

## Coupling relay - PSR-PC20-1NO-1NC-24DC-SC - 2700577

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

### Your advantages

- ✓ 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	 4 046356 916417
GTIN	4046356916417
Weight per Piece (excluding packing)	189.100 g
Custom tariff number	85364900
Country of origin	Germany
Note	Made to Order (non-returnable)

### Technical data

#### Note

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

### Dimensions

Width	12.5 mm
Height	112.2 mm
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)
Maximum altitude	≤ 2000 m (Above sea level)

### Power supply

Rated control circuit supply voltage $U_s$	24 V DC -15 % / +10 % (A1/A2)
	20.4 V DC ... 26.4 V DC
Rated control supply current $I_s$	typ. 50 mA
Power consumption at $U_s$	typ. 1.2 W
Inrush current	typ. 400 mA ( $\Delta t < 10 \mu s$ at $U_s$ )
Filter time	max. 2 ms (at A1-A2; test pulse width)
	≥ 100 ms (at A1-A2; test pulse rate)
Diagnostic supply voltage $U_D$	24 V DC -15 % / +10 % (31/A2, TBUS)
Input current at $U_D$	6 mA (at 31-A2 for $U_D$ ; depending on load + 100 mA at M1 and 32)
Inrush current at $U_D$	typ. 2.5 A ( $\Delta t < 20 \mu s$ at $U_D$ )
Protective circuit	Serial protection against polarity reversal 33 V suppressor diode (A1/A2) 33 V suppressor diode (31/A2)

### Relay outputs: enabling current path

Output name	Enabling current path
Output description	2 N/O contacts in series, without delay, floating
Number of outputs	1 (safety-related N/O contacts: 13/14 (13F/14))
Contact type	1 enabling current path
Contact material	AgSnO <sub>2</sub>
Switching voltage	min. 12 V AC/DC
	max. 250 V AC/DC (Observe the load curve)
Limiting continuous current	6 A (13/14 for high-demand)
	4 A (13F/14 with high/low demand, 13/14 with low demand)
Inrush current	min. 3 mA
	max. 6 A (N/O contact 13/14)
	4 A (N/O contact 13F/14)
Sq. Total current	36 A <sup>2</sup> (13/14, see to derating)
	16 A <sup>2</sup> (13F/14, see to derating)
Switching capacity	min. 60 mW
Switching frequency	max. 0.5 Hz