

Coupling relay - PSR-SPP- 24DC/FSP/1X1/1X2 - 2981981

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)



Coupling relay for SIL 3 high/low demand applications, couples digital output signals to the periphery, 1 enabling current path, 1 signal contact, module for safe state off applications, test pulse filter, fuse, plug-in spring-cage connection, 17.5 mm width

The figure shows a version with a screw connection

Product Features

- Narrow 17.5 mm housing
- Forcibly guided contacts according to EN 50205
- Up to SIL 3 according to IEC 61508
- Easy proof test according to IEC 61508 thanks to integrated signal contact
- Long service life thanks to filtering of controller test pulses
- With built-in, replaceable fuse in the enabling current path
- Couples digital output signals from failsafe controllers to I/O devices (valves, etc.) for electrical isolation and power adaptation
- One enabling current path



Key commercial data

package_quantity	1
GTIN	4046356448345

Technical data

Note:

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
-------------------------	---

Dimensions

Width	17.5 mm
Height	112 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Max. permissible humidity (storage/transport)	≤ 75 % (Condensation and icing are not permitted based on the average annual temperature)
Max. permissible humidity (storage/transport)	≤ 85 % (On an individual basis, condensation and icing are not permitted)

Coupling relay - PSR-SPP- 24DC/FSP/1X1/1X2 - 2981981

Technical data

Ambient conditions

Shock	15 g
Vibration (operation)	2 g

Input data

Nominal input voltage U_N	24 V DC
Input voltage range in reference to U_N	0.85 ... 1.1
Typical input current at U_N	55 mA
Typical inrush current	100 mA
Typical response time	50 ms
Typical release time	50 ms
Recovery time	1 s

Output data

Contact type	1 undelayed enabling current path
Contact type	1 undelayed confirmation current path
Contact material	AgCuNi, + 0.2 μ m Au
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	15 V AC/DC
Limiting continuous current	5 A (N/O contact, pay attention to the derating)
Limiting continuous current	100 mA (N/C contact)
Maximum inrush current	5 A
Inrush current, minimum	5 mA
Sq. Total current	25 A ² (observe derating)
Interrupting rating (ohmic load) max.	120 W (24 V DC, τ = 0 ms, N/C contact: 2.4 W)
Interrupting rating (ohmic load) max.	144 W (48 V DC, τ = 0 ms, N/C contact: 4.8 W)
Interrupting rating (ohmic load) max.	66 W (110 V DC, τ = 0 ms, N/C contact: 11 W)
Interrupting rating (ohmic load) max.	60 W (220 V DC, τ = 0 ms, N/C contact: 22 W)
Interrupting rating (ohmic load) max.	1250 VA (250 V AC, τ = 0 ms, N/C contact: 25 VA)
Maximum interrupting rating (inductive load)	72 W (24 V DC, τ = 40 ms, N/C contact: 2.4 W)
Maximum interrupting rating (inductive load)	36 W (48 V DC, τ = 40 ms, N/C contact: 4.8 W)
Maximum interrupting rating (inductive load)	36 W (110 V DC, τ = 40 ms, N/C contact: 11 W)
Maximum interrupting rating (inductive load)	48 W (220 V DC, τ = 40 ms, N/C contact: 22 W)
Switching capacity min.	75 mW
Output fuse	5 A T (Fuse)

General

Relay type	Electromechanically forcibly guided, dust-proof relay.
Mechanical service life	Approx. 10 ⁷ cycles
Mounting position	Any
Assembly instructions	In rows with zero spacing
Category according to EN 13849-1	4
Stop category	0
Name	Air and creepage distances between the power circuits

Coupling relay - PSR-SPP- 24DC/FSP/1X1/1X2 - 2981981

Technical data

General

Standards/regulations	DIN EN 50178
Rated surge voltage / insulation	6 kV / Safe isolation, increased insulation
Rated insulation voltage	250 V AC
Pollution degree	2
Surge voltage category	III

Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Stripping length	8 mm
Connection method	Spring-cage conn.

classifications

eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371901
eCl@ss 5.1	27371901
eCl@ss 6.0	27371819
eCl@ss 7.0	27371819
eCl@ss 8.0	27371819

ETIM

ETIM 2.0	EC001449
ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001449

UNSPSC

UNSPSC 6.01	30211901
UNSPSC 7.0901	39121501
UNSPSC 11	39121501
UNSPSC 12.01	39121501
UNSPSC 13.2	39121501

approvals

UL Listed / cUL Listed / Functional Safety / cULus Listed /

Coupling relay - PSR-SPP- 24DC/FSP/1X1/1X2 - 2981981

approvals

Approval details

UL Listed

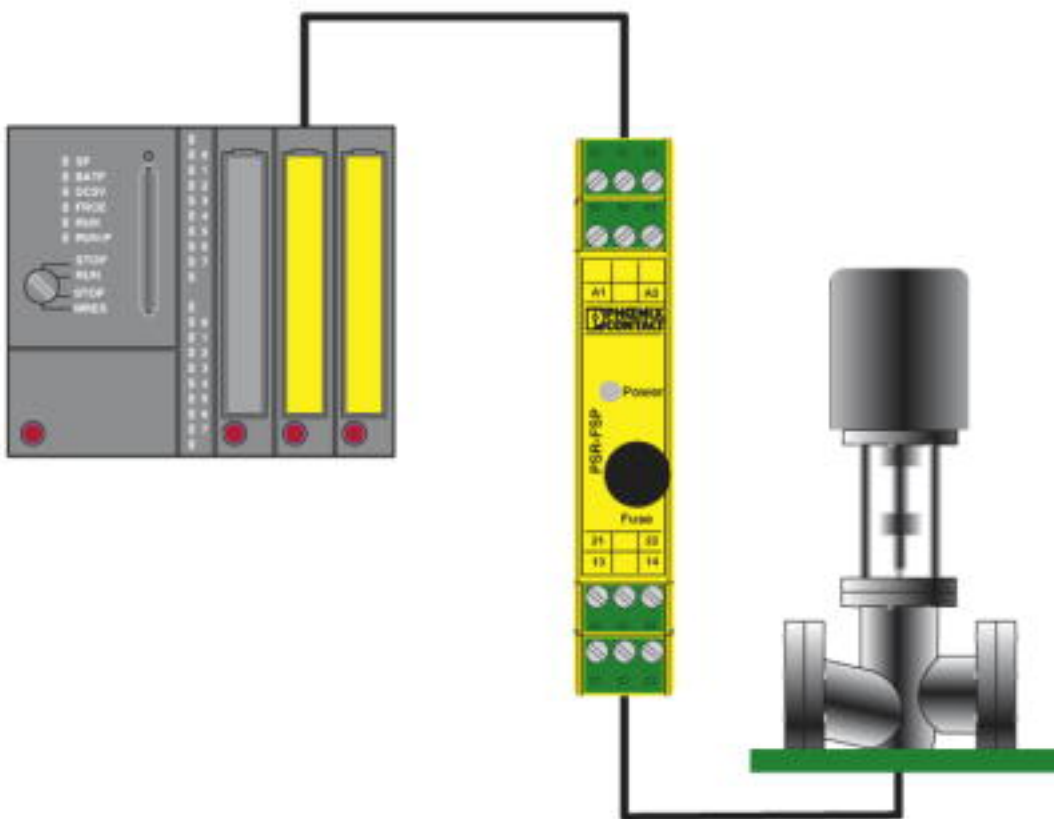
cUL Listed

Functional Safety

cULus Listed

Drawings

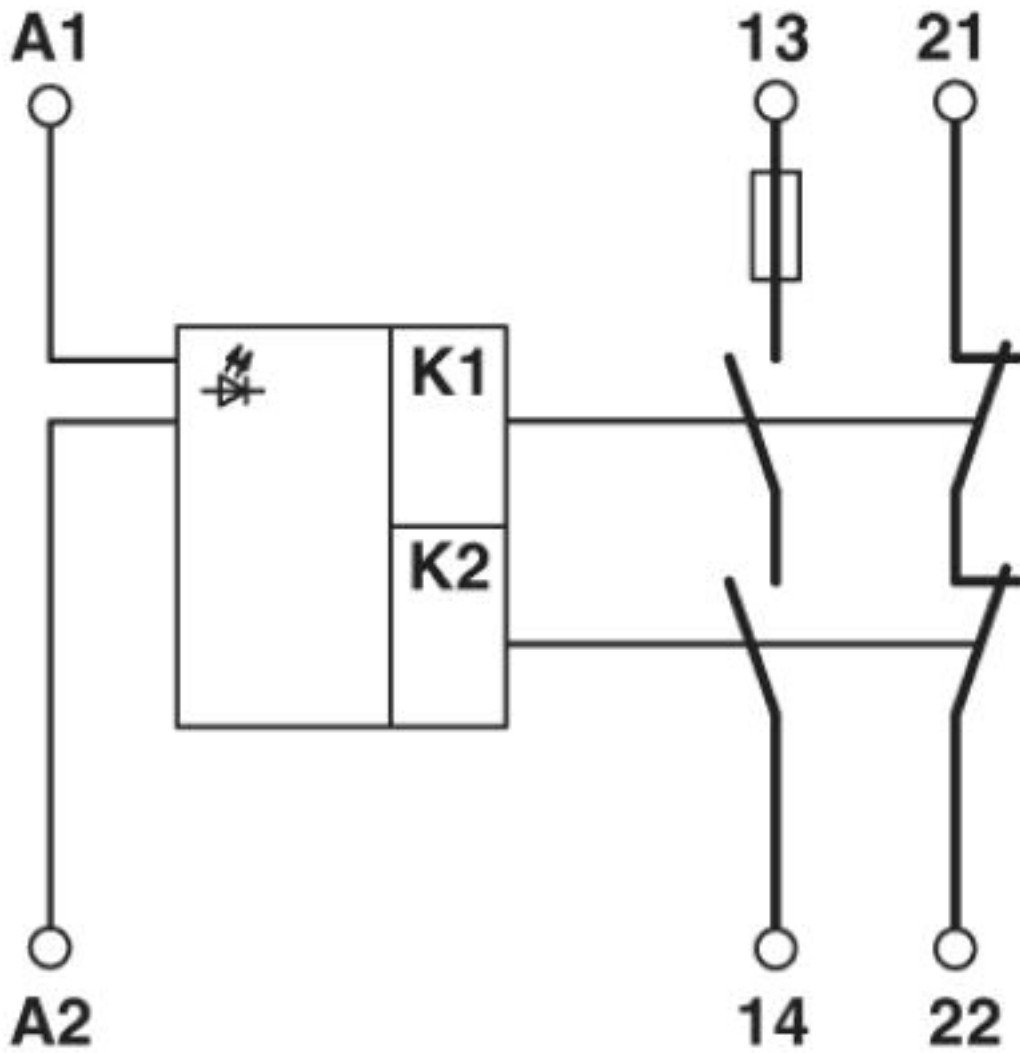
Application drawing



Example of electrical isolation of a safety PLC output from the field.

Coupling relay - PSR-SPP- 24DC/FSP/1X1/1X2 - 2981981

Circuit diagram



Coupling relay - PSR-SPP- 24DC/FSP/1X1/1X2 - 2981981

Circuit diagram

