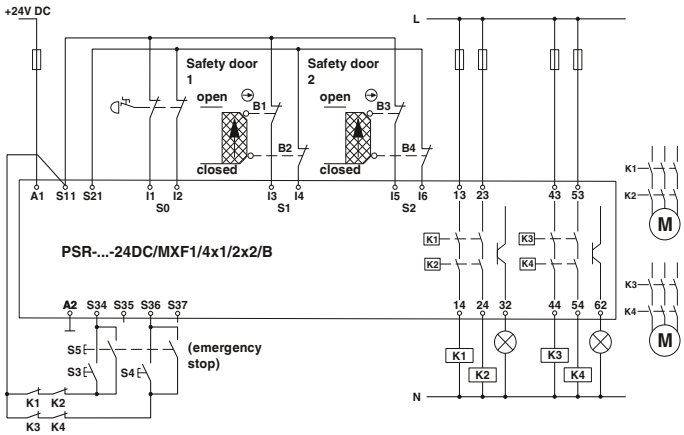
6 A/10 mA
0.1 W
5 A (0.1 Hz; DC13; 24 V)
3 A (AC15; 230 V)
6 A gL/gG NEOZED (N/O contact),
4 A gL/gG NEOZED (for low-demand applications)

-20°C ... 45°C (see derating curve)
DIN EN 50178/VDE 0160
4 kV/basic isolation (safe isolation, reinforced insulation and 6 kV between input circuit, enabling current paths and safety circuit 1 (13/14, 23/24) and safety circuit 2 (43/44, 53/54).)

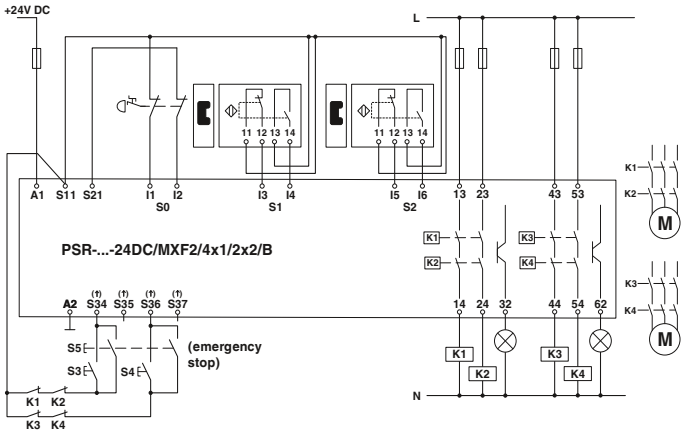
22.5 mm/116.4 mm/114.5 mm
0.2 - 2.5 mm²/0.2 - 2.5 mm²/24 - 12
Class A product, see page 443

Ordering data

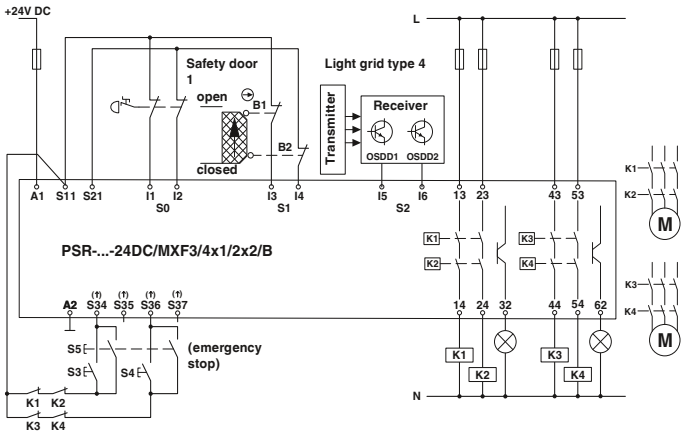
Type	Order No.	Pcs. / Pkt.
PSR-PIP-24DC/MXF1/4X1/2X2/B	2903253	1
PSR-PIP-24DC/MXF2/4X1/2X2/B	2903256	1
PSR-PIP-24DC/MXF3/4X1/2X2/B	2903259	1
PSR-PIP-24DC/MXF4/4X1/2X2/B	2903262	1



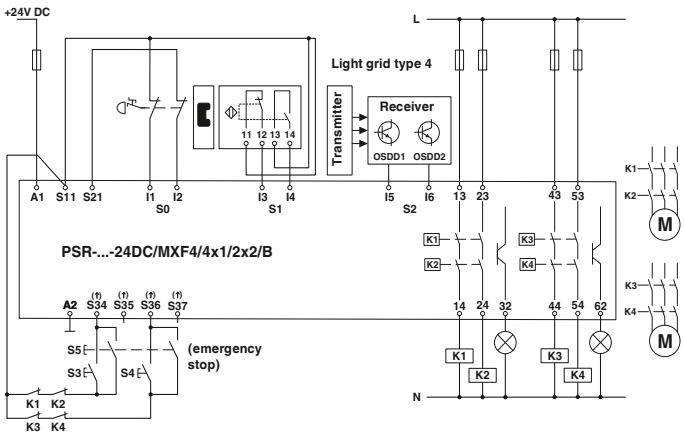
Emergency stop and safety door monitoring



Emergency stop and magnetic switch monitoring



Emergency stop, safety door, and light grid monitoring



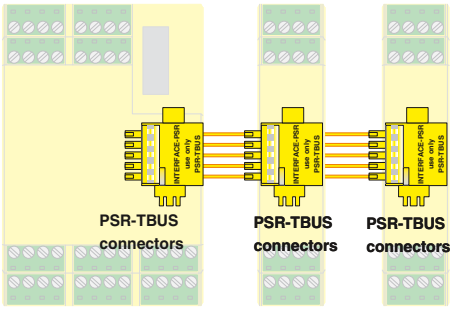
Emergency stop, magnetic switch, and light grid monitoring

PSR-TRISAFE modular

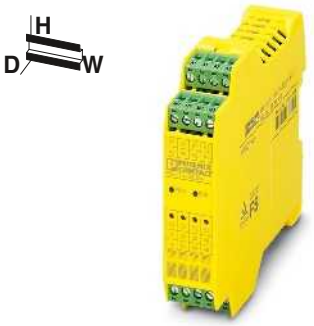
The PSR-TS-SDOR4 is a safe relay extension module for the PSR-TRISAFE-M safety module. It makes additional configurable relay outputs available to the master module.

Features:

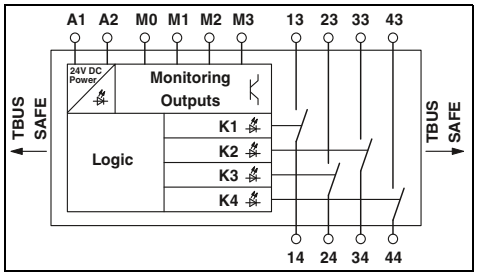
- Output extension for PSR-TRISAFE-M (modular)
- 4 single-channel relay outputs or (configurable via SAFECONF) 2 two-channel relay outputs
- 4 signal outputs
- Slim 22.5 mm housing
- Including PSR-TBUS DIN rail connector for adapting to the PSR-TRISAFE-M master module
- Up to cat. 4/PL e according to EN ISO 13849-1
- Up to SIL 3 according to IEC 61508
- Up to SILCL 3 according to EN 62061



PSR-TBUS DIN rail connectors are used for cross-wiring between the modules.



Extension module with 4 relay outputs



Technical data

Module data	
Nominal input voltage U_N	24 V DC (via PSR-TBUS)
Permissible range (with reference to U_N)	0.85 ... 1.1
Typ. current consumption (with reference to U_N)	120 mA
Interfaces	DIN rail TBUS for connection to the master module, supplied as standard
Output data	
Contact type	4 enabling current paths
Contact material	AgCuNi, + 0.2 µm Au
Max./min. switching voltage	250 V AC/5 V AC/DC
Limiting continuous current	4 A (see derating curve)
Max./min. inrush current	6 A/5 mA
Min. switching power	60 mW
Switching capacity (3600/h cycles)	3 A (230 V (AC 15)) ; 5 A (24 V (DC13))
Short-circuit protection of the output circuits	6 A gL/gG
Response time	Max. 50 ms
Alarm outputs	4
General data	
Ambient temperature range	-20°C ... 55°C
Screw connection solid/stranded/AWG	0.2 - 2.5 mm^2/0.2 - 2.5 mm^2/24 - 12
Spring-cage connection (solid/stranded/AWG)	0.2 - 1.5 mm^2/0.2 - 1.5 mm^2/24 - 16
Dimensions W / H / D — Screw version	22.5 mm/99 mm/114.5 mm
Dimensions W / H / D — Spring-cage version	22.5 mm/112 mm/114.5 mm
EMC note	Class A product, see page 443

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Extension module, 4 relay outputs (1-channel) or 2 relay outputs (2-channel)			
With screw connection	**PSR-SCP- 24DC/TS/SDOR4/4X1**	**2986096**	1
With spring-cage connection	**PSR-SPP- 24DC/TS/SDOR4/4X1**	**2986106**	1

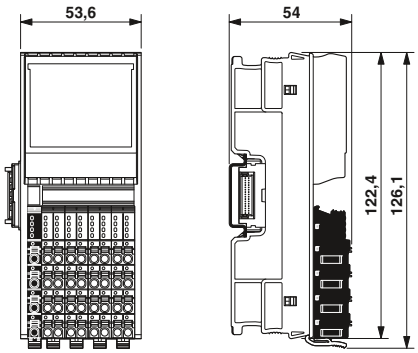
Accessories

Freely configurable master module, for monitoring emergency stops, safety doors, light grids, etc., with 20 safe inputs and 4 safe outputs, 4 alarm outputs and 2 clock outputs, safe and standard extension, including memory stick and PSR-TBUS DIN rail connector			
With screw connection	**PSR-SCP- 24DC/TS/M**	**2986012**	1
With spring-cage connection	**PSR-SPP- 24DC/TS/M**	**2986025**	1
PSR-TBUS DIN rail connector, for supplying/controlling/monitoring (depending on the module)	**PSR-TBUS**	**2890425**	50

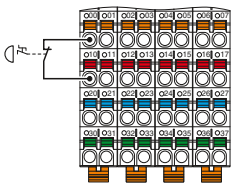
Safe I/O modules

You can install the safety-related Axioline F PROFIsafe I/O modules anywhere inside an Axioline station. In addition to standard signals, this means you can now also read and output safe signals in the Axioline system.

Depending on the installation and parameterization, you can achieve the following safety characteristics with these modules:
– Up to cat. 4/PL e according to EN ISO 13849-1
– Up to SIL 3 according to IEC 61508
– Up to SILCL 3 according to EN 62061



Digital input module



Technical data

Local bus interface	
Name	Axioline F local bus
Connection method	Bus base module
Power supply for module electronics	
Communications power U_{Bus}	5 V DC (via bus base module)
Current consumption from U_{bus}	Typ. 280 mA (Normal operation)
I/O supply	
Supply of digital input modules U_I	24 V DC
Supply voltage range U_I	19.2 V DC ... 30.2 V DC (including all tolerances, including ripple)
Current consumption from U_I	Typ. 40 mA (when using the appropriate clock supply)
Protective circuit	Protection against polarity reversal, EMC protective circuit, undervoltage detection
Digital inputs	
Connection method	2, 3, 4-wire
Number of inputs	4 (with two-channel assignment) 8 (for single-channel assignment)
Description of the inputs	IEC 61131-2 type 3
Nominal input voltage U_{IN}	24 V DC
Nominal input current at U_{IN}	Typ. 4.2 mA
Input filter time	1.5 ms 3 ms (default) 5 ms 15 ms
General data	
Connection method	Direct plug-in technology
Connection data solid / stranded / AWG	0.2 ... 1.5 mm²/0.2 ... 1.5 mm²/24 - 16
Weight	220 g
Width	53.6 mm
Height	126.1 mm
Depth	54 mm
Ambient temperature (operation)	-35°C ... 60°C (mounting position: any)

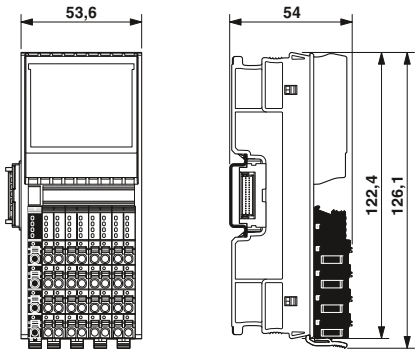
Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Fail-safe digital input module			
- 4 inputs (two-channel), 8 inputs (single-channel)	**AXL F PSDI8/4 1F**	**2701559**	1

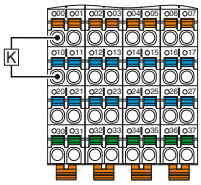
Safe I/O modules

You can install the safety-related Axioline F PROFIsafe I/O modules anywhere inside an Axioline station. In addition to standard signals, this means you can now also read and output safe signals in the Axioline system.

Depending on the installation and parameterization, you can achieve the following safety characteristics with these modules:
– Up to cat. 4/PL e according to EN ISO 13849-1
– Up to SIL 3 according to IEC 61508
– Up to SILCL 3 according to EN 62061



Digital output module



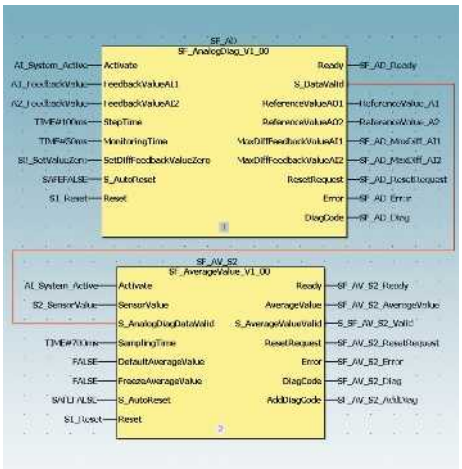
Technical data

Local bus interface	
Name	Axioline F local bus
Connection method	Bus base module
Power supply for module electronics	
Communications power U_{Bus}	5 V DC (via bus base module)
Current consumption from U_{bus}	Typ. 260 mA (Normal operation)
I/O supply	
Supply of digital output modules U_O	24 V DC
Supply voltage range U_O	19.2 V DC ... 30.2 V DC (including all tolerances, including ripple)
Current consumption from U_O	Typ. 26 mA (all outputs set including actuator current)
Protective circuit	Protection against polarity reversal, EMC protective circuit, undervoltage detection
Digital outputs	
Connection method	2, 3-wire
Number of outputs	4 (with two-channel assignment) 8 (for single-channel assignment)
Output voltage	24 V DC
Maximum output current per channel	2 A
Maximum output current per module / terminal block	8 A
Behavior with overload	Affected output is disabled and a diagnostic message is generated.
Protective circuit	Overload protection, freewheeling circuit for inductive loads, Discharge circuit for accelerated discharge of capacitive loads
General data	
Connection method	Direct plug-in technology
Connection data solid / stranded / AWG	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/24 - 16
Weight	220 g
Width	53.6 mm
Height	126.1 mm
Depth	54 mm
Ambient temperature (operation)	-35°C ... 60°C (mounting position: any)

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Fail-safe digital output module			
- 4 outputs (two-channel), 8 outputs (single-channel)	**AXL F PSDO8/3 1F**	**2701560**	1

Safe analog value processing



Wherever analog values need to be processed in a safety-related manner, the Safe AI solution package from Phoenix Contact is the ideal solution. With this TÜV-certified and software-based analog value processing, no safety-related I/O modules are required. This saves you money and offers flexibility.

Components of the Safe AI solution package:

- Initial application advice via telephone on the required software and hardware components
- License key for using the ANALOGINPUT_SF function block library including user documentation
- Advice from the Competence Center Safety in the form of a web meeting

24-hour safety hotline
+49 5281 9-462777
safety-service@phoenixcontact.com

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Function block library for safety-related analog acquisition with standard I/O modules	**SAFE AI**	**2400057**	1

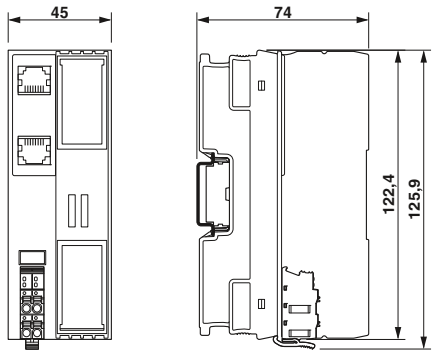
Bus couplers

The Axioline F bus coupler is the link between the Axioline F system and the higher-level third-generation Sercos network.

For startup tests, the Axioline F station can be started up independently of the higher-level network via either the service interface or an Ethernet port on the bus coupler using the Startup+ software.

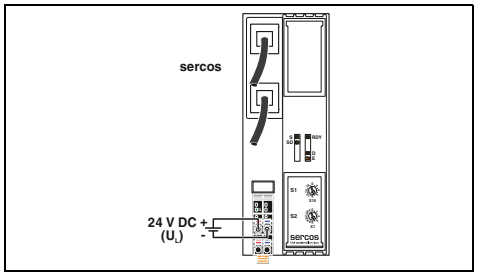
Features:

- Sercos specification V1.3
- Minimum Sercos cycle time of 31.25 µs
- Two rotary encoding switches for address assignment
- 2 RJ45 connections (with integrated switch)
- Up to 63 additional Axioline devices can be connected
- Typical cycle time of the Axioline F local bus is around 10 µs
- Runtime in bus coupler is negligible (almost 0 µs)
- FSP-IO (Function Specific Profile-IO) for modular I/O devices
- Firmware can be updated
- Diagnostic and status indicators



sercos
the automation bus

Sercos III bus coupler



Technical data

Interface	
Fieldbus system	Sercos
Connection method	RJ45 socket, auto negotiation and auto crossing
Number	2
Transmission speed	100 Mbps (full duplex)
Transmission length	Max. 100 m
Network/bus system	
Device profile	FSP_IO
Equipment type	Sercos slave
Update rate	31.25 µs
Local bus interface	
Name	Axioline F local bus
Connection method	Bus base module
Transmission speed	100 Mbps
Number of supported devices	Max. 63 (per station)
Power supply for module electronics	
Supply of communications power U_L	24 V DC
Maximum permissible voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Communications power U_{Bus}	5 V DC (via bus base module)
Current supply at U_{Bus}	2 A
Protective circuit	Surge protection of the supply voltage Polarity reversal protection of the supply voltage
General data	
Connection method	Push-in technology
Connection data solid / stranded / AWG	0.2 ... 1.5 mm²/0.2 ... 1.5 mm²/24 - 16
Weight	177 g

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Axioline bus coupler - For Sercos	**AXL F BK S3**	**2701686**	1

Accessories

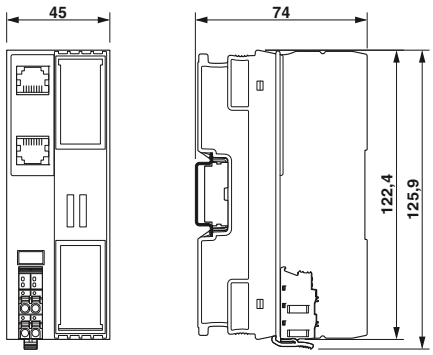
Axioline bus base module (replacement part)	**AXL BS BK**	**2701422**	5

Bus coupler

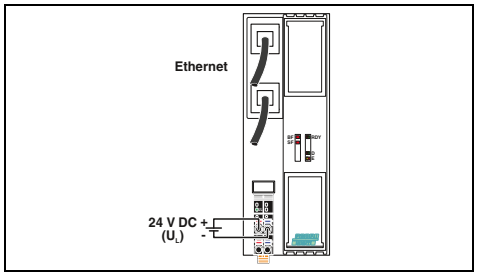
The Axioline F bus coupler is the link between the Axioline F system and the higher-level Ethernet system.

The new version of the device features web-based management. It can be used to access static information (e.g., technical data, MAC address) or dynamic information (e.g., IP address, status information).

For startup tests, the Axioline F station can be started up independently of the higher-level network via either the service interface or an Ethernet port on the bus coupler using the Startup+ software.



PROFINET bus coupler



Features:

- PROFINET RT and PROFINET IRT support
- Minimum cycle time of PROFINET for RT and IRT is 250 µs
- Module replacement without software possible
- 2 RJ45 connections (with integrated switch)
- Up to 63 additional Axioline devices can be connected
- Typical cycle time of the Axioline F local bus is around 10 µs
- MRP client
- Shared device
- Firmware can be updated
- Diagnostic and status indicators

Technical data

Interface	
Fieldbus system	PROFINET
Connection method	RJ45 socket, auto negotiation and autocrossing
Number	2
Transmission speed	100 Mbps (full duplex)
Transmission length	Max. 100 m
Local bus interface	
Name	Axioline F local bus
Connection method	Bus base module
Transmission speed	100 Mbps
Number of supported devices	Max. 63 (per station)
Power supply for module electronics	
Supply of communications power U_L	24 V DC
Maximum permissible voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Communications power U_{Bus}	5 V DC (via bus base module)
Current supply at U_{Bus}	2 A
Protective circuit	Surge protection of the supply voltage Polarity reversal protection of the supply voltage
General data	
Connection method	Push-in technology
Connection data solid / stranded / AWG	0.2 ... 1.5 mm²/0.2 ... 1.5 mm²/24 - 16
Weight	177 g

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Axioline bus coupler - For PROFINET	**AXL F BK PN**	**2701815**	1

Accessories

Axioline bus base module (replacement part)	**AXL BS BK**	**2701422**	5

Digital input and output modules

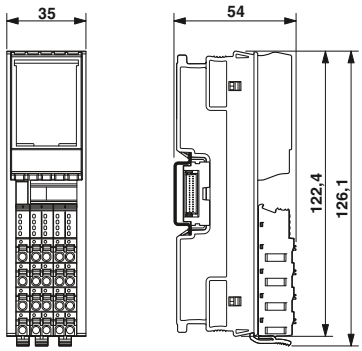
This module is designed for use within an Axioline F station.

It is used to acquire and output digital data.

You can adjust the filter times of the inputs to increase noise immunity. Filter times of 100 µs enable you to implement a counting function with a maximum input frequency of 5 kHz in the application.

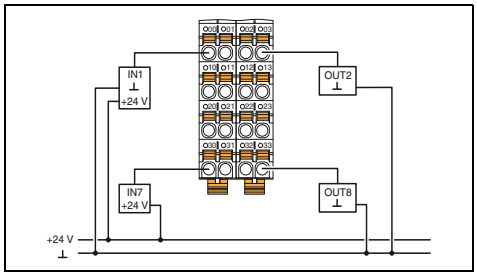
Features:

- 8 digital inputs and 8 digital outputs
- 24 V DC, 500 mA
- Connection of sensors or actuators in single-wire technology
- Minimum update time < 100 µs, bus synchronous
- Filter times can be set in three increments:
  < 100 µs, 1000 µs or 3000 µs
- Maximum input frequency: 5 kHz
- Short-circuit-proof outputs
- Stored device rating plate
- Diagnostic and status indicators



8 digital inputs and 8 digital outputs

BSH



Technical data

Local bus interface	
Name	Axioline F local bus
Connection method	Bus base module
Power supply for module electronics	
Communications power U_{Bus}	5 V DC (via bus base module)
Current consumption from U_{bus}	Max. 120 mA
I/O supply	
Digital input and output module supply U_{IO}	24 V DC
Supply voltage range U_{IO}	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Protective circuit	Surge protection of the supply voltage Polarity reversal protection of the supply voltage
Digital inputs	
Connection method	1-wire
Number of inputs	8
Description of the inputs	EN 61131-2 types 1 and 3
Nominal input voltage U_{IN}	24 V DC
Nominal input current at U_{IN}	2.4 mA
Input filter time	< 100 µs 1000 µs 3000 µs (default)
Protective circuit	Polarity reversal protection of the inputs
Digital outputs	
Connection method	1-wire
Maximum number of outputs	8
Output voltage	24 V
Maximum output current per channel	500 mA
Maximum output current per module	4 A (external fuse)
Behavior with overload	Shutdown with automatic restart
Protective circuit	Short-circuit protection, overload protection of the outputs
General data	
Connection method	Push-in technology
Connection data solid / stranded / AWG	0.2 ... 1.5 mm²/0.2 ... 1.5 mm²/24 - 16
Weight	133 g
Width	35 mm
Height	126.1 mm
Depth	54 mm
EMC note	Class A product, see page 443

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Axioline digital input/output module, complete with accessories (bus base module) - 8 inputs, 8 outputs	**AXL F DI8/1 DO8/1 1H**	**2701916**	1

Accessories

Axioline bus base module (replacement part)	**AXL F BS H**	**2700992**	5

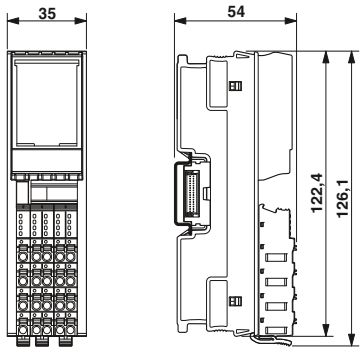
Analog input modules

This module is designed for use within an Axioline F station.

It is used to acquire standard analog voltage signals. Connection is via 2, 3 or 4-wire technology and a shield connection.

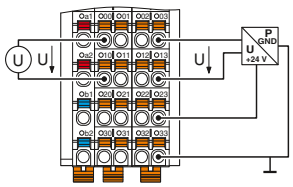
Features:

- 4 analog differential signal inputs
- Voltage measuring ranges
- Input filter selection
- Minimum update time of 250 µs, bus synchronous
- 16-bit measured value representation
- Stored device rating plate
- Integrated sensor supply
- Diagnostic and status indicators



4 analog inputs
Voltage signals

BSH



Technical data

Local bus interface	
Name	Axioline F local bus
Connection method	Bus base module
Power supply for module electronics	
Communications power U_{Bus}	5 V DC (via bus base module)
Current consumption from U_{bus}	Max. 150 mA
I/O supply	
Supply of analog modules U_A	24 V DC
Protective circuit	Surge protection Protection against polarity reversal Transient protection
Analog inputs	
Connection method	2, 3, 4-wire (shielded)
Number of inputs	Max. 4 (differential inputs, voltage)
Voltage input signal	0 V ... 5 V/-5 V ... 5 V/0 V ... 10 V/-10 V ... 10 V
Characteristics	
Measured value representation	16 bits (15 bits + sign bit)
Input filter	30 Hz, 12 kHz and mean-value generation (can be parameterized)
Precision	0.1% (of measuring range final value for active mean-value generation and 30 Hz filter)
General data	
Connection method	Push-in technology
Connection data solid / stranded / AWG	0.2 ... 1.5 mm²/0.2 ... 1.5 mm²/24 - 16
Weight	145 g

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Axioline analog input module, complete with accessories (bus base module) - 4 inputs	**AXL F AI4 U 1H**	**2688501**	1

Accessories

Axioline bus base module (replacement part)	**AXL F BS H**	**2700992**	5
Axioline shield connection set	**AXL SHIELD SET**	**2700518**	1

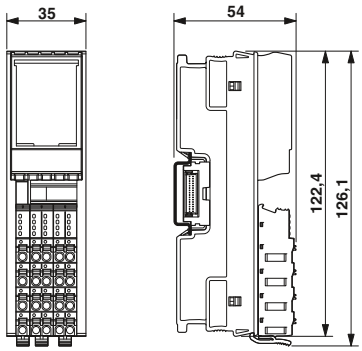
Analog input modules

This module is designed for use within an Axioline F station.

It is used to acquire standard analog current signals. Connection is via 2, 3 or 4-wire technology and a shield connection.

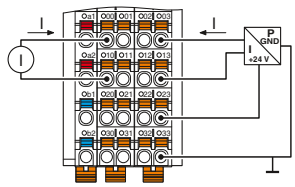
Features:

- 4 analog differential signal inputs
- Current measuring ranges
- Input filter selection
- Minimum update time of 250 µs, bus synchronous
- 16-bit measured value representation
- Stored device rating plate
- Integrated sensor supply
- Diagnostic and status indicators



4 analog inputs
Current signals

BSH



Technical data

Local bus interface	
Name	Axioline F local bus
Connection method	Bus base module
Power supply for module electronics	
Communications power U_{Bus}	5 V DC (via bus base module)
Current consumption from U_{bus}	Max. 150 mA
I/O supply	
Supply of analog modules U_A	24 V DC
Protective circuit	Surge protection Protection against polarity reversal Transient protection
Analog inputs	
Connection method	2, 3, 4-wire (shielded)
Number of inputs	Max. 4 (differential inputs, current)
Current input signal	0 mA ... 20 mA/4 mA ... 20 mA/-20 mA ... 20 mA
Characteristics	
Measured value representation	16 bits (15 bits + sign bit)
Input filter	30 Hz, 12 kHz and mean-value generation (can be parameterized)
Precision	0.1% (of measuring range final value for active mean-value generation and 30 Hz filter)
General data	
Connection method	Push-in technology
Connection data solid / stranded / AWG	0.2 ... 1.5 mm²/0.2 ... 1.5 mm²/24 - 16
Weight	145 g

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Axioline analog input module, complete with accessories (bus base module) - 4 inputs	**AXL F AI4 I 1H**	**2688491**	1

Accessories

Axioline bus base module (replacement part)	**AXL F BS H**	**2700992**	5
Axioline shield connection set	**AXL SHIELD SET**	**2700518**	1

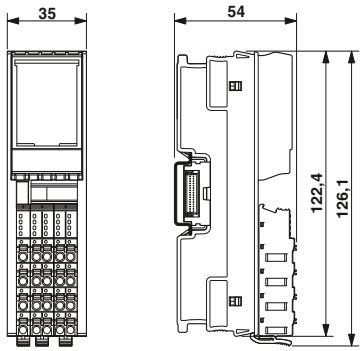
Analog output modules

This module is designed for use within an Axioline F station.

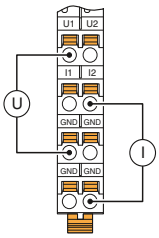
The module is used to output standard analog current and voltage signals. It is connected using 2-wire technology and a shield connection.

Features:

- 4 analog outputs
- Bipolar voltage outputs, Unipolar current outputs
- Minimum update time of 250 µs, bus synchronous
- 16-bit output value
- Overload and short-circuit protected
- Stored device rating plate
- Diagnostic and status indicators



4 analog outputs
Current/voltage signals



Technical data

Local bus interface	
Name	Axioline F local bus
Connection method	Bus base module
Power supply for module electronics	
Communications power U_{Bus}	5 V DC (via bus base module)
Current consumption from U_{bus}	Max. 150 mA
I/O supply	
Supply of analog modules U_A	24 V DC
Analog outputs	
Connection method	2-wire (shielded, twisted pair)
Number of outputs	4
Voltage output signal	0 V ... 5 V/-5 V ... 5 V/0 V ... 10 V/-10 V ... 10 V
Current output signal	0 mA ... 20 mA/4 mA ... 20 mA
Load/output load current output	to 500 Ω
Protective circuit	Short-circuit and overload protection Transient protection
Characteristics	
Representation of output values	16 bits (15 bits + sign)
Precision	Typ. 0.1% (of output range final value)
General data	
Connection method	Push-in technology
Connection data solid / stranded / AWG	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/24 - 16
Weight	145 g

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Axioline analog output module, complete with accessories (bus base module) - 4 outputs	**AXL F AO4 1H**	**2688527**	1

Accessories

Axioline bus base module (replacement part)	**AXL F BS H**	**2700992**	5
Axioline shield connection set	**AXL SHIELD SET**	**2700518**	1

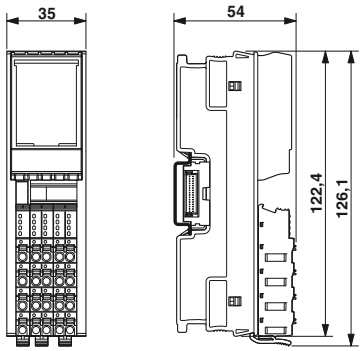
Temperature recording modules

This module is designed for use within an Axioline F station.

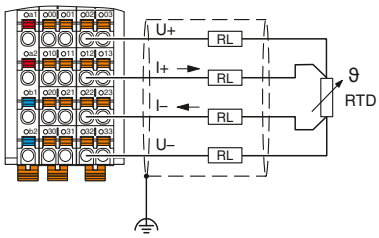
It is used to record resistive temperature sensors. Connection is via 2, 3 or 4-wire technology and a shield connection.

RTD features:

– 4 inputs for temperature shunts
– 500 Ω and 5 kΩ linear inputs
– Programmable filters
– Short-circuit-proof inputs
– Stored device rating plate



4 RTD inputs



Technical data

Local bus interface	
Name	Axioline F local bus
Connection method	Bus base module
Power supply for module electronics	
Communications power U_{Bus}	5 V DC (via bus base module)
Current consumption from U_{bus}	Max. 140 mA
I/O supply	
Supply of analog modules U_A	24 V DC
Protective circuit	Surge protection Protection against polarity reversal Transient protection
Analog inputs	
Connection method	2, 3, 4-wire (shielded)
Number of inputs	4 (for resistance temperature detectors)
Protective circuit	Short-circuit protection, overload protection of the inputs Transient protection of inputs Transient protection of sensor supplies
Sensor types (RTD) that can be used	Pt, Ni, KTY, Cu sensors
Linear resistance measuring range	0 Ω ... 500 Ω/0 kΩ ... 5 kΩ
Characteristics	
Measured value representation	16 bits (15 bits + sign bit)
Input filter time	40 ms/60 ms/100 ms/120 ms (adjustable)
Accuracy	Typ. ± 0.1 K (Pt100 with 3-wire termination)
General data	
Connection method	Push-in technology
Connection data solid / stranded / AWG	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/24 - 16
Weight	144 g

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Axioline analog input module, complete with accessories (bus base module) - 4 inputs for connecting resistance temperature detectors	**AXL F RTD4 1H**	**2688556**	1

Accessories

Axioline bus base module (replacement part)	**AXL F BS H**	**2700992**	5
Axioline shield connection set	**AXL SHIELD SET**	**2700518**	1

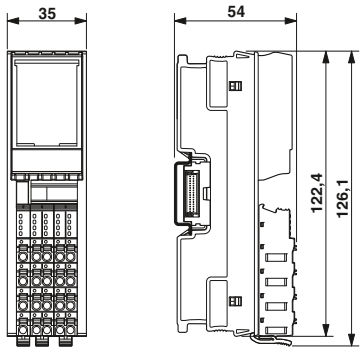
Temperature recording modules

This module is designed for use within an Axioline F station.

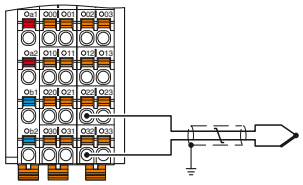
It is used to acquire data from thermocouples. Connection is via 2-wire technology and a shield connection.

Features of UTH:

– 4 inputs for thermocouples
– Linear voltages from -100 mV to +100 mV
– 1 input from -5 V to +5 V
– 2 Pt 100 inputs (external cold junction)
– Configurable cold junction type
– Stored device rating plate



4 UTH inputs



Technical data

Local bus interface	
Name	Axioline F local bus
Connection method	Bus base module
Power supply for module electronics	
Communications power U_{Bus}	5 V DC (via bus base module)
Current consumption from U_{bus}	Max. 40 mA
I/O supply	
Supply of analog modules U_A	24 V DC
Protective circuit	Surge protection of the supply voltage Polarity reversal protection of the supply voltage Transient protection
Analog inputs	
Connection method	2-wire (shielded, twisted pair)
Number of inputs	4 +1 (4 inputs for thermocouples or linear voltage, plus 1 input -5 V to +5 V)
Protective circuit	Short-circuit protection, overload protection of the inputs Transient protection of inputs
Sensor types (RTD) that can be used	Pt 100 (2 external cold junctions, can also be used as a sensor input)
Linear voltage range	-100 mV ... 100 mV
Characteristics	
Measured value representation	16 bits (15 bits + sign bit)
Input filter time	40 ms/60 ms/100 ms/120 ms (adjustable)
Accuracy	Typ. ± 0.19 K (Thermocouple type K, plus tolerance of cold junction)
General data	
Connection method	Push-in technology
Connection data solid / stranded / AWG	0.2 ... 1.5 mm^2/0.2 ... 1.5 mm^2/24 - 16
Weight	144 g

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Axioline analog input module, complete with accessories (bus base module) - 4 inputs for connection of thermocouple sensors	**AXL F UTH4 1H**	**2688598**	1

Accessories

Axioline bus base module (replacement part)	**AXL F BS H**	**2700992**	5
Axioline shield connection set	**AXL SHIELD SET**	**2700518**	1

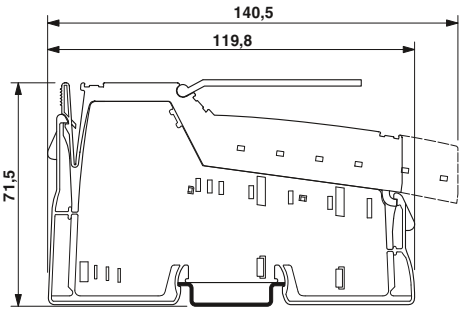
M-bus master terminal

The Inline terminal is designed for use within an Inline station.

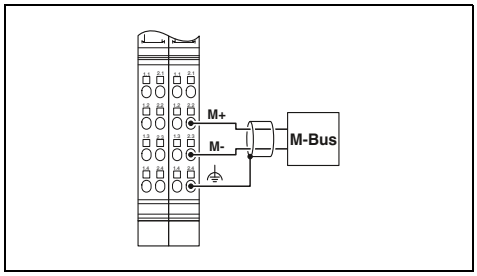
It enables communication with standard M-bus counters according to EN 13757.

Features:

- M-bus connection for up to 30 devices
- Transmission speed can be set from 300 baud to 19,200 baud
- Parameterization via process data
- Process data width: 16 words
- Diagnostic and status indicators



M-bus master



Technical data

Local bus interface	
Connection method	Inline data jumper
Communication interface	
Interface	M-Bus
Connection method	Inline plugs
Power supply for module electronics	
Communications power U_L	7.5 V (via potential jumper)
Current consumption from U_L	Typ. 65 mA
General data	
Connection method	Spring-cage connection
Connection data solid / stranded / AWG	0.08 ... 1.5 mm^2/0.08 ... 1.5 mm^2/28 - 16
Weight	125 g
Width	24.4 mm
Ambient temperature (operation)	-25°C ... 55°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Inline Modular communication terminal, complete with accessories (connector plug and labeling field)			
- for the connection of M-bus devices	**IB IL MBUS-PAC**	**2701927**	1

HMIs for maritime applications

HMI devices for maritime applications are the reliable and robust solution for demanding applications on ships. The touch panels are specifically tested and approved for shipbuilding.

Your advantages:

- Tested quality - certified according to GL, LR, BV, DNV, and ABS
- Flexible communication, even with third-party systems, thanks to numerous drivers
- Save costs and increase service life, thanks to LED backlighting that can be adjusted directly via buttons
- Increase system availability, thanks to temperature and voltage monitoring
- Save costs for acoustic signaling devices: integrated buzzer
- Global use: additional fonts are easy to install
- Cost-effective solution, since there are no additional costs for SCADA runtime: unlimited runtime license for Visu+ RT and AX OPC Server included

17.8 cm (7") TFT color display

Technical data

Display data	
Display	17.8 cm/7" TFT
Monitor resolution	800 x 480 pixels (WVGA)
Display lighting type	LED
Brightness	350 cd/m², typical (adjustable)
Display backlight MTBF	50000 h
Color spectrum	65,536 colors
Touch screen	Resistive industrial touch screen
Computer data	
Operating systems	Windows CE 6.0
Processor	Xscale® PXA320, 806 MHz
RAM	128 MByte SDRAM
Mass storage	1 GB Flash
Interfaces	2x USB Host 1.1, 1x Compact Flash®
Network	1 x Ethernet (10/100 Mbps), RJ45
External dimensions	
Width	203 mm
Height	165 mm
Depth	5 mm
Installation dimensions	
Width	195 mm
Height	157 mm
Installation depth	56 mm
General data	
Degree of protection	IP65 (front), IP20 (back)
Ambient temperature (operation)	0°C ... 55°C
Mounting type	Installation in front plate
Vibration (operation)	DIN EN 60068-2-6
Shock	DIN EN 60068-2-27
EMC note	Class A product, see page 443

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Touch panel with graphics-capable display, for maritime applications	**TP 07T/M 211**	**2701452**	1

Accessories

Stylus for touch screens	**TOUCH PEN**	**2701379**	1
USB Flash memory	**2 GB USB STICK**	**2701382**	1
CMOS battery	**HMI BATTERY**	**2701383**	1
Mounting kit, including hardware for installation - panel installation	**HMI SCB MOUNTING KIT 6**	**2701385**	1
Protective foil for touch screen	**7" DISPLAY PROTECTIVE FOIL**	**2701374**	1

26.4 cm (10.4") TFT color display

30.7 cm (12.1") TFT color display

38.1 cm (15") color TFT display

Technical data

26.4 cm/10.4" TFT
640 x 480 pixels (VGA)
LED
350 cd/m², typical (adjustable)
50000 h
65,536 colors
Resistive industrial touch screen

Windows CE 6.0
Xscale® PXA320, 806 MHz
128 MByte SDRAM
1 GB Flash
2x USB Host 1.1, 1x Compact Flash®
1 x Ethernet (10/100 Mbps), RJ45

328 mm
265 mm
5 mm

303 mm
238 mm
57 mm

IP65 (front), IP20 (back)
0°C ... 55°C
Installation in front plate
DIN EN 60068-2-6
DIN EN 60068-2-27
Class A product, see page 443

Ordering data

Type	Order No.	Pcs. / Pkt.
TP 10T/M 211	2701843	1

Accessories

TOUCH PEN	2701379	1
2 GB USB STICK	2701382	1
HMI BATTERY	2701383	1
HMI SCB MOUNTING KIT 8	2701387	1
10,4" DISPLAY PROTECTIVE FOIL	2701376	1

Technical data

30.7 cm/12.1" TFT
800 x 600 pixels (SVGA)
LED
300 cd/m², typical (adjustable)
50000 h
65,536 colors
Resistive industrial touch screen

Windows CE 6.0
Xscale® PXA320, 806 MHz
128 MByte SDRAM
1 GB Flash
2x USB Host 1.1, 1x Compact Flash®
1 x Ethernet (10/100 Mbps), RJ45

340 mm
285 mm
5 mm

315 mm
259 mm
62 mm

IP65 (front), IP20 (back)
0°C ... 55°C
Installation in front plate
DIN EN 60068-2-6
DIN EN 60068-2-27
Class A product, see page 443

Ordering data

Type	Order No.	Pcs. / Pkt.
TP 12T/M 211	2701844	1

Accessories

TOUCH PEN	2701379	1
2 GB USB STICK	2701382	1
HMI BATTERY	2701383	1
HMI SCB MOUNTING KIT 8	2701387	1
12,1" DISPLAY PROTECTIVE FOIL	2701377	1

Technical data

38.1 cm/15" TFT
1024 x 768 pixels (XGA)
LED
480 cd/m²
50000 h
256 colors
Resistive industrial touch screen

Windows CE 6.0
Xscale® PXA320, 806 MHz
128 MByte SDRAM
1 GB Flash
2x USB Host 1.1, 1x Compact Flash®
1 x Ethernet (10/100 Mbps), RJ45

400 mm
338 mm
5 mm

373 mm
312 mm
62 mm

IP65 (front), IP20 (back)
0°C ... 55°C
Installation in front plate
DIN EN 60068-2-6
DIN EN 60068-2-27
Class A product, see page 443

Ordering data

Type	Order No.	Pcs. / Pkt.
TP 15T/M 211	2701845	1

Accessories

TOUCH PEN	2701379	1
2 GB USB STICK	2701382	1
HMI BATTERY	2701383	1
HMI SCB MOUNTING KIT 8	2701387	1
15,1" DISPLAY PROTECTIVE FOIL	2701378	1

Box PCs

Box PCs are compact and flexible. They can be used in a wide variety of applications such as measurement, control and process testing. The compact size and numerous mounting options also work well for distributed systems with remote monitors.

Features:

- High system availability thanks to a fanless design or convection booster, suitable for industrial applications and absence of moving parts
- 3rd generation of Intel® Celeron® and Core™ i7 processors
- Versatile use, thanks to various mounting options, e.g., on the DIN rail
- Large-scale compatibility with open IT standards, numerous interfaces and operating system options

Box PC for DIN rail or wall mounting

Technical data

Computer data	
Processor	Intel® Celeron® N2920 2.0 GHz
RAM (configuration option)	2 GB DDR3 SODIMM 4 GB DDR3 SODIMM
Mass storage (configuration option)	CompactFlash® 2.5" SATA hard drive 2.5" SATA solid-state drive
Interfaces	1x USB 3.0 1x COM (RS-232/422/485) 2x COM (RS-232) 3x USB 2.0
Network	2x Ethernet (10/100/1000 Mbps), RJ45
Power supply unit	24 V DC ±20%
General data	
Width	162 mm
Height	146.2 mm
Depth	49 mm
Degree of protection	IP20
Ambient temperature (operation)	0°C ... 50°C
Permissible humidity (operation)	5% ... 95% (non-condensing)
Mounting type	Wall or DIN rail
Vibration (operation)	DIN EN 60068-2-6
Shock	15g, 11 ms in accordance with IEC 60068-2-27

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Industrial computer - Configurable	**BL BPC 2000**	**2701712**	1
Industrial computer - Preconfigured with 2 GB RAM, no mass storage or operating system - Preconfigured with 4 GB RAM, no mass storage or operating system	**BL BPC 2001**	**2701711**	1

Box PC for wall mounting

High-performance box PC for wall mounting

Technical data

Intel® Celeron® 1020E 2.2 GHz	Intel® Core™ i7-3555LE 3.2 GHz
4 GB DDR3 SODIMM	4 GB DDR3 SODIMM
8 GB DDR3 SODIMM	8 GB DDR3 SODIMM
16 GB DDR3 SODIMM	16 GB DDR3 SODIMM
CompactFlash®	CompactFlash®
2.5" SATA hard drive	2.5" SATA hard drive
2.5" SATA solid-state drive	2.5" SATA solid-state drive
4x USB 2.0	4x USB 2.0
1x COM (RS-232/422/485)	1x COM (RS-232/422/485)
2x COM (RS-232)	2x COM (RS-232)
2x Ethernet (10/100/1000 Mbps), RJ45	2x Ethernet (10/100/1000 Mbps), RJ45
24 V DC ±20%	24 V DC ±20%
357 mm	357 mm
190 mm	190 mm
87 mm	87 mm
IP20	IP20
0°C ... 45°C	0°C ... 45°C
5% ... 95% (non-condensing)	5% ... 95% (non-condensing)
Wall mount	Wall mount
DIN EN 60068-2-6	DIN EN 60068-2-6
15g, 11 ms in accordance with IEC 60068-2-27	15g, 11 ms in accordance with IEC 60068-2-27

Ordering data

Type	Order No.	Pcs. / Pkt.
BL BPC 3000	**2400082**	1
BL BPC 3001	**2400080**	1

Ordering data

Type	Order No.	Pcs. / Pkt.
BL BPC 7000	**2400083**	1
BL BPC 7001	**2400081**	1

Panel PCs

Panel PCs combine the advantages of a modern industrial PC with the operation and monitoring functions of a touch screen monitor. Typically installed in the front of the control cabinet, they provide monitoring and control directly on site.

Features:

- High system availability thanks to a fanless design or convection booster, suitable for industrial applications and absence of moving parts
- 3rd generation of Intel® Celeron® and Core™ i7 processors
- Large-scale compatibility with open IT standards, numerous interfaces and operating system options
- Display sizes from 12 (SVGA) to 17 (SXGA) inches
- High graphic performance with Intel HD graphics 4000

Panel PC with Atom™ processor

Technical data

Display data	
Display (configuration option)	30.7 cm/12.1" TFT 38.1 cm/15" TFT 43.2 cm/17"-TFT
Monitor resolution	800 x 600 pixels (SVGA) 1024 x 768 pixels (XGA) 1280 x 1024 pixels (SXGA)
Brightness	350 cd/m², typical (adjustable)
Display backlight MTBF	> 50000 h
Touch screen	Resistive industrial touch screen
Computer data	
Processor (configuration option)	Intel® Atom™ N455 1.66 GHz
RAM (configuration option)	2 GB DDR3 SODIMM
Mass storage (configuration option)	CompactFlash® 2.5" SATA hard drive 2.5" SATA solid-state drive
Interfaces	4x USB 2.0 1x COM (RS-232/422/485) 2x COM (RS-232)
Network	2x Ethernet (10/100/1000 Mbps), RJ45
Power supply unit	24 V DC ±20%
General data	
Degree of protection	IP65 (front), IP20 (back)
Ambient temperature (operation)	0°C ... 50°C
Permissible humidity (operation)	5% ... 95% (non-condensing)
Mounting type	Panel PC for mounting in the front panel
Vibration (operation)	DIN EN 60068-2-6
Shock	15g, 11 ms in accordance with IEC 60068-2-27
EMC note	Class A product, see page 443

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Industrial panel PC (PPC) with resistive touch screen. Configurable options for display size, memory and mass storage. - Atom processor - Celeron processor - Core i7 processor	**BL PPC 1000**	**2701401**	1
Industrial panel PC (PPC) with resistive touch screen.			
- Preconfigured with 12.1-inch display, 2 GB RAM, no mass storage or operating system	**BL PPC12 1000**	**2701336**	1
- Preconfigured with 15-inch display, 2 GB RAM, no mass storage or operating system	**BL PPC15 1000**	**2701338**	1
- Preconfigured with 17-inch display, 2 GB RAM, no mass storage or operating system	**BL PPC17 1000**	**2701337**	1
- Preconfigured with 15-inch display, 4 GB RAM, no mass storage or operating system			
- Preconfigured with 17-inch display, 4 GB RAM, no mass storage or operating system			

Panel PC with Celeron® processor

Panel PC with Core™ i7 processor

Technical data

38.1 cm/15" TFT
43.2 cm/17"-TFT

1024 x 768 pixels (XGA)
1280 x 1024 pixels (SXGA)

350 cd/m², typical (adjustable)
> 50000 h
Resistive industrial touch screen

Intel® Celeron® 1020E 2.2 GHz
4 GB DDR3 SODIMM
8 GB DDR3 SODIMM
16 GB DDR3 SODIMM
CompactFlash®
2.5" SATA hard drive
2.5" SATA solid-state drive
4x USB 2.0
1x COM (RS-232/422/485)
2x COM (RS-232)
2x Ethernet (10/100/1000 Mbps), RJ45
24 V DC ±20%

IP65 (front), IP20 (back)
0°C ... 45°C
5% ... 95% (non-condensing)
Panel PC for mounting in the front panel
DIN EN 60068-2-6
15g, 11 ms in accordance with IEC 60068-2-27
Class A product, see page 443

Ordering data

Type	Order No.	Pcs. / Pkt.
BL PPC 3000	**2701397**	1
BL PPC15 3000	**2701393**	1
BL PPC17 3000	**2701394**	1

Technical data

38.1 cm/15" TFT
43.2 cm/17"-TFT

1024 x 768 pixels (XGA)
1280 x 1024 pixels (SXGA)

350 cd/m², typical (adjustable)
> 50000 h
Resistive industrial touch screen

Intel® Core™ i7-3555LE 3.2 GHz
4 GB DDR3 SODIMM
8 GB DDR3 SODIMM
16 GB DDR3 SODIMM
CompactFlash®
2.5" SATA hard drive
2.5" SATA solid-state drive
4x USB 2.0
1x COM (RS-232/422/485)
2x COM (RS-232)
2x Ethernet (10/100/1000 Mbps), RJ45
24 V DC ±20%

IP65 (front), IP20 (back)
0°C ... 45°C
5% ... 95% (non-condensing)
Panel PC for mounting in the front panel
DIN EN 60068-2-6
15g, 11 ms in accordance with IEC 60068-2-27
Class A product, see page 443

Ordering data

Type	Order No.	Pcs. / Pkt.
BL PPC 7000	**2701398**	1
BL PPC15 7000	**2701395**	1
BL PPC17 7000	**2701396**	1

Outdoor panel PCs

The new outdoor panel PCs fit seamlessly into the existing portfolio of panel PCs. Designed for use under extreme ambient conditions, the devices meet the requirements for an extended temperature range, easily readable displays in direct sunlight, UV resistance, and a high level of mechanical and chemical resistance.

Additional features:

– Display can be read in direct sunlight
– Resistant to UV and IR radiation
– Extended temperature range
– Watertight thanks to IP67 protection
– Resistant to environmental influences, such as salt spray and termites
– Resistant to chemicals, e.g., aggressive cleaning agents, deicers for aircraft
– Can be operated when wearing work gloves

17.8 cm (7") widescreen display

Technical data

Display data	
Display	17.8 cm/7" TFT
Monitor resolution	800 x 400 pixels (WVGA)
Display lighting type	LED
Brightness	350 cd/m², typical (adjustable)
Display backlight MTBF	> 50000 h
Touch screen	Resistive industrial touch screen (GFG)
Computer data	
Processor	Intel® Atom™ E680T 1.6 GHz
RAM	2 GB DDR2 800
Mass storage (configuration option)	Flash SSD 8 GB Flash SSD 16 GB Flash SSD 32 GB
Interfaces	4 x USB host 2.0
Slots	SD card
Monitor output	Without
Network	1 x Ethernet (10/100/1000 Mbps), RJ45
Power supply unit	24 V DC ±20%
General data	
Degree of protection	IP67 (front), IP20 (back)
Ambient temperature (operation)	-20°C ... 65°C
Permissible humidity (operation)	20% ... 85% (non-condensing)
Mounting type	Installation in front plate
Vibration (operation)	DIN EN 60068-2-6
Shock	DIN EN 60068-2-27

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Panel PC for outdoor applications			
	EL PPC7 1000/WT	**2400065**	1

30.5 cm (12.1") display

38.1 cm (15") display

Technical data
30.7 cm/12.1" TFT
800 x 600 pixels (SVGA)
LED
350 cd/m², typical (adjustable)
> 50000 h
Resistive industrial touch screen (GFG)
Intel® Atom™ E680T 1.6 GHz
2 GB DDR2 800
Flash SSD 8 GB
Flash SSD 16 GB
Flash SSD 32 GB
4 x USB host 2.0
SD card
Without
1 x Ethernet (10/100/1000 Mbps), RJ45
24 V DC ±20%
IP67 (front), IP20 (back)
-20°C ... 65°C
20% ... 85% (non-condensing)
Installation in front plate
DIN EN 60068-2-6
DIN EN 60068-2-27

Ordering data		
Type	**Order No.**	Pcs. / Pkt.
EL PPC12 1000/WT	**2400066**	1

Technical data
38.1 cm/15" TFT
1024 x 768 pixels (XGA)
LED
350 cd/m², typical (adjustable)
> 50000 h
Resistive industrial touch screen (GFG)
Intel® Atom™ E680T 1.6 GHz
2 GB DDR2 800
Flash SSD 8 GB
Flash SSD 16 GB
Flash SSD 32 GB
4 x USB host 2.0
SD card
Without
1 x Ethernet (10/100/1000 Mbps), RJ45
24 V DC ±20%
IP67 (front), IP20 (back)
-20°C ... 65°C
20% ... 85% (non-condensing)
Installation in front plate
DIN EN 60068-2-6
DIN EN 60068-2-27

Ordering data		
Type	**Order No.**	Pcs. / Pkt.
EL PPC15 1000/WT	**2400067**	1

IP65 panel PCs

Designline 7000 IPCs are powerful panel PCs that utilize Intel® Core™ i7 processors. The fanless design and completely enclosed IP65 housing makes the Designline 7000 suitable for demanding industrial applications. VESA 100 mounting allows installation directly on a machine or system for an integrated, attractive appearance.

Features:

- 4th generation Intel Core i7 processors
- Projected capacitive touch screen (PCT)
- 15-inch XGA to 21.5-inch displays with Intel HD graphics 5000
- Fanless for clean, quiet operation
- Slim, attractive design
- All-in-one, IP65-rated design
- Conforms to VESA MIS-D, 100 mounting standard

Notes:

[1]) Configuration options can affect the operating temperature. See data sheet for details.

Fully enclosed IP65 IPC with 38.1 cm (15") display

Technical data

Display data	
Display	38.1 cm/15" TFT
Monitor resolution	1024 x 768 pixels (XGA)
Display lighting type	LED
Brightness	400 cd/m², typical (adjustable)
Display backlight MTBF	> 50000 h
Touch screen	Capacitive multi-touch screen
Computer data	
Processor	Intel®Core™ i7-4650U 3.30 GHz
RAM (configuration option)	4 GB DDR3 8 GB DDR3 12 GB DDR3
Mass storage (configuration option)	2.5" SATA hard drive 2.5" SATA solid-state drive
Interfaces	4x USB 2.0, 1x USB 3.0 1x COM (RS-232/422/485) 1x Audio
Network	2x Ethernet (10/100/1000 Mbps), RJ45
Power supply unit	24 V DC ±20%
General data	
Degree of protection	IP65
Ambient temperature (operation)	0°C ... 45°C[1])
Permissible humidity (operation)	5% ... 95% (non-condensing)
Mounting type	VESA MIS-D (100 x 100)
Vibration (operation)	1g with SSD, 0.5g with HDD, according to EN 60068-2-6
Shock	15g, 11 ms in accordance with IEC 60068-2-27

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
High performance IPC with touch screen and IP65 housing - 38.1 cm (15") display - 47 cm (18.5") display - 54.6 cm (21.5") display	**DL PPC15M 7000**	**2400017**	1

Fully enclosed IP65 IPC with 47 cm (18.5") display

Fully enclosed IP65 IPC with 54.6 cm (21.5") display

Technical data

47 cm/18,5" TFT
1366 x 768 pixels (WXGA)
LED
300 cd/m², typical (adjustable)
> 50000 h
Capacitive multi-touch screen

Intel®Core™ i7-4650U 3.30 GHz
4 GB DDR3
8 GB DDR3
12 GB DDR3
2.5" SATA hard drive
2.5" SATA solid-state drive
4x USB 2.0, 1x USB 3.0
1x COM (RS-232/422/485)
1x Audio
2x Ethernet (10/100/1000 Mbps), RJ45
24 V DC ±20%

IP65
0°C ... 45°C[1])
5% ... 95% (non-condensing)
VESA MIS-D (100 x 100)
1g with SSD, 0.5g with HDD, according to EN 60068-2-6
15g, 11 ms in accordance with IEC 60068-2-27

Ordering data

Type	Order No.	Pcs. / Pkt.
DL PPC18.5M 7000	**2400015**	1

Technical data

54.6 cm/21,5" TFT
1920 x 1080 pixels (Full HD)
LED
300 cd/m², typical (adjustable)
> 50000 h
Capacitive multi-touch screen

Intel®Core™ i7-4650U 3.30 GHz
4 GB DDR3
8 GB DDR3
12 GB DDR3
2.5" SATA hard drive
2.5" SATA solid-state drive
4x USB 2.0, 1x USB 3.0
1x COM (RS-232/422/485)
1x Audio
2x Ethernet (10/100/1000 Mbps), RJ45
24 V DC ±20%

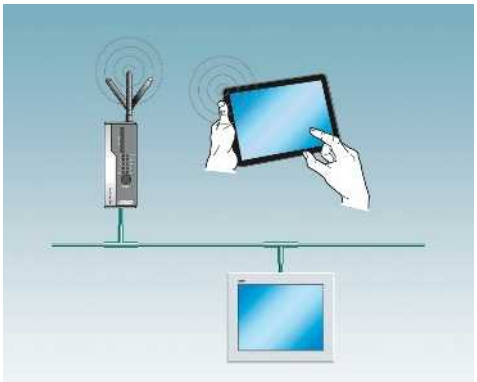
IP65
0°C ... 45°C[1])
5% ... 95% (non-condensing)
VESA MIS-D (100 x 100)
1g with SSD, 0.5g with HDD, according to EN 60068-2-6
15g, 11 ms in accordance with IEC 60068-2-27

Ordering data

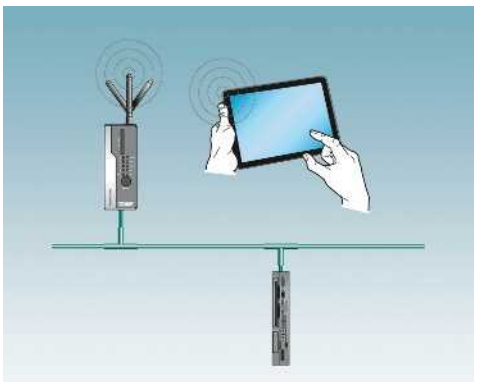
Type	Order No.	Pcs. / Pkt.
DL PPC21.5M 7000	**2400016**	1

Visualization app

Easy app installation via Google Play store or Apple app store



Visu+ mobile on a mobile termination device via access point, with a touch panel and web server



Visu+ mobile on a mobile termination device via access point, with an industrial PC and web server

Extend your system visualization to smartphones or tablets with the **Visu+ mobile** visualization app from Phoenix Contact. You can design flexible operating and monitoring concepts, as the Visu+ mobile app allows you to access your system at any time and from any location.

Integrate Visu+ mobile quickly and easily in existing touch panel or industrial PC visualization solutions. The Visu+ web server required for the app is already pre-installed in numerous devices from Phoenix Contact, such as touch panels. IPCs with Visu+ simply need to be extended with the web license option.

You can conveniently download the app in the usual way from the Google Play Store for Android or the App Store for Apple devices.

Features:

- Familiar comfort: simply use conventional smartphones or tablets to perform operation and monitoring
- Conventional SCADA functions such as trend display or alarm handling now also available on mobile devices
- Easy installation via Google Play store or App store
- High-performance, scalable Visu+ web server: up to 100 clients can be operated simultaneously in its maximum configuration
- Convenient generation of HTML visualization pages for the Visu+ web server from the Visu+ development environment

Multiplexer function for retrofitting

With the software for multiplexer systems, you can create a multiplexer system from two ILC 131 ETH small-scale controllers. Without any time-consuming programming.

To do so, extend each smale-scale controller with an SD FLASH 512MB MODULAR MUX SD card and the corresponding I/O panel. Configuration is easy with few wire bridges - you just need to define the master and slave.

The software is therefore ideal for all areas of application where a multiplexer solution is required, without additional programming work for the controller.

– Wireless, Ethernet cable or network connection
– Multiplexer solution with standard components (2x ILC 131 ETH and 2x SD FLASH 512MB MODULAR MUX)
– Integration in Ethernet network via web interface, with PC and standard browser

Notes:

When ordering, please note that you require two controllers and two SD cards respectively.

Technical data

See phoenixcontact.net/products

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Multiplexer application on SD card for configuring two ILC 131 ETH controllers as a multiplexer	**SD FLASH 512MB MODULAR MUX**	**2701872**	1

Logic modules

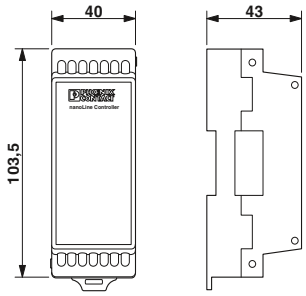
Minimal effort with maximum benefits – for Nanoline programmable logic modules the focus is on simplicity and flexibility. This means a modular and adaptable design with optimum networking options.

Your advantages:

- Save time – by intelligently controlling basic tasks
- Easy use without prior knowledge, thanks to intuitive programming
- Versatile communication with numerous integration and networking options
- Maximum flexibility, thanks to the modular design

Additional features:

- Two high-speed counters and two analog inputs
- Supports four mathematical functions
- Integrated digital I/O
- Add an additional digital I/O extension module for a maximum of 12 I/O points
- Support for large Nanoline operator panel
- Integrated realtime clock (RTC)
- Integrated RS-232 for connection to a PC for programming and configuration
- Integrated RS-232 and RS-485 allow you to use your logic module as a Modbus RTU server
- Flexible programming with nanoNavigator or LOGIC+



24 V DC, 4 digital inputs and 2 relay outputs

Technical data

	NLC-035-024D 041-02QRD-05A	NLC-040-O24D-04I-02QRD-05A
Power supply		
Supply voltage	24 V DC (power available to the I/O and Communications modules)	
Supply voltage range	19.2 V DC ... 30 V DC	
Typical current consumption	74 mA	
Max. current consumption	81 mA	
Digital inputs		
Number of inputs	4	
Description of the inputs	PNP	
Typical response time	10 µs (channel 1 and 2)	
Digital outputs		
Number of outputs	2	
Description of the outputs	Relay output	
Maximum output current per channel	5 A	
Maximum output current per module / terminal block	10 A	
Software interfaces		
Programming tool	nanoNavigator 4.2 or above	LOGIC+
General data		
Connection method	Screw connection	
Degree of protection	IP20	
Ambient temperature (operation)	-25°C ... 70°C	

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Nanoline controller			
- Programmable with nanoNavigator 4.2 and above	**NLC-035-024D 041-02QRD-05A**	**2702031**	1
- Programmable with LOGIC+	**NLC-040-O24D-04I-02QRD-05A**	**2400079**	1

Accessories

Programming cable			
- 9-pos. D-SUB to RJ11/12	**NLC-PC/SERIAL-CBL 1M**	**2701234**	1

Large operator panel

The operator panel is your interface for interacting with the Nanoline system. Read the status of all I/O points, registers, timers, counters, and system flags directly. In addition, the application program sends prompts and instructions to the display. The operator panel offers numerical (0-9), directional (up, down, left, right), and input keys. In addition, each of the 14 keys on the operator panel can be used to create user-specific menus in a flow chart.

Additional features:

– 76 mm diagonal screen
– Variable text sizes for enhanced readability of custom messages (4 x 20 or 2 x 10 or a combination)
– Cable length of up to 15 m allows remote mounting away from the logic module
– External 24 V DC
– Variable backlight: red, blue or green
– Adjustable backlight timer to save energy

User interface for Nanoline controllers

Technical data

Display data	
Display	Backlit LC display, monochrome, 4 lines with 20 characters or 2 lines with 10 characters
Interfaces	
Operator panel	9-pos. D-SUB male
Transmission length	Max. 15 m
Power supply for module electronics	
Supply voltage	24 V DC
Connection method	3-pos. Combicon
Typical current consumption	38 mA (24 V DC)
Max. current consumption	40 mA (24 V DC)
General data	
Programming tool	nanoNavigator
Mounting type	Panel mounting
Keys	17
Height	102 mm
Width	128 mm
Depth	44.5 mm
Degree of protection	IP66
Ambient temperature (operation)	0°C ... 50°C
Ambient temperature (storage/transport)	0°C ... 60°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Operator panel	**NLC-OP2-LCD-076-4X20**	**2701945**	1

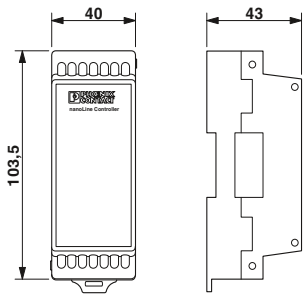
Accessories

Base module for remote mounting Operator Panel (included in nLC-OP1-MKT)	**NLC-OP1-MKT-BASE**	**2701250**	1
D-SUB plug, with **two** cable entries, **universal type**, pin assignment 1,2,3,4,5,6,7,8,9 on **every** screw terminal block	**SUBCON-PLUS-M/AX 9**	**2904467**	1

Analog I/O extension module

Temperature extension module provides RTD and thermocouple inputs as well as four digital outputs.

- Two temperature sensor inputs
- Configuration options for PT100 and PT1000 RTD sensors with two or three wires
- Configuration options for thermocouple types B, E, J, K, N R, S, and T
- Four PNP digital outputs
- Automatically recognized by nanoNavigator



2 temperature inputs, 4 PNP outputs

	Technical data
Power supply for module electronics	
Supply voltage	24 V
Temperature input	
Connection method	2 or 3-wire (shielded)
Number of inputs	2
Sensor types (RTD) that can be used	Pt 100, Pt 1000
Sensor types that can be used (TC)	B, E, J, K, N, R, S, T
Digital outputs	
Number of outputs	4
Description of the outputs	PNP outputs
Nominal output voltage	24 V DC
Maximum output current per channel	0.5 A
Maximum output current per module / terminal block	2 A
Maximum switching voltage	24 V DC
Minimum switching voltage	0.8 V DC
General data	
Connection method	Screw connection
Ambient temperature (operation)	0°C ... 60°C

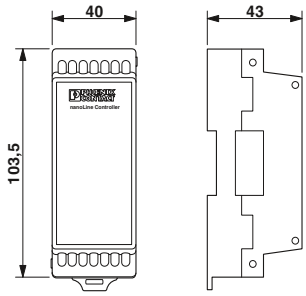
Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Nanoline controllers, I/O extension module			
- 2 temperature inputs, 4 PNP outputs	**NLC-IO-2RTD/UTH-4QTP-01A**	**2701671**	1

Digital I/O extension module for NLC-035 and NLC-040 logic modules

You can extend your Nanoline with an additional I/O extension module. Extension modules provide additional inputs and outputs beyond what is available on the logic module.

- The NLC-IOX is only compatible with the NLC-035 and NLC-040
- One module can be added to the right side of a logic module
- Automatically recognized by nanoNavigator



Digital I/O extension module

	Technical data
Power supply for module electronics	
Supply voltage	24 V DC
Digital inputs	
Maximum number of inputs	4
Description of the inputs	PNP
Digital outputs	
Number of outputs	2
Description of the outputs	Relay output
Maximum output current per channel	5 A
Maximum output current per module / terminal block	10 A

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Nanoline controllers, I/O extension module			
- 4 digital inputs, 2 relay outputs	**NLC-IOX-041-02QRD-05A**	**2702032**	1

Type	Order No.	Page
1		
10,4" DISPLAY PROTECTIVE FOIL	2701376	419
12,1" DISPLAY PROTECTIVE FOIL	2701377	419
15,1" DISPLAY PROTECTIVE FOIL	2701378	419
2		
2 GB USB STICK	2701382	418
7		
7" DISPLAY PROTECTIVE FOIL	2701374	418
A		
A-EXB-20-66L-N-S	1411117	237
A-EXB-20-66L-S-S	1411118	237
A-EXB-25-66L-N-S	1411120	237
A-EXB-25-66L-S-S	1411121	237
A-EXSH-M20-68L-N-S	1411104	236
A-EXSH-M20-68L-S-S	1411105	236
A-EXSH-M25-68L-N-S	1411107	236
A-EXSH-M25-68L-S-S	1411108	236
A-EXSH-M32-68L-N-S	1411109	236
A-EXSH-M32-68L-S-S	1411110	236
A-EXSH-M40-68L-N-S	1411111	236
A-EXSH-M40-68L-S-S	1411112	236
A-EXSH-M50-68L-N-S	1411113	236
A-EXSH-M50-68L-S-S	1411114	236
A-EXSH-M63-68L-N-S	1411115	236
A-EXSH-M63-68L-S-S	1411116	236
A-INL-M12-N-S	1411240	229
A-INL-M12-P-BK	1411213	225
A-INL-M12-P-GY	1411205	224
A-INL-M16-N-S	1411241	229
A-INL-M16-P-BK	1411214	225
A-INL-M16-P-GY	1411206	224
A-INL-M20-N-S	1411242	229
A-INL-M20-P-BK	1411215	225
A-INL-M20-P-GY	1411207	224
A-INL-M20-S-S	1411249	238
A-INL-M25-N-S	1411243	229
A-INL-M25-P-BK	1411216	225
A-INL-M25-P-GY	1411208	224
A-INL-M25-S-S	1411250	238
A-INL-M32-N-S	1411244	229
A-INL-M32-P-BK	1411217	225
A-INL-M32-P-GY	1411209	224
A-INL-M32-S-S	1411251	238
A-INL-M40-N-S	1411246	229
A-INL-M40-P-BK	1411218	225
A-INL-M40-P-GY	1411210	224
A-INL-M40-S-S	1411252	238
A-INL-M50-N-S	1411247	229
A-INL-M50-P-BK	1411219	225
A-INL-M50-P-GY	1411211	224
A-INL-M50-S-S	1411253	238
A-INL-M63-N-S	1411248	229
A-INL-M63-P-BK	1411220	225
A-INL-M63-P-GY	1411212	224
A-INL-M63-S-S	1411254	238
A-INL-NPT1-P-BK	1411239	228
A-INL-NPT1-P-GY	1411235	227
A-INL-NPT1/2-P-BK	1411237	228
A-INL-NPT1/2-P-GY	1411233	227
A-INL-NPT3/4-P-BK	1411238	228
A-INL-NPT3/4-P-GY	1411234	227
A-INL-NPT3/8-P-BK	1411236	228
A-INL-NPT3/8-P-GY	1411231	227
A-INL-PG11-N-S	1411257	230
A-INL-PG11-P-GY	1411223	226
A-INL-PG13,5-N-S	1411259	230
A-INL-PG13,5-P-GY	1411224	226
A-INL-PG16-N-S	1411260	230
A-INL-PG16-P-GY	1411225	226
A-INL-PG21-N-S	1411262	230
A-INL-PG21-P-GY	1411226	226
A-INL-PG29-N-S	1411263	230
A-INL-PG29-P-GY	1411227	226
A-INL-PG36-N-S	1411264	230
A-INL-PG36-P-GY	1411228	226
A-INL-PG42-N-S	1411265	230
A-INL-PG42-P-GY	1411229	226
A-INL-PG48-N-S	1411266	230
A-INL-PG48-P-GY	1411230	226
A-INL-PG7-N-S	1411255	230
A-INL-PG7-P-GY	1411221	226
A-INL-PG9-N-S	1411256	230
A-INL-PG9-P-GY	1411222	226
A-INLE-M12-N-S	1411267	232
A-INLE-M16-N-S	1411268	232
A-INLE-M20-N-S	1411269	232
A-INLE-M25-N-S	1411270	232
A-INLE-M32-N-S	1411271	232
A-INLE-M40-N-S	1411272	232
A-INLE-M50-N-S	1411273	232
A-INLE-M63-N-S	1411274	232
A-INLE-PG11-N-S	1411277	233
A-INLE-PG13,5-N-S	1411278	233
A-INLE-PG16-N-S	1411279	233
A-INLE-PG21-N-S	1411280	233
A-INLE-PG29-N-S	1411281	233
A-INLE-PG36-N-S	1411282	233
A-INLE-PG7-N-S	1411275	233
A-INLE-PG9-N-S	1411276	233
A-SEW-20-P-W	1411283	238
A-SEW-25-P-W	1411284	238
A-SEW-32-P-W	1411285	238
A-SEW-40-P-W	1411286	238
A-SEW-50-P-W	1411287	238
A-SEW-63-P-W	1411288	238
AI 1,0-8 RD-S	1212523	294
AI 1,0-8 YE-S	1212782	294
AI 1,5-8 BK-S	1212524	295
AI 1,5-8 RD-S	1212781	295
ALU-SB	1404531	195
AP RSC-T	3059139	101
AP-FTP METER	3069899	101
AP-ME METER	3034361	101
APH-ME	3034374	101
APH-UTWE 6-2	3069057	101
APT-ME	3034358	93
ATP-QTC QUATTRO	3206225	173
ATP-QTC TWIN	3206212	172
ATP-ST QUATTRO	3030815	157
ATP-ST-TWIN	3030789	156
ATP-STTB 4	3030747	157
ATP-UK	3003224	170
ATP-UT-TWIN	3047183	162
AXL BS BK	2701422	408
AXL F AI4 I 1H	2688491	412
AXL F AI4 U 1H	2688501	411
AXL F AO4 1H	2688527	413
AXL F BK PN	2701815	409
AXL F BK S3	2701686	408
AXL F BS H	2700992	410
AXL F DI8/1 DO8/1 1H	2701916	410
AXL F PSDI8/4 1F	2701559	404
AXL F PSDO8/3 1F	2701560	405
AXL F RTD4 1H	2688556	414
AXL F UTH4 1H	2688598	415
AXL SHIELD SET	2700518	411
B		
BATTERY MOUNTING CASE	2320458	320
BL BPC 2000	2701712	420
BL BPC 2001	2701711	420
BL BPC 3000	2400082	421
BL BPC 3001	2400080	421
BL BPC 7000	2400083	421
BL BPC 7001	2400081	421
BL PPC 1000	2701401	422
BL PPC 3000	2701397	423
BL PPC 7000	2701398	423
BL PPC12 1000	2701336	422
BL PPC15 1000	2701338	422
BL PPC15 3000	2701393	423
BL PPC15 7000	2701395	423
BL PPC17 1000	2701337	422
BL PPC17 3000	2701394	423
BL PPC17 7000	2701396	423
C		
C-FCI 1,5/M3	3240032	96
C-FCI 2,5/M3	3240037	96
C-RCI 1,5/M3	3240016	96
C-RCI 2,5/M3	3240021	96
CAB-USB A/MICRO USB B/2,0M	2701626	358
CABLE-USB/MINI-USB-3,0M	2986135	394
CARRIER-EMP (27X15)	0827451	254
CARRIER-EMP (49X15)	0827452	254
CARRIER-EMP (60X15)	0827453	254
CARRIER-EMP (60X30)	0827454	254
CARRIER-EMP (85,6X54)	0829365	254
CARRIER-EMP 22 (27X15)	0827447	254
CARRIER-EMP 22 (27X18)	0827448	254
CARRIER-PMP (108X38)	0830958	285
CB RC BRIDGE	2801616	321
CB S-BE	2905067	321
CES-B16-8XSRC-BK	1411073	222
CES-B24-10XSRC-BK	1411074	222
CES-SFFS-H	0801728	222
CF CRIMPHANDY 1,0	1212465	294
CF CRIMPHANDY 1,5	1212466	295
CF CRIMPHANDY/ACCU	1212518	294
CF CRIMPHANDY/CHARGER	1212519	294
CK2,5-ED-0,50BU AG	1663640	199
CK2,5-ED-0,50BU AU	1674859	199
CK2,5-ED-0,50ST AG	1663572	199
CK2,5-ED-0,50ST AU	1674804	199
CK2,5-ED-0,75BU AG	1663653	199
CK2,5-ED-0,75ST AG	1663585	199
CK2,5-ED-1,00BU AG	1663666	199
CK2,5-ED-1,00BU AU	1674833	199
CK2,5-ED-1,00ST AG	1663598	199
CK2,5-ED-1,00ST AU	1674781	199
CK2,5-ED-1,50BU AG	1663679	199
CK2,5-ED-1,50BU AU	1674820	199
CK2,5-ED-1,50ST AG	1663608	199
CK2,5-ED-1,50ST AU	1674778	199
CK2,5-ED-2,50BU AG	1663682	199
CK2,5-ED-2,50BU AU	1674862	199
CK2,5-ED-2,50ST AG	1663611	199
CK2,5-ED-2,50ST AU	1674817	199
CK2,5-ED-4,00BU AG	1663705	199
CK2,5-ED-4,00BU AU	1674846	199
CK2,5-ED-4,00ST AG	1663637	199
CK2,5-ED-4,00ST AU	1674794	199
CK2,5-M-2,5 AG	1409207	77
CK2,5-M-4 AG	1409208	77
CK2,5-M-6 AG	1409209	77
CLIP-PROJECT ADVANCED	5146040	291
CLIP-PROJECT PROFESSIONAL	5146053	291
CP-DMC 1,5-THR NAT	1790647	35
CP-HC-S	1410916	221
CP-QPD	1582459	195
CP-QPD 5X2,5	1404530	195
CRIMPFOX 10S CUS	1212764	301
CRIMPFOX 25R CUS	1212765	299
CRIMPFOX 50R CUS	1212766	299
CRIMPFOX 6 CUS	1212767	299
CRIMPFOX 6H CUS	1212768	301
CRIMPFOX 6S-F CUS	1212769	299
CRIMPFOX 6T CUS	1212770	299
CRIMPFOX 6T-F CUS	1212771	299
CRIMPFOX-1,6/2,5-ED-4,0	1687419	185
CRIMPFOX-RC 10 CUS	1212776	301
CRIMPFOX-RC 2,5 CUS	1212777	299
CRIMPFOX-RC 25 CUS	1212778	301
CRIMPFOX-RCI 1 CUS	1212772	299
CRIMPFOX-RCI 2,5 CUS	1212773	299
CRIMPFOX-RCI 6 CUS	1212774	299
CRIMPFOX-RCI 6-1 CUS	1212775	299
CRIMPFOX-SC 1,5 CUS	1212779	299
CRIMPFOX-SC 6 CUS	1212780	301
CSMA-LAMBDA/4-2.0-BS-SET	2800491	394
CUC-IND-C1ZNI-B/R4QE8	1406336	44
CUC-IND-C1ZNI-B/R4QE8:30	1406354	44
CUC-IND-C1ZNI-B/R4QP8	1406337	44
CUC-IND-C1ZNI-B/R4QP8:30	1406355	44
CUC-IND-C1ZNI-S/R4QE8	1406333	44
CUC-IND-C1ZNI-S/R4QE8:30	1406351	44
CUC-IND-C1ZNI-S/R4QP8	1406334	44
CUC-IND-C1ZNI-S/R4QP8:30	1406352	44
CUC-IND-C1ZNI-T/R4QE8	1406339	45
CUC-IND-C1ZNI-T/R4QE8:30	1406357	45
CUC-IND-C1ZNI-T/R4QP8	1406340	45
CUC-IND-C1ZNI-T/R4QP8:30	1406358	45
CUC-PP-FRAME-19	1407986	50
CUC-PP-FRAME-19 BK	1409140	50
CUC-PP-MODUL-COVER	1407988	50
CUC-PP-MODUL-RJ45:6-RJ45:6/...	1407995	50
CUC-PP-PATCHBAY	1407994	50
CUC-PP-PATCHBAY-MH	1409283	50
CUC-PP-PATCHBAY-MH BK	1409284	50
CUC-V14-C1ZNI-B/R4IE8	1408011	47
CUC-V14-C1ZNI-B/R4IE8:10	1467804	47
CUC-V14-C1ZNI-B/R4IP8	1407895	47
CUC-V14-C1ZNI-B/R4IP8:10	1408046	47
CUC-V14-C1ZNI-B/SJFG:10	1408056	49
CUC-V14-C1ZNI-S/R4IE8	1407890	46
CUC-V14-C1ZNI-S/R4IE8:10	1467901	46
CUC-V14-C1ZNI-S/R4IP8	1407889	46
CUC-V14-C1ZNI-S/R4IP8:10	1408039	46
CUC-V14-C1ZNI-T/R4IE8	1468007	46
CUC-V14-C1ZNI-T/R4IE8:10	1467807	46
CUC-V14-C1ZNI-T/R4IP8	1408027	46
CUC-V14-C1ZNI-T/R4IP8:10	1408092	46
CUC-V14-C1ZNI-T/SJFG:10	1408095	48
CUTFOX-ES	1212621	222
D		
D-PT 1,5/S-MT-0,8	3210303	156
D-PT 1,5/S-MT-0,8 OG	3210304	156
D-PT 1,5/S-QUATTRO-MT-0,8	3210333	157
D-PT 1,5/S-QUATTRO-MT-0,8 OG	3210334	157
D-PT 1,5/S-TWIN-MT-0,8	3210313	157
D-PT 1,5/S-TWIN-MT-0,8 OG	3210314	157
D-PTT 1,5/S-2MT-0,8	3210353	157
D-PTT 1,5/S-2MT-0,8 OG	3210354	157
D-PTT 2,5-2MT-0,8	3210300	158
D-PTT 2,5-2MT-0,8 OG	3210299	158
D-PTTBS 2,5-2MTB	3210404	160
D-QTC 2,5-QUATTRO	3206449	173
D-QTCU 2,5-TWIN-MT	3050511	172
D-UK 4-SD	3246862	170
D-UTT 2,5/4	3044676	164
DL PPC15M 7000	2400017	426
DL PPC18.5M 7000	2400015	427
DL PPC21.5M 7000	2400016	427
DMET 5X20	3032075	168
DP-UTT 2,5/4	3044677	164

Type	Order No.	Page
DS-QTC 2,5	3206607	173
DT-TELE-SHDSL	2801593	314

E

Type	Order No.	Page
EB 2- 6	0201155	170
EB 3- 6	0201142	170
EB 10- 6	0201139	170
EL PPC12 1000/WT	2400066	425
EL PPC15 1000/WT	2400067	425
EL PPC7 1000/WT	2400065	424
EM-PB-GATEWAY-IFS	2297620	358
EML (100X40)R-EX	0803258	277
EML (100X40)R-EX CUS	0803268	277
EML (100X73)R-EX	0803259	277
EML (100X73)R-EX CUS	0803269	277
EML (100X90)R-EX	0803260	277
EML (100X90)R-EX CUS	0803270	277
EML (10X4)R-EX	0803251	277
EML (10X4)R-EX CUS	0803261	277
EML (15X9)R-EX	0803253	277
EML (15X9)R-EX CUS	0803262	277
EML (20X8)R-EX	0803254	277
EML (20X8)R-EX CUS	0803263	277
EML (30X20)R-EX	0803255	277
EML (30X20)R-EX CUS	0803264	277
EML (40X25)R-EX	0803256	277
EML (40X25)R-EX CUS	0803266	277
EML (70X50)R-EX	0803257	277
EML (70X50)R-EX CUS	0803267	277
EMLP (13X9)R	0819453	195
EMT (25X6)R	0817264	272
EMT (29X8)R	0817277	273
EMT (40X17)R	0817293	273
EMT (60X15)R	0801846	273
EV-GBM4C-DC60A-5,0M16ESBK00	1621468	85
EV-ICCPD-T1C-EU-S-13A1-A-GEN2	1621797	83
EV-ICCPD-T2C-EU-S-13A1-A	1621516	83
EV-T1L2C-1AC16A-4,0M14ASBK00	1621484	80
EV-T1L2C-1AC30A-4,0M10ASBK00	1409949	80
EV-T1L2CC-DC125A-5,0M1ASBK00	1409950	84
EV-T1L2CC-DC200A-5,0M00ASBK00	1621489	84
EV-T1L2CC-DC60A-5,0M6ASBK00	1621488	84
EV-T1M3C-1AC20A-4,0M2,5EHBK00	1621670	80
EV-T1M3C-1AC32A-4,0M6,0EHBK00	1621794	80
EV-T2M3C-1AC20A-4,0M2,5ESBK00	1409319	81
EV-T2M3C-1AC32A-4,0M6,0ESBK00	1405198	81
EV-T2M3C-3AC20A-4,0M2,5ESBK00	1409320	81
EV-T2M3C-3AC32A-4,0M6,0ESBK00	1405199	81
EV-T2M3PC-1AC20A-4,0M2,5ESBK001405193		82
EV-T2M3PC-3AC32A-4,0M6,0ESBK001404569		82
EV-T2M4CC-DC125A-5,0M50ESBK001409060		84
EV-T2M4CC-DC200A-5,0M70ESBK001621653		84
EV-T2M4CC-DC60A-4,5M16ESBK00	1618306	84
EV-TAM3PC-1AC20A-4,0M2,5ESBK001621481		82
EV-TAM3PC-1AC32A-4,0M6,0ESBK001410090		82

F

Type	Order No.	Page
FB-12SP	2316310	399
FB-6SP	2316307	399
FBP-2/10	3069881	98
FBP-2/12	3069883	98
FBP-2/14	3069885	98
FBP-2/15	3069886	98
FBP-2/17	3069888	98
FBP-2/19	3069890	98
FBP-2/20	3069891	98
FBP-2/21	3069892	98
FBP-2/22	3069893	98
FBP-2/25	3069896	98
FBP-2/4	3069875	98
FBP-2/5	3069876	98
FBP-2/9	3069880	98
FBP-2/A14	3069500	109
FBP-2/A7	3069497	103
FBP-2/B14	3069501	111
FBP-2/B19	3069503	115
FBP-2/B7	3069498	105
FBP-2/C14	3069502	113
FBP-2/C19	3069504	117
FBP-2/D19	3069671	119
FBP-2/E7	3069499	107
FBP-2/F19	3069675	121
FBP-2/G19	3069676	123
FBP-2/H19	3069677	125
FBP-2/I19	3069678	127
FBS 1/3-8	3032363	101
FBS 1/3/5-8	3032389	101
FBS 1/4-8	3032376	101
FBS 1/4/7/10-8	3032402	101
FBS 2-5	3030161	160
FBS 2-6	3030336	166
FBS 2-8	3030284	100
FBS 3-5	3030174	160
FBS 3-6	3030242	166
FBS 3-8	3030297	100
FBS 4-5	3030187	160
FBS 4-6	3030255	166
FBS 4-8	3030307	100
FBS 5-5	3030190	160
FBS 5-6	3030349	166
FBS 5-8	3030310	100
FBS 6-8	3032470	100
FBS 10-3,5	3213056	156
FBS 10-5	3030213	160
FBS 10-6	3030271	166
FBS 10-8	3030323	100
FBS 2-18	2801068	306
FBS 2-3,5	3213014	156
FBS 20-3,5	3213069	156
FBS 20-5	3030226	160
FBS 20-6	3030365	166
FBS 3-3,5	3213027	156
FBS 4-3,5	3213030	156
FBS 5-3,5	3213043	156
FBS-PV	3032185	160
FBSR 16-8	3033816	100
FBSRH 2-8	3033802	100
FBSRH 3-8	3033803	100
FBSRH 4-8	3033804	100
FL CAT5 PATCH 3,0	2832292	391
FL COMSERVER BAS 232/422/485-T	2904681	391
FL COMSERVER UNI 232/422/485-T	2904817	391
FL MC 2000E SM40 LC	2891156	389
FL MC 2000T SC	2891315	388
FL MC 2000T SM20 SC	2891317	389
FL MC 2000T SM40 SC	2891318	389
FL MC 2000T ST	2891316	388
FL MEM PLUG	2891259	379
FL MEM PLUG/MRM	2891275	379
FL RED 2001E PRP 2LC	2701864	382
FL RED 2003E PRP	2701863	382
FL SFP FX	2891081	386
FL SFP FX SM	2891082	386
FL SWITCH 1708 M12 POE	2701883	376
FL SWITCH 3012E-2SFX	2891067	383
FL SWITCH 3016E	2891066	383
FL SWITCH 4800E-P1	2891075	384
FL SWITCH 4800E-P5	2891076	384
FL SWITCH 4808E-16FX LC-4GC	2891073	385
FL SWITCH 4808E-16FX SM LC-4GC	2891074	385
FL SWITCH 4808E-16FX SM-4GC	2891080	385
FL SWITCH 4808E-16FX-4GC	2891079	385
FL SWITCH 4824E-4GC	2891072	384
FL SWITCH 7005/FX-2FXSM-EIP	2701420	381
FL SWITCH 7006/2FX-EIP	2701419	381
FL SWITCH 7008-EIP	2701418	380
FL SWITCH LM 8TX-B	2989446	378
FL SWITCH SMN 8TX-PN	2989501	379
FL WLAN 5102	2701850	387
FL-PP-RJ45-SCC/SC041	2903532	392
FL-PP-RJ45-SCC/SC045	2904577	392
FL-PP-RJ45/RJ45-B	2904933	392
FOC-V14-C1ZNI-B/SJFG	1407905	49
FOC-V14-C1ZNI-B/SJFH	1407904	49
FOC-V14-C1ZNI-B/SJFH:10	1408055	49
FOC-V14-C1ZNI-B/SJFP	1407902	49
FOC-V14-C1ZNI-B/SJFP:10	1408053	49
FOC-V14-C1ZNI-S/SJFG	1407898	48
FOC-V14-C1ZNI-S/SJFG:10	1408049	48
FOC-V14-C1ZNI-S/SJFH	1407897	48
FOC-V14-C1ZNI-S/SJFH:10	1408048	48
FOC-V14-C1ZNI-S/SJFP	1407896	48
FOC-V14-C1ZNI-S/SJFP:10	1408047	48
FOC-V14-C1ZNI-T/SJFG	1408030	48
FOC-V14-C1ZNI-T/SJFH	1408029	48
FOC-V14-C1ZNI-T/SJFH:10	1408094	48
FOC-V14-C1ZNI-T/SJFP	1408028	48
FOC-V14-C1ZNI-T/SJFP:10	1408093	48
FT NUT M25 BK	1457937	77
FTP-2/1	3069469	103
FTP-2/10	3001712	96
FTP-2/12	3001714	96
FTP-2/14	3001716	96
FTP-2/15	3001717	96
FTP-2/17	3001720	96
FTP-2/19	3001723	96
FTP-2/20	3001724	96
FTP-2/21	3001725	96
FTP-2/22	3001726	96
FTP-2/25	3001729	96
FTP-2/4	3001706	96
FTP-2/5	3001707	96
FTP-2/9	3001711	96
FTP-2/A14	3069474	109
FTP-2/A7	3069470	103
FTP-2/B14	3069475	111
FTP-2/B19	3069477	115
FTP-2/B7	3069471	105
FTP-2/C14	3069476	113
FTP-2/C19	3069478	117
FTP-2/D19	3069479	119
FTP-2/E7	3069472	107
FTP-2/F19	3069480	121
FTP-2/G19	3069481	123
FTP-2/H19	3069482	125
FTP-2/I19	3069483	127
FTPR-2/10	3001688	96
FTPR-2/12	3001690	96
FTPR-2/14	3001692	96
FTPR-2/15	3001693	96
FTPR-2/17	3001696	96
FTPR-2/19	3001698	96
FTPR-2/20	3001699	96
FTPR-2/21	3001700	96
FTPR-2/22	3001701	96
FTPR-2/25	3001704	96
FTPR-2/4	3001681	96
FTPR-2/5	3001683	96
FTPR-2/9	3001687	96
FTPR-2/A14	3069487	109
FTPR-2/A7	3069484	103
FTPR-2/B14	3069488	111
FTPR-2/B19	3069490	115
FTPR-2/B7	3069485	105
FTPR-2/C14	3069489	113
FTPR-2/C19	3069491	117
FTPR-2/D19	3069492	119
FTPR-2/E7	3069486	107
FTPR-2/F19	3069493	121
FTPR-2/G19	3069494	123
FTPR-2/H19	3069495	125
FTPR-2/I19	3069496	127

G

Type	Order No.	Page
G-EDSWU-M20-M66L-STES-S	1411091	235
G-EDSWU-M20S-S66L-STES-S	1411089	235
G-EDSWU-M25-M66L-STES-S	1411093	235
G-EDSWU-M32-L66L-STES-S	1411095	235
G-EDSWU-M40-L66L-STES-S	1411099	235
G-EDSWU-M50-L66L-STES-S	1411101	235
G-EDSWU-M63-L66L-STES-S	1411103	235
G-ESS-M20-S66L-NTES-S	1411075	234
G-ESS-M20-S66L-STES-S	1411076	234
G-ESS-M25-M66L-NTES-S	1411077	234
G-ESS-M25-M66L-STES-S	1411078	234
G-ESS-M32-M66L-NTES-S	1411079	234
G-ESS-M32-M66L-STES-S	1411080	234
G-ESS-M40-L66L-NTES-S	1411081	234
G-ESS-M40-L66L-STES-S	1411082	234
G-ESS-M50-L66L-NTES-S	1411084	234
G-ESS-M50-L66L-STES-S	1411085	234
G-ESS-M63-L66L-NTES-S	1411086	234
G-ESS-M63-L66L-STES-S	1411087	234
G-ESSWU-M20-M66L-NTES-S	1411090	235
G-ESSWU-M20S-S66L-NTES-S	1411088	235
G-ESSWU-M25-M66L-NTES-S	1411092	235
G-ESSWU-M32-L66L-NTES-S	1411094	235
G-ESSWU-M40-L66L-NTES-S	1411097	235
G-ESSWU-M50-L66L-NTES-S	1411100	235
G-ESSWU-M63-L66L-NTES-S	1411102	235
G-INS-M12-S68N-NNES-S	1411160	229
G-INS-M12-S68N-PNES-BK	1411131	225
G-INS-M12-S68N-PNES-GY	1411123	224
G-INS-M16-S68N-NNES-S	1411162	229
G-INS-M16-S68N-PNES-BK	1411132	225
G-INS-M16-S68N-PNES-GY	1411124	224
G-INS-M20-S68N-NNES-S	1411163	229
G-INS-M20-S68N-PNES-BK	1411133	225
G-INS-M20-S68N-PNES-GY	1411125	224
G-INS-M25-M68N-NNES-S	1411165	229
G-INS-M25-M68N-PNES-BK	1411134	225
G-INS-M25-M68N-PNES-GY	1411126	224
G-INS-M32-M68N-NNES-S	1411166	229
G-INS-M32-M68N-PNES-BK	1411136	225
G-INS-M32-M68N-PNES-GY	1411127	224
G-INS-M40-M68N-NNES-S	1411167	229
G-INS-M40-M68N-PNES-BK	1411137	225
G-INS-M40-M68N-PNES-GY	1411128	224
G-INS-M50-L68L-PNES-BK	1411138	225
G-INS-M50-L68L-PNES-GY	1411129	224
G-INS-M50-L68N-NNES-S	1411168	229
G-INS-M63-L68L-PNES-BK	1411139	225
G-INS-M63-L68L-PNES-GY	1411130	224
G-INS-M63-L68N-NNES-S	1411169	229
G-INS-N1-M68L-PNES-BK	1411159	228
G-INS-N1-M68L-PNES-GY	1411155	227
G-INS-N1/2-S68L-PNES-BK	1411157	228
G-INS-N1/2-S68L-PNES-GY	1411153	227
G-INS-N3/4-M68L-PNES-BK	1411158	228
G-INS-N3/4-M68L-PNES-GY	1411154	227
G-INS-N3/8-S68L-PNES-BK	1411156	228
G-INS-N3/8-S68L-PNES-GY	1411152	227
G-INS-NPT1-M68L-NNES-S	1411185	231
G-INS-NPT1/2-S68L-NNES-S	1411183	231
G-INS-NPT3/4-M68L-NNES-S	1411184	231
G-INS-NPT3/8-S68L-NNES-S	1411182	231
G-INS-PG11-S68N-NNES-S	1411172	230
G-INS-PG11-S68N-PNES-GY	1411142	226
G-INS-PG13,5-S68N-NNES-S	1411173	230
G-INS-PG13,5-S68N-PNES-GY	1411143	226
G-INS-PG16-S68N-NNES-S	1411174	230
G-INS-PG16-S68N-PNES-GY	1411144	226
G-INS-PG21-M68N-NNES-S	1411175	230
G-INS-PG21-M68N-PNES-GY	1411145	226
G-INS-PG29-M68N-NNES-S	1411176	230
G-INS-PG29-M68N-PNES-GY	1411146	226
G-INS-PG36-L68N-NNES-S	1411178	230
G-INS-PG36-L68N-PNES-GY	1411147	226
G-INS-PG42-L68N-NNES-S	1411179	230
G-INS-PG42-L68N-PNES-GY	1411149	226
G-INS-PG48-L68N-NNES-S	1411181	230
G-INS-PG48-L68N-PNES-GY	1411150	226
G-INS-PG7-S68N-NNES-S	1411170	230
G-INS-PG7-S68N-PNES-GY	1411140	226
G-INS-PG9-S68N-NNES-S	1411171	230
G-INS-PG9-S68N-PNES-GY	1411141	226
G-INSEC-M12-S68N-NCRS-S	1411187	232
G-INSEC-M16-S68N-NCRS-S	1411188	232

Type	Order No.	Page
G-INSEC-M20-S68N-NCRS-S	1411189	232
G-INSEC-M25-S68N-NCRS-S	1411190	232
G-INSEC-M32-M68N-NCRS-S	1411191	232
G-INSEC-M40-M68N-NCRS-S	1411192	232
G-INSEC-M50-L68N-NCRS-S	1411193	232
G-INSEC-M63-L68N-NCRS-S	1411194	232
G-INSEC-PG11-S68N-NNES-S	1411197	233
G-INSEC-PG13,5-S68N-NNES-S	1411198	233
G-INSEC-PG16-S68N-NNES-S	1411199	233
G-INSEC-PG21-M68N-NNES-S	1411200	233
G-INSEC-PG29-M68N-NNES-S	1411201	233
G-INSEC-PG36-L68N-NNES-S	1411202	233
G-INSEC-PG42-L68N-NNES-S	1411203	233
G-INSEC-PG48-L68N-NNES-S	1411204	233
G-INSEC-PG7-S68N-NNES-S	1411195	233
G-INSEC-PG9-S68N-NNES-S	1411196	233
GPE 13X 9 WH	0806932	195

H

Type	Order No.	Page
HC-B 6-FL-MDI	1410929	221
HC-B 10-FL-MDI	1410932	221
HC-B 16-FL-MDI	1410945	221
HC-B 24-FL-MDI	1410958	221
HC-B-G-M20-EC-AL	1411439	204
HC-B-G-M20-ER-AL	1411442	218
HC-B-G-M25-EC-AL	1411446	204
HC-B-G-M25-ER-AL	1411443	218
HC-B-G-M32-EC-AL	1411440	204
HC-B-G-M32-ER-AL	1411444	218
HC-B-G-M40-EC-AL	1411441	204
HC-B-G-M40-ER-AL	1411445	218
HC-B06-SG-CBK	1411483	220
HC-B06-SP-CBK	1411477	220
HC-B10-SG-CBK	1411484	220
HC-B10-SP-CBK	1411479	220
HC-B16-SG-CBK	1411485	220
HC-B16-SP-CBK	1411480	220
HC-B24-SG-CBK	1411486	220
HC-B24-SP-CBK	1411482	220
HC-BB10-I-CT-F	1584703	199
HC-BB10-I-CT-M	1584774	199
HC-BB18-I-CT-F	1584729	199
HC-BB18-I-CT-M	1584716	199
HC-BB32-I-CT-F	1584745	199
HC-BB32-I-CT-F 33-64	1406543	199
HC-BB32-I-CT-M	1584732	199
HC-BB32-I-CT-M 33-64	1406544	199
HC-BB46-I-CT-F	1584758	199
HC-BB46-I-CT-F 47-92	1406545	199
HC-BB46-I-CT-M	1584761	199
HC-BB46-I-CT-M 47-92	1406546	199
HC-D-G-M20-PLRBK	1411350	196
HC-D-G-M25-PLRBK	1411351	196
HC-D-TA-M25-PLRBK	1411352	219
HC-D-TA-NPT-3/4-PLR-BK	1411354	219
HC-D-TA-PG16-PLR-BK	1411353	219
HC-EVO-A10UT-BWS-HH-M20-PLRBK	1411356	196
HC-EVO-A10UT-BWSC-HH-M20-PLRBK	1411357	196
HC-EVO-A16UT-BWS-HH-M25-PLRBK	1411358	197
HC-EVO-A16UT-BWSC-HH-M25-PLRBK	1411359	197
HC-EVO-B06-CHWS-ELC-AL	1411450	204
HC-EVO-B06-HHFS-EL-AL	1411447	204
HC-EVO-B06-HLFS-EL-AL	1411448	204
HC-EVO-B06PT-BWSC-HL-M20ELC-AL	1411487	204
HC-EVO-B10-CHWD-ELC-AL	1411458	206
HC-EVO-B10-CHWS-ELC-AL	1411459	205
HC-EVO-B10-HHFD-EL-AL	1411451	206
HC-EVO-B10-HHFS-EL-AL	1411453	205
HC-EVO-B10-HHWD-EL-AL	1411454	207
HC-EVO-B10-HLFD-EL-AL	1411455	206
HC-EVO-B10-HLFS-EL-AL	1411456	205
HC-EVO-B10-HLWD-EL-AL	1411457	207
HC-EVO-B10PT-BWD-HL-M25ELC-AL	1411488	206
HC-EVO-B10PT-BWSC-HL-M25ELC-AL	1411491	205
HC-EVO-B16-CHWD-ELC-AL	1411463	209
HC-EVO-B16-CHWS-ELC-AL	1411464	208
HC-EVO-B16-HHFD-EL-AL	1411460	209
HC-EVO-B16-HHFS-EL-AL	1411461	208
HC-EVO-B16-HHWD-EL-AL	1411462	210
HC-EVO-B16PT-BWD-HH-M25ELC-AL	1411489	209
HC-EVO-B16PT-BWSC-HH-M25ELC-AL	1411492	208
HC-EVO-B24-CHWD-ELC-AL	1411475	212
HC-EVO-B24-CHWS-ELC-AL	1411476	211
HC-EVO-B24-HHFD-EL-AL	1411472	212
HC-EVO-B24-HHFS-EL-AL	1411473	211
HC-EVO-B24-HHWD-EL-AL	1411474	213
HC-EVO-B24PT-BWD-HH-M32ELC-AL	1411490	212
HC-EVO-B24PT-BWSC-HH-M32ELC-AL	1411493	211
HC-EVO-D15-BWS-PLR-BK	1411336	196
HC-EVO-D15-BWSC-PLR-BK	1411337	196
HC-EVO-D15-CHWS-PL-BK	1411338	196
HC-EVO-D15-HHFS-PL-BK	1411340	196
HC-EVO-D15-SLWS-2SSM25-PLR-BK	1411341	196
HC-EVO-D15-SLWSC-2SSM25-PLR-BK	1411343	196
HC-EVO-D25-BWS-PLR-BK	1411344	197
HC-EVO-D25-BWSC-PLR-BK	1411345	197
HC-EVO-D25-CHWS-PLR-BK	1411346	197
HC-EVO-D25-HHFS-PL-BK	1411347	197
HC-EVO-D25-SLWS-2SSM25-PLR-BK	1411348	197
HC-EVO-D25-SLWSC-2SSM25-PLR-BK	1411349	197
HC-HPR-B06-BFH-EMR-BK	1411122	214
HC-HPR-B06-HHWH-1STM20-EM-BK	1411878	214
HC-HPR-B06-HHWH-1STM25-EM-BK	1411119	214
HC-HPR-B06-HHWH-1TTM20-EM-BK	1411879	214
HC-HPR-B06-HHWH-1TTM25-EM-BK	1411106	214
HC-HPR-B06-SHFH-2SSM20-EMR-BK	1411880	214
HC-HPR-B06-SHFH-2SSM25-EMR-BK	1411135	214
HC-HPR-B10-BFH-EMR-BK	1411083	215
HC-HPR-B10-HHWH-1STM25EM-BK	1411881	215
HC-HPR-B10-HHWH-1STM32-EM-BK	1411070	215
HC-HPR-B10-HHWH-1TTM25-EM-BK	1411882	215
HC-HPR-B10-HHWH-1TTM32-EM-BK	1411067	215
HC-HPR-B10-SHFH-2SSM25-EMR-BK	1411883	215
HC-HPR-B10-SHFH-2SSM32-EMR-BK	1411096	215
HC-HPR-B16-BFH-EMR-BK	1411060	216
HC-HPR-B16-HHWH-1STM32-EM-BK	1411058	216
HC-HPR-B16-HHWH-1STM40-EM-BK	1411884	216
HC-HPR-B16-HHWH-1TTM32-EM-BK	1411059	216
HC-HPR-B16-HHWH-1TTM40-EM-BK	1411885	216
HC-HPR-B16-SHFH-2SSM32-EMR-BK	1411054	216
HC-HPR-B16-SHFH-2SSM40-EMR-BK	1411886	216
HC-HPR-B24-BFH-EMR-BK	1411055	217
HC-HPR-B24-HHWH-1STM32-EM-BK	1411887	217
HC-HPR-B24-HHWH-1STM40-EM-BK	1411061	217
HC-HPR-B24-HHWH-1TTM32-EM-BK	1411888	217
HC-HPR-B24-HHWH-1TTM40-EM-BK	1411062	217
HC-HPR-B24-SHFH-2SSM32-EMR-BK	1411889	217
HC-HPR-B24-SHFH-2SSM40-EMR-BK	1411063	217
HC-HS06-I-UT-F	1406530	201
HC-HS06-I-UT-F 7-12	1406533	201
HC-HS06-I-UT-M	1406531	201
HC-HS06-I-UT-M 7-12	1406534	201
HC-K-BS-M25 BK	1411245	219
HC-K-BS-M32-BK	1410754	219
HC-K-BS-M40-BK	1410767	219
HC-K-KV-M20(5-13)BK	1411261	218
HC-K-KV-M25(8-17)BK	1411258	218
HC-K-KV-M32(12-21)BK	1407673	218
HC-K-KV-M40(16-28)BK	1407674	218
HC-STA-B06-BWS-ELC-AL	1411318	204
HC-STA-B06-BWSC-ELC-AL	1411319	204
HC-STA-B10-BFDC-ELC-AL	1411323	207
HC-STA-B10-BWD-ELC-AL	1411322	206
HC-STA-B10-BWS-ELC-AL	1411320	205
HC-STA-B10-BWSC-ELC-AL	1411321	205
HC-STA-B16-BFDC-ELC-AL	1411328	210
HC-STA-B16-BWD-ELC-AL	1411327	209
HC-STA-B16-BWS-ELC-AL	1411324	208
HC-STA-B16-BWSC-ELC-AL	1411325	208
HC-STA-B24-BFDC-ELC-AL	1411332	213
HC-STA-B24-BWD-ELC-AL	1411331	212
HC-STA-B24-BWS-ELC-AL	1411329	211
HC-STA-B24-BWSC-ELC-AL	1411330	211
HMI BATTERY	2701383	418
HMI SCB MOUNTING KIT 6	2701385	418
HMI SCB MOUNTING KIT 8	2701387	419
HSCH 2,5-2U-2220 9005	2201792	35
HSCH 2,5-2U-TT00 9005	2201791	35
HSCH 2,5-2U-TTTT 9005	2201790	35
HSCH 2,5-2U/ 8 9005	2201789	35
HSCH 2,5-3U/12 9005	2201788	35
HSCP-SP 2,5-1U-20 7035	2201782	35
HSCP-SP 2,5-1U-TT 7035	2201781	35
HSCP-SP 2,5-1U/ 4 7035	2201780	35

I

Type	Order No.	Page
IB IL MBUS-PAC	2701927	416
IFS-CONFSTICK	2986122	358
IFS-USB-DATACABLE	2320500	358
IFS-USB-PROG-ADAPTER	2811271	339
IMC 1,5/ 2-G-3,5 P20 THR	1830414	16
IMC 1,5/ 2-G-3,5 RN P20 THR	1830566	17
IMC 1,5/ 3-G-3,5 P20 THR	1830427	16
IMC 1,5/ 3-G-3,5 RN P20 THR	1830579	17
IMC 1,5/ 4-G-3,5 P20 THR	1830430	16
IMC 1,5/ 4-G-3,5 RN P20 THR	1830582	17
IMC 1,5/ 5-G-3,5 P20 THR	1830443	16
IMC 1,5/ 5-G-3,5 RN P20 THR	1830595	17
IMC 1,5/ 6-G-3,5 P20 THR	1830456	16
IMC 1,5/ 6-G-3,5 RN P20 THR	1830605	17
IMC 1,5/ 7-G-3,5 P20 THR	1830469	16
IMC 1,5/ 7-G-3,5 RN P20 THR	1830618	17
IMC 1,5/ 8-G-3,5 P20 THR	1830472	16
IMC 1,5/ 8-G-3,5 RN P20 THR	1830621	17
IMC 1,5/ 9-G-3,5 P20 THR	1830485	16
IMC 1,5/ 9-G-3,5 RN P20 THR	1830634	17
IMC 1,5/10-G-3,5 P20 THR	1830498	16
IMC 1,5/10-G-3,5 RN P20 THR	1830647	17
IMC 1,5/11-G-3,5 P20 THR	1830508	16
IMC 1,5/11-G-3,5 RN P20 THR	1830650	17
IMC 1,5/12-G-3,5 P20 THR	1830511	16
IMC 1,5/12-G-3,5 RN P20 THR	1830663	17
IMCV 1,5/ 2-G-3,5 P20 THR	1830715	17
IMCV 1,5/ 2-G-3,5 RN P20 THR	1830867	17
IMCV 1,5/ 3-G-3,5 P20 THR	1830728	17
IMCV 1,5/ 3-G-3,5 RN P20 THR	1830870	17
IMCV 1,5/ 4-G-3,5 P20 THR	1830731	17
IMCV 1,5/ 4-G-3,5 RN P20 THR	1830883	17
IMCV 1,5/ 5-G-3,5 P20 THR	1830744	17
IMCV 1,5/ 5-G-3,5 RN P20 THR	1830896	17
IMCV 1,5/ 6-G-3,5 P20 THR	1830757	17
IMCV 1,5/ 6-G-3,5 RN P20 THR	1830906	17
IMCV 1,5/ 7-G-3,5 P20 THR	1830760	17
IMCV 1,5/ 7-G-3,5 RN P20 THR	1830919	17
IMCV 1,5/ 8-G-3,5 P20 THR	1830773	17
IMCV 1,5/ 8-G-3,5 RN P20 THR	1830922	17
IMCV 1,5/ 9-G-3,5 P20 THR	1830786	17
IMCV 1,5/ 9-G-3,5 RN P20 THR	1830935	17
IMCV 1,5/10-G-3,5 P20 THR	1830799	17
IMCV 1,5/10-G-3,5 RN P20 THR	1830948	17
IMCV 1,5/11-G-3,5 P20 THR	1830809	17
IMCV 1,5/11-G-3,5 RN P20 THR	1830951	17
IMCV 1,5/12-G-3,5 P20 THR	1830812	17
IMCV 1,5/12-G-3,5 RN P20 THR	1830964	17
ISH 2,5/0,2	3002843	160
ISH 2,5/0,5	3002856	160
ISH 2,5/1,0	3002869	160

K

Type	Order No.	Page
KMK HP (25X6)	0830720	272
KMK HP (29X8)	0830721	273
KMK HP (40X17)	0830723	273
KMK HP (60X15)	0830722	273
KMK UV (25X6)	1014106	274
KMK UV (29X8)	1014107	275
KMK UV (40X17)	1014109	275
KMK UV (60X15)	1014108	275
KV-DI-PG16-1XASI	1582462	195
KV-DI-PG16-2XASI	1582464	195

L

Type	Order No.	Page
LS-EML (180X180) BK-WH	0831784	262
LS-EML (180X180) BK-WH CUS	0832070	262
LS-EMLP (100X60) SR	0831726	257
LS-EMLP (100X60) SR CUS	0832012	259
LS-EMLP (100X60) WH	0831699	256
LS-EMLP (100X60) WH CUS	0831985	258
LS-EMLP (100X60) YE	0831753	257
LS-EMLP (100X60) YE CUS	0832039	259
LS-EMLP (11X9) SR	0831705	257
LS-EMLP (11X9) SR CUS	0831991	259
LS-EMLP (11X9) WH	0831678	256
LS-EMLP (11X9) WH CUS	0831964	258
LS-EMLP (11X9) YE	0831732	257
LS-EMLP (11X9) YE CUS	0832018	259
LS-EMLP (13X9) SR	0831706	257
LS-EMLP (13X9) SR CUS	0831992	259
LS-EMLP (13X9) WH	0831679	256
LS-EMLP (13X9) WH CUS	0831965	258
LS-EMLP (13X9) YE	0831733	257
LS-EMLP (13X9) YE CUS	0832019	259
LS-EMLP (17,5X12) SR	0831709	257
LS-EMLP (17,5X12) SR CUS	0831995	259
LS-EMLP (17,5X12) WH	0831682	256
LS-EMLP (17,5X12) WH CUS	0831968	258
LS-EMLP (17,5X12) YE	0831736	257
LS-EMLP (17,5X12) YE CUS	0832022	259
LS-EMLP (17,5X15) SR	0831710	257
LS-EMLP (17,5X15) SR CUS	0831996	259
LS-EMLP (17,5X15) WH	0831683	256
LS-EMLP (17,5X15) WH CUS	0831969	258
LS-EMLP (17,5X15) YE	0831737	257
LS-EMLP (17,5X15) YE CUS	0832023	259
LS-EMLP (17X7) SR	0831707	257
LS-EMLP (17X7) SR CUS	0831993	259
LS-EMLP (17X7) WH	0831680	256
LS-EMLP (17X7) WH CUS	0831966	258
LS-EMLP (17X7) YE	0831734	257
LS-EMLP (17X7) YE CUS	0832020	259
LS-EMLP (17X9) SR	0831708	257
LS-EMLP (17X9) SR CUS	0831994	259
LS-EMLP (17X9) WH	0831681	256
LS-EMLP (17X9) WH CUS	0831967	258
LS-EMLP (17X9) YE	0831735	257
LS-EMLP (17X9) YE CUS	0832021	259
LS-EMLP (20X7) SR	0831711	257
LS-EMLP (20X7) SR CUS	0831997	259
LS-EMLP (20X7) WH	0831684	256
LS-EMLP (20X7) WH CUS	0831970	258
LS-EMLP (20X7) YE	0831738	257
LS-EMLP (20X7) YE CUS	0832024	259
LS-EMLP (20X8) SR	0831712	257
LS-EMLP (20X8) SR CUS	0831998	259
LS-EMLP (20X8) WH	0831685	256
LS-EMLP (20X8) WH CUS	0831971	258
LS-EMLP (20X8) YE	0831739	257
LS-EMLP (20X8) YE CUS	0832025	259
LS-EMLP (22X12) SR	0831713	257
LS-EMLP (22X12) SR CUS	0831999	259
LS-EMLP (22X12) WH	0831686	256
LS-EMLP (22X12) WH CUS	0831972	258
LS-EMLP (22X12) YE	0831740	257
LS-EMLP (22X12) YE CUS	0832026	259
LS-EMLP (22X22) SR	0831714	257
LS-EMLP (22X22) SR CUS	0832000	259
LS-EMLP (22X22) WH	0831687	256
LS-EMLP (22X22) WH CUS	0831973	258
LS-EMLP (22X22) YE	0831741	257
LS-EMLP (22X22) YE CUS	0832027	259
LS-EMLP (27X12,5) SR	0831716	257
LS-EMLP (27X12,5) SR CUS	0832002	259
LS-EMLP (27X12,5) WH	0831689	256
LS-EMLP (27X12,5) WH CUS	0831975	258

Type	Order No.	Page
LS-EMLP (27X12,5) YE	0831743	257
LS-EMLP (27X12,5) YE CUS	0832029	259
LS-EMLP (27X15) SR	0831717	257
LS-EMLP (27X15) SR CUS	0832003	259
LS-EMLP (27X15) WH	0831690	256
LS-EMLP (27X15) WH CUS	0831976	258
LS-EMLP (27X15) YE	0831744	257
LS-EMLP (27X15) YE CUS	0832030	259
LS-EMLP (27X18) SR	0831718	257
LS-EMLP (27X18) SR CUS	0832004	259
LS-EMLP (27X18) WH	0831691	256
LS-EMLP (27X18) WH CUS	0831977	258
LS-EMLP (27X18) YE	0831745	257
LS-EMLP (27X18) YE CUS	0832031	259
LS-EMLP (27X27) SR	0831719	257
LS-EMLP (27X27) SR CUS	0832005	259
LS-EMLP (27X27) WH	0831692	256
LS-EMLP (27X27) WH CUS	0831978	258
LS-EMLP (27X27) YE	0831746	257
LS-EMLP (27X27) YE CUS	0832032	259
LS-EMLP (27X8) SR	0831715	257
LS-EMLP (27X8) SR CUS	0832001	259
LS-EMLP (27X8) WH	0831688	256
LS-EMLP (27X8) WH CUS	0831974	258
LS-EMLP (27X8) YE	0831742	257
LS-EMLP (27X8) YE CUS	0832028	259
LS-EMLP (45X14) SR	0831720	257
LS-EMLP (45X14) SR CUS	0832006	259
LS-EMLP (45X14) WH	0831693	256
LS-EMLP (45X14) WH CUS	0831979	258
LS-EMLP (45X14) YE	0831747	257
LS-EMLP (45X14) YE CUS	0832033	259
LS-EMLP (45X15) SR	0831721	257
LS-EMLP (45X15) SR CUS	0832007	259
LS-EMLP (45X15) WH	0831694	256
LS-EMLP (45X15) WH CUS	0831980	258
LS-EMLP (45X15) YE	0831748	257
LS-EMLP (45X15) YE CUS	0832034	259
LS-EMLP (49X15) SR	0831722	257
LS-EMLP (49X15) SR CUS	0832008	259
LS-EMLP (49X15) WH	0831695	256
LS-EMLP (49X15) WH CUS	0831981	258
LS-EMLP (49X15) YE	0831749	257
LS-EMLP (49X15) YE CUS	0832035	259
LS-EMLP (60X15) SR	0831723	257
LS-EMLP (60X15) SR CUS	0832009	259
LS-EMLP (60X15) WH	0831696	256
LS-EMLP (60X15) WH CUS	0831982	258
LS-EMLP (60X15) YE	0831750	257
LS-EMLP (60X15) YE CUS	0832036	259
LS-EMLP (60X30) SR	0831724	257
LS-EMLP (60X30) SR CUS	0832010	259
LS-EMLP (60X30) WH	0831697	256
LS-EMLP (60X30) WH CUS	0831983	258
LS-EMLP (60X30) YE	0831751	257
LS-EMLP (60X30) YE CUS	0832037	259
LS-EMLP (85,6X54) SR	0831725	257
LS-EMLP (85,6X54) SR CUS	0832011	259
LS-EMLP (85,6X54) WH	0831698	256
LS-EMLP (85,6X54) WH CUS	0831984	258
LS-EMLP (85,6X54) YE	0831752	257
LS-EMLP (85,6X54) YE CUS	0832038	259
LS-EMLP 24 (30X12) SR	0831727	260
LS-EMLP 24 (30X12) SR CUS	0832013	260
LS-EMLP 24 (30X12) WH	0831700	260
LS-EMLP 24 (30X12) WH CUS	0831986	260
LS-EMLP 24 (30X12) YE	0831754	260
LS-EMLP 24 (30X12) YE CUS	0832040	260
LS-EMLP 30 (45X10) SR	0831728	261
LS-EMLP 30 (45X10) SR CUS	0832014	261
LS-EMLP 30 (45X10) WH	0831701	261
LS-EMLP 30 (45X10) WH CUS	0831987	261
LS-EMLP 30 (45X10) YE	0831755	261
LS-EMLP 30 (45X10) YE CUS	0832041	261
LS-EMLP 32 (38X14) SR	0831729	261
LS-EMLP 32 (38X14) SR CUS	0832015	261
LS-EMLP 32 (38X14) WH	0831702	261
LS-EMLP 32 (38X14) WH CUS	0831988	261
LS-EMLP 32 (38X14) YE	0831756	261
LS-EMLP 32 (38X14) YE CUS	0832042	261

Type	Order No.	Page
LS-EMLP-AL (100X60)	0831586	252
LS-EMLP-AL (100X60) BK	0831595	253
LS-EMLP-AL (100X60) BK CUS	0831881	253
LS-EMLP-AL (100X60) CUS	0831872	252
LS-EMLP-AL (27X15)	0831580	252
LS-EMLP-AL (27X15) BK	0831589	253
LS-EMLP-AL (27X15) BK CUS	0831875	253
LS-EMLP-AL (27X15) CUS	0831866	252
LS-EMLP-AL (27X18)	0831581	252
LS-EMLP-AL (27X18) BK	0831590	253
LS-EMLP-AL (27X18) BK CUS	0831876	253
LS-EMLP-AL (27X18) CUS	0831867	252
LS-EMLP-AL (49X15)	0831582	252
LS-EMLP-AL (49X15) BK	0831591	253
LS-EMLP-AL (49X15) BK CUS	0831877	253
LS-EMLP-AL (49X15) CUS	0831868	252
LS-EMLP-AL (60X15)	0831583	252
LS-EMLP-AL (60X15) BK	0831592	253
LS-EMLP-AL (60X15) BK CUS	0831878	253
LS-EMLP-AL (60X15) CUS	0831869	252
LS-EMLP-AL (60X30)	0831584	252
LS-EMLP-AL (60X30) BK	0831593	253
LS-EMLP-AL (60X30) BK CUS	0831879	253
LS-EMLP-AL (60X30) BU	0831606	253
LS-EMLP-AL (60X30) BU CUS	0831892	253
LS-EMLP-AL (60X30) CUS	0831870	252
LS-EMLP-AL (60X30) GN	0831610	253
LS-EMLP-AL (60X30) GN CUS	0831896	253
LS-EMLP-AL (60X30) OG	0831602	253
LS-EMLP-AL (60X30) OG CUS	0831888	253
LS-EMLP-AL (60X30) RD	0831598	253
LS-EMLP-AL (60X30) RD CUS	0831884	253
LS-EMLP-AL (85,6X54)	0831585	252
LS-EMLP-AL (85,6X54) BK	0831594	253
LS-EMLP-AL (85,6X54) BK CUS	0831880	253
LS-EMLP-AL (85,6X54) BU	0831607	253
LS-EMLP-AL (85,6X54) BU CUS	0831893	253
LS-EMLP-AL (85,6X54) CUS	0831871	252
LS-EMLP-AL (85,6X54) GN	0831611	253
LS-EMLP-AL (85,6X54) GN CUS	0831897	253
LS-EMLP-AL (85,6X54) OG	0831603	253
LS-EMLP-AL (85,6X54) OG CUS	0831889	253
LS-EMLP-AL (85,6X54) RD	0831599	253
LS-EMLP-AL (85,6X54) RD CUS	0831885	253
LS-EMP-AL (100X60)	0831667	254
LS-EMP-AL (100X60) BK	0831675	255
LS-EMP-AL (100X60) BK CUS	0831961	255
LS-EMP-AL (100X60) CUS	0831953	254
LS-EMP-AL (27X15)	0831661	254
LS-EMP-AL (27X15) BK	0831669	255
LS-EMP-AL (27X15) BK CUS	0831955	255
LS-EMP-AL (27X15) CUS	0831947	254
LS-EMP-AL (27X18)	0831662	254
LS-EMP-AL (27X18) BK	0831670	255
LS-EMP-AL (27X18) BK CUS	0831956	255
LS-EMP-AL (27X18) CUS	0831948	254
LS-EMP-AL (49X15)	0831663	254
LS-EMP-AL (49X15) BK	0831671	255
LS-EMP-AL (49X15) BK CUS	0831957	255
LS-EMP-AL (49X15) CUS	0831949	254
LS-EMP-AL (60X15)	0831664	254
LS-EMP-AL (60X15) BK	0831672	255
LS-EMP-AL (60X15) BK CUS	0831958	255
LS-EMP-AL (60X15) CUS	0831950	254
LS-EMP-AL (60X30)	0831665	254
LS-EMP-AL (60X30) BK	0831673	255
LS-EMP-AL (60X30) BK CUS	0831959	255
LS-EMP-AL (60X30) CUS	0831951	254
LS-EMP-AL (85,6X54)	0831666	254
LS-EMP-AL (85,6X54) BK	0831674	255
LS-EMP-AL (85,6X54) BK CUS	0831960	255
LS-EMP-AL (85,6X54) CUS	0831952	254
LS-EMSP-AL (110X80)	0831620	251
LS-EMSP-AL (110X80) BK	0831631	251
LS-EMSP-AL (110X80) BK CUS	0831917	251
LS-EMSP-AL (110X80) CUS	0831906	251
LS-EMSP-AL (150X120)	0831622	251
LS-EMSP-AL (150X120) BK	0831633	251
LS-EMSP-AL (150X120) BK CUS	0831919	251
LS-EMSP-AL (150X120) CUS	0831908	251

Type	Order No.	Page
LS-EMSP-AL (150X80)	0831621	251
LS-EMSP-AL (150X80) BK	0831632	251
LS-EMSP-AL (150X80) BK CUS	0831918	251
LS-EMSP-AL (150X80) CUS	0831907	251
LS-EMSP-AL (170X180)	0831623	251
LS-EMSP-AL (170X180) BK	0831634	251
LS-EMSP-AL (170X180) BK CUS	0831920	251
LS-EMSP-AL (170X180) CUS	0831909	251
LS-EMSP-AL (39X15)	0831615	251
LS-EMSP-AL (39X15) BK	0831626	251
LS-EMSP-AL (39X15) BK CUS	0831912	251
LS-EMSP-AL (39X15) CUS	0831901	251
LS-EMSP-AL (50X15)	0831616	251
LS-EMSP-AL (50X15) BK	0831627	251
LS-EMSP-AL (50X15) BK CUS	0831913	251
LS-EMSP-AL (50X15) CUS	0831902	251
LS-EMSP-AL (50X30)	0831617	251
LS-EMSP-AL (50X30) BK	0831628	251
LS-EMSP-AL (50X30) BK CUS	0831914	251
LS-EMSP-AL (50X30) BU	0831645	251
LS-EMSP-AL (50X30) BU CUS	0831931	251
LS-EMSP-AL (50X30) CUS	0831903	251
LS-EMSP-AL (50X30) GN	0831649	251
LS-EMSP-AL (50X30) GN CUS	0831935	251
LS-EMSP-AL (50X30) OG	0831641	251
LS-EMSP-AL (50X30) OG CUS	0831927	251
LS-EMSP-AL (50X30) RD	0831637	251
LS-EMSP-AL (50X30) RD CUS	0831923	251
LS-EMSP-AL (75,6X54)	0831618	251
LS-EMSP-AL (75,6X54) BK	0831629	251
LS-EMSP-AL (75,6X54) BK CUS	0831915	251
LS-EMSP-AL (75,6X54) BU	0831646	251
LS-EMSP-AL (75,6X54) BU CUS	0831932	251
LS-EMSP-AL (75,6X54) CUS	0831904	251
LS-EMSP-AL (75,6X54) GN	0831650	251
LS-EMSP-AL (75,6X54) GN CUS	0831936	251
LS-EMSP-AL (75,6X54) OG	0831642	251
LS-EMSP-AL (75,6X54) OG CUS	0831928	251
LS-EMSP-AL (75,6X54) RD	0831638	251
LS-EMSP-AL (75,6X54) RD CUS	0831924	251
LS-EMSP-AL (90X60)	0831619	251
LS-EMSP-AL (90X60) BK	0831630	251
LS-EMSP-AL (90X60) BK CUS	0831916	251
LS-EMSP-AL (90X60) CUS	0831905	251
LS-EMSP-V4A (39X15)	0831653	250
LS-EMSP-V4A (39X15) CUS	0831939	250
LS-EMSP-V4A (50X15)	0831654	250
LS-EMSP-V4A (50X15) CUS	0831940	250
LS-EMSP-V4A (50X30)	0831655	250
LS-EMSP-V4A (50X30) CUS	0831941	250
LS-EMSP-V4A (75,6X54)	0831656	250
LS-EMSP-V4A (75,6X54) CUS	0831942	250
LS-EMSP-V4A (90X60)	0831657	250
LS-EMSP-V4A (90X60) CUS	0831943	250
LS-WMTB-AL (100X15)	0831503	247
LS-WMTB-AL (100X15) BK	0831511	247
LS-WMTB-AL (100X15) BK CUS	0831797	247
LS-WMTB-AL (100X15) CUS	0831789	247
LS-WMTB-AL (29X8)	0831500	247
LS-WMTB-AL (29X8) BK	0831508	247
LS-WMTB-AL (29X8) BK CUS	0831794	247
LS-WMTB-AL (29X8) CUS	0831786	247
LS-WMTB-AL (40X15)	0831501	247
LS-WMTB-AL (40X15) BK	0831509	247
LS-WMTB-AL (40X15) BK CUS	0831795	247
LS-WMTB-AL (40X15) CUS	0831787	247
LS-WMTB-AL (60X15)	0831502	247
LS-WMTB-AL (60X15) BK	0831510	247
LS-WMTB-AL (60X15) BK CUS	0831796	247
LS-WMTB-AL (60X15) CUS	0831788	247
LS-WMTB-AL (D25)	0831504	249
LS-WMTB-AL (D25) BK	0831512	249
LS-WMTB-AL (D25) BK CUS	0831798	249
LS-WMTB-AL (D25) CUS	0831790	249
LS-WMTB-AL (D30)	0831505	249
LS-WMTB-AL (D30) BK	0831513	249
LS-WMTB-AL (D30) BK CUS	0831799	249
LS-WMTB-AL (D30) CUS	0831791	249
LS-WMTB-V4A (100X15)	0831519	247
LS-WMTB-V4A (100X15) CUS	0831805	247

Type	Order No.	Page
LS-WMTB-V4A (29X8)	0831516	247
LS-WMTB-V4A (29X8) CUS	0831802	247
LS-WMTB-V4A (40X15)	0831517	247
LS-WMTB-V4A (40X15) CUS	0831803	247
LS-WMTB-V4A (60X15)	0831518	247
LS-WMTB-V4A (60X15) CUS	0831804	247
LS-WMTB-V4A (D25)	0831520	249
LS-WMTB-V4A (D25) CUS	0831806	249
LS-WMTB-V4A (D30)	0831521	249
LS-WMTB-V4A (D30) CUS	0831807	249

M

Type	Order No.	Page
MACX MCR-EX-I20	2905679	346
MACX MCR-I20	2905680	343
MACX PL-EX-RPSS-2I-2I	2904963	345
MACX PL-EX-RPSS-2I-2I-SP	2904964	345
MACX PL-EX-RPSSI-2I	2904959	344
MACX PL-EX-RPSSI-2I-SP	2904960	344
MACX PL-EX-T-UIREL-UP	2904910	346
MACX PL-EX-T-UIREL-UP-SP	2904912	346
MACX PL-RPSSI-2I	2904961	342
MACX PL-RPSSI-2I-SP	2904962	342
MACX PL-T-UIREL-UP	2904901	343
MACX PL-T-UIREL-UP-SP	2904903	343
MC 1,5/13-G-3,81 P20 THR	1829056	18
MC 1,5/13-G-3,81 P20 THRR72	1828691	20
MC 1,5/13-GF-3,81 P20 THR	1829137	19
MC 1,5/13-GF-3,81 P20 THRR72	1828772	21
MC 1,5/14-G-3,81 P20 THR	1829069	18
MC 1,5/14-G-3,81 P20 THRR88	1828701	20
MC 1,5/14-GF-3,81 P20 THR	1829140	19
MC 1,5/14-GF-3,81 P20 THRR88	1828785	21
MC 1,5/15-G-3,81 P20 THR	1829072	18
MC 1,5/15-G-3,81 P20 THRR88	1828714	20
MC 1,5/15-GF-3,81 P20 THR	1829153	19
MC 1,5/15-GF-3,81 P20 THRR88	1828798	21
MC 1,5/16-G-3,81 P20 THR	1829085	18
MC 1,5/16-G-3,81 P20 THRR88	1828727	20
MC 1,5/16-GF-3,81 P20 THR	1829166	19
MC 1,5/16-GF-3,81 P20 THRR88	1828808	21
MC 1,5/17-G-3,81 P20 THR	1829098	18
MC 1,5/17-G-3,81 P20 THRR88	1828730	20
MC 1,5/17-GF-3,81 P20 THR	1829179	19
MC 1,5/17-GF-3,81 P20 THRR88	1828811	21
MC 1,5/18-G-3,81 P20 THR	1829108	18
MC 1,5/18-G-3,81 P20 THRR88	1828743	20
MC 1,5/18-GF-3,81 P20 THR	1829182	19
MC 1,5/18-GF-3,81 P20 THRR88	1828824	21
MC 1,5/19-G-3,81 P20 THR	1829111	18
MC 1,5/19-G-3,81 P20 THRR104	1828756	20
MC 1,5/19-GF-3,81 P20 THR	1829195	19
MC 1,5/19-GF-3,81 P20 THRR104	1828837	21
MC 1,5/20-G-3,81 P20 THR	1829124	18
MC 1,5/20-G-3,81 P20 THRR104	1828769	20
MC 1,5/20-GF-3,81 P20 THR	1829205	19
MC 1,5/20-GF-3,81 P20 THRR104	1828840	21
MCV 1,5/13-G-3,81 P20 THR	1828895	19
MCV 1,5/13-G-3,81 P20 THRR72	1828536	21
MCV 1,5/13-GF-3,81 P20 THR	1828976	19
MCV 1,5/13-GF-3,81 P20 THRR72	1828617	21
MCV 1,5/14-G-3,81 P20 THR	1828905	19
MCV 1,5/14-G-3,81 P20 THRR88	1828549	21
MCV 1,5/14-GF-3,81 P20 THR	1828989	19
MCV 1,5/14-GF-3,81 P20 THRR88	1828620	21
MCV 1,5/15-G-3,81 P20 THR	1828918	19
MCV 1,5/15-G-3,81 P20 THRR88	1828522	21
MCV 1,5/15-GF-3,81 P20 THR	1828992	19
MCV 1,5/15-GF-3,81 P20 THRR88	1828633	21
MCV 1,5/16-G-3,81 P20 THR	1828921	19
MCV 1,5/16-G-3,81 P20 THRR88	1828565	21
MCV 1,5/16-GF-3,81 P20 THR	1829001	19
MCV 1,5/16-GF-3,81 P20 THRR88	1828646	21
MCV 1,5/17-G-3,81 P20 THR	1828934	19
MCV 1,5/17-G-3,81 P20 THRR88	1828578	21
MCV 1,5/17-GF-3,81 P20 THR	1829014	19
MCV 1,5/17-GF-3,81 P20 THRR88	1828659	21

Type	Order No.	Page
MCV 1,5/18-G-3,81 P20 THR	1828947	19
MCV 1,5/18-G-3,81 P20 THRR88	1828581	21
MCV 1,5/18-GF-3,81 P20 THR	1829027	19
MCV 1,5/18-GF-3,81 P20 THRR88	1828662	21
MCV 1,5/19-G-3,81 P20 THR	1828950	19
MCV 1,5/19-G-3,81 P20 THRR104	1828594	21
MCV 1,5/19-GF-3,81 P20 THR	1829030	19
MCV 1,5/19-GF-3,81 P20 THRR104	1828675	21
MCV 1,5/20-G-3,81 P20 THR	1828963	19
MCV 1,5/20-G-3,81 P20 THRR104	1828604	21
MCV 1,5/20-GF-3,81 P20 THR	1829043	19
MCV 1,5/20-GF-3,81 P20 THRR104	1828688	21
ME 17,5 TBUS 1,5/ 5-ST-3,81 GN	2709561	337
ME 17,5 TBUS 1,5/4P1S KMGY	2201731	39
ME 17,5 TBUS ADAPTER KMGY	2201757	39
ME 18,8 TBUS 1,5/5-ST-3,81KMGY	2201813	35
ME 22,5 TBUS 1,5/ 5-ST-3,81 GN	2707437	358
ME 22,5 TBUS 1,5/4P1S KMGY	2201732	39
ME 22,5 TBUS ADAPTER KMGY	2201756	39
ME 6,2 TBUS-2 1,5/5-ST-3,81 GN	2869728	336
ME 6,2 TBUS-2 1,5/5-ST-3,81 GY	2695439	336
ME-IO 18,8 B/FE 3/9U TBUS 7035	2201963	34
ME-IO 18,8 B/FE 5/9U TBUS 7035	2201962	34
ME-IO 18,8 B/FE 7/9U TBUS 7035	2201961	34
ME-IO 18,8 B/FE 9/9U TBUS 7035	2201960	34
ME-IO 18,8 C 2U 7035	2201799	35
ME-IO 18,8 C 3U 7035	2201800	35
ME-IO 18,8 C 3U S1 7035	2201801	35
ME-IO 18,8 C 4U 7035	2201802	35
ME-IO 18,8 C 5U 7035	2201803	35
ME-IO 18,8 C 6U 7035	2201804	35
ME-IO 18,8 C 7U 7035	2201805	35
ME-SAS	2853899	391
MICROFOX-SP-1	1212487	44
MINI FD BLUETOOTH	0830986	289
MINI MCR-2-FM-RC	2904504	338
MINI MCR-2-FM-RC-PT	2904508	338
MINI MCR-2-I-I	2901998	328
MINI MCR-2-I-I-PT	2901999	328
MINI MCR-2-I0-U	2902000	328
MINI MCR-2-I0-U-PT	2902001	328
MINI MCR-2-I4-U	2902002	328
MINI MCR-2-I4-U-PT	2902003	328
MINI MCR-2-POT-UI	2902016	334
MINI MCR-2-POT-UI-C	2905005	334
MINI MCR-2-POT-UI-PT	2902017	334
MINI MCR-2-POT-UI-PT-C	2905006	334
MINI MCR-2-PTB	2902066	336
MINI MCR-2-PTB-PT	2902067	336
MINI MCR-2-RPSS-I-I	2902014	329
MINI MCR-2-RPSS-I-I-PT	2902015	329
MINI MCR-2-RTD-UI	2902049	330
MINI MCR-2-RTD-UI-C	2902048	330
MINI MCR-2-RTD-UI-PT	2902052	330
MINI MCR-2-RTD-UI-PT-C	2902051	330
MINI MCR-2-TB	2902068	338
MINI MCR-2-TC-UI	2902055	332
MINI MCR-2-TC-UI-C	2902053	332
MINI MCR-2-TC-UI-PT	2905249	332
MINI MCR-2-TC-UI-PT-C	2905248	332
MINI MCR-2-U-I0	2902022	328
MINI MCR-2-U-I0-PT	2902023	328
MINI MCR-2-U-I4	2902029	328
MINI MCR-2-U-I4-PT	2902030	328
MINI MCR-2-U-U	2902042	328
MINI MCR-2-U-U-PT	2902043	328
MINI MCR-2-UI-UI	2902037	326
MINI MCR-2-UI-UI-C	2902036	326
MINI MCR-2-UI-UI-PT	2902040	326
MINI MCR-2-UI-UI-PT-C	2902039	326
MINI-PS-100-240AC/24DC/1.5/EX	2866653	337
MINI-SYS-PS-100-240AC/24DC/1.5	2866983	337
MPB 18/1-57	2809238	306
MPS-IH RD	0201676	156
MPS-MT	0201744	156

N

Type	Order No.	Page
NLC-035-024D-04I-02QRD-05A	2702031	430
NLC-040-O24D-04I-02QRD-05A	2400079	430
NLC-IO-2RTD/UTH-4QTP-01A	2701671	432
NLC-IOX-041-02QRD-05A	2702032	433
NLC-OP1-MKT-BASE	2701250	431
NLC-OP2-LCD-076-4X20	2701945	431
NLC-PC/SERIAL-CBL 2M	2701234	430

P

Type	Order No.	Page
P-CO	3036796	158
P-DI	3036783	158
P-FIX	3038956	158
P-FU 5X20	3036806	164
P-FU 5X20 LA 250-EX	3036836	163
P-FU 5X20 LED 24-5	3209248	158
P-FU 5X20 LED 24-EX	3036821	163
P-FU 5X20 LED 250-5	3209264	158
P-FU 5X20 LED 60-5	3209251	158
P-FU 5X20 LED 60-EX	3036823	163
P-FU 5X20-5	3209235	158
P-FU 5X20-EX	3036807	163
P-FU 6,3X32 LA 250-EX	3046525	163
P-FU 6,3X32 LED 24-EX	3046509	163
P-FU 6,3X32 LED 60-EX	3046512	163
P-FU 6,3X32-EX	3046499	163
PACT RCP-4000A-1A-D140	2904922	353
PACT RCP-4000A-1A-D190	2904923	353
PACT RCP-4000A-1A-D95	2904921	353
PACT RCP-CLAMP	2904895	353
PAI-4-N GY	3032871	162
PBR 42A BU	2201916	38
PBR 42A KMGY	2201917	38
PBR 42A RD	2201915	38
PC-FTP-TRI	3069898	99
PC-UTWE-TRI	3069897	99
PCO 17,5-L KMGY	2201684	38
PCO 22,5-L KMGY	2201685	38
PLC-LOGIC-STARTERKIT1	2905504	359
PLC-OPT- 24DC/230AC/2.4/ACT	2904632	366
PLC-OSC- 24DC/230AC/2.4/ACT	2904631	366
PLC-V8C/CAB/TBUS/0,3M	2905263	358
PLC-V8C/PT-24DC/BM	2905135	357
PLC-V8C/PT-24DC/EM	2905137	357
PLC-V8C/PT-24DC/SAM	2905136	356
PLC-V8C/SC-24DC/BM	2903094	357
PLC-V8C/SC-24DC/EM	2903095	357
PLC-V8C/SC-24DC/SAM	2905082	356
PMST (9X38)	0830960	285
PMST (9X38) BK	0830965	285
PMST (9X38) BN	0830968	285
PMST (9X38) BU	0830969	285
PMST (9X38) GN	0830961	285
PMST (9X38) GY	0830963	285
PMST (9X38) OG	0830966	285
PMST (9X38) RD	0830962	285
PMST (9X38) VT	0830967	285
PMST (9X38) YE	0830964	285
PRC 3-FC-FS6 8-12	1410658	76
PRC 3-FC-FS6 8-21	1410661	76
PRC 3-FC-FS6 12-16	1409217	76
PRC 3-FC-FS6 16-21	1410659	76
PRC 3-FT25-MC	1409218	77
PRC 3-FT25-MC2,5-150	1409219	77
PRC 3-FT25-MC4-150	1409220	77
PRC 3-FT25-MC6-150	1409221	77
PRC 3-TC-FS6 8-21	1621326	76
PRC 5-FC-FS6 8-12	1410629	76
PRC 5-FC-FS6 8-21	1410656	76
PRC 5-FC-FS6 12-16	1409205	76
PRC 5-FC-FS6 16-21	1410655	76
PRC 5-FT25-MC	1409206	77
PRC 5-FT25-MC2,5-150	1409211	77
PRC 5-FT25-MC4-150	1409212	77
PRC 5-FT25-MC6-150	1409213	77
PRC 5-TC-FS6 8-21	1621325	76
PRC COVER F	1409236	76
PRC COVER M	1409237	77
PS 6-CT-SD	3246857	171
PS 6-DI-SD	3246856	171
PS 6-VT-SD	3246858	171
PS-5	3030983	160
PS-5/2,3MM RD	3038723	158
PS-6	3030996	162
PSBJ-URTK 6 BK	3026447	99
PSBJ-URTK 6 BN	3026971	99
PSBJ-URTK 6 BU	3026434	99
PSBJ-URTK 6 FARBLOS	3026450	99
PSBJ-URTK 6 GN	3026418	99
PSBJ-URTK 6 GY	3026612	99
PSBJ-URTK 6 RD	3026719	99
PSBJ-URTK 6 VT	3026421	99
PSBJ-URTK 6 YE	3026405	99
PSI-CAB-GSM/UMTS- 5M	2900980	394
PSI-CAB-GSM/UMTS-10M	2900981	394
PSI-GSM/UMTS-ANT-OMNI-2-5	2900982	394
PSI-GSM/UMTS-QB-ANT	2313371	394
PSK APS7004IOL	2700710	350
PSM-KA 9 SUB 25/BB/2METER	2761059	391
PSM-KA9SUB9/BB/2METER	2799474	391
PSR-PIP-24DC/MXF1/4X1/2X2/B	2903253	401
PSR-PIP-24DC/MXF2/4X1/2X2/B	2903256	401
PSR-PIP-24DC/MXF3/4X1/2X2/B	2903259	401
PSR-PIP-24DC/MXF4/4X1/2X2/B	2903262	401
PSR-SCP- 24DC/MXF1/4X1/2X2/B	2902725	400
PSR-SCP- 24DC/TS/M	2986012	402
PSR-SCP- 24DC/TS/SDOR4/4X1	2986096	402
PSR-SCP-24DC/MXF2/4X1/2X2/B	2903254	400
PSR-SCP-24DC/MXF3/4X1/2X2/B	2903257	400
PSR-SCP-24DC/MXF4/4X1/2X2/B	2903260	400
PSR-SPP- 24DC/TS/M	2986025	402
PSR-SPP- 24DC/TS/SDOR4/4X1	2986106	402
PSR-SPP-24DC/MXF1/4X1/2X2/B	2902726	400
PSR-SPP-24DC/MXF2/4X1/2X2/B	2903255	400
PSR-SPP-24DC/MXF3/4X1/2X2/B	2903258	400
PSR-SPP-24DC/MXF4/4X1/2X2/B	2903261	400
PSR-TBUS	2890425	402
PT 1,5/S-MT	3210301	156
PT 1,5/S-MT BU	3210302	156
PT 1,5/S-MTD	3210308	156
PT 1,5/S-MTD BU	3210309	156
PT 1,5/S-QUATTRO-MT	3210321	157
PT 1,5/S-QUATTRO-MT BU	3210322	157
PT 1,5/S-QUATTRO-MTD	3210328	157
PT 1,5/S-QUATTRO-MTD BU	3210329	157
PT 1,5/S-TWIN-MT	3210311	157
PT 1,5/S-TWIN-MT BU	3210312	157
PT 1,5/S-TWIN-MTD	3210317	157
PT 1,5/S-TWIN-MTD BU	3210319	157
PT-IQ-1X2-EX-24DC-P	2801514	312
PT-IQ-1X2-EX-24DC-UT	2801512	312
PT-IQ-2X2+F-48DC-PT	2801266	311
PT-IQ-2X2+F-48DC-UT	2800987	311
PT-IQ-2X2+F-5DC-PT	2801260	311
PT-IQ-2X2+F-5DC-UT	2800809	311
PT-IQ-2X2-48DC-P	2800810	310
PT-IQ-2X2-48DC-PT	2801265	310
PT-IQ-2X2-48DC-UT	2800986	310
PT-IQ-2X2-5DC-P	2800802	310
PT-IQ-2X2-5DC-PT	2801259	310
PT-IQ-2X2-5DC-UT	2800807	310
PT-IQ-2X2-EX-24DC-P	2801515	312
PT-IQ-2X2-EX-24DC-UT	2801513	312
PT-IQ-3-HF+F-12DC-PT	2801289	313
PT-IQ-3-HF+F-12DC-UT	2800995	313
PT-IQ-3-HF-12DC-P	2800784	313
PT-IQ-3-HF-12DC-PT	2801288	313
PT-IQ-3-HF-12DC-UT	2800786	313
PT-IQ-3-PB+F-PT	2801287	313
PT-IQ-3-PB+F-UT	2800994	313
PT-IQ-3-PB-P	2800783	313
PT-IQ-3-PB-PT	2801286	313
PT-IQ-3-PB-UT	2800785	313
PT-IQ-4X1+F-5DC-PT	2801268	311
PT-IQ-4X1+F-5DC-UT	2801216	311
PT-IQ-4X1-5DC-P	2800811	311
PT-IQ-4X1-5DC-PT	2801267	311
PT-IQ-4X1-5DC-UT	2801215	311
PT-IQ-EX-H-PP	2905024	312
PT-IQ-EX-L-PP	2905023	312
PT/FS 4,8	1670497	195
PTRE 6-2/10	3069855	93
PTRE 6-2/12	3069861	93
PTRE 6-2/14	3069863	93
PTRE 6-2/15	3069864	93
PTRE 6-2/17	3069866	93
PTRE 6-2/19	3069868	93
PTRE 6-2/20	3069869	93
PTRE 6-2/21	3069870	93
PTRE 6-2/22	3069871	93
PTRE 6-2/25	3069874	93
PTRE 6-2/4	3069849	93
PTRE 6-2/5	3069850	93
PTRE 6-2/9	3069854	93
PTRE 6-2/A14	3069452	109
PTRE 6-2/A7	3069449	103
PTRE 6-2/B14	3069453	111
PTRE 6-2/B19	3069455	115
PTRE 6-2/B7	3069450	105
PTRE 6-2/C14	3069454	113
PTRE 6-2/C19	3069456	117
PTRE 6-2/D19	3069457	119
PTRE 6-2/E7	3069451	107
PTRE 6-2/F19	3069458	121
PTRE 6-2/G19	3069459	123
PTRE 6-2/H19	3069460	125
PTRE 6-2/I19	3069461	127
PTSM 0,5/ 1-2,5-H SMD WH L R24	1840035	23
PTSM 0,5/ 2-HTB-2,5-SMD WH R32	1830126	23
PTSM 0,5/ 2-HV-2,5-SMD WH R32	1778696	23
PTSM 0,5/ 3-HTB-2,5-SMD WH R32	1830139	23
PTSM 0,5/ 3-HV-2,5-SMD WH R32	1778706	23
PTSM 0,5/ 4-HTB-2,5-SMD WH R44	1830142	23
PTSM 0,5/ 4-HV-2,5-SMD WH R44	1778719	23
PTSM 0,5/ 5-HTB-2,5-SMD WH R44	1830155	23
PTSM 0,5/ 5-HV-2,5-SMD WH R44	1778722	23
PTSM 0,5/ 6-HTB-2,5-SMD WH R44	1830168	23
PTSM 0,5/ 6-HV-2,5-SMD WH R44	1778735	23
PTSM 0,5/ 7-HTB-2,5-SMD WH R44	1830171	23
PTSM 0,5/ 7-HV-2,5-SMD WH R44	1778748	23
PTSM 0,5/ 8-HTB-2,5-SMD WH R44	1830184	23
PTSM 0,5/ 8-HV-2,5-SMD WH R44	1778751	23
PTT 1,5/S-2L	3210356	157
PTT 1,5/S-2L BU	3210357	157
PTT 1,5/S-2MT	3210351	157
PTT 1,5/S-2MT BU	3210352	157
PTT 1,5/S-L/MT	3210341	157
PTT 1,5/S-L/MT BU	3210342	157
PTT 2,5-2L	3210267	159
PTT 2,5-2L BU	3210268	159
PTT 2,5-2MT	3210258	159
PTT 2,5-2MT BU	3210265	159
PTT 2,5-L/MT	3210251	159
PTT 2,5-L/MT BU	3210257	159
PTT 2,5-L/TG	3210230	158
PTT 2,5-L/TG BU	3210270	158
PTTBS 2,5-2MTB	3210400	161
PTTBS 2,5-2MTB BU	3210401	161
PTTBS 2,5-2TGB	3210402	160
PTWE 6-2/10	3069833	92
PTWE 6-2/12	3069835	92
PTWE 6-2/14	3069837	92
PTWE 6-2/15	3069838	92
PTWE 6-2/17	3069840	92
PTWE 6-2/19	3069842	92
PTWE 6-2/20	3069843	92
PTWE 6-2/21	3069844	92
PTWE 6-2/22	3069845	92
PTWE 6-2/25	3069848	92
PTWE 6-2/4	3069827	92
PTWE 6-2/5	3069828	92
PTWE 6-2/9	3069832	92
PTWE 6-2/A14	3069439	108
PTWE 6-2/A7	3069436	102

Type	Order No.	Page
PTWE 6-2/B14	3069440	110
PTWE 6-2/B19	3069442	114
PTWE 6-2/B7	3069437	104
PTWE 6-2/C14	3069441	112
PTWE 6-2/C19	3069443	116
PTWE 6-2/D19	3069444	118
PTWE 6-2/E7	3069438	106
PTWE 6-2/F19	3069445	120
PTWE 6-2/G19	3069446	122
PTWE 6-2/H19	3069447	124
PTWE 6-2/I19	3069448	126
PV-MI-CABLE SPLICE 3P	1812403	72
PV-MI-CABLE TERMINATOR 3P	1812416	72
PV-MI-YC-1,15-3-12-NA-0,50-OE	1706518	70
PV-MI-YC-1,15-3-25-EU-0,50-OE	1621351	70
PV-MI-YC-CARRIER-CAP-TP	1706608	70
PV-MI-YC-CARRIER-CAP-TS	1706599	70
PV-MI-YC-GC-P-1,00-3-12-NA SET	1707091	70
PV-MI-YC-GC-P-1,00-3-25-EU SET	1621349	70
PV-MI-YC-GC-S-1,00-3-12-NA SET	1707092	71
PV-MI-YC-GC-S-1,00-3-25-EU SET	1621350	71
PV-MI-YC-PATCH-1,00-3-12-NA	1707090	71
PV-MI-YC-PATCH-1,00-3-25-EU	1621352	71
PV-MI-YC-PROTECTION-CAP-TP	1706610	70
PV-MI-YC-PROTECTION-CAP-TS	1706515	70
PV-MI-YC-UNLOCKTOOL	1706514	70
PWO 16-UW	1844387	29
PWO 16-UW/S	1844390	29

Q

Type	Order No.	Page
Q-MU M16	1640692	195
Q-MU M20	1640702	195
Q-MU M25	1640715	195
Q-MU PG 21 BK	1582655	195
QPD 5P/ 1,0-PVC/5P 5X2,5 BK	1408720	194
QPD 5P/ 3,0-PVC/5P 5X2,5 BK	1408721	194
QPD 5P/ 5,0-PVC/5P 5X2,5 BK	1408722	194
QPD 5P/10,0-PVC/5P 5X2,5 BK	1408723	194
QPD C 4PE6,0 1X12-20 BK	1410416	190
QPD C 4PE6,0 1X12-20 GY	1410418	190
QPD C 4PE6,0 1X9-14 BK	1410415	190
QPD C 4PE6,0 1X9-14 GY	1410417	190
QPD C 4PE6,0 2X12-20 BK	1410412	190
QPD C 4PE6,0 2X12-20 GY	1410414	190
QPD C 4PE6,0 2X9-14 BK	1410410	190
QPD C 4PE6,0 2X9-14 GY	1410413	190
QPD CLIP 2,5 BK	1582235	195
QPD H 4PE6,0 4X12-20 BK	1411425	188
QPD H 4PE6,0 4X12-20 GY	1411429	188
QPD H 4PE6,0 4X9-14 BK	1411422	188
QPD H 4PE6,0 4X9-14 GY	1411428	188
QPD H 4PE6,0 BK	1411426	188
QPD H 4PE6,0 GY	1411427	188
QPD N 4PE6,0 12-20 BK	1410406	188
QPD N 4PE6,0 12-20 GY	1410405	188
QPD N 4PE6,0 9-14 BK	1410409	188
QPD N 4PE6,0 9-14 GY	1410407	188
QPD PSK 2,5	1582151	195
QPD PSK 5X2,5	1404529	195
QPD PSK 5X6,0	1411404	195
QPD QSK 2,5	1582150	195
QPD QSK 2,5 FS	1582488	195
QPD QSK 5X2,5	1404528	195
QPD QSK 5X6,0	1411403	195
QPD QSK BK 2,5 FS	1582645	195
QPD QSK BK 5X2,5 FS	1404525	195
QPD QSK GY 5X2,5 FS	1404526	195
QPD T 4PE6,0 2X12-20 BK	1411417	189
QPD T 4PE6,0 2X12-20 GY	1411421	189
QPD T 4PE6,0 2X9-14 BK	1411416	189
QPD T 4PE6,0 2X9-14 GY	1411420	189
QPD T 4PE6,0 3X12-20 BK	1411415	189
QPD T 4PE6,0 3X12-20 GY	1411419	189
QPD T 4PE6,0 3X9-14 BK	1411414	189
QPD T 4PE6,0 3X9-14 GY	1411418	189
QPD W 4PE2,5 6-11 M20 0,5 EX	1411393	192
QPD W 4PE2,5 6-11 M20 1,0 EX	1411394	192
QPD W 4PE2,5 6-11 M20 FC EX	1411395	192
QPD W 4PE2,5 6-11 M25 0,5 EX	1411387	192
QPD W 4PE2,5 6-11 M25 1,0 EX	1411388	192
QPD W 4PE2,5 6-11 M25 DT BK	1411432	191
QPD W 4PE2,5 6-11 M25 DT GY	1411434	191
QPD W 4PE2,5 6-11 M25 FC EX	1411389	192
QPD W 4PE2,5 9-16 M20 0,5 EX	1411397	192
QPD W 4PE2,5 9-16 M20 1,0 EX	1411398	192
QPD W 4PE2,5 9-16 M20 FC EX	1411399	192
QPD W 4PE2,5 9-16 M25 0,5 EX	1411390	192
QPD W 4PE2,5 9-16 M25 1,0 EX	1411391	192
QPD W 4PE2,5 9-16 M25 DT BK	1411433	191
QPD W 4PE2,5 9-16 M25 DT GY	1411435	191
QPD W 4PE2,5 9-16 M25 FC EX	1411392	192
QPD W 4PE6,0 12-20 M25 0,5 BK	1410394	193
QPD W 4PE6,0 12-20 M25 0,5 GY	1410401	193
QPD W 4PE6,0 12-20 M25 1,0 BK	1410395	193
QPD W 4PE6,0 12-20 M25 1,0 GY	1410402	193
QPD W 4PE6,0 9-14 M25 0,5 BK	1410392	193
QPD W 4PE6,0 9-14 M25 0,5 GY	1410399	193
QPD W 4PE6,0 9-14 M25 1,0 BK	1410393	193
QPD W 4PE6,0 9-14 M25 1,0 GY	1410400	193
QPD W 4PE6,0 M25 0,5 BK	1410396	193
QPD W 4PE6,0 M25 0,5 GY	1410403	193
QPD W 4PE6,0 M25 1,0 BK	1410397	193
QPD W 4PE6,0 M25 1,0 GY	1410404	193
QSS 15	1641992	195
QSS 19	1670895	195
QSS 22	1670206	195
QSS 24	1670219	195
QSS 27	1670646	195
QTC 2,5-QUATTRO	3206446	173
QTC 2,5-QUATTRO BU	3206447	173
QTC 2,5-QUATTRO-PE	3206448	173
QTCU 2,5-TWIN-MT	3050304	172
QTCU 2,5-TWIN-MT BU	3050317	172
QUINT-PS/2AC/1DC/24DC/20	2320830	315

R

Type	Order No.	Page
RAD-868-IFS	2904909	398
RAD-CABLE-USB	2903447	398
RAD-MEMORY	2902828	398
RB ST (2,5/4)-1,5/S	3214356	156
RB ST 6-1,5/S	3213250	156
RFMARK HF	5148010	281
RFMARK HF POWER LINK STATION	5148013	281
RFMARK HF PROTECTION CASE	5148017	281
RFMARK HF/ACCU	5148015	281
RFMARK HF/BELTPOUCH	5148018	281
RFMARK UHF	5148011	281
RFMARK UHF FD	5148012	281
RFMARK UHF POWER LINK STATION	5148014	281
RFMARK UHF PROTECTION CASE	5148020	281
RFMARK UHF/ACCU	5148016	281
RFMARK UHF/BELTPOUCH	5148021	281
RIF-0-OPT-24DC/230AC/1	2905295	363
RIF-0-OPT-24DC/24DC/2	2905293	362
RIF-0-OPT-24DC/48DC/100	2905294	363
RIF-1-RPT-LDP-24DC/1X21MS	2905289	364
RIF-1-RPT-LDP-24DC/2X21MS	2905291	365
RIF-1-RPT-LV-230AC/1X21MS	2905290	364
RIF-1-RPT-LV-230AC/2X21MS	2905292	365
RVT-PA 3,5 BK	0830959	285

S

Type	Order No.	Page
S-MT	3247954	159
SAC-2P- 1,5-PUR/DTFS	1410723	182
SAC-2P- 1,5-PUR/DTFS-1L	1410728	182
SAC-2P- 1,5-PUR/DTFS-1L-S	1410732	183
SAC-2P- 1,5-PUR/SUSFS	1410748	181
SAC-2P- 3,0-PUR/DTFS	1410724	182
SAC-2P- 3,0-PUR/DTFS-1L	1410729	182
SAC-2P- 3,0-PUR/DTFS-1L-S	1410733	183
SAC-2P- 3,0-PUR/SUSFS	1410749	181
SAC-2P- 5,0-PUR/DTFS	1410726	182
SAC-2P- 5,0-PUR/DTFS-1L	1410730	182
SAC-2P- 5,0-PUR/DTFS-1L-S	1410734	183
SAC-2P- 5,0-PUR/SUSFS	1410750	181
SAC-2P-10,0-PUR/DTFS	1410727	182
SAC-2P-10,0-PUR/DTFS-1L	1410731	182
SAC-2P-10,0-PUR/DTFS-1L-S	1410735	183
SAC-2P-10,0-PUR/SUSFS	1410751	181
SAC-2P-MSB-FSB SCO/910/...	1538092	396
SAC-2P-MSB/ 1,0-910/FSB SCO	1518122	396
SAC-2P-SUSMS/ 0,3-PUR/SUSFS	1410757	181
SAC-2P-SUSMS/ 0,6-PUR/SUSFS	1410759	181
SAC-2P-SUSMS/ 1,5-PUR	1410752	181
SAC-2P-SUSMS/ 1,5-PUR/SUSFS	1410760	181
SAC-2P-SUSMS/ 3,0-PUR	1410753	181
SAC-2P-SUSMS/ 3,0-PUR/SUSFS	1410761	181
SAC-2P-SUSMS/ 5,0-PUR	1410755	181
SAC-2P-SUSMS/10,0-PUR	1410756	181
SAC-3P- 1,0-PVC/FRS PE SCO	1411648	184
SAC-3P- 1,0-PVC/FSS PE SCO	1411644	184
SAC-3P- 1,5-PUO/A-1L-Z OD	1407287	180
SAC-3P- 1,5-PUR/A-1L-R-ES 4A	1400827	177
SAC-3P- 1,5-PUR/B-1L-R-ES	1401294	177
SAC-3P- 1,5-PUR/BI-1L-R-ES	1401340	178
SAC-3P- 1,5-PUR/C-1L-R-ES	1401434	178
SAC-3P- 1,5-PUR/CI-1L-R-ES	1401466	179
SAC-3P- 2,0-PVC/FRS PE SCO	1411649	184
SAC-3P- 2,0-PVC/FSS PE SCO	1411645	184
SAC-3P- 3,0-PUO/A-1L-Z OD	1407288	180
SAC-3P- 3,0-PUR/A-1L-R-ES 4A	1401131	177
SAC-3P- 3,0-PUR/B-1L-R-ES	1401295	177
SAC-3P- 3,0-PUR/BI-1L-R-ES	1401350	178
SAC-3P- 3,0-PUR/C-1L-R-ES	1401435	178
SAC-3P- 3,0-PUR/CI-1L-R-ES	1401542	179
SAC-3P- 5,0-PUO/A-1L-Z OD	1407289	180
SAC-3P- 5,0-PUR/A-1L-R-ES 4A	1401136	177
SAC-3P- 5,0-PUR/B-1L-R-ES	1401338	177
SAC-3P- 5,0-PUR/BI-1L-R-ES	1401358	178
SAC-3P- 5,0-PUR/C-1L-R-ES	1401448	178
SAC-3P- 5,0-PUR/CI-1L-R-ES	1401544	179
SAC-3P- 5,0-PVC/FRS PE SCO	1411650	184
SAC-3P- 5,0-PVC/FSS PE SCO	1411646	184
SAC-3P-10,0-PUO/A-1L-Z OD	1407290	180
SAC-3P-10,0-PUR/A-1L-R-ES 4A	1401168	177
SAC-3P-10,0-PUR/B-1L-R-ES	1401339	177
SAC-3P-10,0-PUR/BI-1L-R-ES	1401359	178
SAC-3P-10,0-PUR/C-1L-R-ES	1401465	178
SAC-3P-10,0-PUR/CI-1L-R-ES	1401617	179
SAC-3P-10,0-PVC/FRS PE SCO	1411651	184
SAC-3P-10,0-PVC/FSS PE SCO	1411647	184
SAC-3P-MRS/ 1,0-PVC PE SCO	1411640	184
SAC-3P-MRS/ 2,0-PVC PE SCO	1411641	184
SAC-3P-MRS/ 5,0-PVC PE SCO	1411642	184
SAC-3P-MRS/10,0-PVC PE SCO	1411643	184
SAC-3P-MSS/ 1,0-PVC PE SCO	1411636	184
SAC-3P-MSS/ 2,0-PVC PE SCO	1411637	184
SAC-3P-MSS/ 5,0-PVC PE SCO	1411638	184
SAC-3P-MSS/10,0-PVC PE SCO	1411639	184
SAC-4PY-MT/2XFT VP	1410632	186
SAC-5P- 1,5-PUO/AD-2L OD	1407291	180
SAC-5P- 2,0-92X/M12FS SH OD	1410474	187
SAC-5P- 3,0-PUO/AD-2L OD	1407292	180
SAC-5P- 5,0-92X/M12FS SH OD	1410494	187
SAC-5P- 5,0-PUO/AD-2L OD	1407293	180
SAC-5P-10,0-92X/M12FS SH OD	1410496	187
SAC-5P-10,0-PUO/AD-2L OD	1407294	180
SAC-5P-M12FS CAN TR	1529344	396
SAC-5P-M12FS PB TR	1403911	396
SAC-5P-M12MS CAN TR	1507816	396
SAC-5P-M12MS PB TR	1507803	396
SAC-5P-M12MS/ 2,0-92X SH OD	1410471	187
SAC-5P-M12MS/ 5,0-92X SH OD	1410472	187
SAC-5P-M12MS/10,0-92X SH OD	1410473	187
SAC-5P-M12MS/2,0-92X/M12FSSHOD	1410467	187
SAC-5P-M12MS/5,0-92X/M12FSSHOD	1410470	187
SAC-5P-MS-FS SCO/920/...	1538157	396
SAC-5P-MS/ 1,0-920/FS SCO	1518274	396
SACC-CC1,0-T-0,50-M AU PU100	1412351	185
SACC-DSI-M12FS-12P-M16XL/0,5	1411589	54
SACC-DSI-M12FS-17P-M16XL/0,5	1411590	54
SACC-DSI-M12FS-4P-M16XL/0,5	1411584	54
SACC-DSI-M12FS-5P-M16XL/0,5	1411586	54
SACC-DSI-M12FS-8P-M16XL/0,5	1411588	54
SACC-DSI-M12FSB-5P-M16XL/0,5	1411587	54
SACC-DSI-M12FSD-4P-M16XL/0,5	1411585	54
SACC-DSI-M12FSS-3P-M16/0,5 PE	1411652	58
SACC-DSI-M12FSS-4P-M16XL/0,5PE	1411598	56
SACC-DSI-M12FST-4P-M16XL/0,5	1411599	56
SACC-DSI-M12MS-12P-M16XL/0,5	1411596	54
SACC-DSI-M12MS-17P-M16XL/0,5	1411597	54
SACC-DSI-M12MS-4P-M16XL/0,5	1411591	54
SACC-DSI-M12MS-5P-M16XL/0,5	1411593	54
SACC-DSI-M12MS-8P-M16XL/0,5	1411595	54
SACC-DSI-M12MSB-5P-M16XL/0,5	1411594	54
SACC-DSI-M12MSD-4P-M16XL/0,5	1411592	54
SACC-DSI-M12MSS-3P-M16/0,5 PE	1411653	58
SACC-DSI-M12MSS-4P-M16XL/0,5PE	1411603	56
SACC-DSI-M12MST-4P-M16XL/0,5	1411604	56
SACC-E-M12FS-12P-M16XL/0,5	1411574	55
SACC-E-M12FS-17P-M16XL/0,5	1411576	55
SACC-E-M12FS-4P-M16XL/0,5	1411568	55
SACC-E-M12FS-5P-M16XL/0,5	1411571	55
SACC-E-M12FS-8P-M16XL/0,5	1411573	55
SACC-E-M12FSB-5P-M16XL/0,5	1411572	55
SACC-E-M12FSD-4P-M16XL/0,5	1411569	55
SACC-E-M12FSS-3P-M16/0,5 PE	1411654	58
SACC-E-M12FSS-4P-M16XL/0,5 PE	1411605	57
SACC-E-M12FST-4P-M16XL/0,5	1411606	57
SACC-E-M12MS-12P-M16XL/0,5	1411582	55
SACC-E-M12MS-17P-M16XL/0,5	1411583	55
SACC-E-M12MS-4P-M16XL/0,5	1411577	55
SACC-E-M12MS-5P-M16XL/0,5	1411579	55
SACC-E-M12MS-8P-M16XL/0,5	1411581	55
SACC-E-M12MSB-5P-M16XL/0,5	1411580	55
SACC-E-M12MSD-4P-M16XL/0,5	1411578	55
SACC-E-M12MSS-3P-M16/0,5 PE	1411655	58
SACC-E-M12MSS-4P-M16XL/0,5 PE	1411607	57
SACC-E-M12MST-4P-M16XL/0,5	1411608	57
SACC-M12MRD-4CT SH PN	1411047	185
SACC-M12MSD-4CT SH PN	1411046	185
SAFE AI	2400057	406
SCRT 9X16-27	0830970	285
SCRT 9X25-40	0830971	285
SCRT 9X40-60	0830972	285
SCRT 9X60-80	0830973	285
SCRT 9X80-100	0830974	285
SCRT 9X100-120	0830975	285
SCRT 9X140-160	0830976	285
SCRT 9X160-180	0830977	285
SCRT 9X180-200	0830978	285
SD FLASH 2GB	2988162	387
SD FLASH 2GB EMWISE EXTENDED	2701747	348
SD FLASH 2GB EMWISE IMP ANALOG	2701746	348
SD FLASH 2GB EMWISE IMPULS	2701745	348
SD FLASH 512MB	2988146	380
SD FLASH 512MB ILDLC FLEX	2701873	349
SD FLASH 512MB MODULAR MUX	2701872	429
SEALING PLUG 10X16 RD	1400284	195
SEALING PLUG 14X22 RD	1400270	195
SF-08KP010	1621574	66
SF-08KP020	1621575	66
SF-08KS010	1621571	66
SF-08KS020	1621573	66
SF-20KP021	1621579	66
SF-20KP022	1621580	66
SF-20KP023	1621581	66
SF-20KS021	1621576	66
SF-20KS022	1621577	66
SF-20KS023	1621578	66
SF-BIT-HEX 3-50	1212647	222
SF-M BH	1212070	222
SF-SL 0,6X3,5-100 S-VDE	1212587	170
SF-SL 0,8X4,0-100	1212551	92
SH-8EPC58A8LB1S	1621533	62
SH-8EPC58A8LB2S	1621532	62
SH-8EPC58A8LB3S	1621531	62
SH-8EPC58A8LB4S	1621530	62
SH-8EPC58A8LDLS	1621529	62
SH-8EPC58A9LB1S	1621553	63
SH-8EPC58A9LB2S	1621552	63
SH-8EPC58A9LB3S	1621551	63
SH-8EPC58A9LB4S	1621550	63
SH-8EPC58A9LDLS	1621549	63

Type	Order No.	Page
SH-8EPC58AAC00S	1621561	65
SH-8EPC58AAD00S	1621565	65
SH-8EPC58AWA00S	1621569	64
SH-8EPS48A8LB1S	1621538	62
SH-8EPS48A8LB2S	1621537	62
SH-8EPS48A8LB3S	1621536	62
SH-8EPS48A8LB4S	1621535	62
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SH-8EPS48AWA00S	1621570	64
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SH-8ESC58A8LB2S	1621522	62
SH-8ESC58A8LB3S	1621521	62
SH-8ESC58A8LB4S	1621520	62
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SH-8ESS48A8LB2S	1621527	62
SH-8ESS48A8LB3S	1621526	62
SH-8ESS48A8LB4S	1621525	62
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SH-8ESS48AAD00S	1621564	65
SH-8ESS48AWA00S	1621568	64
SK 5,0 WH:REEL	0805221	339
SPT-SMD 1,5/ 2-H-3,5 R24	1824527	7
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SPT-SMD 1,5/ 2-H-5,08 R24	1824857	9
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SPT-SMD 1,5/ 2-V-3,81 R24	1824190	7
SPT-SMD 1,5/ 2-V-5,0 R24	1824307	9
SPT-SMD 1,5/ 2-V-5,08 R24	1824417	9
SPT-SMD 1,5/ 3-H-3,5 R24	1824530	7
SPT-SMD 1,5/ 3-H-3,81 R24	1824640	7
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SPT-SMD 1,5/ 3-V-5,08 R32	1824420	9
SPT-SMD 1,5/ 4-H-3,5 R44	1824543	7
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SPT-SMD 1,5/ 4-H-5,0 R44	1824763	9
SPT-SMD 1,5/ 4-H-5,08 R44	1824873	9
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SPT-SMD 1,5/ 4-V-3,81 R44	1824213	7
SPT-SMD 1,5/ 4-V-5,0 R44	1824323	9
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SPT-SMD 1,5/ 5-H-3,81 R44	1824666	7
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SPT-SMD 1,5/ 5-V-5,0 R44	1824336	9
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SPT-SMD 1,5/ 6-H-3,5 R44	1824569	7
SPT-SMD 1,5/ 6-H-3,81 R44	1824679	7
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SPT-SMD 1,5/ 7-H-5,0 R88	1824792	9
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SPT-SMD 1,5/ 7-V-3,5 R44	1824132	7
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SPT-SMD 1,5/10-V-3,5 R72	1824161	7
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SPT-THR 1,5/ 2-H-3,5 P20 R24	1823638	11
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SPT-THR 1,5/ 2-V-5,08 P20 R24	1823528	13
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SPT-THR 1,5/ 4-H-5,08 P26	1823104	12
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SPT-THR 1,5/ 4-V-3,5 P26	1822338	11
SPT-THR 1,5/ 4-V-3,81 P20 R44	1823324	11
SPT-THR 1,5/ 4-V-3,81 P26	1822448	11
SPT-THR 1,5/ 4-V-5,0 P20 R56	1823434	13
SPT-THR 1,5/ 4-V-5,0 P26	1822558	13
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SPT-THR 1,5/ 5-V-3,81 P20 R44	1823337	11
SPT-THR 1,5/ 5-V-3,81 P26	1822451	11
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SPT-THR 1,5/ 5-V-5,0 P26	1822561	13
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SPT-THR 1,5/ 6-H-5,08 P26	1823120	12
SPT-THR 1,5/ 6-V-3,5 P20 R44	1823230	11
SPT-THR 1,5/ 6-V-3,5 P26	1822354	11
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SPT-THR 1,5/ 8-H-5,0 P20 R56	1823913	13
SPT-THR 1,5/ 8-H-5,0 P26	1823036	12
SPT-THR 1,5/ 8-H-5,08 P20 R56	1824022	13
SPT-THR 1,5/ 8-H-5,08 P26	1823146	12
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SPT-THR 1,5/ 9-H-5,0 P26	1823049	12
SPT-THR 1,5/ 9-H-5,08 P20 R88	1824035	13
SPT-THR 1,5/ 9-H-5,08 P26	1823159	12
SPT-THR 1,5/ 9-V-3,5 P20 R72	1823269	11
SPT-THR 1,5/ 9-V-3,5 P26	1822383	11
SPT-THR 1,5/ 9-V-3,81 P20 R72	1823379	11
SPT-THR 1,5/ 9-V-3,81 P26	1822493	11
SPT-THR 1,5/ 9-V-5,0 P20 R88	1823489	13
SPT-THR 1,5/ 9-V-5,0 P26	1822600	13
SPT-THR 1,5/ 9-V-5,08 P20 R88	1823599	13
SPT-THR 1,5/ 9-V-5,08 P26	1822710	13
SPT-THR 1,5/10-H-3,5 P20 R72	1823719	11
SPT-THR 1,5/10-H-3,5 P26	1822833	10
SPT-THR 1,5/10-H-3,81 P20 R72	1823829	11
SPT-THR 1,5/10-H-3,81 P26	1822943	10
SPT-THR 1,5/10-H-5,0 P20 R88	1823939	13
SPT-THR 1,5/10-H-5,0 P26	1823052	12
SPT-THR 1,5/10-H-5,08 P20 R88	1824048	13
SPT-THR 1,5/10-H-5,08 P26	1823162	12
SPT-THR 1,5/10-V-3,5 P20 R72	1823272	11
SPT-THR 1,5/10-V-3,5 P26	1822396	11
SPT-THR 1,5/10-V-3,81 P20 R72	1823382	11
SPT-THR 1,5/10-V-3,81 P26	1822503	11
SPT-THR 1,5/10-V-5,0 P20 R88	1823492	13
SPT-THR 1,5/10-V-5,0 P26	1822613	13
SPT-THR 1,5/10-V-5,08 P20 R88	1823609	13
SPT-THR 1,5/10-V-5,08 P26	1822723	13
SPT-THR 1,5/11-H-3,5 P20 R72	1823722	11
SPT-THR 1,5/11-H-3,5 P26	1822846	10
SPT-THR 1,5/11-H-3,81 P20 R72	1823832	11
SPT-THR 1,5/11-H-3,81 P26	1822956	10
SPT-THR 1,5/11-H-5,0 P20 R88	1823942	13
SPT-THR 1,5/11-H-5,0 P26	1823065	12
SPT-THR 1,5/11-H-5,08 P20 R88	1824051	13
SPT-THR 1,5/11-H-5,08 P26	1823175	12
SPT-THR 1,5/11-V-3,5 P20 R72	1823285	11
SPT-THR 1,5/11-V-3,5 P26	1822406	11
SPT-THR 1,5/11-V-3,81 P20 R72	1823395	11
SPT-THR 1,5/11-V-3,81 P26	1822516	11
SPT-THR 1,5/11-V-5,0 P20 R88	1823502	13
SPT-THR 1,5/11-V-5,0 P26	1822626	13
SPT-THR 1,5/11-V-5,08 P20 R88	1823612	13
SPT-THR 1,5/11-V-5,08 P26	1822736	13
SPT-THR 1,5/12-H-3,5 P20 R72	1823735	11
SPT-THR 1,5/12-H-3,5 P26	1822859	10
SPT-THR 1,5/12-H-3,81 P20 R72	1823845	11
SPT-THR 1,5/12-H-3,81 P26	1822969	10
SPT-THR 1,5/12-H-5,0 P20 R88	1823955	13
SPT-THR 1,5/12-H-5,0 P26	1823078	12
SPT-THR 1,5/12-H-5,08 P20 R88	1824064	13
SPT-THR 1,5/12-H-5,08 P26	1823188	12
SPT-THR 1,5/12-V-3,5 P20 R72	1823298	11
SPT-THR 1,5/12-V-3,5 P26	1822419	11
SPT-THR 1,5/12-V-3,81 P20 R72	1823405	11
SPT-THR 1,5/12-V-3,81 P26	1822529	11
SPT-THR 1,5/12-V-5,0 P20 R88	1823515	13
SPT-THR 1,5/12-V-5,0 P26	1822639	13
SPT-THR 1,5/12-V-5,08 P20 R88	1823625	13
SPT-THR 1,5/12-V-5,08 P26	1822749	13
SPTA 16/ 1-10,0	1819192	27
SPTA 16/ 2-10,0-ZB	1819202	27
SPTA 16/ 3-10,0-ZB	1819215	27
SPTA 16/ 4-10,0-ZB	1819228	27
SPTA 16/ 5-10,0-ZB	1819231	27
SPTA 16/ 6-10,0-ZB	1819244	27
SPTA 16/ 7-10,0-ZB	1819257	27
SPTA 16/ 8-10,0-ZB	1819260	27
SPTA 16/ 9-10,0-ZB	1819273	27
SPTA 5/ 1-7,5	1819079	25
SPTA 5/ 2-7,5-ZB	1819082	25
SPTA 5/ 3-7,5-ZB	1819095	25
SPTA 5/ 4-7,5-ZB	1819105	25

Type	Order No.	Page
SPTA 5/ 5-7,5-ZB	1819118	25
SPTA 5/ 6-7,5-ZB	1819121	25
SPTA 5/ 7-7,5-ZB	1819134	25
SPTA 5/ 8-7,5-ZB	1819147	25
SPTA 5/ 9-7,5-ZB	1819150	25
SPTA 5/10-7,5-ZB	1819163	25
SPTA 5/11-7,5-ZB	1819176	25
SPTA 5/12-7,5-ZB	1819189	25
SPTD 1,5/ 2-H-3,5	1841490	15
SPTD 1,5/ 3-H-3,5	1841500	15
SPTD 1,5/ 4-H-3,5	1841513	15
SPTD 1,5/ 5-H-3,5	1841526	15
SPTD 1,5/ 6-H-3,5	1841539	15
SPTD 1,5/ 7-H-3,5	1841542	15
SPTD 1,5/ 8-H-3,5	1841555	15
SPTD 1,5/ 9-H-3,5	1841568	15
SPTD 1,5/10-H-3,5	1841571	15
SPTD 1,5/11-H-3,5	1841584	15
SPTD 1,5/12-H-3,5	1841597	15
ST-10KP010	1618255	66
ST-10KP020	1618256	66
ST-10KP030	1618261	66
ST-10KS010	1618239	66
ST-10KS020	1618251	66
ST-10KS030	1618254	66
STEP-PS/ 1AC/24DC/0.75	2868635	394
STP 5-2-ZB	3037643	173
SUBCON 9/F-SH	2761499	391
SUBCON-PLUS-CAN/35/M12	2902325	397
SUBCON-PLUS-CAN/35/PG/M12	2902324	397
SUBCON-PLUS-CAN/90/M12	2902323	397
SUBCON-PLUS-CAN/90/PG/M12	2902322	397
SUBCON-PLUS-CAN/90X/M12	2902731	396
SUBCON-PLUS-CAN/90X/PG/M12	2902730	396
SUBCON-PLUS-M/AX 9	2904467	431
SUBCON-PLUS-PROFIB/35/M12	2902320	397
SUBCON-PLUS-PROFIB/35/PG/M12	2902319	397
SUBCON-PLUS-PROFIB/90/M12	2902318	397
SUBCON-PLUS-PROFIB/90/PG/M12	2902317	397
SUBCON-PLUS-PROFIB/90X/M12	2902729	396
SUBCON-PLUS-PROFIB/90X/PG/M12	2902728	396
SZF 0-0,4X2,5	1204504	156
SZF 1-0,6X3,5	1204517	158
SZG 0,6X3,5 VDE	1205121	164
SZS 0,6X3,5	1205053	162
SZS 1,0X4,0 VDE	1205066	163

T

Type	Order No.	Page
TC MOBILE I/O X200	2903805	394
TC MOBILE I/O X200 AC	2903806	395
TC MOBILE I/O X300	2903807	395
TC MOBILE I/O X300 AC	2903808	395
TF-SCRJ-POF KONF SET	1405246	48
THERMOMARK CARD	5146464	289
THERMOMARK CARD PLUS	5146481	289
THERMOMARK CARD-UCT-MAG25	0802935	268
THERMOMARK CARD-UCT-MAG26	0802988	272
THERMOMARK CARD-UCT-MAG27	0802989	270
THERMOMARK CARD-UM-MAG1	0831200	264
THERMOMARK CARD-UM-MAG3	0831202	265
THERMOMARK CARD-UM-MAG4	0831203	265
THERMOMARK CARD-US-MAG1	5146451	278
THERMOMARK ROLL	5146477	289
THERMOMARK ROLL X1	5146723	289
THERMOMARK X1.2	5146231	289
TM-RIBBON 110-EX	0803211	277
TMT 5 R	0816430	44
TMT 5 R GN	0816401	44
TMT 5 R RD	0816427	44
TMT (EX10)R	0803068	266
TMT (EX10)R CUS	0803080	266
TMT (EX10,5)R	0803070	266
TMT (EX10,5)R CUS	0803081	266
TMT (EX12)R	0803071	266
TMT (EX12)R CUS	0803082	266
TMT (EX5,5)R	0803062	266
TMT (EX5,5)R CUS	0803072	266
TMT (EX6,2)R	0803063	266
TMT (EX6,2)R CUS	0803073	266
TMT (EX6,5)R	0803064	266
TMT (EX6,5)R CUS	0803075	266
TMT (EX7,5)R	0803065	266
TMT (EX7,5)R CUS	0803076	266
TMT (EX8)R	0803066	266
TMT (EX8)R CUS	0803077	266
TMT (EX8,5)R	0803067	266
TMT (EX8,5)R CUS	0803078	266
TMT (EX9,5)R	0828295	266
TMT (EX9,5)R CUS	0803079	266
TMT TOOL	0816650	266
TMT2 (EX11)R	0802683	266
TMT2 (EX11)R CUS	0830811	266
TOOL-BAG CUS	1200081	296
TOOL-BELTPOUCH CUS	1200084	297
TOOL-CARRIER CUS	1200082	296
TOOL-CASE	1212629	296
TOOL-CASE CUS	1200072	296
TOOL-KIT CUS	1200085	297
TOOL-WRAP CUS	1200083	297
TOPMARK LASER	0831831	245
TOPMARK LASER STATION	0831835	245
TOPMARK LASER-MAG CARD	0831837	245
TOPMARK LASER-MAG SHEET	0831836	245
TOUCH PEN	2701379	418
TP 07T/M 211	2701452	418
TP 10T/M 211	2701843	419
TP 12T/M 211	2701844	419
TP 15T/M 211	2701845	419

U

Type	Order No.	Page
UC-EMLP (15X5)	0819301	339
UC-EMLP (15X5) CUS	0824550	339
UC-EMLP (22X22)-EX	0803224	276
UC-EMLP (22X22)-EX CUS	0803229	276
UC-EMLP (27X18)-EX	0803225	276
UC-EMLP (27X18)-EX CUS	0803230	276
UC-EMLP (27X27)-EX	0803226	276
UC-EMLP (27X27)-EX CUS	0803231	276
UC-EMLP (49X15)-EX	0803227	276
UC-EMLP (49X15)-EX CUS	0803232	276
UC-EMLP (60X30)-EX	0803228	276
UC-EMLP (60X30)-EX CUS	0803233	276
UC-TMF 5	0818153	44
UCT-EM (30X5)	0801505	339
UCT-EM (30X5) CUS	0801589	339
UCT-EMP (25X6)	1014117	272
UCT-EMP (25X6) CUS	1014121	272
UCT-EMP (29X8)	1014118	273
UCT-EMP (29X8) CUS	1014122	273
UCT-EMP (40X17)	1014120	273
UCT-EMP (40X17) CUS	1014124	273
UCT-EMP (60X15)	1014119	273
UCT-EMP (60X15) CUS	1014123	273
UCT-PMLP (90X38)	0803041	286
UCT-PMLP (90X38) CUS	0803042	286
UCT-PMLP-RFID/HF (90X38)	0830956	282
UCT-PMLP-RFID/UHF (90X38)	0830957	283
UCT-PMP (90X38)	0803039	287
UCT-PMP (90X38) BU	0803047	287
UCT-PMP (90X38) BU CUS	8190566	287
UCT-PMP (90X38) CUS	0803040	287
UCT-PMP (90X38) VT	0803132	287
UCT-PMP (90X38) VT CUS	8190707	287
UCT-PMP (90X38) YE	0803133	287
UCT-PMP (90X38) YE CUS	8190708	287
UCT-PMP-RFID/HF (90X38)	0830954	284
UCT-PMP-RFID/UHF (90X38)	0830955	285
UCT-PMP-RFID/UHF (90X38) OG	0803048	285
UCT-WMCO 2,9 (12X4)	0830780	268
UCT-WMCO 2,9 (12X4) CUS	0830788	268
UCT-WMCO 2,9 (18X4)	0830781	268
UCT-WMCO 2,9 (18X4) CUS	0830789	268
UCT-WMCO 3,5 (12X4)	0830782	269
UCT-WMCO 3,5 (12X4) CUS	0830790	269
UCT-WMCO 3,5 (18X4)	0830783	269
UCT-WMCO 3,5 (18X4) CUS	0830791	269
UCT-WMCO 4,1 (12X4)	0830784	269
UCT-WMCO 4,1 (12X4) CUS	0830792	269
UCT-WMCO 4,1 (18X4)	0830785	269
UCT-WMCO 4,1 (18X4) CUS	0830793	269
UCT-WMCO 4,7 (12X4)	0830786	269
UCT-WMCO 4,7 (12X4) CUS	0830794	269
UCT-WMCO 4,7 (18X4)	0830787	269
UCT-WMCO 4,7 (18X4) CUS	0830795	269
UCT-WMTBA (24X4)	1014082	270
UCT-WMTBA (24X4) CUS	1014088	270
UCT-WMTBA (24X4) YE	1014083	270
UCT-WMTBA (24X4) YE CUS	1014089	270
UCT-WMTBA (29X6)	1014084	271
UCT-WMTBA (29X6) CUS	1014090	271
UCT-WMTBA (29X6) YE	1014085	271
UCT-WMTBA (29X6) YE CUS	1014091	271
UCT-WMTBA (40X17)	1014086	271
UCT-WMTBA (40X17) CUS	1014092	271
UCT-WMTBA (40X17) YE	1014087	271
UCT-WMTBA (40X17) YE CUS	1014093	271
UK 4-SD	3246861	170
UM1-TM (12X10)	0830916	264
UM1-TM (3,5X12)	0830925	264
UM1-TM (5X10)	0830905	264
UM1-TM (5X12)	0830912	264
UM1-TM (6X10)	0830903	264
UM1-TM (6X12)	0830909	264
UM1-TM (8X10)	0830906	264
UM1-TM (8X12)	0830920	264
UM1-TMF (3,5X5)	0830935	265
UM1-TMF (5X5)	0830902	265
UM1-TMF (6X5)	0830904	265
UM1-TMF (8X5)	0830924	265
UM1U-TM (5X10)	0830910	265
UM1U-TM (6X10)	0830907	265
UNO-PS/1AC/ 5DC/ 25W	2904374	316
UNO-PS/1AC/ 5DC/ 40W	2904375	316
UNO-PS/1AC/12DC/100W	2902997	317
UNO-PS/1AC/15DC/ 55W	2903001	317
UNO-PS/1AC/15DC/100W	2903002	318
UNO-PS/1AC/15DC/30W	2903000	317
UNO-PS/1AC/24DC/ 90W/C2LPS	2902994	318
UNO-PS/1AC/48DC/ 60W	2902995	319
UNO-PS/1AC/48DC/100W	2902996	319
UNO-PS/2AC/24DC/90W/C2LPS	2904371	319
US-EMLP-HA (17X7)	0830988	278
US-EMLP-HA (17X7) CUS	0830994	278
US-EMLP-HA (20X9)	0830989	278
US-EMLP-HA (20X9) CUS	0830995	278
US-EMLP-HA (60X30)	0830990	278
US-EMLP-HA (60X30) CUS	0830996	278
US-EMLP-HA (60X30) SR	0830991	278
US-EMLP-HA (60X30) SR CUS	0830997	278
US-EMLP-HA (85,6X54)	0830992	278
US-EMLP-HA (85,6X54) CUS	0830998	278
US-EMLP-HA (85,6X54) SR	0830993	278
US-EMLP-HA (85,6X54) SR CUS	0830999	278
US-EMP (25X6)-1	0802754	272
US-EMP (29X8)	0829436	273
US-EMP (40X17)	0829437	273
US-EMP (60X15)	0828781	273
USA 10/4,6	1202713	195
UT 4-L	3214363	166
UT 4-L/HESI (5X20)	3214325	168
UT 4-L/L	3214362	166
UT 4-MT-EX	3046141	163
UT 4-MT-P/P-EX	3046173	163
UT 4-PE/L/HEDI	3214324	169
UT 4-PE/L/HESI (5X20)	3214320	169
UT 4-PE/L/HESILED 24 (5X20)	3214321	169
UT 4-PE/L/HESILED 250 (5X20)	3214323	169
UT 4-PE/L/HESILED 60 (5X20)	3214322	169
UT 4-PE/L/L	3214360	167
UT 4-PE/L/MT	3214364	167
UT 4-PE/L/N	3214361	167
UT 4-PE/L/TG	3214365	167
UT 4-TG-EX	3046143	162
UT 4-TG-P/P-EX	3046169	162
UT 6-TG P/P-EX	3073870	163
UT 6-TG-EX	3046486	163
UTRE 6-2/10	3069811	95
UTRE 6-2/12	3069813	95
UTRE 6-2/14	3069815	95
UTRE 6-2/15	3069816	95
UTRE 6-2/17	3069818	95
UTRE 6-2/19	3069820	95
UTRE 6-2/20	3069821	95
UTRE 6-2/21	3069822	95
UTRE 6-2/22	3069823	95
UTRE 6-2/25	3069826	95
UTRE 6-2/4	3069805	95
UTRE 6-2/5	3069806	95
UTRE 6-2/9	3069810	95
UTRE 6-2/A14	3069426	135
UTRE 6-2/A7	3069423	129
UTRE 6-2/B14	3069427	137
UTRE 6-2/B19	3069429	141
UTRE 6-2/B7	3069424	131
UTRE 6-2/C14	3069428	139
UTRE 6-2/C19	3069430	143
UTRE 6-2/D19	3069431	145
UTRE 6-2/E7	3069425	133
UTRE 6-2/F19	3069432	147
UTRE 6-2/G19	3069433	149
UTRE 6-2/H19	3069434	151
UTRE 6-2/I19	3069435	153
UTT 2,5-2MT-P/P	3044670	165
UTT 2,5-2MT-P/P BU	3044671	165
UTTB 2,5-MT-P/P	3044640	165
UTTB 2,5-MT-P/P BU	3044641	165
UTTB 2,5-TG-P/P	3044644	164
UTWE 6-2/10	3069658	94
UTWE 6-2/12	3069660	94
UTWE 6-2/14	3069663	94
UTWE 6-2/15	3069664	94
UTWE 6-2/17	3069667	94
UTWE 6-2/19	3069672	94
UTWE 6-2/20	3069673	94
UTWE 6-2/21	3069800	94
UTWE 6-2/22	3069801	94
UTWE 6-2/25	3069804	94
UTWE 6-2/4	3069650	94
UTWE 6-2/5	3069651	94
UTWE 6-2/9	3069656	94
UTWE 6-2/A14	3069413	134
UTWE 6-2/A7	3069410	128
UTWE 6-2/B14	3069414	136
UTWE 6-2/B19	3069416	140
UTWE 6-2/B7	3069411	130
UTWE 6-2/C14	3069415	138
UTWE 6-2/C19	3069417	142
UTWE 6-2/D19	3069418	144
UTWE 6-2/E7	3069412	132
UTWE 6-2/F19	3069419	146
UTWE 6-2/G19	3069420	148
UTWE 6-2/H19	3069421	150
UTWE 6-2/I19	3069422	152

V

Type	Order No.	Page
VAL-MS 350 VF ST	2856595	306
VAL-MS 75 VF ST	2805318	306
VAL-MS BE-AR	2801065	306
VAL-MS BE-AR/FM	2801066	306
VAL-MS-AR 350 VF	2801489	306
VAL-MS-AR 350 VF/FM	2801490	306
VAL-MS-AR 75 VF	2801487	306
VAL-MS-AR 75 VF/FM	2801488	306
VAL-MS-AR-T1/T2 75	2801491	306
VAL-MS-AR-T1/T2 75/FM	2801492	306
VAL-MS-T1/T2 48/12.5 ST	2801242	307
VAL-MS-T1/T2 48/12.5/1+1V	2801532	307
VAL-MS-T1/T2 48/12.5/1+1V-FM	2801533	307
VAL-MS-T1/T2 75/12.5 ST	2801146	306
VAL-SQ NP 120-2-A 32	2800371	309
VAL-SQ NP 120-2-A 32 ST	2800369	309

Type	Order No.	Page
VAL-SQ NP 120-2-A BE	2800749	309
VIP-2/PT/PDM-2/16/FU 6.3A	2903603	373
VIP-8RPT-120AC/1AU/DI/PLC	2904576	371
VIP-8RPT-24DC/1AU/DI/PLC	2903600	371
VIP-8RPT-24DC/21/D0/FU/PLC	2903601	370
VIP-PA-PWR/20XOE/ 1,0M/S7	2904724	369
VIP-PA-PWR/20XOE/ 2,0M/S7	2904725	369
VIP-PA-PWR/20XOE/ 3,0M/S7	2904726	369
VIP-PA-PWR/20XOE/ 4,0M/S7	2904727	369
VIP-PA-PWR/20XOE/ 6,0M/S7	2904728	369
VIP-PA-PWR/20XOE/ 8,0M/S7	2904729	369
VIP-PA-PWR/20XOE/10,0M/S7	2904730	369
VIP-PA-PWR/2X10COMBI/ 0,5M/S7	2904713	369
VIP-PA-PWR/2X10COMBI/ 1,0M/S7	2904714	369
VIP-PA-PWR/2X10COMBI/ 1,5M/S7	2904715	369
VIP-PA-PWR/2X10COMBI/ 2,0M/S7	2904716	369
VIP-PA-PWR/2X10COMBI/ 2,5M/S7	2904717	369
VIP-PA-PWR/2X10COMBI/ 3,0M/S7	2904718	369
VIP-PA-PWR/2X10COMBI/ 4,0M/S7	2904719	369
VIP-PA-PWR/2X10COMBI/ 5,0M/S7	2904720	369
VIP-PA-PWR/2X10COMBI/ 6,0M/S7	2904721	369
VIP-PA-PWR/2X10COMBI/ 8,0M/S7	2904722	369
VIP-PA-PWR/2X10COMBI/10,0M/S7	2904723	369
VIP-PA-PWR/40XOE/ 1,0M/S7	2904731	369
VIP-PA-PWR/40XOE/ 2,0M/S7	2904732	369
VIP-PA-PWR/40XOE/ 3,0M/S7	2904733	369
VIP-PA-PWR/40XOE/ 4,0M/S7	2904734	369
VIP-PA-PWR/40XOE/ 6,0M/S7	2904735	369
VIP-PA-PWR/40XOE/ 8,0M/S7	2904736	369
VIP-PA-PWR/40XOE/10,0M/S7	2904737	369
VIP-PA-PWR/4X10COMBI/ 0,5M/S7	2904702	368
VIP-PA-PWR/4X10COMBI/ 1,0M/S7	2904703	368
VIP-PA-PWR/4X10COMBI/ 1,5M/S7	2904704	368
VIP-PA-PWR/4X10COMBI/ 2,0M/S7	2904705	368
VIP-PA-PWR/4X10COMBI/ 2,5M/S7	2904706	368
VIP-PA-PWR/4X10COMBI/ 3,0M/S7	2904707	368
VIP-PA-PWR/4X10COMBI/ 4,0M/S7	2904708	368
VIP-PA-PWR/4X10COMBI/ 5,0M/S7	2904709	368
VIP-PA-PWR/4X10COMBI/ 6,0M/S7	2904710	368
VIP-PA-PWR/4X10COMBI/ 8,0M/S7	2904711	368
VIP-PA-PWR/4X10COMBI/10,0M/S7	2904712	368
VIP-PT/FLK16/DS/FU/LED/AN/DV	2903599	372
VS-CABLE-STRIP-VARIO	1657407	44

W

Type	Order No.	Page
WIREFOX 10 CUS	1212760	301
WIREFOX 16 CUS	1212761	301
WIREFOX 4 CUS	1212762	301
WIREFOX 6SC CUS	1212763	301
WT-HP HF 3,6X140	0830982	272
WT-HP HF 4,5X290	0830984	272
WT-HP HF 4,8X200	0830983	272
WT-UV HF 3,6X140 BK	3240832	274
WT-UV HF 4,5X200 BK	3240834	274
WT-UV HF 4,5X290 BK	3240835	274

Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page	Type	Order No.	Page

EMC: Class A product:

In accordance with statutory regulations, our products are indicated with this footnote if they are intended for use in industrial environments. This means that the permissible limit values for residential applications may be exceeded in the event of conducted and emitted interference. In such cases, the operator may have to take additional safety measures in order to ensure electromagnetic compatibility in residential applications.

PHOENIX CONTACT
INSPIRING INNOVATIONS

ООО «ЛайфЭлектроникс» “LifeElectronics” LLC

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

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