

## METRAL® SIGNAL CONNECTORS STANDARD

- Header, 4 row, straight, wide body
- Header, 4 row, straight, narrow body
- Receptacle, 4 row, right angle
- Header, 5 row, straight, wide body
- Header, 5 row, straight, narrow body
- Receptacle, 5 row, right angle
- Header, 8 row, straight, wide body
- Receptacle, 8 row, right angle

# Header, 4 row, signal, straight, solder to board, wide body

## FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 Rows and 2 mm pitch permit high signal density (200 contacts per 100 mm connector length).
- Stackable end-to-end without loss of positions.
- Stackable with other METRAL™ function modules (e.g. power, coax, guide pin).
- First Make Last Break options.

## TECHNICAL DATA

### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

### ELECTRICAL

- current rating: 1 A
- insulation resistance: 5x10<sup>3</sup> MΩ initially, 1x10<sup>3</sup> MΩ after tests
- withstanding voltage: 1000 V rms (sea level)

### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

### PACKAGING

- standard: tubes

### PROCESSING INFORMATION

- applicable soldering process: wave, IR, vapor phase

### REFERENCE DATA

- product specification.: GS-12-180

### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



## MATING DATA

### Receptacle, right angle, press-fit, page 34

- 1 mod – part number 88945-102LF
- 2 mod – part number 88946-102LF
- 4 mod – part number 88947-102LF
- 8 mod – part number 88948-102LF

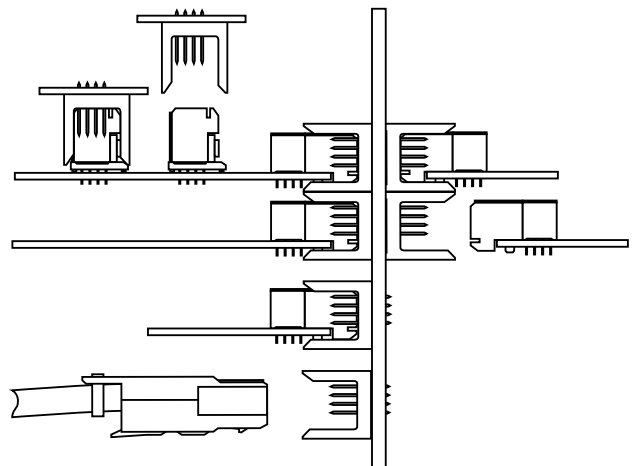
### Receptacle, right angle, solder-to-board, page 32

- 1 mod – part numbers 89035-102LF
- 2 mod – part numbers 89036-102LF
- 4 mod – part numbers 89037-102LF
- 8 mod - part numbers 89038-102LF

### Receptacle, right angle, Pin-in-Paste, page 36

- 1 mod – part numbers 52048-101LF

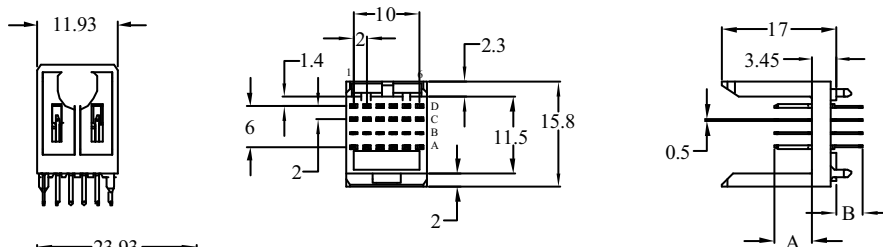
## TYPICAL APPLICATIONS



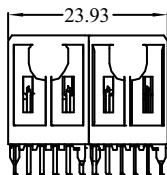
# Header, 4 row, signal, straight, solder to board, wide body

## PRODUCT

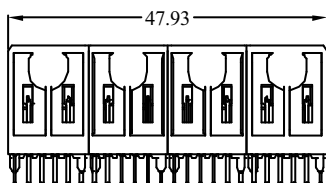
1 Module  
88951-1yyLF



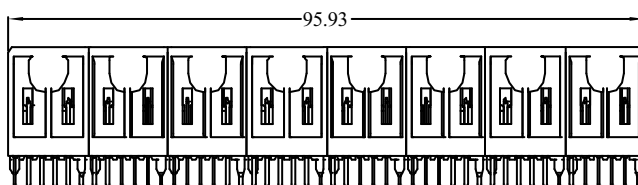
2 Module  
88952-1yyLF



4 Module  
88953-1yyLF



8 Module  
88954-1yyLF



PCB pattern P5, see chapter PCB layouts

## PARTNUMBERS

8895x - 1yyLF

Base Part Number

Performance

Pin Configuration

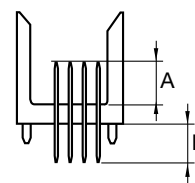
LF

88951 = 1 module (4 x 6 pos.)  
88952 = 2 module (4 x 12 pos.)  
88953 = 4 module (4 x 24 pos.)  
88954 = 8 module (4 x 48 pos.)

1 = Telcordia CO

LF = lead free

yy	mating length (A)	tail length(B)
01	5,00 mm	4,25 mm
05	6,50 mm	4,25 mm
31	5,00 mm	3,30 mm
35	6,50 mm	3,30 mm
61	5,00 mm	2,65 mm



**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 4 row, signal, straight, press-fit, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density ( 200 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Eye of the needle press-fit contact

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3$  M $\Omega$  initially,  $1 \times 10^3$  M $\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 65 N max. per pin
- press-fit pin withdrawal: 15 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- Applicable process: press-fit

#### REFERENCE DATA

- product specification.: GS-12-180

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223.



### MATING DATA

#### ■ Receptacle, right angle, press-fit, page 34

- 1 mod – part number 88945-102LF
- 2 mod – part number 88946-102LF
- 4 mod – part number 88947-102LF
- 8 mod – part number 88948-102LF

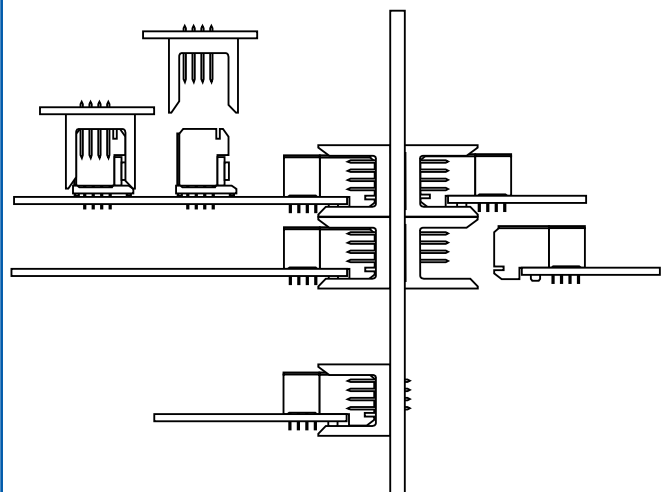
#### ■ Receptacle, right angle, solder-to-board, page 32

- 1 mod – part numbers 89035-101LF
- 2 mod – part numbers 89036-101LF
- 4 mod – part numbers 89037-101LF
- 8 mod – part numbers 89038-101LF

#### ■ Receptacle right angle, Pin-in-Paste, page 36

- 1 mod – part numbers 52048-101LF

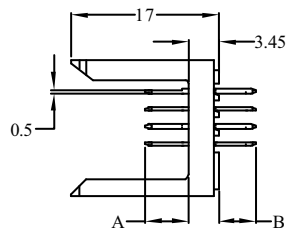
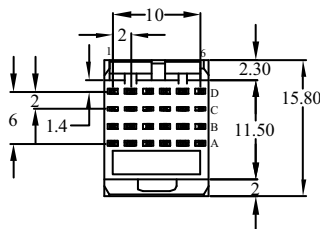
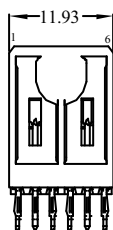
### TYPICAL APPLICATIONS



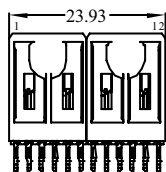
# Header, 4 row, signal, straight, press-fit, wide body

## PRODUCT

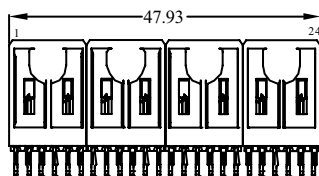
1 Module  
70232-1yyLF



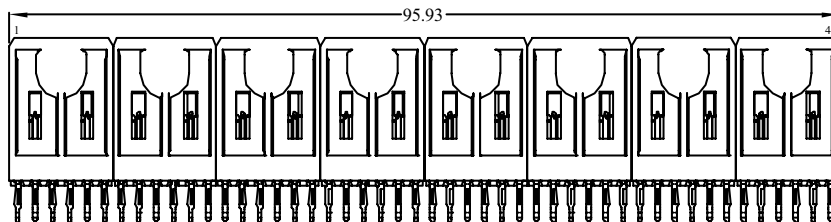
2 Module  
70233-1yyLF



4 Module  
70234-1yyLF



8 Module  
70235-1yyLF



PCB pattern P6, see chapter PCB layouts

## PARTNUMBERS

7023x - 1yyLF

Base Part Number

Performance

Pin Configuration

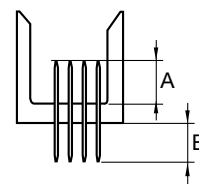
LF

70232 = 1 module (4 x 6 pos.)  
70233 = 2 module (4 x 12 pos.)  
70234 = 4 module (4 x 24 pos.)  
70235 = 8 module (4 x 48 pos.)

1 = Telcordia CO

LF = lead free

yy	mating length (A)	tail length (B)
11	5,00 mm	4,30 mm
16	5,75 mm	4,30 mm
15	6,50 mm	4,30 mm
21	5,00 mm	13,60 mm
26	5,75 mm	13,60 mm
25	6,50 mm	13,60 mm



**Note:** blue marked in **pin configuration** is the preferred recommended standard for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 4 row, signal, straight, solder to board, narrow body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 Rows and 2 mm pitch permit high signal density (200 contacts per 100 mm connector length).
- Stackable end-to-end without loss of positions.
- Stackable with other METRAL™ function modules (e.g. power, coax, guide pin).
- First Make Last Break options.

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- applicable soldering process: wave, IR, vapor phase

#### REFERENCE DATA

- product specification.: GS-12-180

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

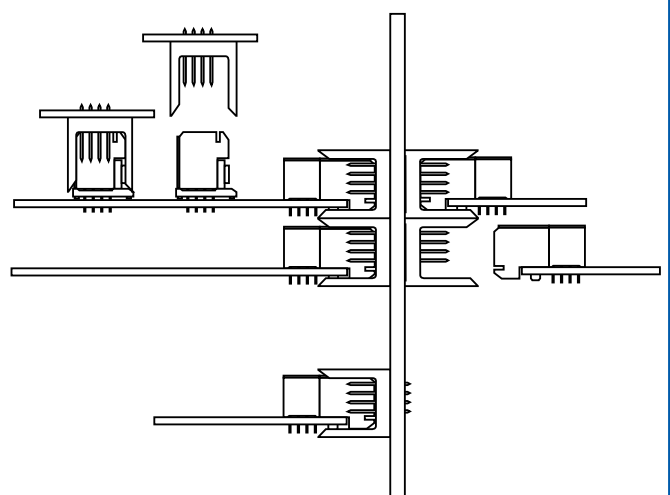
#### Receptacle, straight

- 1 mod – pf - part number 85757-1101LF, page 69
- 1 mod – stb -part nr HM1S41FRR000H6PLF, page 67

#### Receptacle, right angle

- 1 mod – pf - part number 88945-102LF, page 35
- 1 mod – stb -part number 89035-102LF, page 33
- 1 mod – pip -part number 52048-101LF, page 37

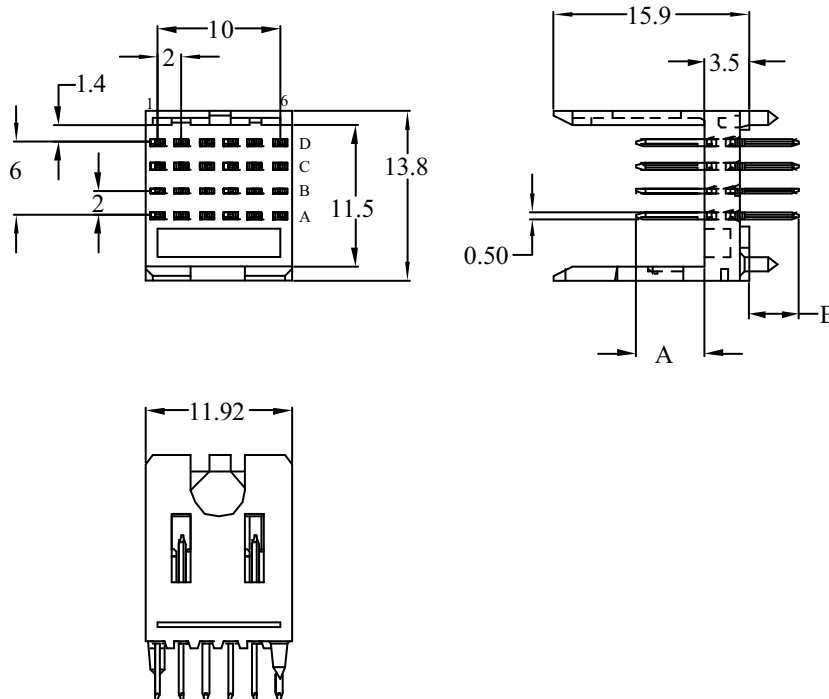
### TYPICAL APPLICATIONS



# Header, 4 row, signal, straight, solder to board, narrow body

## PRODUCT

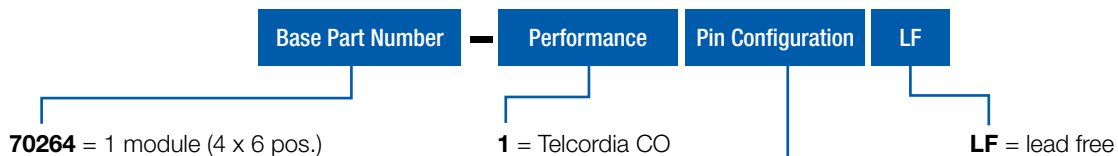
1 Module  
70264-1yyLF



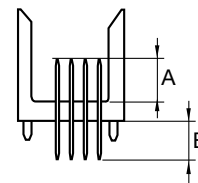
PCB pattern P3, see chapter PCB layouts

## PARTNUMBERS

70264 - 1yyLF



yy	mating length (A)	tail length (B)
01	5,00 mm	4,25 mm
05	6,50 mm	4,25 mm



**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 4 row, signal, straight, press-fit, narrow body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 Rows and 2 mm pitch permit high signal density (200 contacts per 100 mm connector length).
- Stackable end-to-end without loss of positions.
- Stackable with other METRAL™ function modules (e.g. power, coax, guide pin).
- First Make Last Break options.
- Eye the needle press-fit contact

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 65 N max. per pin
- press-fit pin withdrawal: 15 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- product specification.: GS-12-180

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

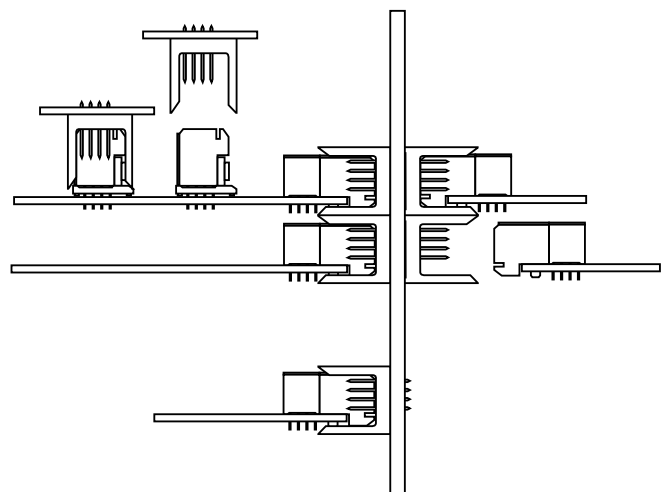
#### Receptacle, straight

- 1 mod – pf - part number 85757-1101LF, page 69
- 1 mod – stb -part nr HM1S41FRR000H6PLF, page 67

#### Receptacle, right angle

- 1 mod – pf - part number 88945-102LF, page 35
- 1 mod – stb -part number 89035-102LF, page 33
- 1 mod – pip -part number 52048-101LF, page 37

### TYPICAL APPLICATIONS

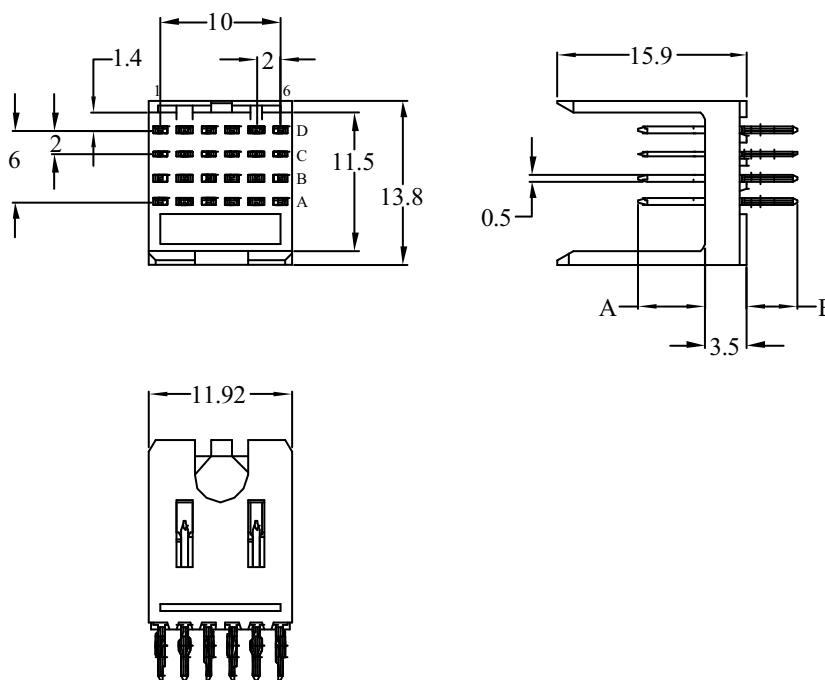




# Header, 4 row, signal, straight, press-fit, narrow body

## PRODUCT

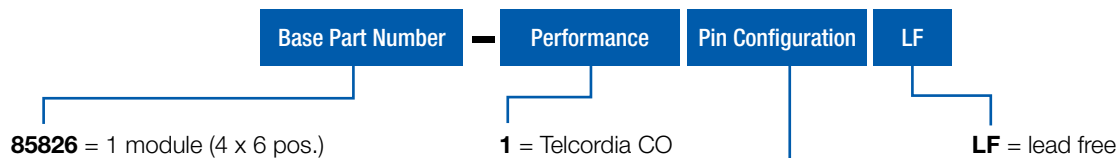
1 Module  
85826-1yyLF



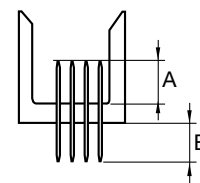
PCB pattern P4, see chapter PCB layouts

## PARTNUMBERS

85826 - 1yyLF



yy	mating length (A)	tail length (B)
01	5,00 mm	4,25 mm

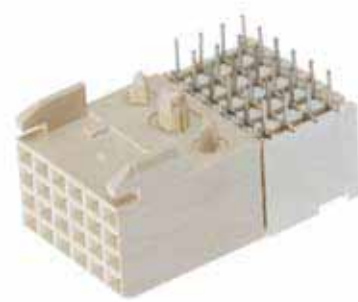


**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Receptacle, 4 row, signal, right angle, solder to board

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density (200 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Stackable end-to-end without loss of position
- Stackable with other METRAL® function modules (power, I/O)
- Reliable dual beam box contact
- Stable PCB fixation device
- Low profile allows PCB spacing of 14mm



### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- contact material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- Recommended hole diameter: 0,65 – 0,80 mm

#### ENVIRONMENTAL

- Operating temperature range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- Applicable process: wave, IR, vapor phase

#### REFERENCE DATA

- Press-peg application, TA-0941
- product specification.: GS-12-453

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

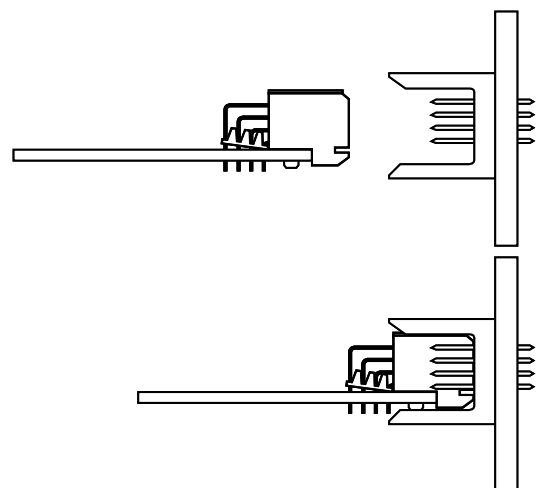
#### Header, straight, press-fit, page 27

- 1 module – part number 70232-116LF
- 2 modules – part number 70233-116LF
- 4 modules – part number 70234-116LF
- 8 modules – part number 70235-116LF

#### Headerstraight, solder-to-board, page 25

- 1 module – part number 88951-101LF
- 2 modules – part number 88952-101LF
- 4 modules – part number 88953-101LF
- 8 modules – part number 88954-101LF

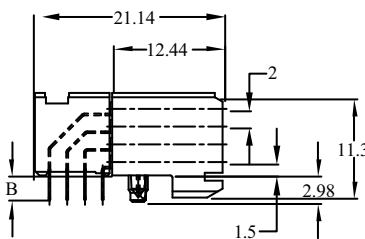
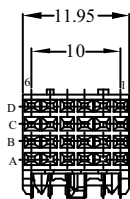
### TYPICAL APPLICATIONS



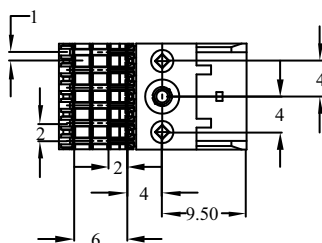
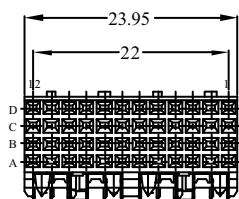
# Receptacle, 4 row, signal, right angle, solder to board

## PRODUCT

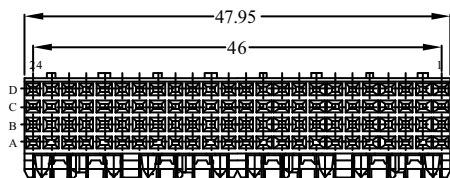
1 Module  
89035-1yyLF



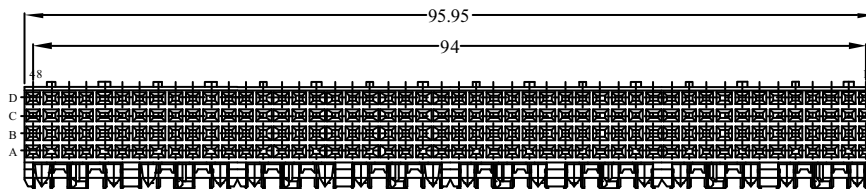
2 Module  
89036-1yyLF



4 Module  
89037-1yyLF



8 Module  
89038-1yyLF



PCB pattern P1, see chapter PCB layouts

## PARTNUMBERS

8903x - 1yyLF

Base Part Number

Performance

Pin Configuration

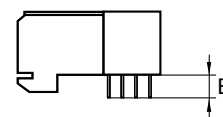
LF

89035 = 1 module (4 x 6 pos.)  
89036 = 2 module (4 x 12 pos.)  
89037 = 4 module (4 x 24 pos.)  
89038 = 8 module (4 x 48 pos.)

1 = Telcordia CO

LF = lead free

yy	tail length (B)	PCB thickness
02	2,90 mm	1,60 mm
12	3,53 mm	2,40 mm



## Receptacle, 4 row, signal, right angle, press fit

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density (200 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Stackable end-to-end without loss of position
- Stackable with other METRAL® function modules (power, I/O)
- Reliable dual beam box contact
- Stable PCB fixation device
- Press block ensures accurate position of press-fit tails for easy mounting
- Eye the needle press-fit contact
- Low profile allows PCB spacing of 14mm



### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- contact material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance: 5x10<sup>3</sup> MΩ initially, 1x10<sup>3</sup> MΩ after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 55 N max. per pin
- press-fit pin withdrawal: 15 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- Press-peg application, TA-0941
- product specification.: GS-12-453

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

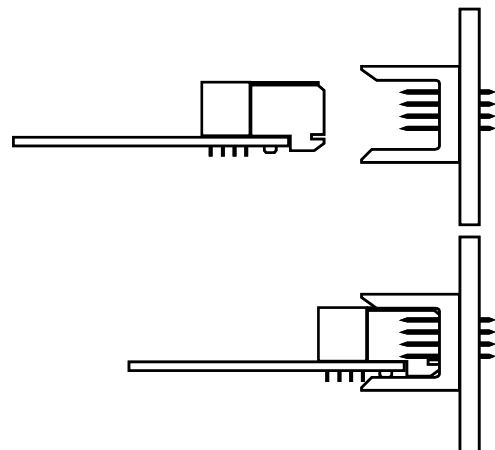
#### Header, straight, press-fit, page 27

- 1 module – part number 70232-116LF
- 2 modules – part number 70233-116LF
- 4 modules – part number 70234-116LF
- 8 modules – part number 70235-116LF

#### Header, straight, solder-to-board, page 25

- 1 module – part number 88951-101LF
- 2 modules – part number 88952-101LF
- 4 modules – part number 88953-101LF
- 8 modules – part number 88954-101LF

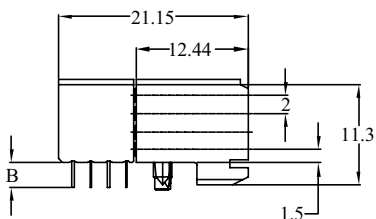
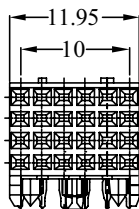
### TYPICAL APPLICATIONS



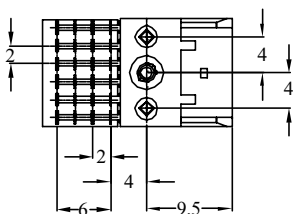
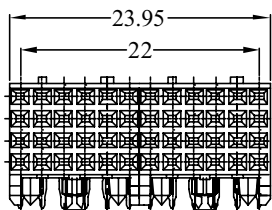
# Receptacle, 4 row, signal, right angle, press fit

## PRODUCT

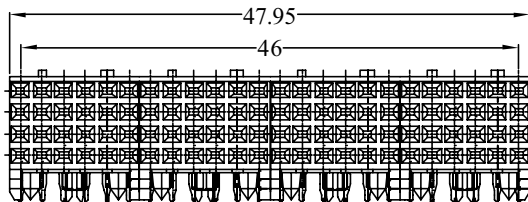
1 Module  
88945-1yyLF



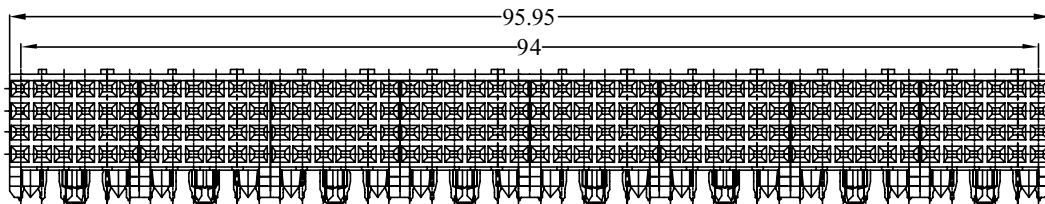
2 Module  
88946-1yyLF



4 Module  
88947-1yyLF



8 Module  
88948-1yyLF



PCB pattern P1, see chapter PCB layouts

## PARTNUMBERS

8894x - 1yyLF

Base Part Number

Performance

Pin Configuration

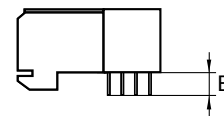
LF

88945 = 1 module (4 x 6 pos.)  
88946 = 2 module (4 x 12 pos.)  
88947 = 4 module (4 x 24 pos.)  
88948 = 8 module (4 x 48 pos.)

1 = Telcordia CO

LF = lead free

yy	tail length (B)	PCB thickness
02	2,90 mm	1,60 mm
12	3,53 mm	2,40 mm



**Note:** blue marked in pin configuration is the preferred recommended standard  
for other special patterns or loadings, please check drawings, all other configurations on request only

## Receptacle, 4 row, signal, right angle, pin-in-paste

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density, 1 module (4 x 6 positions)
- Modular design guarantees flexibility
- Stackable end-to-end without loss of position
- Stackable with other METRAL® function modules (power, I/O)
- Tuning fork, forced controlled contact
- Stable PCB fixation device
- Low profile allows PCB spacing of 14mm



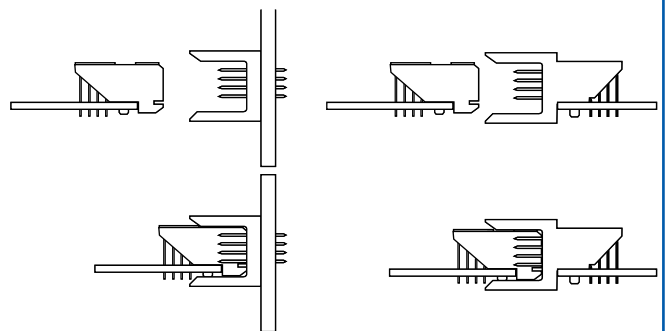
### TECHNICAL DATA

- **PHYSICAL**
  - spacing: 2,00 mm x 2,00 mm
  - housing: glass-filled LCP (30% glass), colour natural
  - flammability rating: UL 94 V-0
  - contact material: phosphor bronze
  - performance level: Telcordia CO
- **ELECTRICAL**
  - current rating: 1 A
  - insulation resistance: 5x10<sup>3</sup> MΩ initially, 1x10<sup>3</sup> MΩ after tests
  - withstanding voltage: 1000 V rms (sea level)
- **MECHANICAL PERFORMANCE**
  - Maximum mounting force, 20 N per connector
  - insertion force: 0,45 N max. per individual signal contact (mating)
  - withdrawal force: 0,15 N max. per individual signal contact (unmating)
  - Recommended hole diameter: 0,65 – 0,80 mm
- **ENVIRONMENTAL**
  - Operating temperature -55°C to + 125°C
  - Max. temperature 260°C for 30 seconds
  - RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC
- **PACKAGING**
  - Tape&reel
- **PROCESSING INFORMATION**
  - Pick&place by vacuum nozzle or mechanical gripper
  - automatic Surface-mount reflow process, resistance for Lead Free reflow temperature
- **REFERENCE DATA**
  - Product specification GS-12-215
- **APPLICATION EQUIPMENT**
  - for application equipment, check out the application equipment table on page 217-223

### MATING DATA

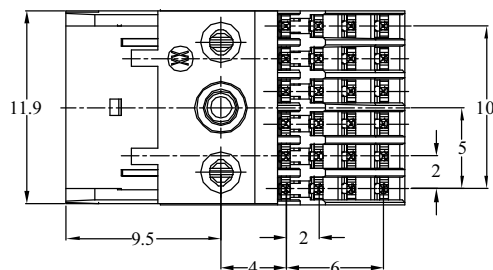
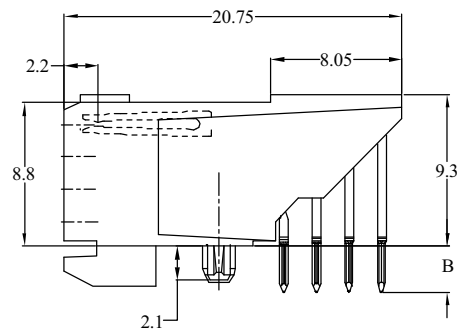
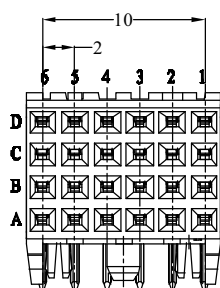
- Header, straight, press-fit, page 27
  - 1 module – part number 70232-116LF
- Header, straight, solder-to-board, page 25
  - 1 module – part number 88951-101LF

### TYPICAL APPLICATIONS



# Receptacle, 4 row, signal, right angle, pin-in-paste

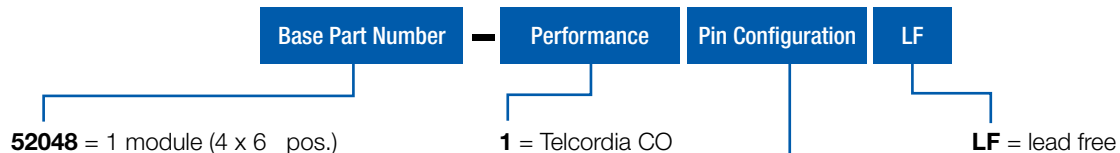
## PRODUCT



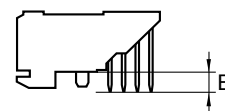
PCB pattern P1, see chapter PCB layouts

## PARTNUMBERS

52048 - 1yyLF



yy	tail length (B)	PCB thickness
01	2,80 mm	1,60 mm



**Note:** blue marked in **pin configuration** is the preferred recommended standard for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 5 row, signal, straight, solder to board, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 5 Rows and 2 mm pitch permit high signal density (200 contacts per 100 mm connector length).
- Stackable end-to-end without loss of positions.
- Stackable with other METRAL™ function modules (e.g. power, coax, guide pin).
- First Make Last Break options.

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- applicable soldering process: wave, IR, vapor phase

#### REFERENCE DATA

- product specification.: GS-12-180

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

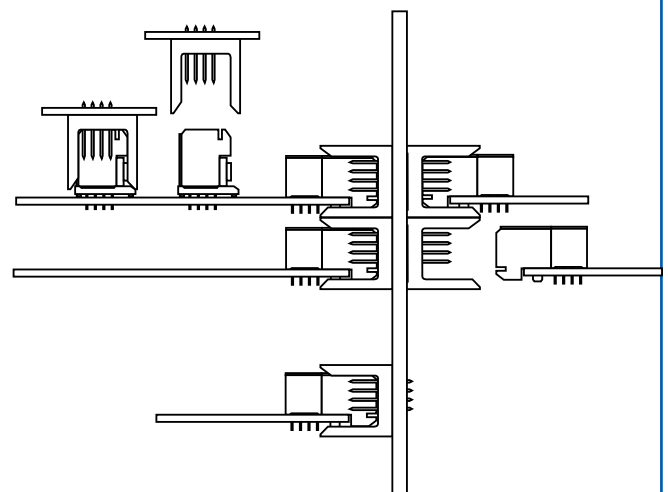
#### ■ Receptacle, right angle, press-fit, page 45

- 1 mod – part number 89047-102LF
- 2 mod – part number 89093-102LF
- 4 mod – part number 89094-102LF
- 8 mod – part number 89095-102LF

#### ■ Receptacle, right angle, solder-to-board, page 43

- 1 mod – part numbers 85863-102LF
- 2 mod – part numbers 85864-102LF
- 4 mod – part numbers 85865-102LF
- 8 mod - part numbers 85866-102LF

### TYPICAL APPLICATIONS

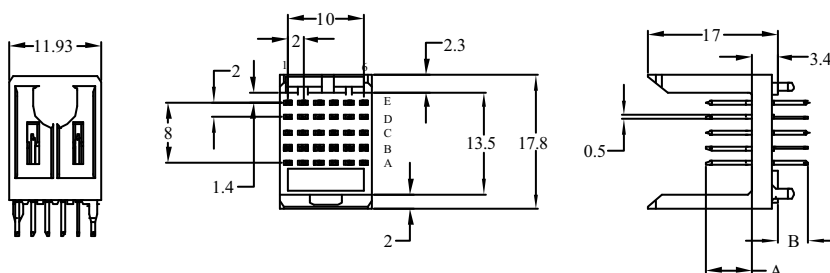




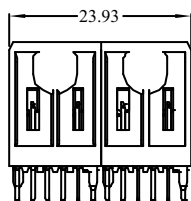
# Header, 5 row, signal, straight, solder to board, wide body

## PRODUCT

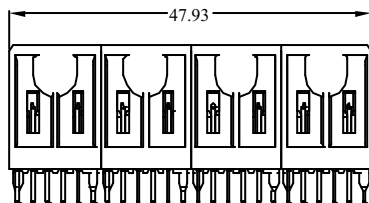
**1 Module**  
74741-1yyLF



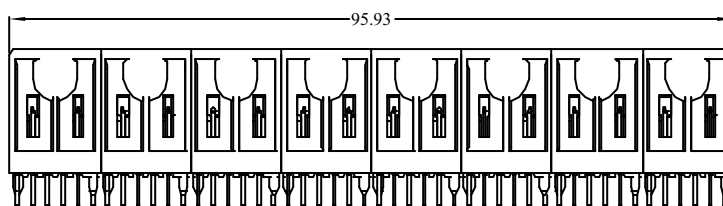
**2 Module**  
7474x-1yyLF  
*on request only*



**4 Module**  
7474x-1yyLF  
*on request only*



**8 Module**  
7474x-1yyLF  
*on request only*



PCB pattern P16, see chapter PCB layouts

## PARTNUMBERS

74741 - 1yyLF

Base Part Number

Performance

Pin Configuration

LF

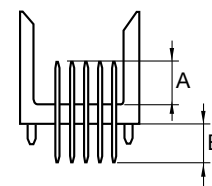
**74741**  
*on request only*  
*on request only*  
*on request only*  
*on request only*

- = 1 module (5 x 6 pos.)
- = 2 module (5 x 12 pos.)
- = 4 module (5 x 24 pos.)
- = 8 module (5 x 48 pos.)

**1** = Telcordia CO

**LF** = lead free

yy	mating length (A)	tail length (B)
63	5,00 mm	4,25 mm
01	6,50 mm	4,25 mm
79	5,00 mm	3,30 mm
31	6,50 mm	3,30 mm



**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 5 row, signal, straight, press-fit, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+).
- 5 Rows and 2 mm pitch permit high signal density (200 contacts per 100 mm connector length).
- Stackable end-to-end without loss of positions.
- Stackable with other METRAL™ function modules (e.g. power, coax, guide pin).
- First Make Last Break options.
- Eye the needle press-fit contact

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 65 N max. per pin
- press-fit pin withdrawal: 15 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- product specification.: GS-12-180

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

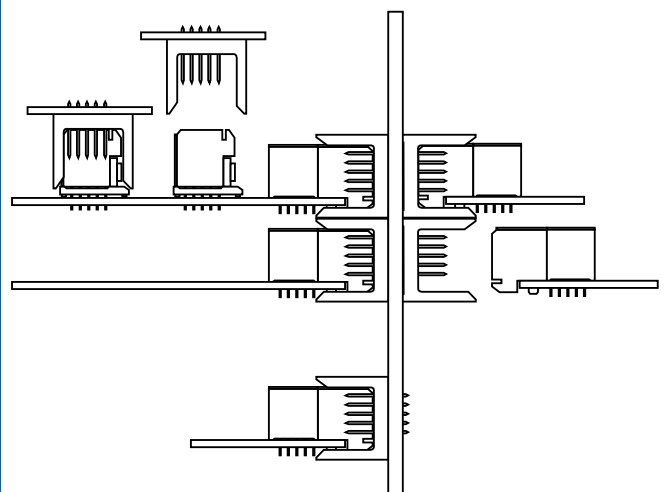
#### ■ Receptacle, right angle, press-fit, page 45

- 1 mod – part number 89047-102LF
- 2 mod – part number 89093-102LF
- 4 mod – part number 89094-102LF
- 8 mod – part number 89095-102LF

#### ■ Receptacle, right angle, solder-to-board, page 43

- 1 mod – part numbers 85863-102LF
- 2 mod – part numbers 85864-102LF
- 4 mod – part numbers 85865-102LF
- 8 mod - part numbers 85866-102LF

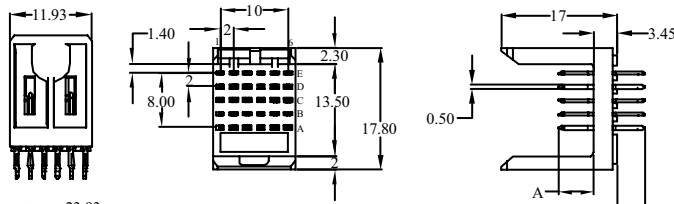
### TYPICAL APPLICATIONS



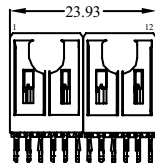
# Header, 5 row, signal, straight, press-fit, wide body

## PRODUCT

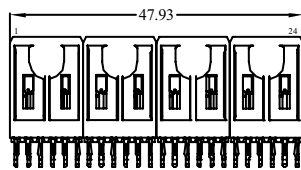
1 Module  
89006-1yyLF



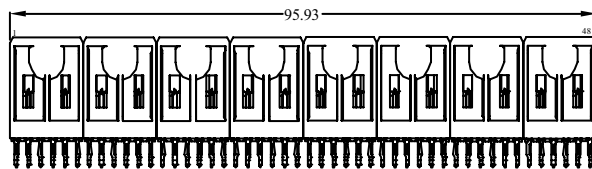
2 Module  
89007-1yyLF



4 Module  
89008-1yyLF



8 Module  
89009-1yyLF



PCB pattern P7, see chapter PCB layouts

## PARTNUMBERS

8900x - 1yyLF

Base Part Number

Performance

Pin Configuration

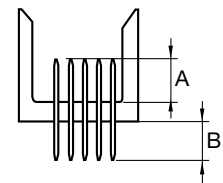
LF

89006 = 1 module (5 x 6 pos.)  
89007 = 2 module (5 x 12 pos.)  
89008 = 4 module (5 x 24 pos.)  
89009 = 8 module (5 x 48 pos.)

1 = Telcordia CO

LF = lead free

yy	mating length (A)	tail length (B)
11	5,00 mm	4,30 mm
16	5,75 mm	4,30 mm
15	6,50 mm	4,30 mm
21	5,00 mm	13,60 mm
26	5,75 mm	13,60 mm
25	6,50 mm	13,60 mm
first-make last-brake 44	row A = 5,00 mm	4,30 mm
	row B = 6,50 mm	4,30 mm
	row C = 7,25 mm	4,30 mm
	row D = 6,50 mm	4,30 mm
	row E = 5,00 mm	4,30 mm



**Note:** blue marked in pin configuration is the preferred recommended standard for other special patterns or loadings, please check drawings, all other configurations on request only

## Receptacle, 5 row, signal, right angle, solder to board

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 5 row and 2 mm pitch permit high signal density (250 contacts per 100 mm connector length)
- Modular design guarantees flexibility
- Stackable end-to-end without loss of position
- Stackable with other METRAL® function modules (power, I/O)
- Reliable dual beam box contact
- Stable PCB fixation device

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- contact material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- Recommended hole diameter: 0,65 – 0,80 mm

#### ENVIRONMENTAL

- Operating temperature range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

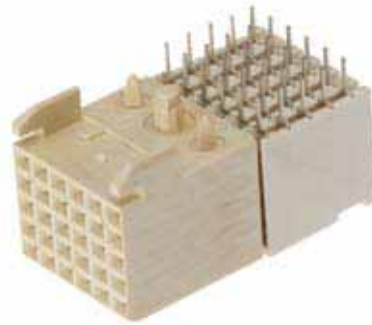
- Applicable process: wave, IR, vapor phase

#### REFERENCE DATA

- Press-peg application, TA-0941
- product specification.: GS-12-453

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

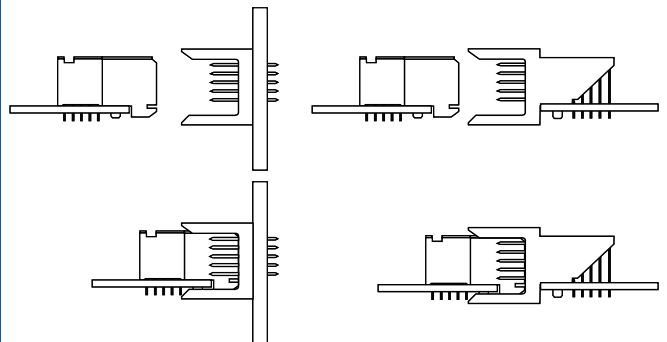
#### Header straight, press-fit, page 41

- 1 module – part number 89006-116LF
- 2 modules – part number 89007-116LF
- 4 modules – part number 89008-116LF
- 8 modules – part number 89009-116LF

#### Header straight, solder-to-board, page 39

- 1 module – part number 74741-101LF
- 2 modules – *on request only*
- 4 modules – *on request only*
- 8 modules – *on request only*

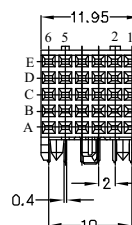
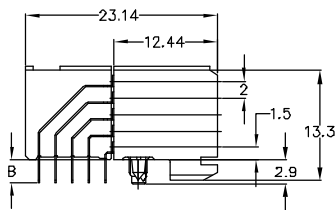
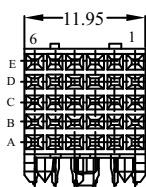
### TYPICAL APPLICATIONS



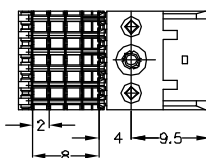
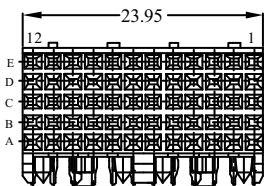
# Receptacle, 5 row, signal, right angle, solder to board

## PRODUCT

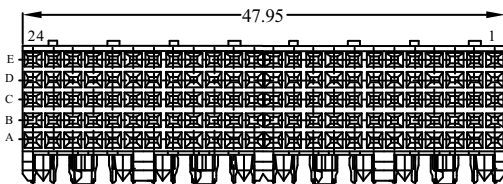
1 Module  
85863-1yyLF



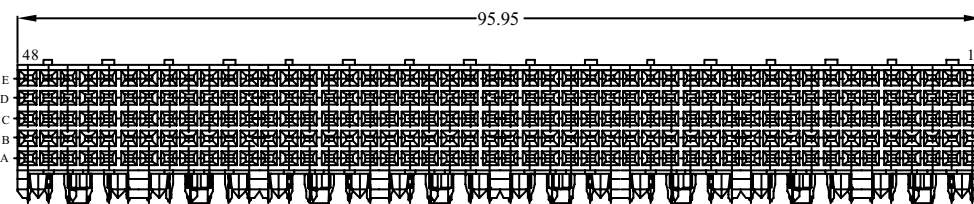
2 Module  
85864-1yyLF



4 Module  
85865-1yyLF



8 Module  
85866-1yyLF



PCB pattern P2, see chapter PCB layouts

## PARTNUMBERS

8586x - 1yyLF

Base Part Number

Performance

Pin Configuration

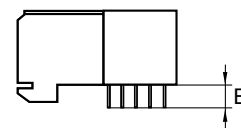
LF

85863 = 1 module (5 x 6 pos.)  
85864 = 2 module (5 x 12 pos.)  
85865 = 4 module (5 x 24 pos.)  
85866 = 8 module (5 x 48 pos.)

1 = Telcordia CO

LF = lead free

yy	tail length (B)	PCB thickness
02	2,90 mm	1,60 mm
12	3,53 mm	2,40 mm



## Receptacle, 5 row, signal, right angle, press fit

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 5 row and 2 mm pitch permit high signal density (250 contacts per 100 mm connector length)
- Modular design guarantees flexibility
- Stackable end-to-end without loss of position
- Stackable with other METRAL® function modules (power, I/O)
- Reliable dual beam box contact
- Stable PCB fixation device
- Press block ensures accurate position of press-fit tails for easy mounting
- Eye the needle press-fit contact



### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- contact material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance: 5x10<sup>3</sup> MΩ initially, 1x10<sup>3</sup> MΩ after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 55 N max. per pin
- press-fit pin withdrawal: 15 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- Press-peg application, TA-0941
- product specification.: GS-12-453

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223.

### MATING DATA

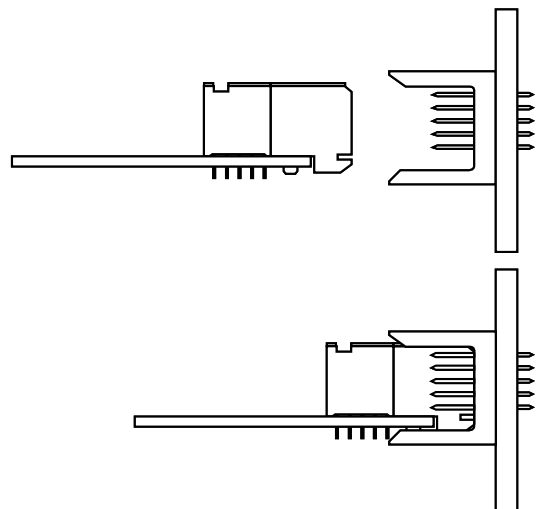
#### Header straight, press-fit, page 41

- 1 module – part number 89006-116LF
- 2 modules – part number 89007-116LF
- 4 modules – part number 89008-116LF
- 8 modules – part number 89009-116LF

#### Header straight, solder-to-board, page 39

- 1 module – part number 74741-101LF
- 2 modules – *on request only*
- 4 modules – *on request only*
- 8 modules – *on request only*

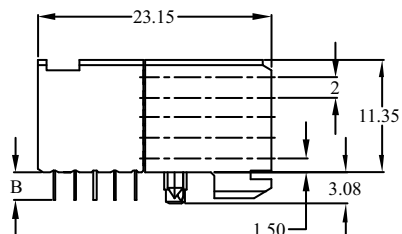
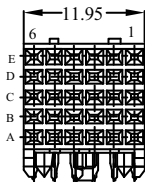
### TYPICAL APPLICATIONS



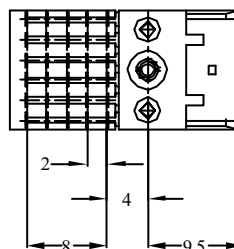
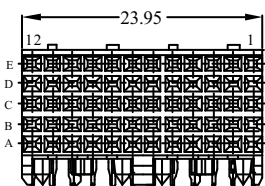
# Receptacle, 5 row, signal, right angle, press fit

## PRODUCT

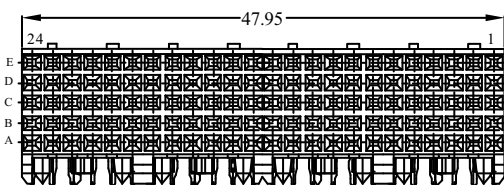
1 Module  
89047-1yyLF



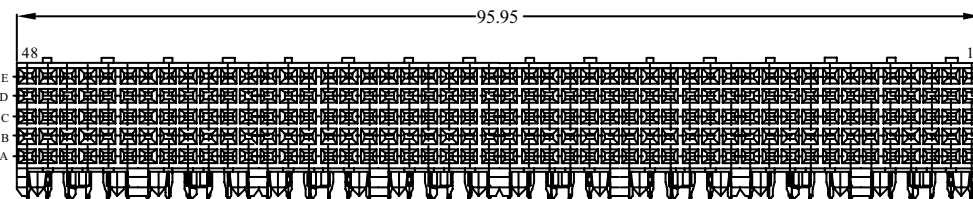
2 Module  
89093-1yyLF



4 Module  
89094-1yyLF



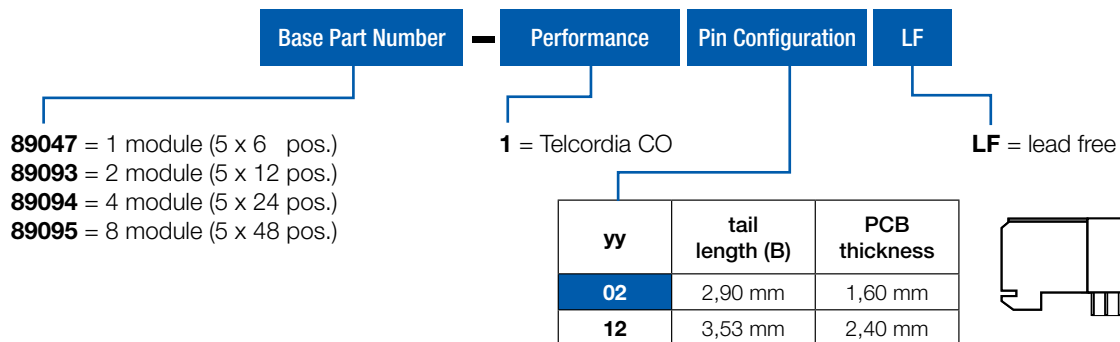
8 Module  
89095-1yyLF



PCB pattern P2, see chapter PCB layouts

## PARTNUMBERS

8904x - 1yyLF



**Note:** blue marked in **pin configuration** is the preferred recommended standard for other special patterns or loadings, please check drawings, all other configurations on request only

## Receptacle, 5 row, signal, right angle, pin-in-paste

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 5 row and 2 mm pitch permit high signal density, 1 module (5 x 6 positions)
- Modular design guarantees flexibility
- Stackable end-to-end without loss of position
- Stackable with other METRAL® function modules (power, I/O)
- Tuning fork, forced controlled contact
- Stable PCB fixation device
- Low profile allows PCB spacing of 14mm



### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP (30% glass), colour natural
- flammability rating: UL 94 V-0
- contact material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance: 5x10<sup>3</sup> MΩ initially, 1x10<sup>3</sup> MΩ after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- Maximum mounting force, 20 N per connector
- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- Recommended hole diameter: 0,65 – 0,80 mm

#### ENVIRONMENTAL

- Operating temperature -55°C to + 125°C
- Max. temperature 260°C for 30 seconds
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- Tape&reel

#### PROCESSING INFORMATION

- Pick&place by vacuum nozzle or mechanical gripper
- automatic Surface-mount reflow process, resistance for Lead Free reflow temperature

#### REFERENCE DATA

- Product specification GS-12-215

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

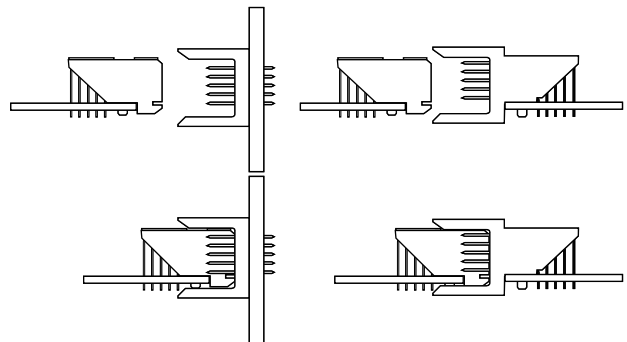
- Header, straight, press-fit, page 41

- 1 module – part number 89006-116LF

- Header, straight, solder-to-board, page 39

- 1 module – part number 74741-101LF

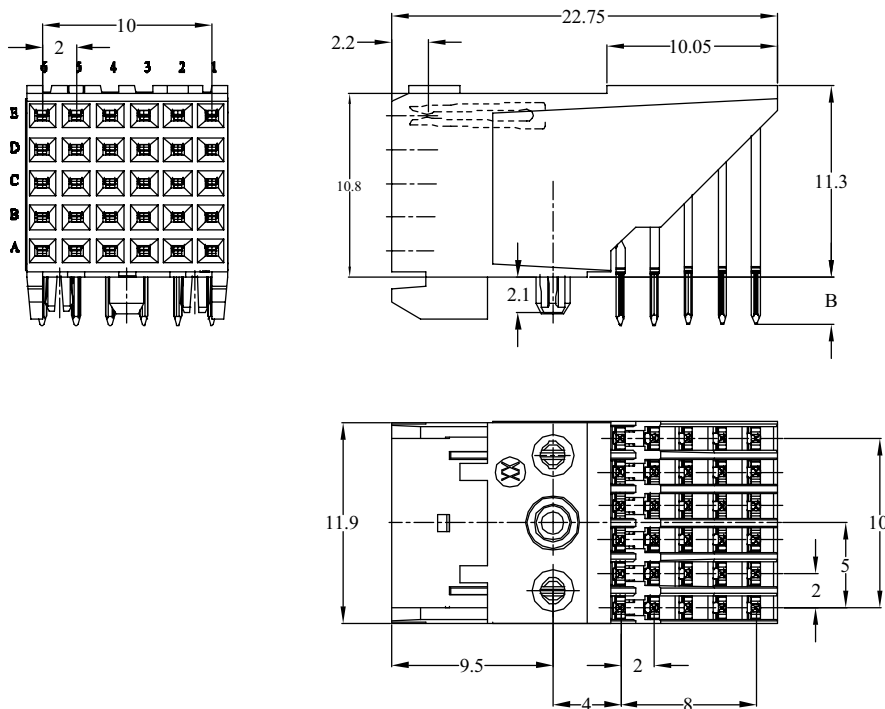
### TYPICAL APPLICATIONS





# Receptacle, 5 row, signal, right angle, pin-in-paste

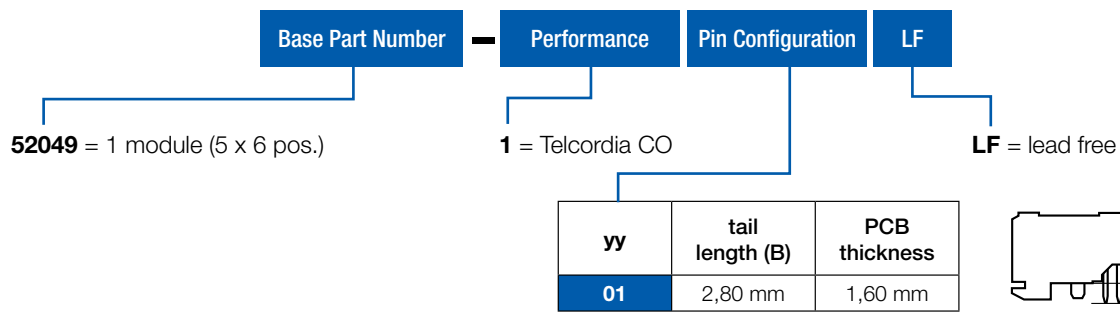
## PRODUCT



PCB pattern P2, see chapter PCB layouts

## PARTNUMBERS

52049 - 101LF



**Note:** blue marked in **pin configuration** is the preferred recommended standard for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 8 row, signal, straight, press fit, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 8 row and 2 mm pitch permit high signal density ( 800 contacts per 100mm connector length)
- 2 modules header, 8 rows by 6 position
- Baby H-shape press-fit contact

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 65 N max. per pin
- press-fit pin withdrawal: 15 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- product specification.: GS-12-134
- application specification: GS-20-010

#### APPLICATION EQUIPMENT

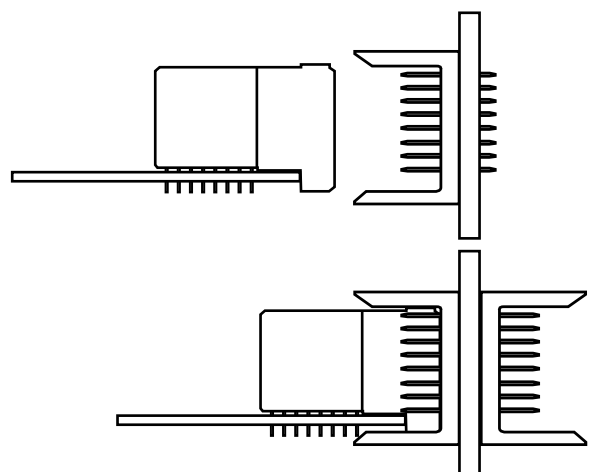
- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

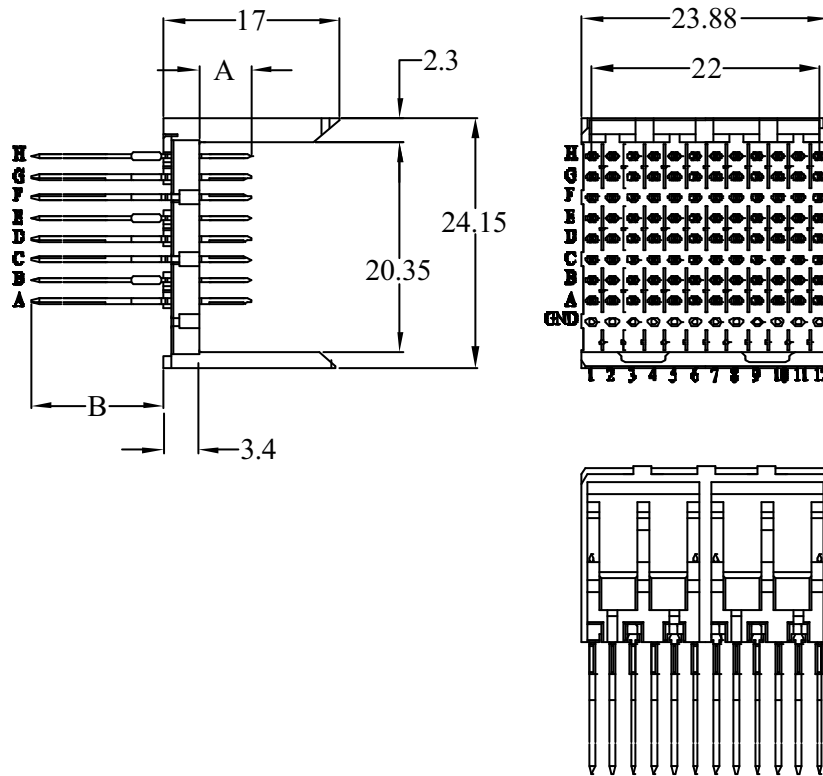
- Receptacle, right angle, press-fit, page 51
- part number 74770-102LF

### TYPICAL APPLICATIONS



# Header, 8 row, signal, straight, press fit, wide body

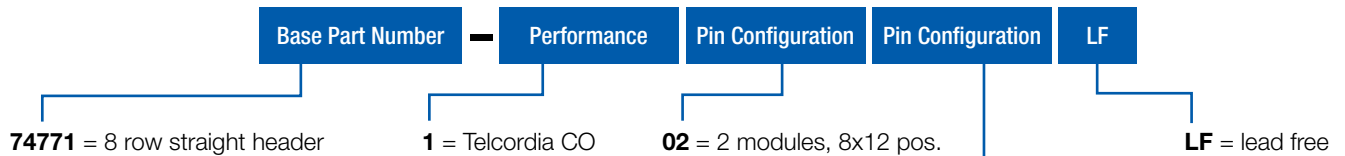
## PRODUCT



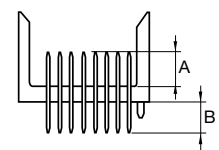
PCB pattern P21, see chapter PCB layouts

## PARTNUMBERS

74771 - 102011LF



yyy	mating length (A)	tail length (B)
011	6,50 mm	17,10 mm



**Note:** blue marked in **pin configuration** is the preferred recommended standard  
for other special patterns or loadings, please check drawings, all other configurations on request only

## Receptacle, 8 row, signal, right angle, press fit

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 8 row and 2 mm pitch permit high signal density ( 800 contacts per 100mm connector length)
- 2 modules header, 8 rows by 6 position
- Eye of the needle press-fit contact
- Tuning fork, forced controlled contact

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3$  M $\Omega$  initially,  $1 \times 10^3$  M $\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 55 N max. per pin
- press-fit pin withdrawal: 15 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- product spec.: GS-12-134
- application specification: GS-20-010

#### APPLICATION EQUIPMENT

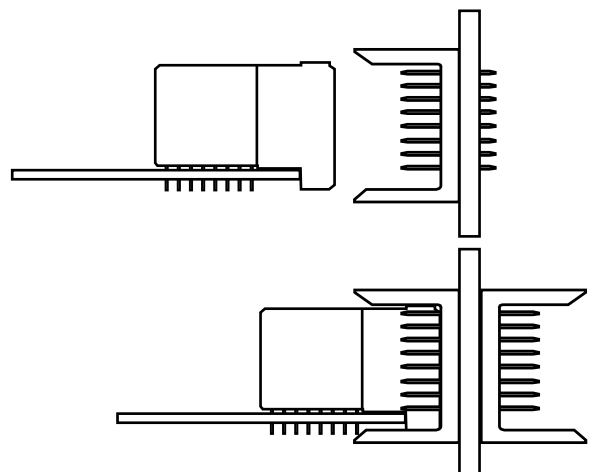
- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

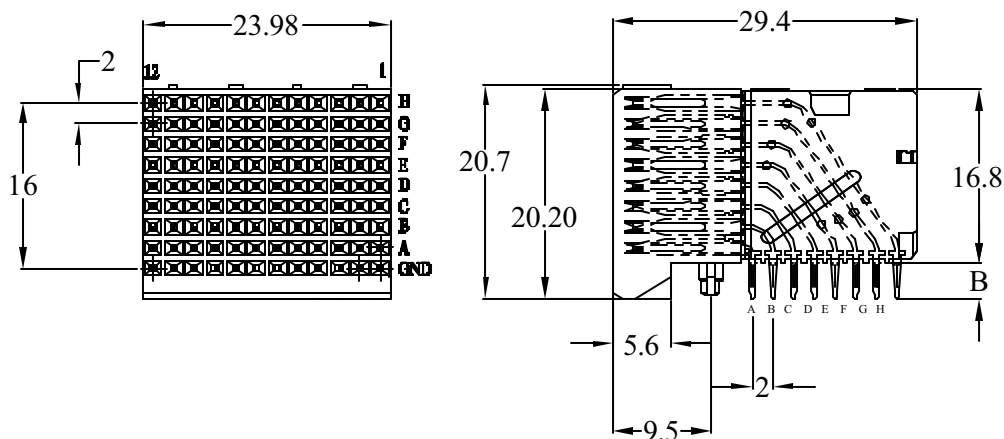
- Receptacle, right angle, press-fit, page 49
- part number 74771-102011LF

### TYPICAL APPLICATIONS



# Receptacle, 8 row, signal, right angle, press fit

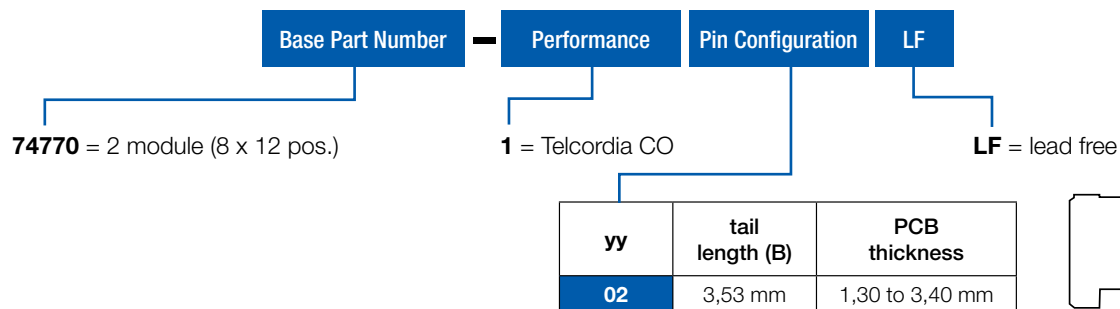
## PRODUCT



PCB pattern P22, see chapter PCB layouts

## PARTNUMBERS

74770 - 102LF



**Note:** blue marked in **pin configuration** is the preferred recommended standard for other special patterns or loadings, please check drawings, all other configurations on request only





## ■ METRAL® SIGNAL CONNECTORS REVERSED

- Header, 4 row, right angle, wide body
- Header, 4 row, right angle, narrow body
- Receptacle, 4 row, straight
- Header, 5 row, right angle, wide body
- Header, 5 row, right angle, narrow body
- Receptacle, 4 row, straight

## Header, 4 row, signal, right angle, solder to board, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density ( 200 contacts per 100mm connector length)
- Modular design guarantees flexibility

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3$  M $\Omega$  initially,  $1 \times 10^3$  M $\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: trays

#### PROCESSING INFORMATION

- applicable soldering process: wave, IR, vapor phase

#### REFERENCE DATA

- Product specification: GS-12-446

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

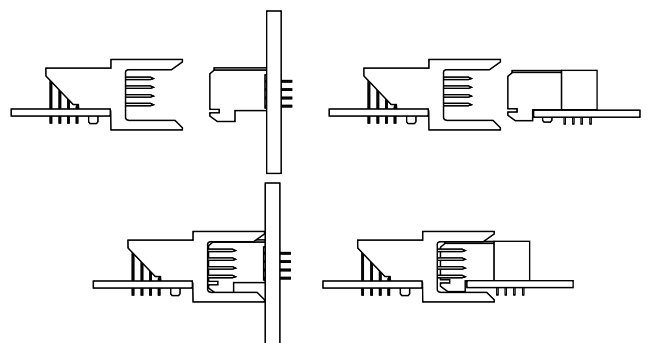
#### ■ Receptacle, straight, press-fit, page 69

- 1 mod – part number 85757-1101LF
- 2 mod – part number 85758-1101LF
- 4 mod – part number 85759-1101LF
- 8 mod – part number 85760-1101LF

#### ■ Receptacle, straight, solder-to-board, page 67

- 1 mod – part numbers HM1S41FRR000H6PLF
- 2 mod – part numbers HM1S42FRR000H6PLF
- 4 mod – part numbers HM1S43FRR000H6PLF
- 8 mod - part numbers HM1S44FRR000H6PLF

### TYPICAL APPLICATIONS

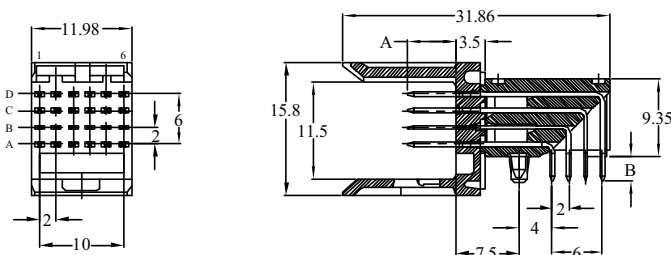




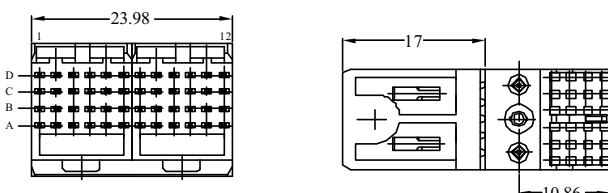
# Header, 4 row, signal, right angle, solder to board, wide body

## PRODUCT

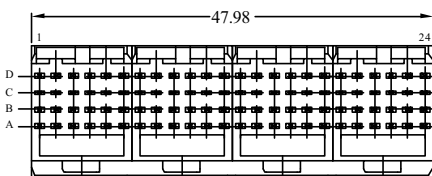
### 1 Module



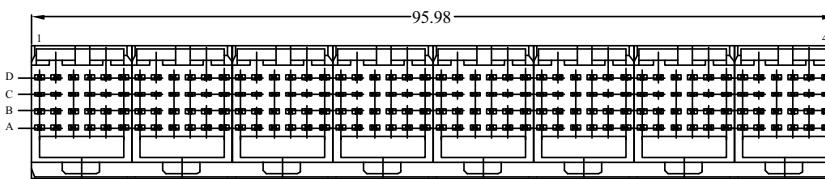
### 2 Module



### 4 Module



### 8 Module



PCB pattern P1, see chapter PCB layouts

## PARTNUMBERS

HM1L4 x LAP000H6PLF

Base Part Number	Type	no. of rows	no. of pos.	Configuration	000	Performance	Packaging	LF
------------------	------	-------------	-------------	---------------	-----	-------------	-----------	----

HM1

L = Signal header  
right angle, wide body

4 = 4 row

LAP = solder to board

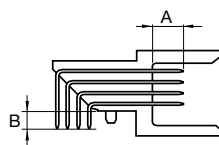
H6 = Telcordia CO

LF = lead free

P = trays

- 1 = 1 module (4 x 6 pos.)
- 2 = 2 module (4 x 12 pos.)
- 3 = 4 module (4 x 24 pos.)
- 4 = 8 module (4 x 48 pos.)

mating length (A)	tail length (B)
5,75 mm	2,90 mm
1,6 mm PCB thickness	



**Note:** For other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 4 row, signal, right angle, press fit, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density ( 200 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Eye of the needle press-fit contact

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance: 5x10<sup>3</sup> MΩ initially, 1x10<sup>3</sup> MΩ after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
  
- press-fit contact insertion: 55 N max. per pin
- press-fit pin withdrawal: 15 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: trays

#### PROCESSING INFORMATION

- press-fit

#### REFERENCE DATA

- Product specification: GS-12-445

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

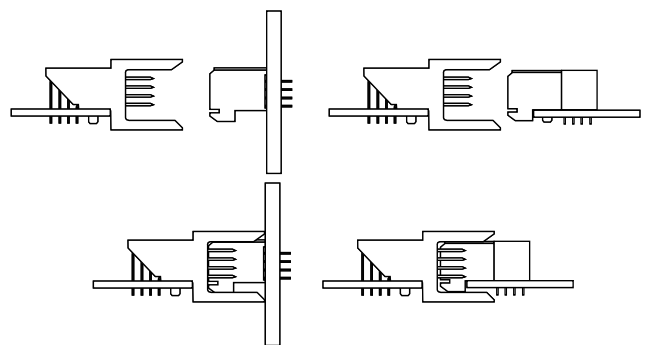
#### Receptacle, press-fit, page 69

- 1 mod – part number 85757-1101LF
- 2 mod – part number 85758-1101LF
- 4 mod – part number 85759-1101LF
- 8 mod – part number 85760-1101LF

#### Receptacle, solder-to-board, page 67

- 1 mod – part numbers HM1S41FRR000H6PLF
- 2 mod – part numbers HM1S42FRR000H6PLF
- 4 mod – part numbers HM1S43FRR000H6PLF
- 8 mod - part numbers HM1S44FRR000H6PLF

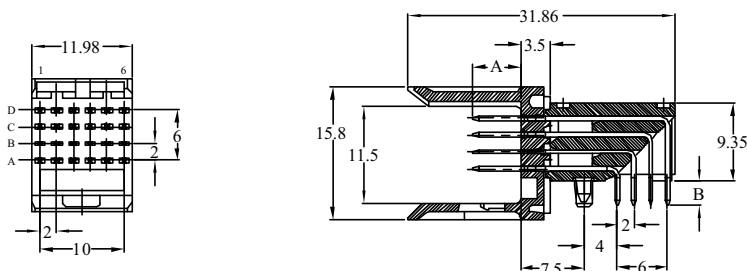
### TYPICAL APPLICATIONS



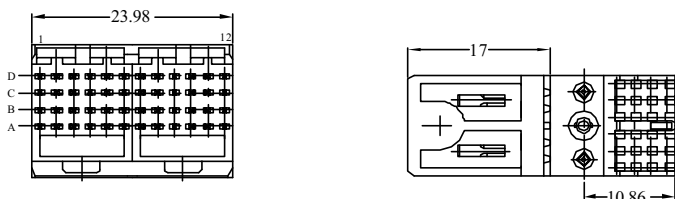
# Header, 4 row, signal, right angle, press fit, wide body

## PRODUCT

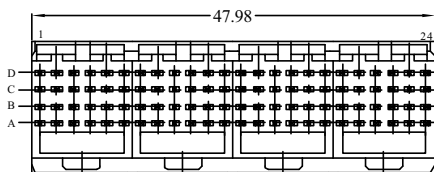
### 1 Module



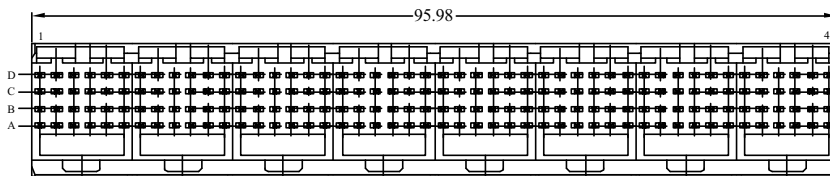
### 2 Module



### 4 Module



### 8 Module



PCB pattern P1, see chapter PCB layouts

## PARTNUMBERS

HM1L4 x LDP000H6PLF

Base Part Number	Type	no. of rows	no. of pos.	Configuration	000	Performance	Packaging	LF						
HM1	L = Signal header right angle, wide body	4 = 4 row	LDP = Press fit	<table border="1"> <thead> <tr> <th>mating length (A)</th> <th>tail length (B)</th> </tr> </thead> <tbody> <tr> <td>5,75 mm</td> <td>2,90 mm</td> </tr> <tr> <td colspan="2">1,6 mm PCB thickness</td> </tr> </tbody> </table>	mating length (A)	tail length (B)	5,75 mm	2,90 mm	1,6 mm PCB thickness			H6 = Telcordia CO	P = trays	LF = lead free
mating length (A)	tail length (B)													
5,75 mm	2,90 mm													
1,6 mm PCB thickness														
		1 = 1 module (4 x 6 pos.) 2 = 2 module (4 x 12 pos.) 3 = 4 module (4 x 24 pos.) 4 = 8 module (4 x 48 pos.)												

**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 4 row, signal, right angle, pin-in-paste, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density ( 200 contacts per 100mm connector length)
- Modular design guarantees flexibility

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3$  M $\Omega$  initially,  $1 \times 10^3$  M $\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: trays

#### PROCESSING INFORMATION

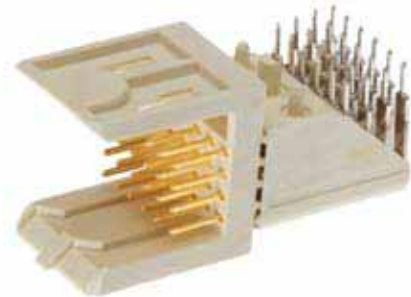
- Pick&place by vacuum nozzle or mechanical gripper
- automatic Surface-mount reflow process, resistance for Lead Free reflow temperature

#### REFERENCE DATA

- Product specification: GS-12-446

#### APPLICATION EQUIPMENT

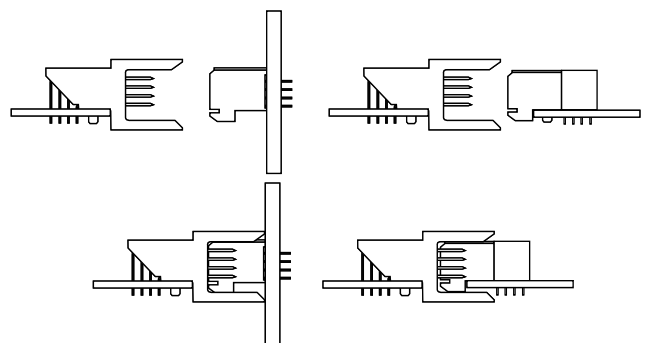
- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

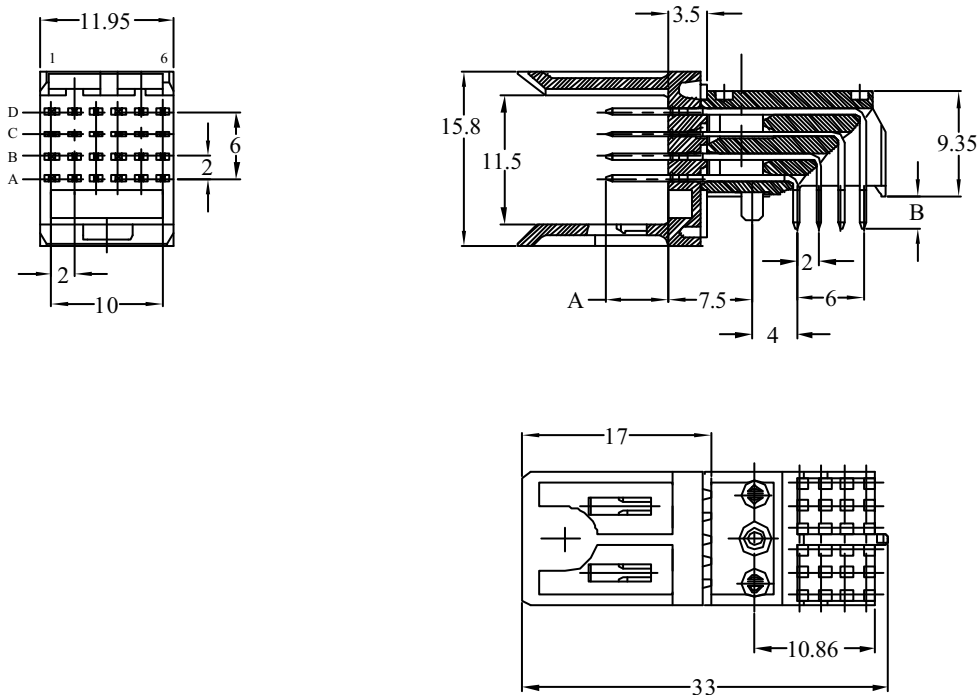
- Receptacle, straight, press-fit, page 69
  - 1 mod – part number 85757-101LF
- Receptacle, straight, solder-to-board, page 67
  - 1 mod – part numbers HM1S41FRR000H6PLF

### TYPICAL APPLICATIONS



# Header, 4 row, signal, right angle, pin-in-paste, wide body

## PRODUCT



PCB pattern P1, see chapter PCB layouts

## PARTNUMBERS

**HM1L4 x LFP000H6PLF**

Base Part Number	Type	no. of rows	no. of pos.	Configuration	000	Performance	Packaging	LF						
<b>HM1</b>	<b>L</b> = Signal header right angle, wide body	<b>4</b> = 4 row	<b>1</b> = 1 module (4 x 6 pos.)	<b>LFP</b> = Pin-in-Paste <table border="1"> <thead> <tr> <th>mating length (A)</th> <th>tail length (B)</th> </tr> </thead> <tbody> <tr> <td>5,75 mm</td> <td>2,90 mm</td> </tr> <tr> <td colspan="2">1,6 mm PCB thickness</td> </tr> </tbody> </table>	mating length (A)	tail length (B)	5,75 mm	2,90 mm	1,6 mm PCB thickness			<b>H6</b> = Telcordia CO	<b>P</b> = trays	<b>LF</b> = lead free
mating length (A)	tail length (B)													
5,75 mm	2,90 mm													
1,6 mm PCB thickness														

**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 4 row, signal, right angle, solder to board, narrow body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density ( 200 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Narrow body housing

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3$  M $\Omega$  initially,  $1 \times 10^3$  M $\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- applicable soldering process: wave, IR, vapor phase

#### REFERENCE DATA

- Product specification: GS-12-446

#### APPLICATION EQUIPMENT

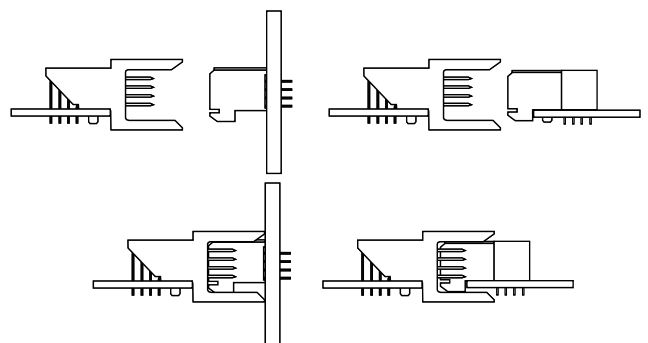
- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

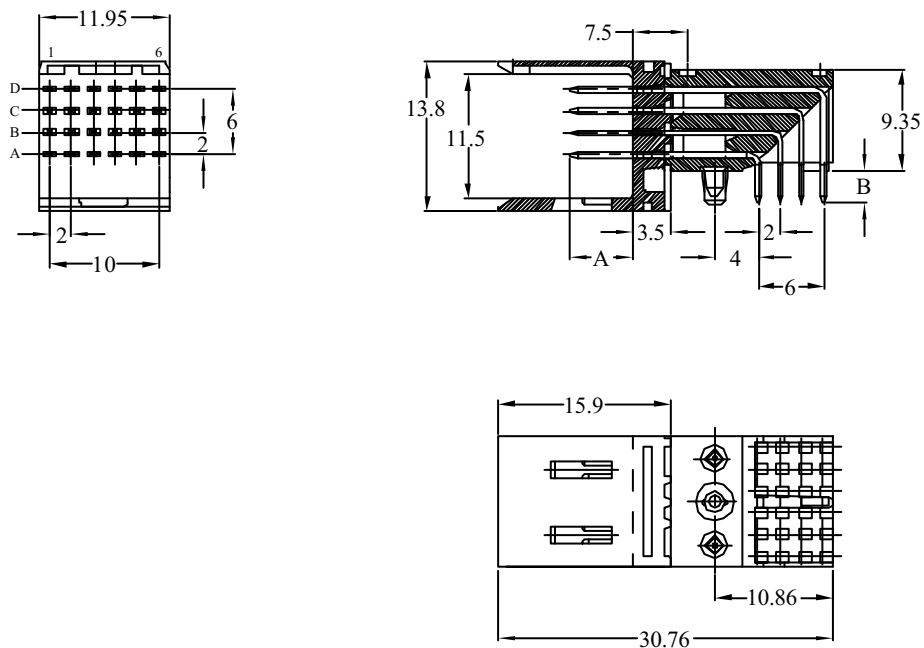
- Receptacle, straight, press-fit, page 69
  - 1 mod – part number 85757-1101LF
- Receptacle, straight, solder-to-board, page 67
  - 1 mod – part numbers HM1S41FRR000H6PLF

### TYPICAL APPLICATIONS



# Header, 4 row, signal, right angle, solder to board, narrow body

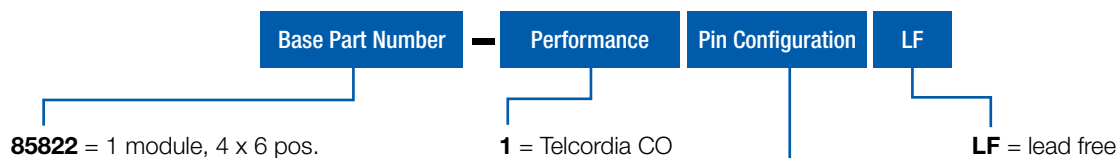
## PRODUCT



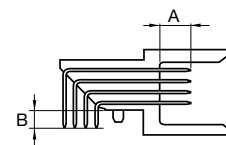
PCB pattern P1, see chapter PCB layouts

## PARTNUMBERS

85822 - 1yyLF



yy	mating length (A)	tail length (B)
01	5,00 mm	2,90 mm
05	5,75 mm	2,90 mm
10	5,75 mm	3,70 mm



**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 4 row, signal, right angle, press fit, narrow body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 5 row and 2 mm pitch permit high signal density ( 250 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Narrow body housing
- Eye of the needle press-fit contact



### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 55 N max. per pin
- press-fit pin withdrawal: 15 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- Product specification: GS-12-445

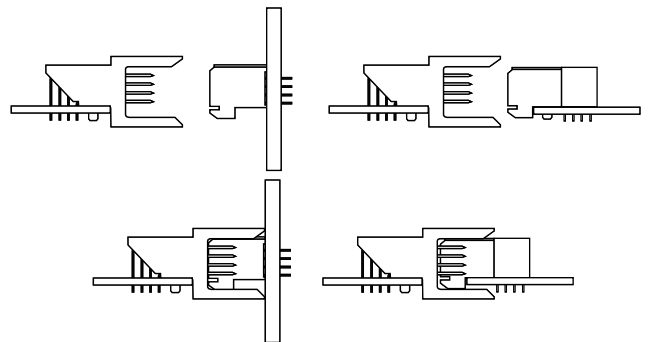
#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

- Receptacle, straight, press-fit, page 69
  - 1 mod – part number 85757-1101LF
- Receptacle, straight, solder-to-board, page 67
  - 1 mod – part numbers HM1S41FRR000H6PLF

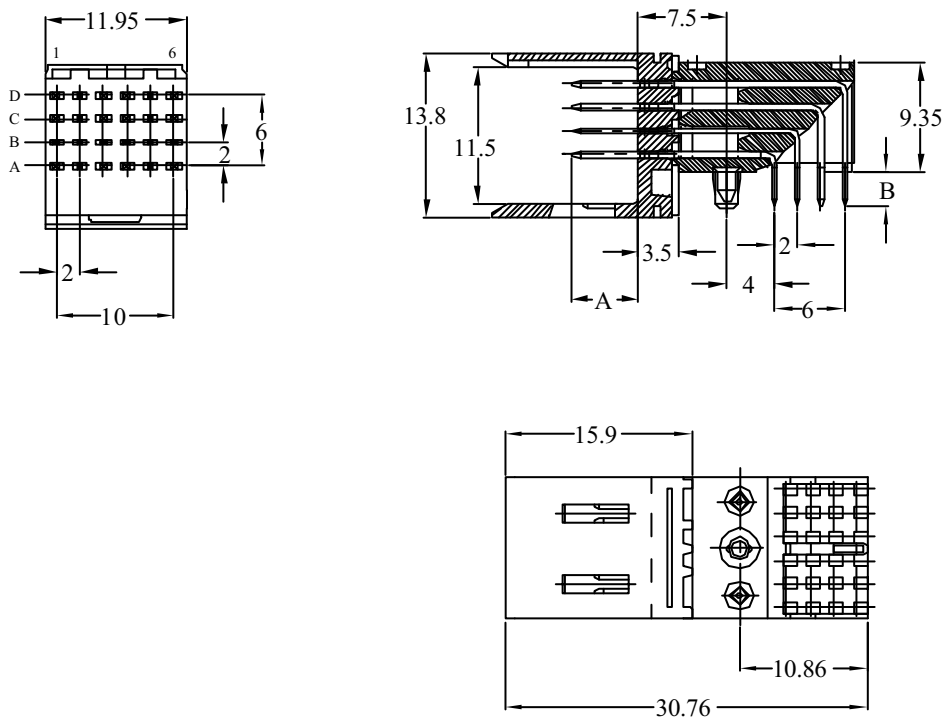
### TYPICAL APPLICATIONS





# Header, 4 row, signal, right angle, press fit, narrow body

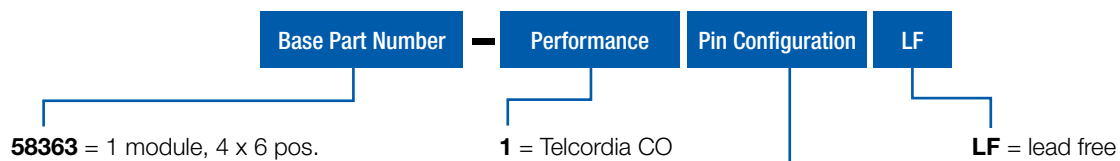
## PRODUCT



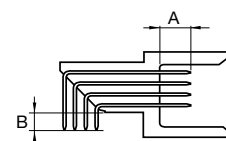
PCB pattern P1, see chapter PCB layouts

## PARTNUMBERS

58363 - 1yyLF



yy	mating length (A)	tail length (B)
01	5,00 mm	2,90 mm
05	5,75 mm	2,90 mm



**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 4 row, signal, right angle, pin-in-paste, narrow body

## FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density ( 200 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Narrow body housing

## TECHNICAL DATA

## PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

## ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

## MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

## ENVIRONMENTAL

- Operating temperature range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

## PACKAGING

- standard: tape&reel

## PROCESSING INFORMATION

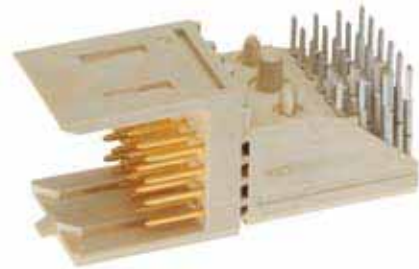
- Pick&place by vacuum nozzle or mechanical gripper
- automatic Surface-mount reflow process, resistance for Lead Free reflow temperature

## REFERENCE DATA

- Product specification: GS-12-446

## APPLICATION EQUIPMENT

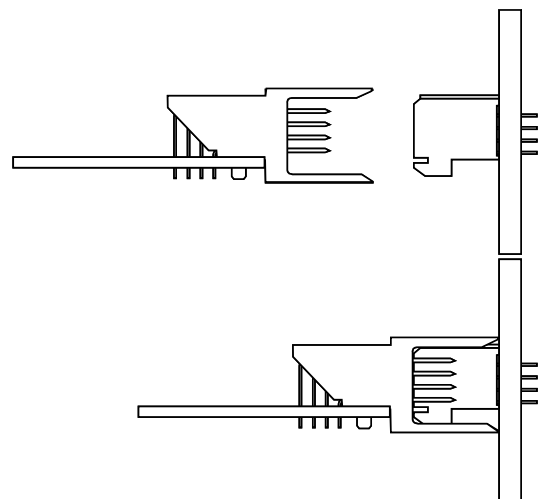
- for application equipment, check out the application equipment table on page 217-223



## MATING DATA

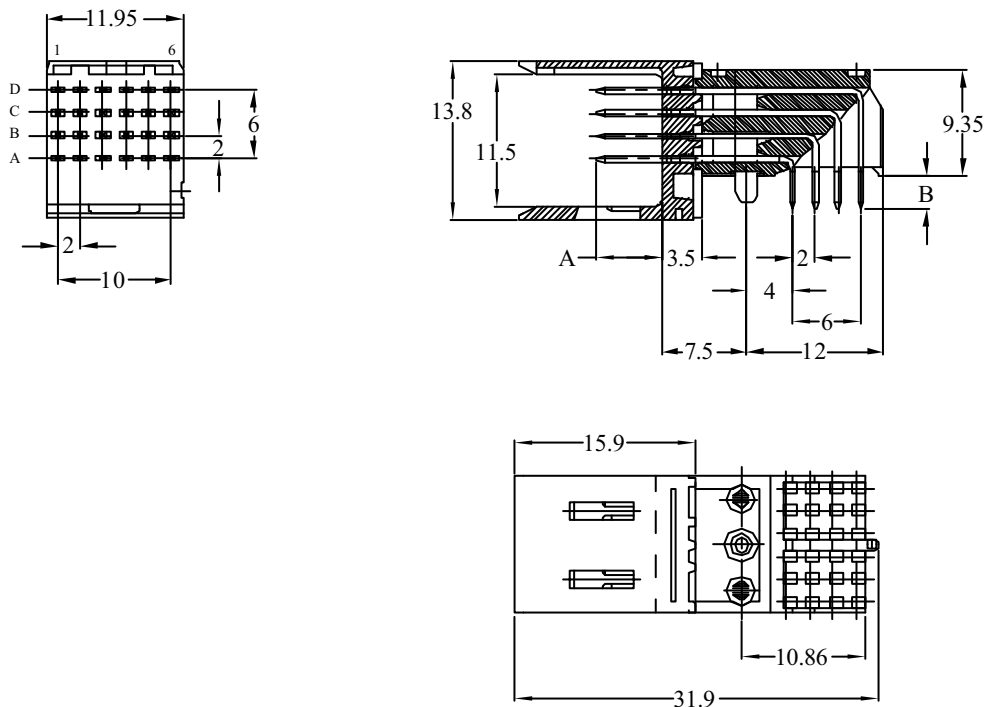
- Receptacle, straight, press-fit, page 69
  - 1 mod – part number 85757-1101LF
- Receptacle, straight, solder-to-board, page 67
  - 1 mod – part numbers HM1S41FRR000H6PLF

## TYPICAL APPLICATIONS



# Header, 4 row, signal, right angle, pin-in-paste, narrow body

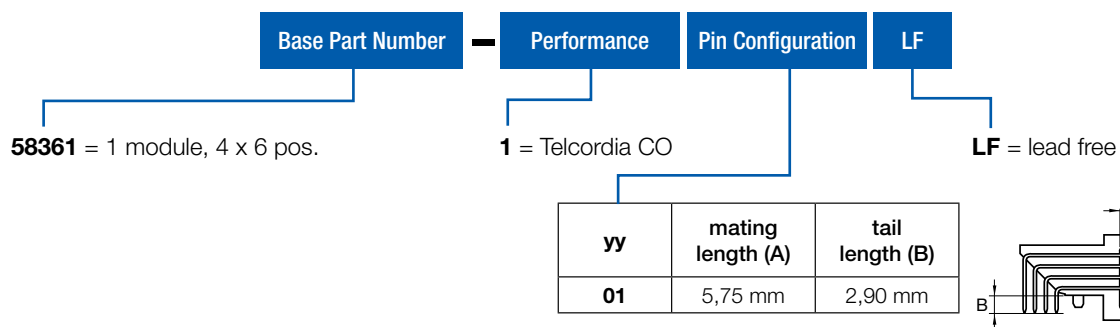
## PRODUCT



PCB pattern P1, see chapter PCB layouts

## PARTNUMBERS

**58361 - 101LF**



**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Receptacle, 4 row, signal, straight, solder to board

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density (200 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Parallel board applications
- Tuning fork contact



### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- contact material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3$  M $\Omega$  initially,  $1 \times 10^3$  M $\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: trays

#### PROCESSING INFORMATION

- Applicable process: wave, IR, vapor phase

#### REFERENCE DATA

- Product specification: GS-12-448

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

#### Header, right angle, press-fit, page 57

- 1 module-part number HM1L41LDP000H6PLF
- 2 module-part number HM1L42LDP000H6PLF
- 4 module-part number HM1L43LDP000H6PLF
- 8 module-part number HM1L44LDP000H6PLF

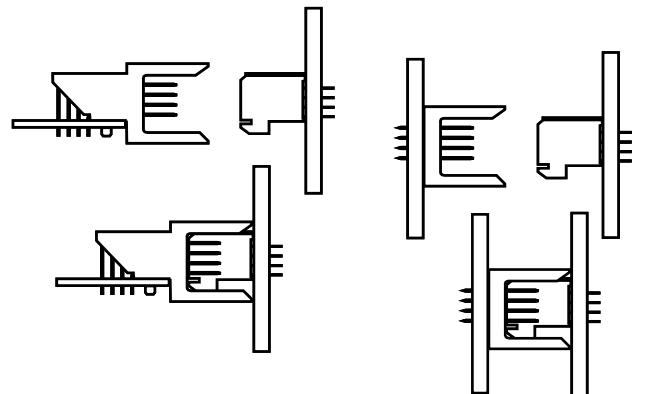
#### Header, right angle, solder-to-board, page 55

- 1 module-part number HM1L41LAP000H6PLF
- 2 module-part number HM1L42LAP000H6PLF
- 4 module-part number HM1L43LAP000H6PLF
- 8 module-part number HM1L44LAP000H6PLF

#### Header, right angle, Pin-in-Paste, page 59

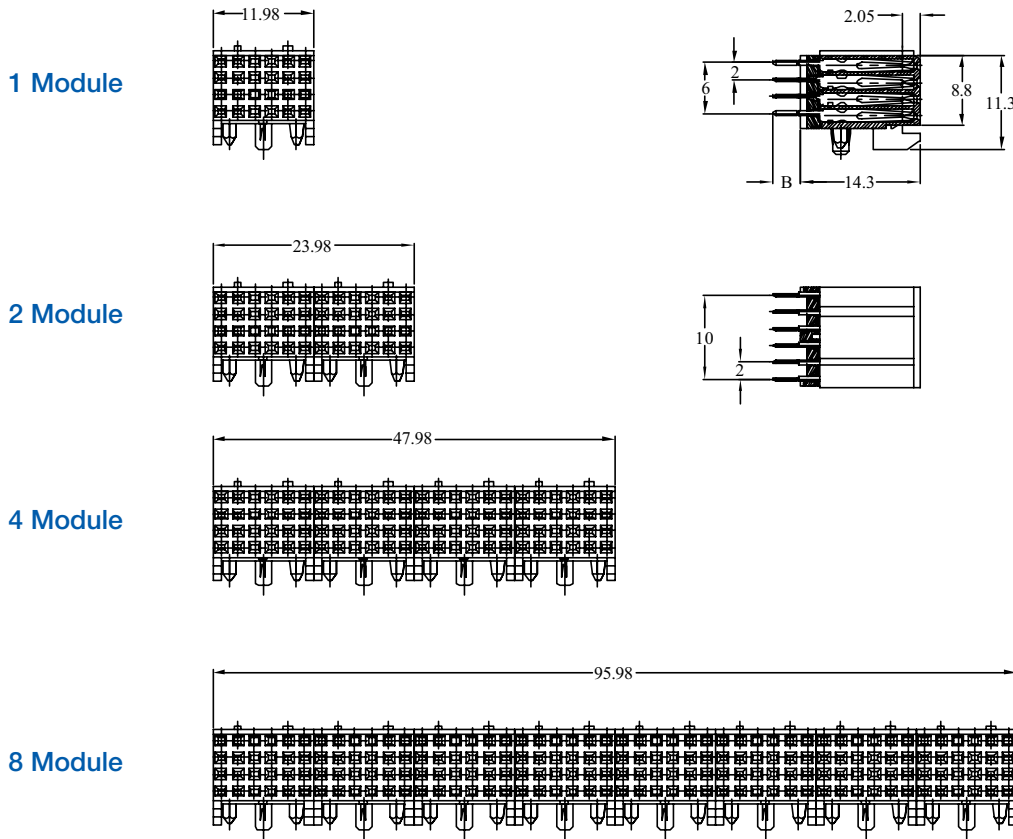
- 1 module-part number HM1L41LFP000H6PLF

### TYPICAL APPLICATIONS



# Receptacle, 4 row, signal, straight, solder to board

## PRODUCT



PCB pattern P5, see chapter PCB layouts

## PARTNUMBERS

HM1S4 x FRR000H6PLF

Base Part Number	Type	no. of rows	no. of pos.	Configuration	000	Performance	Packaging	LF
HM1	S = signal receptacle straight	4 = 4 row		FRR = solder to board		H6 = Telcordia CO		LF = lead free
				tail length (B) 3,30 mm			P = trays	
			1 = 1 module (4 x 6 pos.) 2 = 2 module (4 x 12 pos.) 3 = 4 module (4 x 24 pos.) 4 = 8 module (4 x 48 pos.)					

**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Receptacle, 4 row, signal, straight, press fit

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 4 row and 2 mm pitch permit high signal density (200 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Parallel board applications
- Tuning fork contact
- Baby H-shape press-fit contact
- Flat rock design; can be pressed on PCB with flat press block



### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- contact material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 100 N max. per pin
- press-fit pin withdrawal: 20 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- Product specification: GS-12-447

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

#### Header, right angle, press-fit, page 57

- 1 module-part number HM1L41LDP000H6PLF
- 2 module-part number HM1L42LDP000H6PLF
- 4 module-part number HM1L43LDP000H6PLF
- 8 module-part number HM1L44LDP000H6PLF

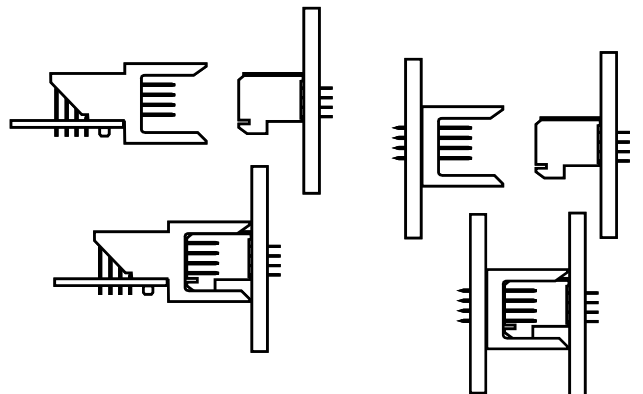
#### Header, right angle, solder-to-board, page 55

- 1 module-part number HM1L41LAP000H6PLF
- 2 module-part number HM1L42LAP000H6PLF
- 4 module-part number HM1L43LAP000H6PLF
- 8 module-part number HM1L44LAP000H6PLF

#### Header, right angle, Pin-in-Paste, page 59

- 1 module-part number HM1L41LFP000H6PLF

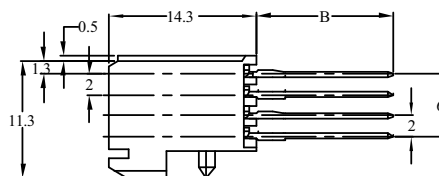
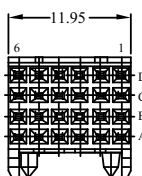
### TYPICAL APPLICATIONS



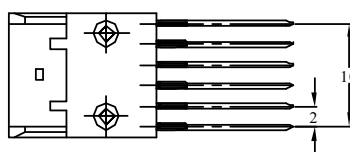
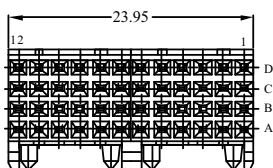
# Receptacle, 4 row, signal, straight, press fit

## PRODUCT

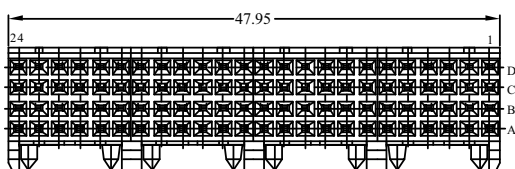
### 1 Module



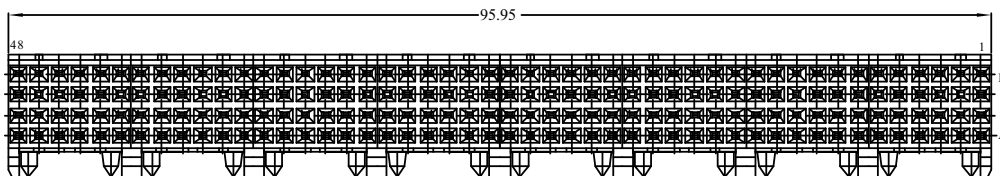
### 2 Module



### 4 Module



### 8 Module



PCB pattern P6, see chapter PCB layouts

## PARTNUMBERS

8575x - 1y01LF



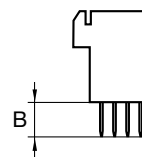
85757 = 1 module (4 x 6 pos.)  
 85758 = 2 module (4 x 12 pos.)  
 85759 = 4 module (4 x 24 pos.)  
 85760 = 8 module (4 x 48 pos.)

1 = Telcordia CO

01 = fully loaded

LF = lead free

y	tail length (B)
1	4,3 mm
2	13,6 mm
3	17,1 mm



**Note:** blue marked in **tail length** is the preferred recommended standard  
 for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 5 row, signal, right angle, solder to board, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 5 row and 2 mm pitch permit high signal density (250 contacts per 100mm connector length)
- Modular design guarantees flexibility

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: trays

#### PROCESSING INFORMATION

- applicable soldering process: wave, IR, vapor phase

#### REFERENCE DATA

- Product specification: GS-12-446

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

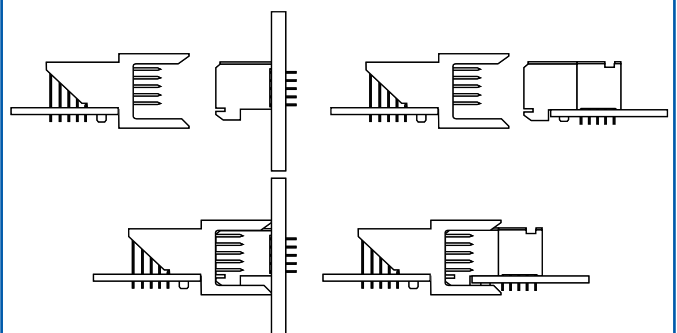
#### ■ Receptacle, straight, press-fit, page 79

- 1 mod – part number 85761-1101LF
- 2 mod – on request only
- 4 mod – part number 85763-1101LF
- 8 mod – on request only

#### ■ Receptacle, straight, solder-to-board, page 77

- 1 mod – part numbers HM1S51FRR000H6PLF
- 2 mod – part numbers HM1S52FRR000H6PLF
- 4 mod – part numbers HM1S53FRR000H6PLF
- 8 mod - part numbers HM1S54FRR000H6PLF

### TYPICAL APPLICATIONS

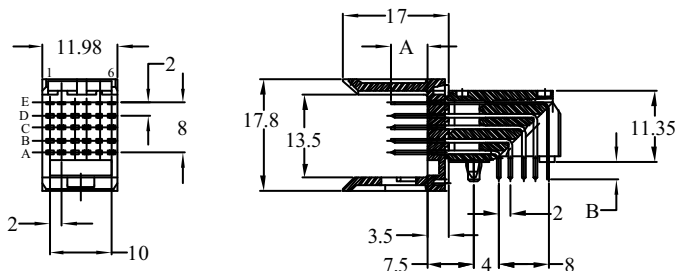




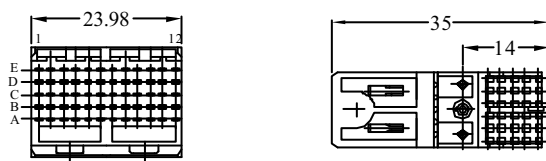
# Header, 5 row, signal, right angle, solder to board, wide body

## PRODUCT

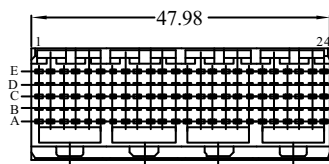
### 1 Module



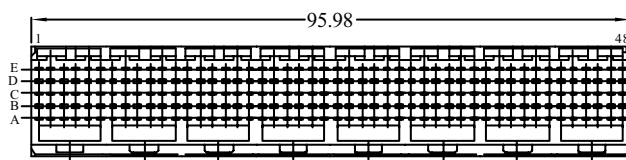
### 2 Module



### 4 Module



### 8 Module



PCB pattern P2, see chapter PCB layouts

## PARTNUMBERS

HM1L5 x LAP000H6PLF

Base Part Number	Type	no. of rows	no. of pos.	Configuration	000	Performance	Packaging	LF											
HM1	L = Signal header right angle, wide body	5 = 5 row	<table border="1"> <thead> <tr> <th>mating length (A)</th> <th>tail length (B)</th> </tr> </thead> <tbody> <tr> <td>5,75 mm</td> <td>2,90 mm</td> </tr> <tr> <td colspan="2">1,6 mm PCB thickness</td> </tr> </tbody> </table>	mating length (A)	tail length (B)	5,75 mm	2,90 mm	1,6 mm PCB thickness		<table border="1"> <thead> <tr> <th>mating length (A)</th> <th>tail length (B)</th> </tr> </thead> <tbody> <tr> <td>5,75 mm</td> <td>2,90 mm</td> </tr> <tr> <td colspan="2">1,6 mm PCB thickness</td> </tr> </tbody> </table>	mating length (A)	tail length (B)	5,75 mm	2,90 mm	1,6 mm PCB thickness		H6 = Telcordia CO	P = trays	LF = lead free
mating length (A)	tail length (B)																		
5,75 mm	2,90 mm																		
1,6 mm PCB thickness																			
mating length (A)	tail length (B)																		
5,75 mm	2,90 mm																		
1,6 mm PCB thickness																			
1 = 1 module (5 x 6 pos.) 2 = 2 module (5 x 12 pos.) 3 = 4 module (5 x 24 pos.) 4 = 8 module (5 x 48 pos.)																			

**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 5 row, signal, right angle, press fit, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 5 row and 2 mm pitch permit high signal density (250 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Eye of the needle press-fit contact

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 55 N max. per pin
- press-fit pin withdrawal: 15 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: trays

#### PROCESSING INFORMATION

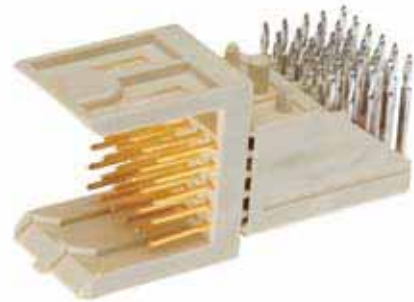
- press fit

#### REFERENCE DATA

- Product specification: GS-12-445

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

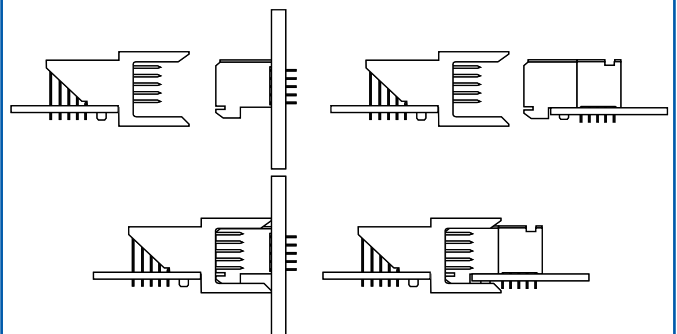
#### ■ Receptacle, straight, press-fit, page 79

- 1 mod – part number 85761-1101LF
- 2 mod – on request only
- 4 mod – part number 85763-1101LF
- 8 mod – on request only

#### ■ Receptacle, straight, solder-to-board, page 77

- 1 mod – part numbers HM1S51FRR000H6PLF
- 2 mod – part numbers HM1S52FRR000H6PLF
- 4 mod – part numbers HM1S53FRR000H6PLF
- 8 mod - part numbers HM1S54FRR000H6PLF

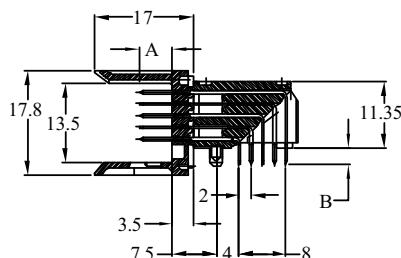
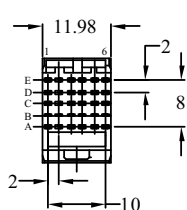
### TYPICAL APPLICATIONS



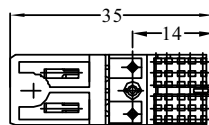
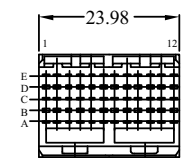
# Header, 5 row, signal, right angle, press fit, wide body

## PRODUCT

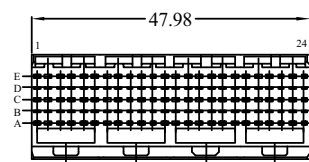
1 Module



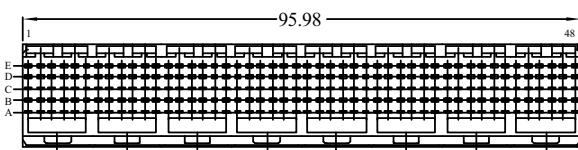
2 Module



4 Module



8 Module



PCB pattern P2, see chapter PCB layouts

## PARTNUMBERS

HM1L5 x LDP000H6PLF

Base Part Number	Type	no. of rows	no. of pos.	Configuration	000	Performance	Packaging	LF
HM1	L = Signal header right angle, wide body	5 = 5 row		LDP = press fit		H6 = Telcordia CO		LF = lead free
							P = trays	

mating length (A)	tail length (B)
5,75 mm	2,90 mm
1,6 mm PCB thickness	

**1** = 1 module (5 x 6 pos.)  
**2** = 2 module (5 x 12 pos.)  
**3** = 4 module (5 x 24 pos.)  
**4** = 8 module (5 x 48 pos.)

**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Header, 5 row, signal, right angle, pin-in-paste, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 5 row and 2 mm pitch permit high signal density ( 250 contacts per 100mm connector length)
- Modular design guarantees flexibility

### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance: 5x10<sup>3</sup> MΩ initially, 1x10<sup>3</sup> MΩ after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: trays

#### PROCESSING INFORMATION

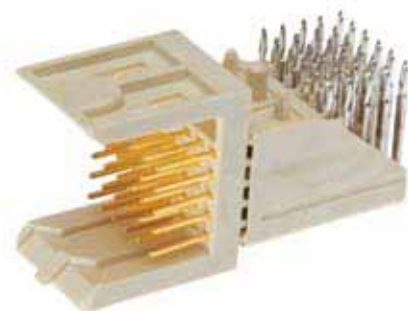
- Pick&place by vacuum nozzle or mechanical gripper
- automatic Surface-mount reflow process, resistance for Lead Free reflow temperature

#### REFERENCE DATA

- Product specification: GS-12-446

#### APPLICATION EQUIPMENT

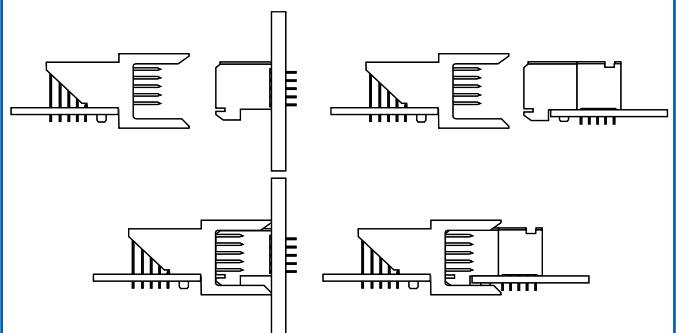
- for application equipment, check out the application equipment table on page 217-223



### MATING DATA

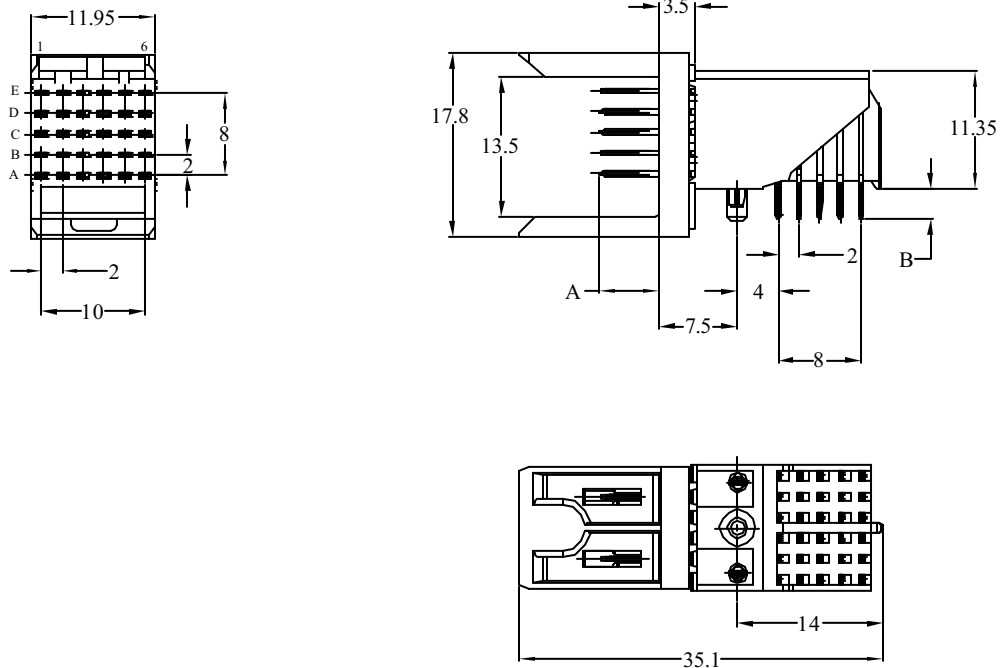
- Receptacle, straight, press-fit, page 79
  - 1 mod – part number 85761-1101LF
- Receptacle, straight, solder-to-board, page 77
  - 1 mod – part numbers HM1S51FRR000H6PLF

### TYPICAL APPLICATIONS



# Header, 5 row, signal, right angle, pin-in-paste, wide body

## PRODUCT



PCB pattern P2, see chapter PCB layouts

## PARTNUMBERS

HM1L5 x LFP000H6PLF

Base Part Number	Type	no. of rows	no. of pos.	Configuration	000	Performance	Packaging	LF
HM1	L = Signal header right angle, wide body	5 = 5 row	1 = 1 module (5 x 6 pos.)	LFP = Pin-in-Paste	000	H6 = Telcordia CO	P = trays	LF = lead free

mating length (A)	tail length (B)
5,75 mm	2,90 mm
1,6 mm PCB thickness	

**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Receptacle, 5 row, signal, straight, solder to board

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 5 row and 2 mm pitch permit high signal density (250 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Parallel board applications
- Tuning fork contact



### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- contact material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance: 5x10<sup>3</sup> MΩ initially, 1x10<sup>3</sup> MΩ after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: trays

#### PROCESSING INFORMATION

- Applicable process: wave, IR, vapor phase

#### REFERENCE DATA

- Product specification: GS-12-448

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

#### Header, right angle, press-fit, page 73

- 1 module-part number HM1L51LDP000H6PLF
- 2 module-part number HM1L52LDP000H6PLF
- 4 module-part number HM1L53LDP000H6PLF
- 8 module-part number HM1L54LDP000H6PLF

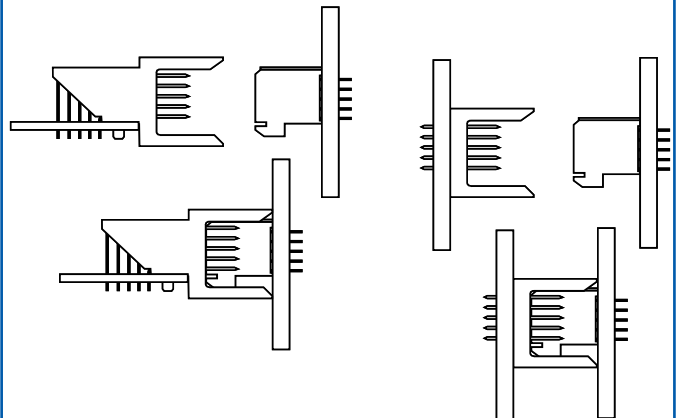
#### Header, right angle, solder-to-board, page 71

- 1 module-part number HM1L51LAP000H6PLF
- 2 module-part number HM1L52LAP000H6PLF
- 4 module-part number HM1L53LAP000H6PLF
- 8 module-part number HM1L54LAP000H6PLF

#### Header, right angle, Pin-in-Paste, page 75

- 1 module-part number HM1L51LFP000H6PLF

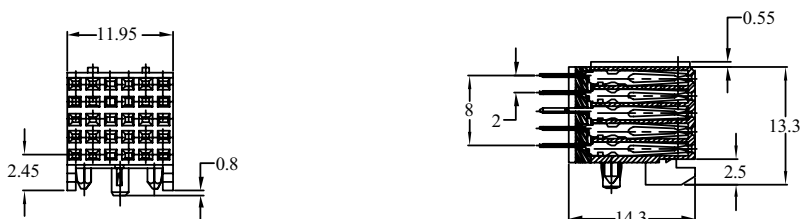
### TYPICAL APPLICATIONS



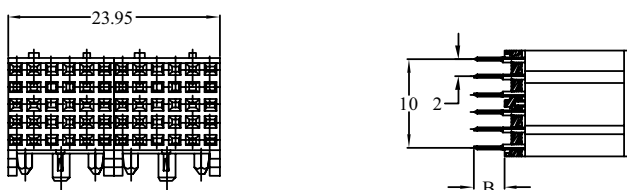
# Receptacle, 5 row, signal, straight, solder to board

## PRODUCT

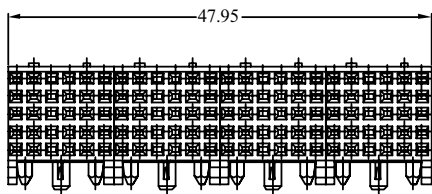
### 1 Module



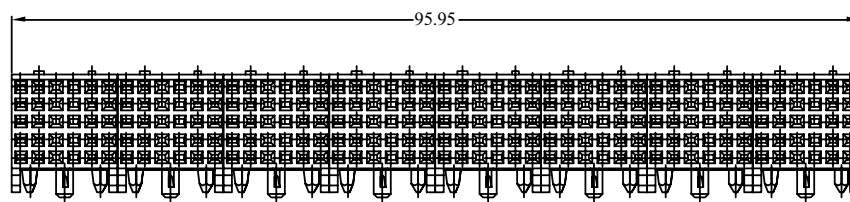
### 2 Module



### 4 Module



### 8 Module



PCB pattern P7, see chapter PCB layouts

## PARTNUMBERS

HM1S5 x FRR000H6PLF

Base Part Number	Type	no. of rows	no. of pos.	Configuration	000	Performance	Packaging	LF
HM1	S = signal receptacle straight	5 = 5 row		FRR = solder to board		H6 = Telcordia CO		LF = lead free
				tail length (B) 3,30 mm				P = trays

**1** = 1 module (5 x 6 pos.)  
**2** = 2 module (5 x 12 pos.)  
**3** = 4 module (5 x 24 pos.)  
**4** = 8 module (5 x 48 pos.)

**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Receptacle, 5 row, signal, straight, press fit

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 5 row and 2 mm pitch permit high signal density (250 contacts per 100mm connector length)
- Modular design guarantees flexibility
- Parallel board applications
- Tuning fork contact
- baby H-shape press-fit contact
- Flat rock design; can be pressed on PCB with flat press block



### TECHNICAL DATA

#### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- contact material: phosphor bronze
- performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- insulation resistance: 5x10<sup>3</sup> MΩ initially, 1x10<sup>3</sup> MΩ after tests
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 100 N max. per pin
- press-fit pin withdrawal: 20 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- Product specification: GS-12-447

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

#### Header, right angle, press-fit, page 73

- 1 module-part number HM1L51LDP000H6PLF
- 2 module-part number HM1L52LDP000H6PLF
- 4 module-part number HM1L53LDP000H6PLF
- 8 module-part number HM1L54LDP000H6PLF

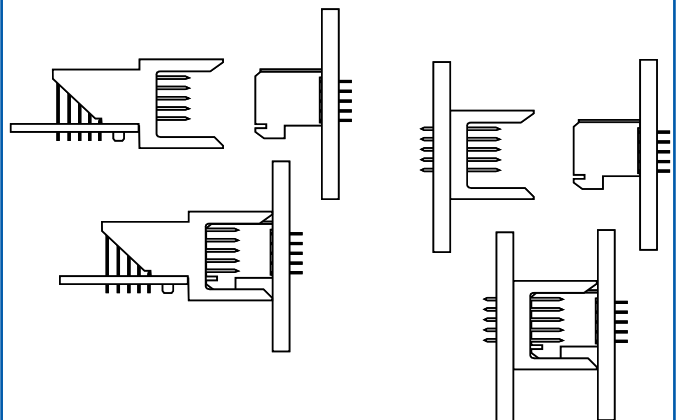
#### Header, right angle, solder-to-board, page 71

- 1 module-part number HM1L51LAP000H6PLF
- 2 module-part number HM1L52LAP000H6PLF
- 4 module-part number HM1L53LAP000H6PLF
- 8 module-part number HM1L54LAP000H6PLF

#### Header, right angle, Pin-in-Paste, page 75

- 1 module-part number HM1L51LFP000H6PLF

### TYPICAL APPLICATIONS

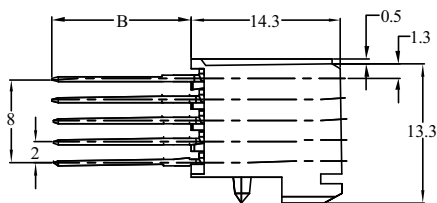
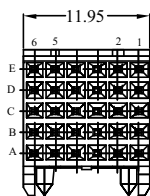




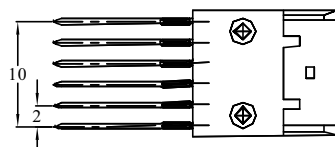
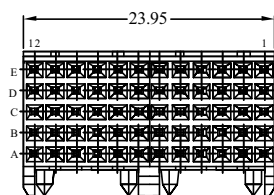
# Receptacle, 5 row, signal, straight, press fit

## PRODUCT

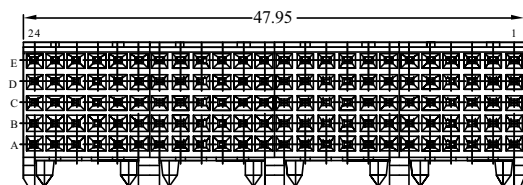
### 1 Module



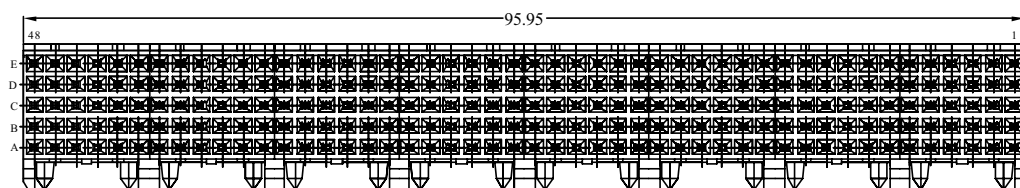
### 2 Module



### 4 Module



### 8 Module



PCB pattern P7, see chapter PCB layouts

## PARTNUMBERS

8576x - 1y01LF



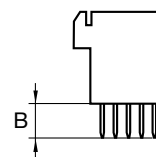
**85761** = 1 module (5 x 6 pos.)  
*on request only* = 2 module (5 x 12 pos.)  
**85763** = 4 module (5 x 24 pos.)  
*on request only* = 8 module (5 x 48 pos.)

**1** = Telcordia CO

**01** = fully loaded

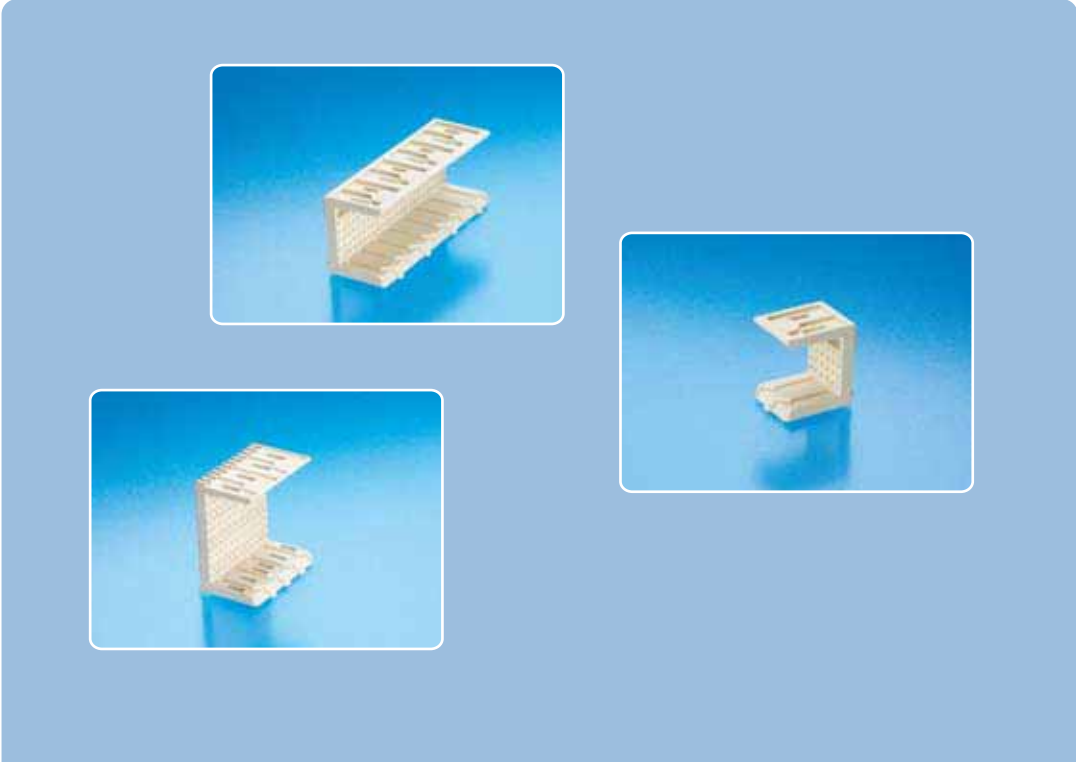
**LF** = lead free

y	tail length (B)
<b>1</b>	4,3 mm
2	13,6 mm
3	17,1 mm






**Note:** blue marked in **tail length** is the preferred recommended standard  
 for other special patterns or loadings, please check drawings, all other configurations on request only





## METRAL® SHROUDS

-  Shroud, 4 row, wide body
-  Shroud, 5 row, wide body
-  Shroud, 8 row, wide body

# Shroud, 4 row, wide body

## FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- Different stand-off versions for rear-plug-up
- Easy direct mounting of the shroud on the pins without need of mounting shroud to PCB.
- Retention force from the shroud on the press-connector is on the non-contact side of the pin.
- Wide lead-in for easy mating of female connectors
- Designed-in polarization.
- Optional coding.



## TECHNICAL DATA

### PHYSICAL

- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0

### ELECTRICAL

- withstanding voltage: 1000 V rms (sea level)

### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)

### ENVIRONMENTAL

- Operating temperature range: -55°C to +105°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

### PROCESSING INFORMATION

- used over pins previously staked into the pc board

### REFERENCE DATA

- product specification: GS-12-180

### APPLICATION EQUIPMENT

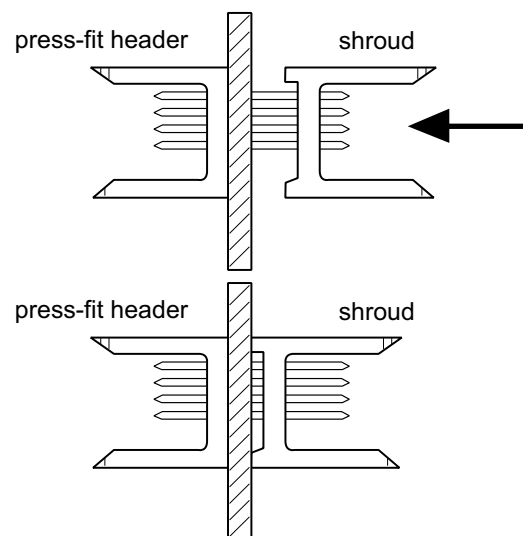
- for application equipment, check out the application equipment table on page 217-223.

## MATING DATA

- 4 row Header, straight, press-fit, page 27

- 1 mod 70232-116LF
- 2 mod 70233-116LF
- 4 mod 70234-116LF
- 8 mod 70235-116LF

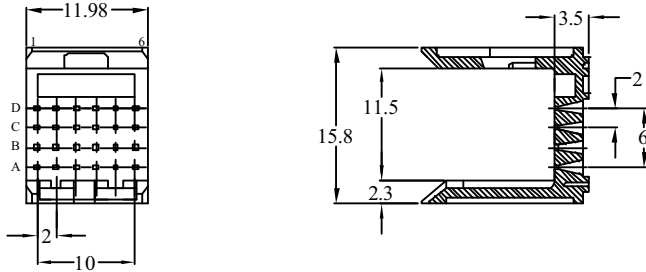
## TYPICAL APPLICATIONS



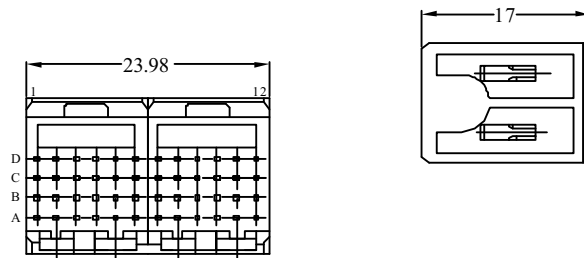
# Shroud, 4 row, wide body

## PRODUCT

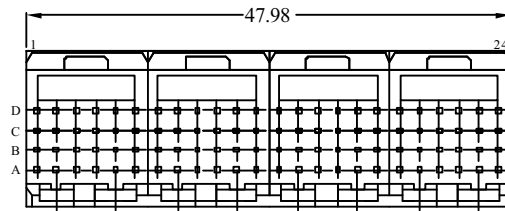
**1 Module**  
70203-111LF



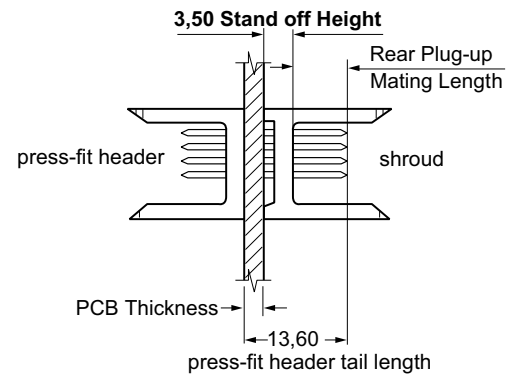
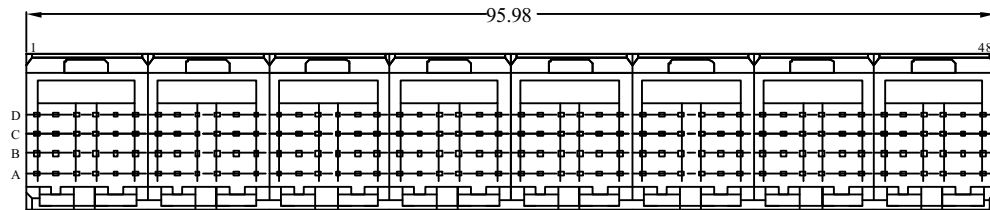
**2 Module**  
70203-112LF



**4 Module**  
70203-113LF

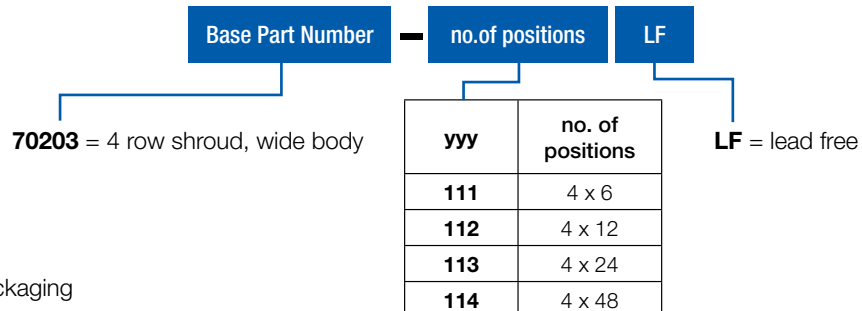


**8 Module**  
70203-114LF



## PARTNUMBERS

70203 - yyyLF



Note: Box packaging

## Shroud, 5 row, wide body

### FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- Different stand-off versions for rear-plug-up
- Easy direct mounting of the shroud on the pins without need of mounting shroud to PCB.
- Retention force from the shroud on the press-connector is on the non-contact side of the pin.
- Wide lead-in for easy mating of female connectors
- Designed-in polarization.
- Optional coding.



### TECHNICAL DATA

#### PHYSICAL

- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0

#### ELECTRICAL

- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +105°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PROCESSING INFORMATION

- used over pins previously staked into the pc board

#### REFERENCE DATA

- product specification: GS-12-180

#### APPLICATION EQUIPMENT

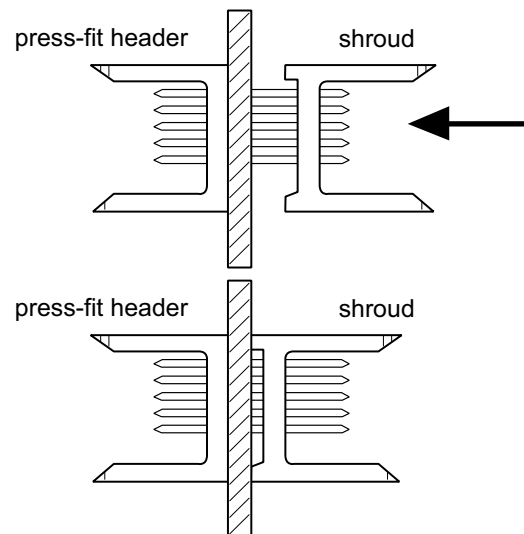
- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

- 4 row Header, straight, press-fit, page 41

- 1 mod 89006-116LF
- 2 mod 89007-116LF
- 4 mod 89008-116LF
- 8 mod 89009-116LF

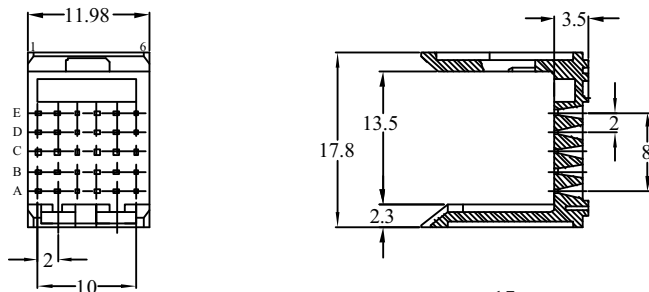
### TYPICAL APPLICATIONS



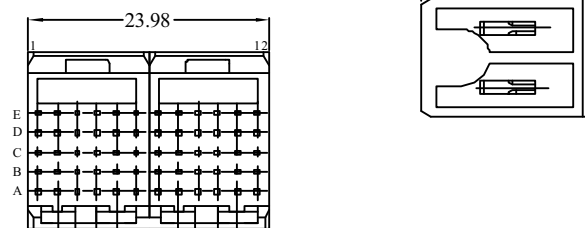
# Shroud, 5 row, wide body

## PRODUCT

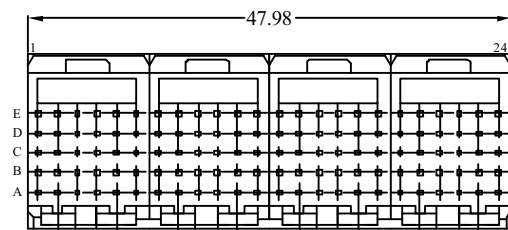
**1 Module**  
89055-111LF



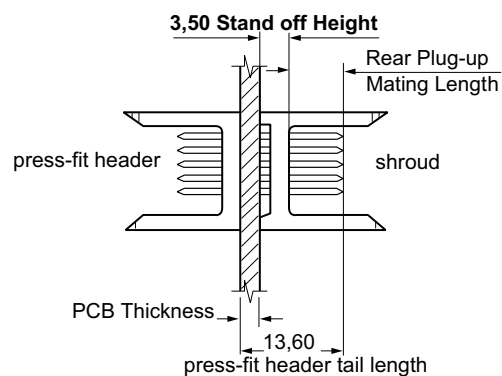
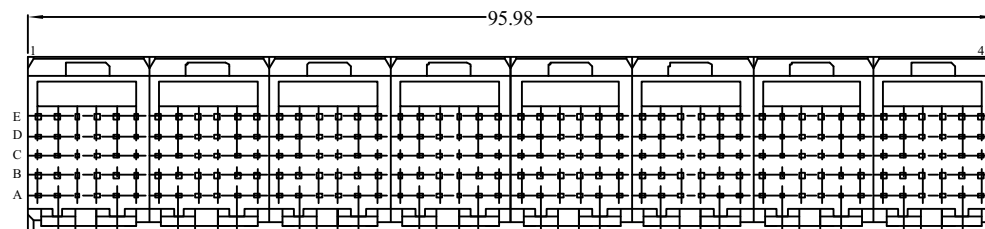
**2 Module**  
89055-112LF



**4 Module**  
89055-113LF

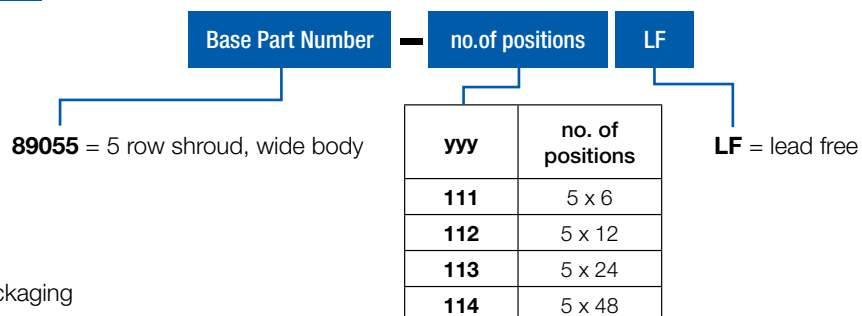


**8 Module**  
89055-114LF



## PARTNUMBERS

89055 - yyLF



Note: Box packaging

# Shroud, 8 row, wide body

## FEATURES

- In accordance with IEC 60917 and IEC 61076-4-104 (Futurebus+)
- 8 row and 2 mm pitch permit high signal density ( 800 contacts per 100mm connector length)
- Stackable with other METRAL® function modules (power, I/O)
- 2 modules shroud, 8 rows by 6 position

## TECHNICAL DATA

### PHYSICAL

- spacing: 2,00 mm x 2,00 mm
- housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- pin material: phosphor bronze
- performance level: Telcordia CO

### ELECTRICAL

- current rating: 1 A
- insulation resistance:  $5 \times 10^3 \text{ M}\Omega$  initially,  $1 \times 10^3 \text{ M}\Omega$  after tests
- withstanding voltage: 1000 V rms (sea level)

### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)

### ENVIRONMENTAL

- Operating temperature range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

### PACKAGING

- standard: tubes

### PROCESSING INFORMATION

- used over pins previously staked into the pc board

### REFERENCE DATA

- Product specification: GS-12-134

### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223



## MATING DATA

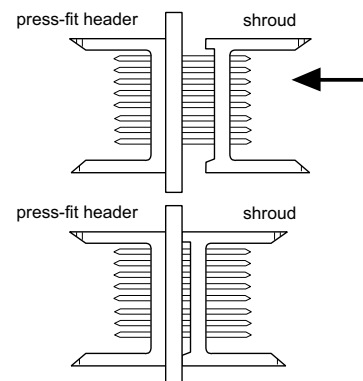
- Header, straight, press-fit, page 49

- part number 74771-102011LF (used opposite board side)

- Receptacle, straight, press-fit, page 51

- part number 74770-102LF

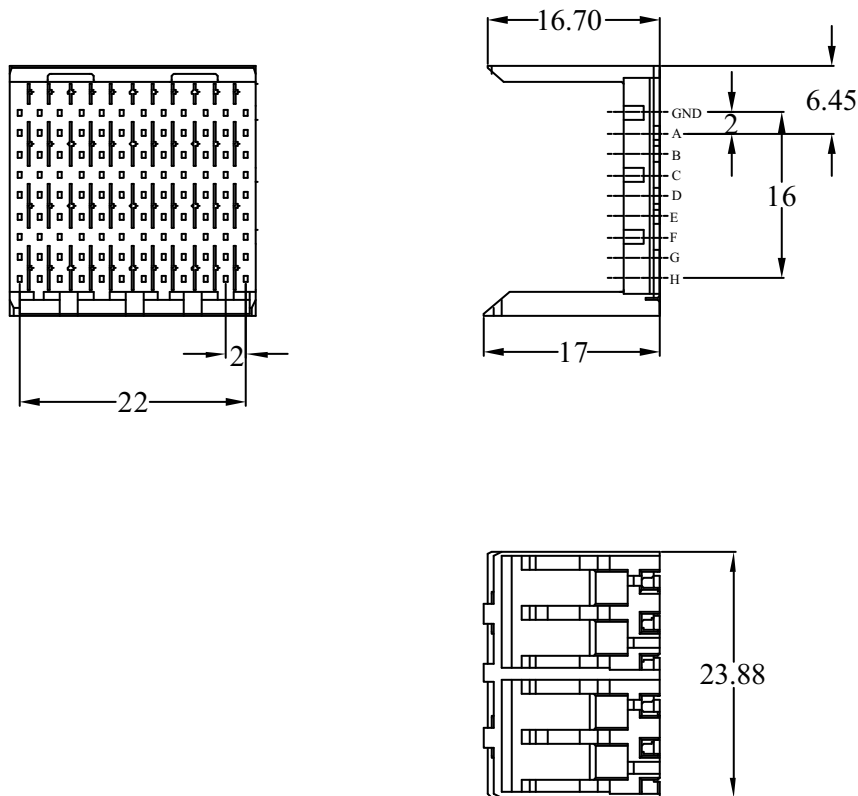
## TYPICAL APPLICATIONS





# Shroud, 8 row, wide body

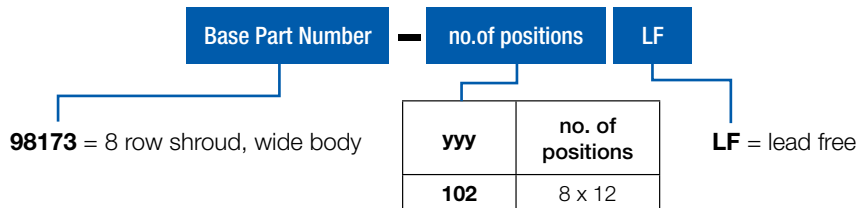
## PRODUCT



SHROUDS

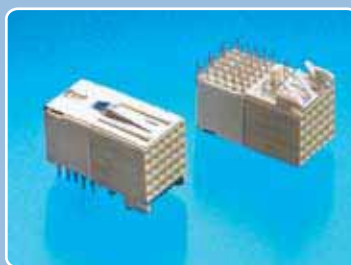
## PARTNUMBERS

**98173 - 102LF**






**Note:** Box packaging





## METRAL® ELECTRICAL ENHANCED SIGNAL CONNECTORS

-  Header, Straight, 5 row
-  Shroud, 5 row
-  Receptacle, Right Angle, 5 row

## Header, 5+2 row, signal, straight, press-fit, wide body

### FEATURES

- 5 row Header
- 2 row Shielding, because of die-cast housing all signal pins are surrounded by a ground path, consequently reducing crosstalk and ground bounce.
- EMI of 15 dB
- Press-fit, eye of the needle contact



### TECHNICAL DATA

#### PHYSICAL

- Housing: Die-cast zinc alloy
- Wafer material: glass filled LCP, UL 94 V-0, color natural
- Contact material: Phosphor bronze
- Performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 65 N max. per pin
- press-fit pin withdrawal: 20 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- Product specification GS-12-074
- Application specification TA-941

#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

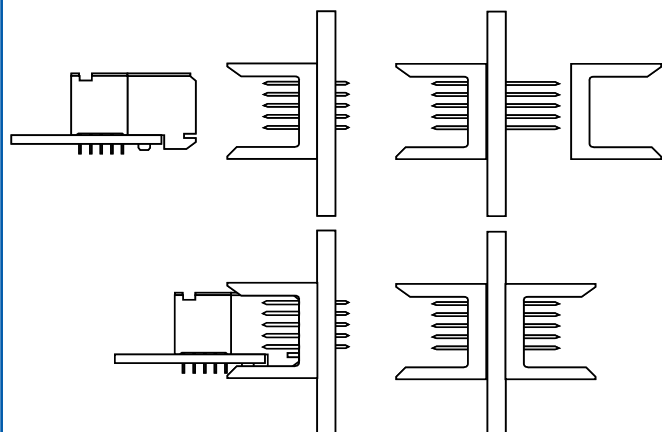
#### Electrical Enhanced Receptacle, Signal, right angle

- part number 85847-102LF, page 139

#### Electrical Enhanced Shroud, wide body

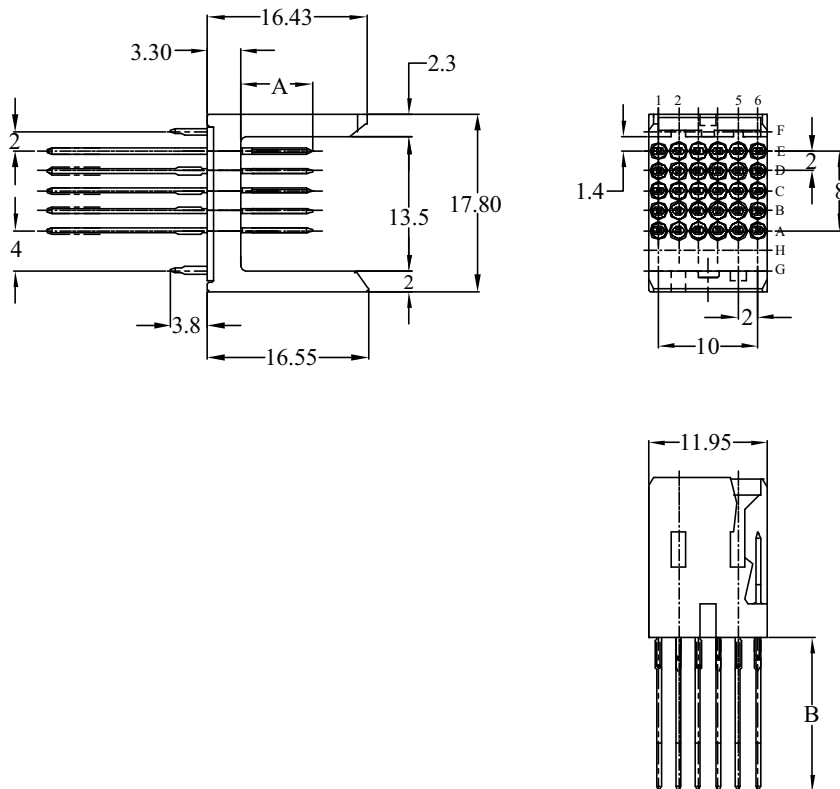
- part numbers 70438-111LF, page 137

### TYPICAL APPLICATIONS



# Header, 5+2 row, signal, straight, press-fit, wide body

## PRODUCT

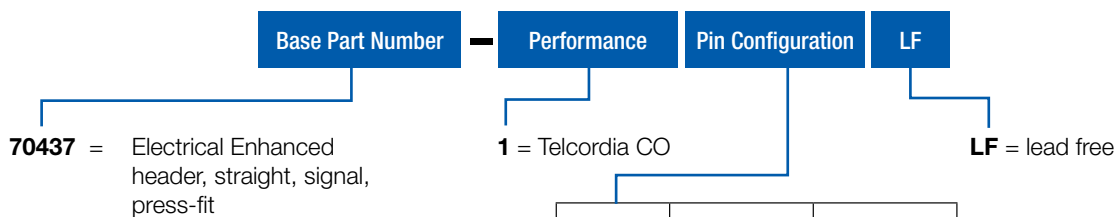


PCB pattern P15, see chapter PCB layouts

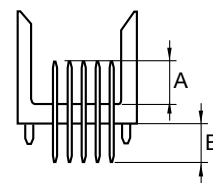
ELECTRICAL ENHANCED

## PARTNUMBERS

70437 - 1yyLF



yy	mating length (A)	rear plug up length (B)
11	6,50 mm	4,30 mm
16	5,75 mm	4,30 mm
18	5,00 mm	4,30 mm
21	6,50 mm	13,60 mm
26	5,75 mm	13,60 mm
28	5,00 mm	13,60 mm



**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Shroud, 5+2 row, wide body

### FEATURES

- 5 row Shroud
- 2 row Shielding, because of die-cast housing all signal pins are surrounded by a ground path, consequently reducing crosstalk and ground bounce.
- EMI of 15 dB



### TECHNICAL DATA

#### PHYSICAL

- Housing: Die-cast zinc alloy
- Wafer material: glass filled LCP, UL 94 V-0, color natural

#### ELECTRICAL

- current rating: 1 A
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- Product specification GS-12-074

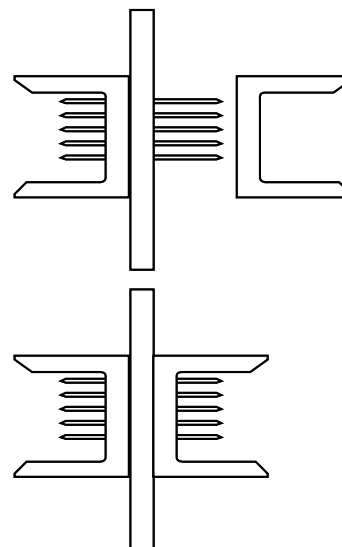
#### APPLICATION EQUIPMENT

- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

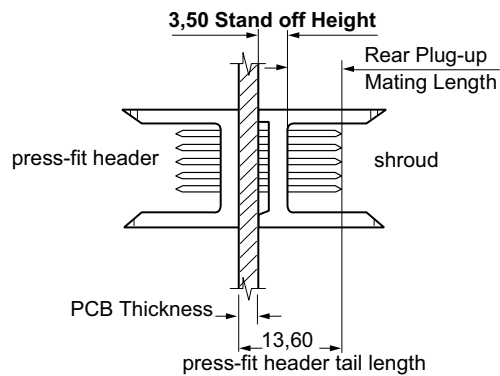
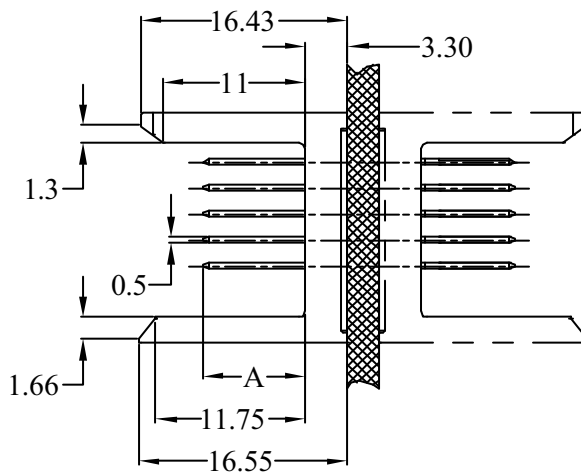
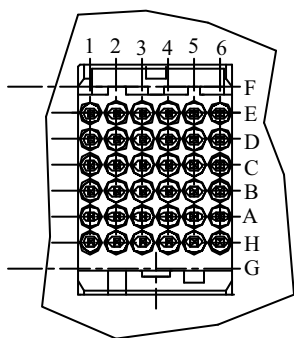
- Rear plug up- Header, Signal, straight, press-fit, page 135
- partnumber 70437-121LF
- partnumber 70437-126LF
- partnumber 70437-128LF

### TYPICAL APPLICATIONS



# Shroud, 5+2 row, wide body

## PRODUCT



ELECTRICAL ENHANCED

## PARTNUMBERS

**70438 - 111LF**

Base Part Number

no. of positions

LF

**70438** = Electrical Enhanced Shroud, wide body

**111** = 1 module, 5 x 6 positions

**LF** = lead free

## Receptacle, 5+2 row, signal, right angle, press fit

### FEATURES

- 5 row Receptacle
- 2 row Shielding, because of die-cast housing all signal pins are surrounded by a ground path, consequently reducing crosstalk and ground bounce.
- EMI of 15 dB
- Press-fit, eye of the needle contact



### TECHNICAL DATA

#### PHYSICAL

- Housing: glass-filled LCP, colour natural
- flammability rating: UL 94 V-0
- Contact material: Phosphor bronze
- Shielding material: Phosphor bronze
- Performance level: Telcordia CO

#### ELECTRICAL

- current rating: 1 A
- withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- insertion force: 0,45 N max. per individual signal contact (mating)
- withdrawal force: 0,15 N max. per individual signal contact (unmating)
- press-fit contact insertion: 65 N max. per pin
- press-fit pin withdrawal: 20 N min. per pin
- recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- Operating temperature range: -55°C to +125°C
- RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- standard: tubes

#### PROCESSING INFORMATION

- press fit

#### REFERENCE DATA

- Product specification GS-12-074
- Application specification TA-941

#### APPLICATION EQUIPMENT

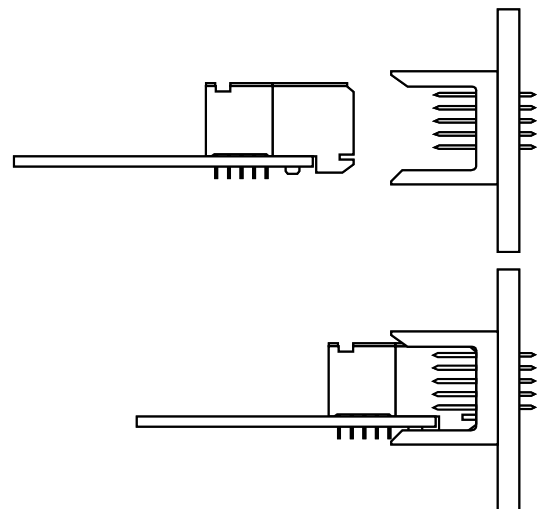
- for application equipment, check out the application equipment table on page 217-223

### MATING DATA

- Electrical Enhanced Header, Signal, straight, page 135

- part number 70437-111LF
- part number 70437-116LF
- part number 70437-118LF

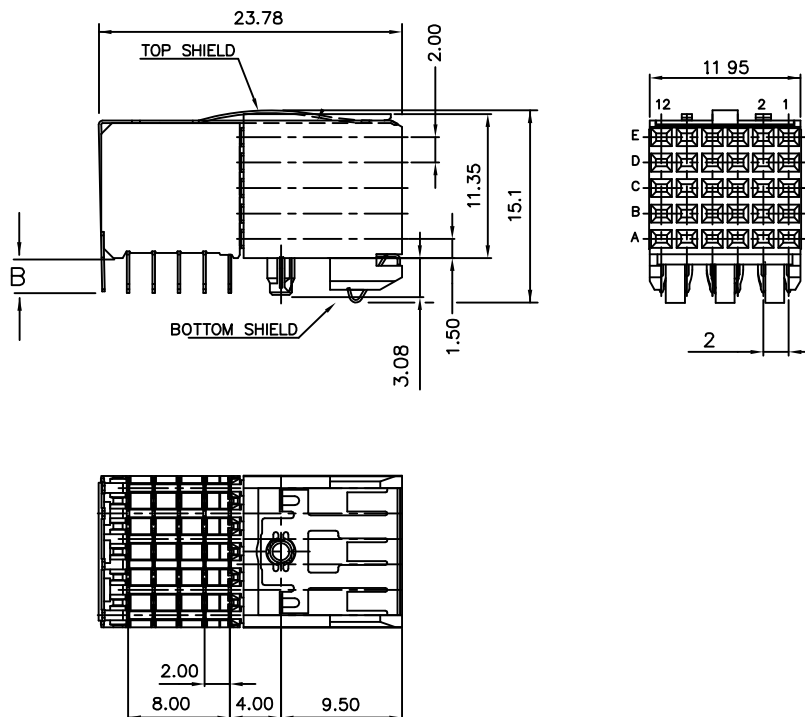
### TYPICAL APPLICATIONS





# Receptacle, 5+2 row, signal, right angle, press fit

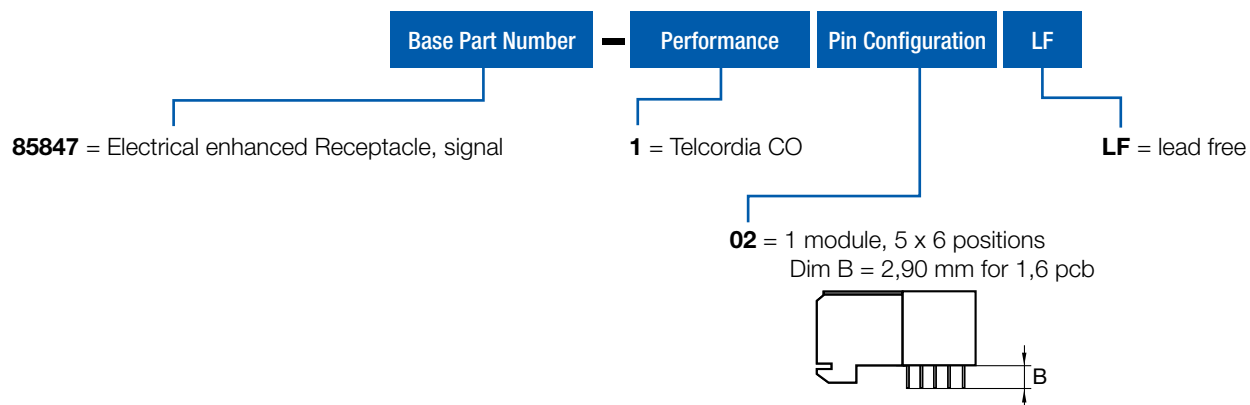
## PRODUCT



PCB pattern P2, see chapter PCB layouts

## PARTNUMBERS



85847 - 102LF







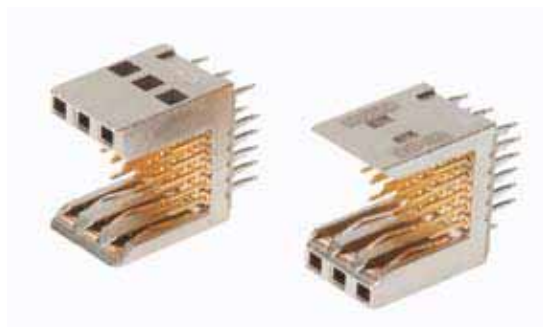
## METRAL® SHIELDED SIGNAL CONNECTORS

-  Header, Straight, 5 row
-  Round cable connector

## Shielded Header, 5 row, signal, straight, press-fit

### FEATURES

- ▶ Because of die-cast housing all signal pins are surrounded by a ground path.
- ▶ EMI improved
- ▶ 5 row Header, 1 module
- ▶ active latching system
- ▶ Press-fit, eye of the needle contact



### TECHNICAL DATA

#### PHYSICAL

- ▶ Housing: Die-cast zinc alloy
- ▶ Wafer material: glass filled LCP, UL 94 V-0, color natural
- ▶ Contact material: Phosphor bronze
- ▶ Ground spring material : copper-nickel-tin alloy
- ▶ Performance level: Telcordia CO

#### ELECTRICAL

- ▶ current rating: 1 A
- ▶ withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- ▶ insertion force: 0,45 N max. per individual signal contact (mating)
- ▶ withdrawal force: 0,15 N max. per individual signal contact (unmating)
- ▶ press-fit contact insertion: 65 N max. per pin
- ▶ press-fit pin withdrawal: 20 N min. per pin
- ▶ recommended hole diameter: 0,65-0,80 mm

#### ENVIRONMENTAL

- ▶ Operating temperature range: -55°C to +125°C
- ▶ RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

- ▶ standard: tubes

#### PROCESSING INFORMATION

- ▶ press fit

#### REFERENCE DATA

- ▶ Product specification GS-12-135

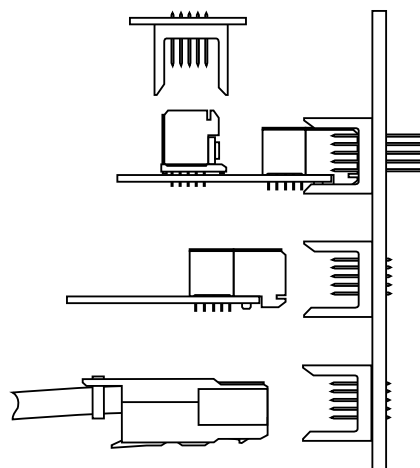
#### APPLICATION EQUIPMENT

- ▶ for application equipment, check out the application equipment table on page 217-223

### MATING DATA

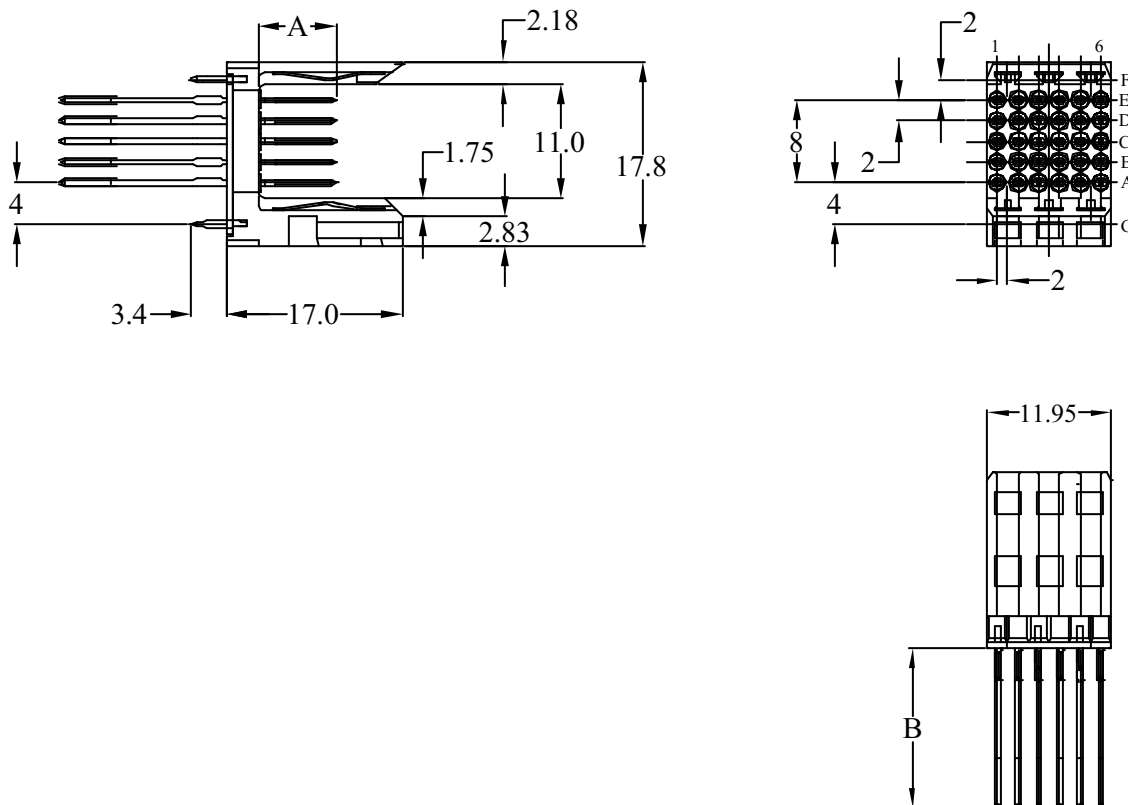
- ▶ **Round Cable connector, Shielded**
  - ▶ 5 x 6 pos. part number 85706-xxxxLF, page 145
- ▶ **Cable Connector**
  - ▶ 5 row, part number 72478-1111LF, page 175
- ▶ **Receptacle, 5 row**
  - ▶ Right angle, press-fit, part number 89047-102LF, page 45
  - ▶ Straight, press-fit, part number 85761-1101LF, page 79

### TYPICAL APPLICATIONS



# Header, 5 row, signal, straight, press-fit

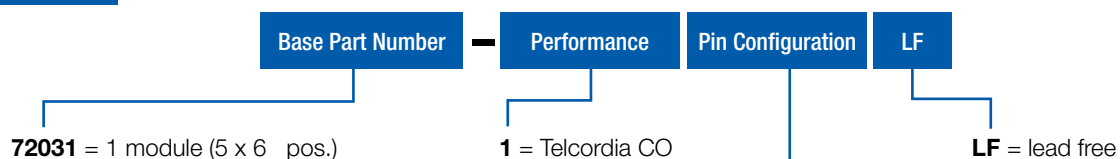
## PRODUCT



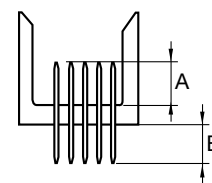
PCB pattern P15, see chapter PCB layouts

## PARTNUMBERS

72031 - 1yyLF



yy	mating length (A)	tail length (B)
11	6,50 mm	4,30 mm
16	5,75 mm	4,30 mm
first-make last-brake 14	row A = 5,75 mm	4,30 mm
	row B = 5,75 mm	4,30 mm
	row C = 7,25 mm	4,30 mm
	row D = 5,75 mm	4,30 mm
	row E = 5,75 mm	4,30 mm



**Note:** for other special patterns or loadings, please check drawings, all other configurations on request only

## Shielded Cable Connector, 5 row, signal

### FEATURES

- ▶ 5 row , 1 module Round Cable Connector
- ▶ Heat Shrink or Crimp Ring version
- ▶ EMI improved
- ▶ Active latching system
- ▶ AWG size 24,26,28 and 30
- ▶ Reliable dual beam contact
- ▶ IDC wire termination

### TECHNICAL DATA

#### PHYSICAL

- ▶ Housing: glass filled thermoplastic polyester, color grey
- ▶ Latch: polycarbonate, color black, UL 94 V-0
- ▶ Cover: copper-nickel-tin alloy
- ▶ Contact material: Phosphor bronze
- ▶ Performance level: Telcordia CO

#### ELECTRICAL

- ▶ current rating: 1 A
- ▶ withstanding voltage: 1000 V rms (sea level)

#### MECHANICAL PERFORMANCE

- ▶ insertion force: 0,645 N max. per individual signal contact (mating)
- ▶ withdrawal force: 0,36 N max. per individual signal contact (unmating)

#### ENVIRONMENTAL

- ▶ Operating temperature range: -55°C to +125°C
- ▶ RoHs information, this product is compatible according to the European Union Directive 2002/95/IEC

#### PACKAGING

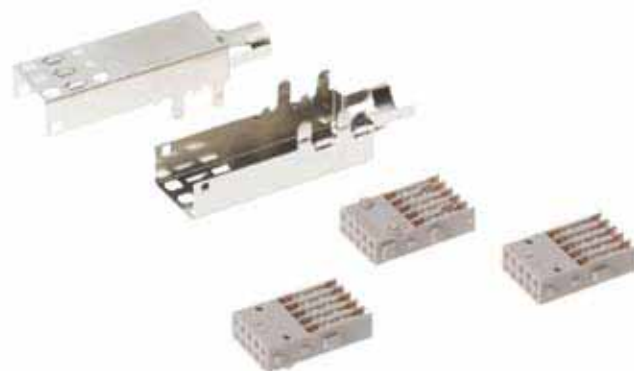
- ▶ Kits, bags of 100 pcs

#### REFERENCE DATA

- ▶ application specification GES-20-003

#### APPLICATION EQUIPMENT

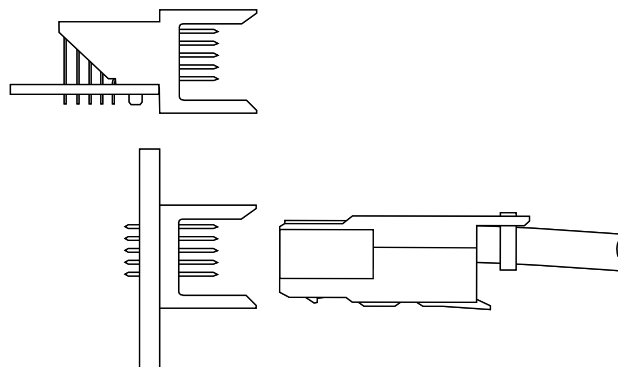
- ▶ for application equipment, check out the application equipment table on page 217-223



### MATING DATA

- ▶ Shielded Header, straight, press-fit, wide body, page 143
  - ▶ part number 72031-116LF
- ▶ Header, straight, press-fit, wide body, page 41
  - ▶ part number 89006-116LF
- ▶ Header, right angle, press-fit, wide body, page 73
  - ▶ part number HM151LDP000H6PLF

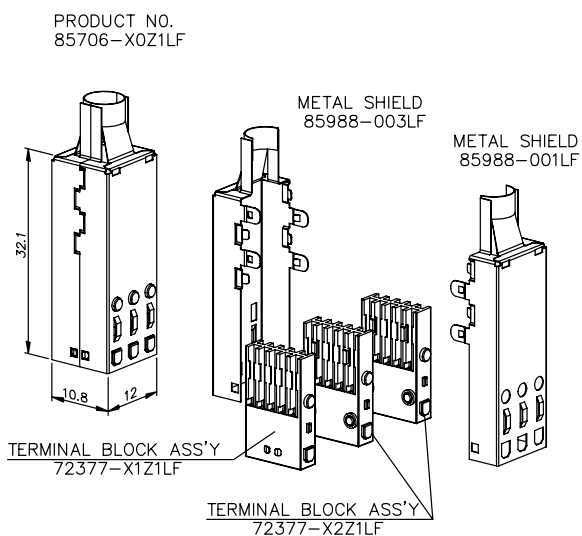
### TYPICAL APPLICATIONS



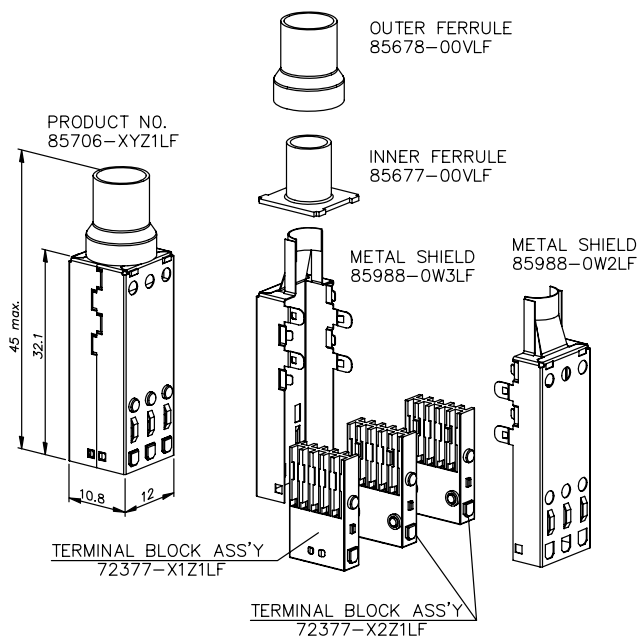
# Shielded Cable Connector, 5 row, signal

## PRODUCT

### Heat shrink version

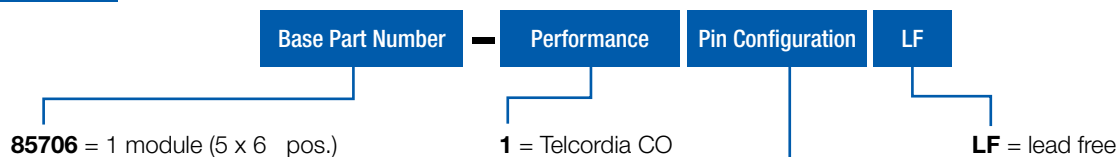


### Crimped version



## PARTNUMBERS

85706 - 1yz1LF



<b>yz1</b>	
<b>y = 0</b>	heat shrink version
<b>y = 2</b>	crimped version inner ferrule 8 mm dia. outer ferrule 10 mm dia.
<b>z = 1</b>	AWG size: 26 to 24 AWG
<b>z = 2</b>	AWG size: 30 to 28 AWG

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