


PSR – Phoenix Safety Relay PSR-THC4

- Two-hand and safety door control module according to EN 574 Type IIIC
- Safety Category 4, EN 954-1
- Plug-in screw-cage or spring-cage terminal blocks
- Two-channel circuit
- Safe isolation
- Cross-circuit detection
- Housing width 22.5 mm (0.886 in.)
- Two enable contacts
- One signaling contact
- Approvals:  US Listed;

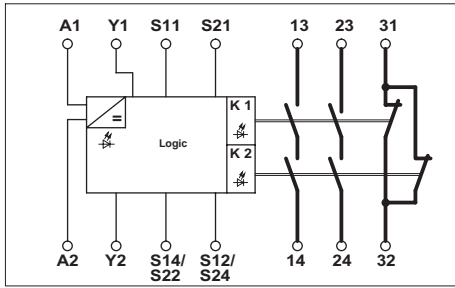


1. Short Description

The PSR-...-24UC/THC4/2x1/1x2 safety relays can be used to monitor two-hand control systems according to EN 574 Type IIIC and safety doors.

The module monitors the simultaneity of both inputs in < 0.5 seconds. In this way, up to Safety Category 4 can be achieved in safety circuits according to VDE 0113 Part 1 and EN 954-1. External contactors or expansion modules can be monitored. The module has two enable current paths and one signaling current path with Stop Category 0 according to EN 60204-1/ VDE 0113 Part 1.

2. Technical Data



PSR-THC4



	solid	flexible	
	[mm ²]		AWG
Connection data:	0.2 - 2.5	0.2 - 2.5	25 - 14
Stripping length:	Screw-cage version 7 mm (0.28 in.)		
	Spring-cage version 10 mm (0.39 in.)		

Housing width 22.5 mm (0.886 in.)

Description	
Safety relay, Category 4	Screw-cage Spring-cage

Type	Order No.	Pcs. Pkt.
PSR-SCP-24UC/THC4/2X1/1X2	29 63 72 1	1
PSR-SPP-24UC/THC4/2X1/1X2	29 63 98 3	1

Technical Data

Input Data
 Nominal input voltage U_N
 Permissible range
 Typical current consumption at U_N
 Voltage at input, start, and feedback circuit
 Typical response time (K1, K2) at U_N
 Typical release time (K1, K2) at U_N
 Simultaneity input 1/2
 Recovery time

24 V AC/DC
 0.85 - 1.1 x U_N
 125 mA AC, 60 mA DC
 24 V DC, approximately
 50 ms
 20 ms
 < 0.5 s
 < 1 s

Output Data
 Contact version

2 enable current paths,
 1 signaling current path
 Silver stannic oxide, gold-flashed (AgSnO₂ 0.2 μm Au)
 250 V AC/DC
 15 V AC/DC
 6 A (Form A contact/Form B contact)
 6 A
 25 mA
 Ohmic load
 Inductive load
 $\tau = 0$ ms
 $\tau = 40$ ms
 144 W
 42 W
 48 V DC
 288 W
 42 W
 110 V DC
 110 W
 42 W
 220 V DC
 88 W
 42 W
 250 V AC
 1500 VA
 0.4 W
 10⁷ cycles, approximately
 24 V (DC 13) 4 A
 24 V (DC 13) 2.5 A
 6 A fast-blow

Contact material
 Maximum switching voltage
 Minimum switching voltage
 Limiting continuous current
 Maximum inrush current
 Minimum switching current
 Maximum shutdown power

Minimum switching power
 Mechanical life
 Breaking capacity according to
 DIN EN 60947-5-1/VDE 0660 Part 20
 Short-circuit protection of the output circuits,
 external

General Data

Permissible ambient operating temperature	-20°C to +55°C (-4°F to +131°F)
Nominal operating mode	100% ED
Degree of protection	According to DIN EN 60529/VDE 0470 Part 1
- Housing	IP 40
- Connection terminal blocks	IP 20
- Mounting location	IP 54, minimum
Mounting position	Any
Mounting	Can be mounted without spacing
Air and creepance distances between circuits	According to DIN EN 50 178:1998-04, safe isolation, reinforced insulation
Impulse voltage withstand level	6 kV
Degree of pollution	2
Surge Voltage Category	III
Dimensions (W x H x D)	22.5 mm x 99 mm x 114.5 mm (0.886 x 3.898 x 4.508 in.)
Cable cross section	0.2 - 2.5 mm ² (25 - 14 AWG)
Housing material	Polyamide PA, not reinforced

Note: When operating relay modules the operator must meet the requirements for emitted interference for electrical and electronic equipment (EN 50081-2) on the contact side and, if required, take appropriate measures.

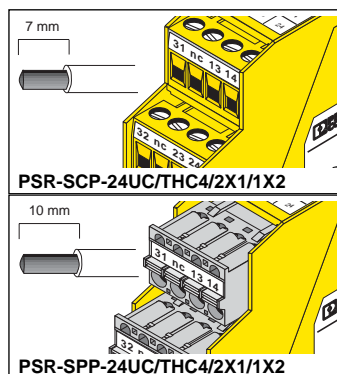
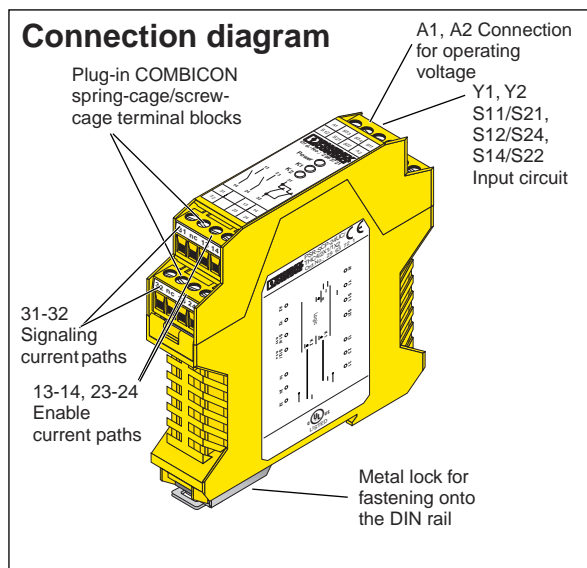
3. Connection Notes and Safety Instructions

3.1. Safety Instructions

- Please observe the safety regulations of electrical engineering and industrial safety and liability associations.
- Disregarding these safety regulations may result in death or serious damage to persons or property.
- Before working on the device, disconnect the power.
- Startup, mounting, modifications, and upgrades should only be carried out by a skilled electrical engineer.
- Protective covers must not be removed when operating electrical switching devices.
- During operation, parts of electrical switching devices carry hazardous voltages.
- Keep the instruction sheet in a safe place.
- In the event of an error, replace the device immediately.

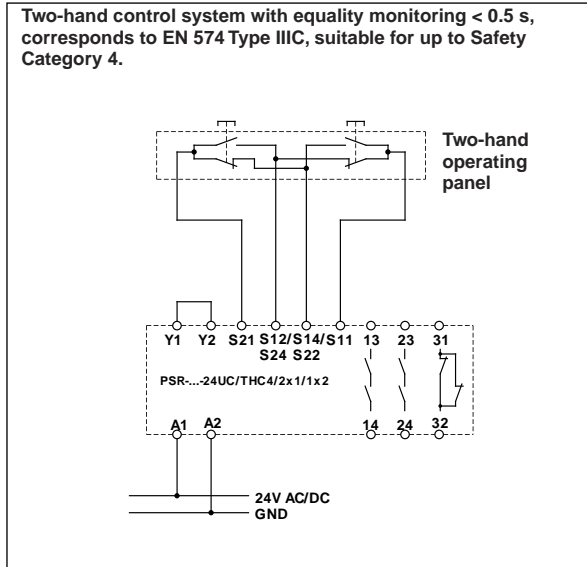
3.2. Connection Notes

To maintain the UL, use copper cables, which are designed for operating temperatures of 75°C (167°F). For reliable and safe contacts, strip the connector ends accordingly.

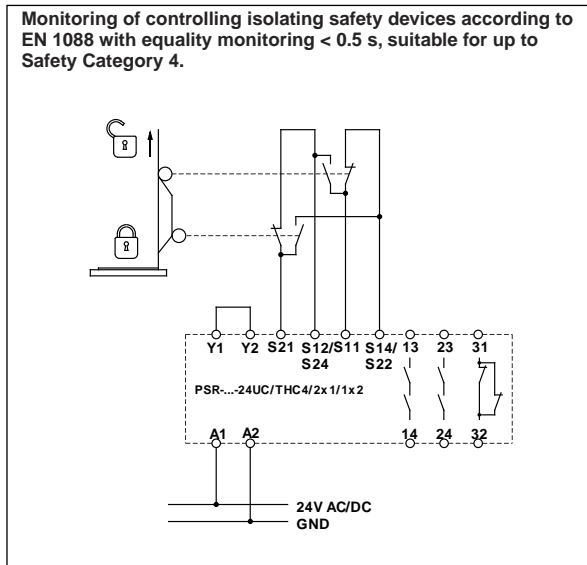


4. Connection Examples

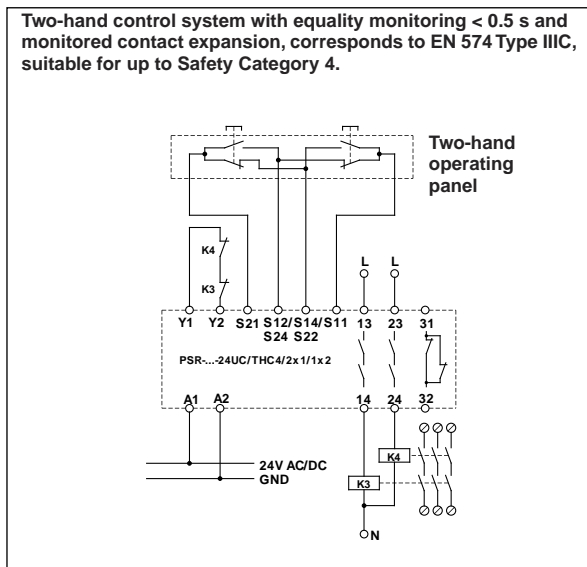
Two-hand control system with equality monitoring < 0.5 s, corresponds to EN 574 Type IIIC, suitable for up to Safety Category 4.



Monitoring of controlling isolating safety devices according to EN 1088 with equality monitoring < 0.5 s, suitable for up to Safety Category 4.



Two-hand control system with equality monitoring < 0.5 s and monitored contact expansion, corresponds to EN 574 Type IIIC, suitable for up to Safety Category 4.



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