

Coupling relay - PSR-PC20-1NO-1NC-24DC-SP - 2700578

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://phoenixcontact.com/download>)



Coupling relay for SIL 3 high- and low-demand applications, couples digital output signals to the I/O, 1 enabling current path, 1 confirmation current path, 1 digital signal output, safe state off applications, test pulse filter, PSR-TBUS connection, plug-in spring-cage terminal block

The figure shows a version with a screw connection

Why buy this product

- ✓ Up to SIL 3 according to IEC 61508
- ✓ Forcibly guided contacts according to EN 50205
- ✓ Easy proof test according to IEC 61508 thanks to integrated signal contact
- ✓ Approved for Class I, Zone 2 applications
- ✓ Low housing width of just 12.5 mm
- ✓ Enabling current path protected via internal fuse as an option
- ✓ Long service life thanks to filtering of controller test pulses
- ✓ 1 enabling current path, 1 digital signal output, 1 diagnostic current path
- ✓ Couples digital output signals from failsafe controllers to I/O devices (valves, etc.) for electrical isolation and power adaptation



Key Commercial Data

Packing unit	1 pc
GTIN	
Weight per Piece (excluding packing)	188.0 g
Custom tariff number	85364900
Country of origin	Germany
Note	Made to Order (non-returnable)

Technical data

Dimensions

Width	12.5 mm
Height	116.6 mm

Coupling relay - PSR-PC20-1NO-1NC-24DC-SP - 2700578

Technical data

Dimensions

Depth	114.5 mm
-------	----------

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)
Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Shock	15g
Vibration (operation)	2g
Maximum altitude	≤ 2000 m (Above sea level)

Input data

Rated control supply voltage U_s	24 V DC -15 % / +10 %
Power consumption at U_s	typ. 1.2 W
Rated control supply current I_s	typ. 50 mA
Typical inrush current	400 mA ($\Delta t < 10 \mu s$ at U_s)
Typical pick-up time	< 100 ms (when controlled via A1)
Typical release time	< 35 ms (when controlled via A1)
Recovery time	500 ms
Status display	1 x green LED
Maximum switching frequency	1 Hz

Output data

Contact type	1 enabling current path
	1 confirmation current path
Contact material	AgSnO ₂ (enabling current path)
	AgCuNi, + Au (confirmation current path)
Minimum switching voltage	20 V AC/DC (N/O contact)
	20.4 V DC (N/C contact)
Maximum switching voltage	250 V AC/DC (N/O contact)
	26.4 V DC (N/C contact)
Nominal current	6 A (N/O contact)
Limiting continuous current	6 A (13/14, see to derating)
	4 A (13F/14, see to derating)
	100 mA (N/C contact)
Inrush current, minimum	3 mA (N/O contact)
	1 mA (N/C contact)
Maximum inrush current	6 A (N/O contact)
	100 mA (N/C contact)
Sq. Total current	36 A ² (see to derating)
Switching capacity	min. 60 mW
Output fuse	6 A gL/gG (N/O contact 13/14)

Coupling relay - PSR-PC20-1NO-1NC-24DC-SP - 2700578

Technical data

Output data

	4 A gL/gG (for low-demand applications)
	150 mA fast blow (Confirmation current path)

Alarm outputs

Number of outputs	1 (digital, PNP)
Voltage	22 V DC ($U_D - 2 V$)
Current	max. 100 mA
Maximum inrush current	500 mA ($\Delta t = 1 ms$ at U_s)
Short-circuit protection	no

General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with IEC/EN 61810-3 (EN 50205)
Mechanical service life	10×10^6 cycles
Net weight	188 g
Mounting type	DIN rail mounting
Assembly instructions	See derating curve
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Mounting position	vertical, horizontal, with front of module upward
Control	single-channel
Stop category	0
Parameters for IEC 61508	3
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178, EN 60079-15
Rated surge voltage/insulation	Safe isolation, 6 kV reinforced insulation from control circuit, start circuit, confirmation current path, signal output to the enabling current path; 4 kV/basic insulation between all current paths and housing
Rated insulation voltage	250 V AC
Pollution degree	2
Overvoltage category	III
Housing material	PBT

Connection data

Connection method	Spring-cage connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16

Coupling relay - PSR-PC20-1NO-1NC-24DC-SP - 2700578

Technical data

Connection data

Stripping length	8 mm
------------------	------

Classifications

eCl@ss

eCl@ss 5.1	27371901
eCl@ss 6.0	27371819
eCl@ss 8.0	27371819

ETIM

ETIM 5.0	EC001449
----------	----------

Approvals

Approvals

Approvals

UL Listed / cUL Listed / EAC / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Listed

cUL Listed

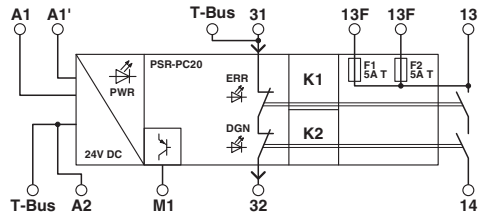
EAC

cULus Listed

Drawings

Coupling relay - PSR-PC20-1NO-1NC-24DC-SP - 2700578

Block diagram



Circuit diagram

