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## Coupling relay - PSR-PC50-1NO-1DO-24DC-SC - 2904664

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Coupling relay for SIL 3 low demand applications, couples digital output signals to the periphery, 1 enabling current path, module for F&G applications, test pulse filter, plug-in screw connection, 17.5 mm width

### Why buy this product

- Up to SIL 3 according to IEC 61508
- Easy proof test according to IEC 61508 thanks to integrated signal contact
- Installation in zone 2 permitted
- 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 STK
GTIN	 4 046356 919937

### Technical data

#### Note

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

Width	17.5 mm
Height	112.2 mm
Depth	114.5 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 65 °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)

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## Technical data

### Ambient conditions

Shock	15g
Vibration (operation)	2g
Maximum altitude	≤ 2000 m (Above sea level)

### Input data

Nominal input voltage $U_N$	24 V DC -15 %; +10 % (A1/A2 and 24V/A2)
Input voltage range in reference to $U_N$	0.85 ... 1.1
Typical input current at $U_N$	65 mA (A1/A2)
	15 mA (24V/A2; depending on load M1 +100 mA)
Typical inrush current	≤ 200 mA (A1/A2)
Current consumption	typ. 20 mA (Input TP1)
	typ. 18 mA (Input TP2)
	typ. 35 mA (Input TP3)
Typical pick-up time	30 ms (when controlled via A1)
Typical release time	30 ms (when controlled via A1)
Recovery time	1 s
Status display	Green LED
Maximum switching frequency	0.5 Hz
Max. permissible overall conductor resistance	< 10 Ω (LO/LO' and NI/NI' and load resistance in the event of a short circuit)
Filter time	< 2 ms (Test pulse duration)
	≥ 100 ms (Test pulse rate)

### Output data

Contact type	1 enabling current path
Contact material	AgNi, gold-flashed
Minimum switching voltage	15 V AC/DC (without diagnostics)
	20 V AC/DC (with diagnostics)
Maximum switching voltage	250 V AC
	125 V DC
Nominal current	5 A
Limiting continuous current	5 A (N/O contact)
Inrush current, minimum	100 mA
Maximum inrush current	5 A
Switching capacity min.	1.5 W
Switching capacity	min. 1.5 W

### Alarm outputs

Number of outputs	1 (digital)
Voltage	23 V DC
Current	max. 100 mA
Short-circuit protection	no

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## Technical data

### General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Mechanical service life	Approx. $5 \times 10^7$ cycles
Net weight	219.3 g
Mounting type	DIN rail mounting
Degree of protection	IP54
	IP20
Min. degree of protection of inst. location	IP54
Mounting position	vertical or horizontal
Control	single-channel

### Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

### Safety-related characteristic data

Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3 (15 % of total SIL)

### Standards and Regulations

Shock	15g
Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
Rated insulation voltage	250 V AC
Rated surge voltage/insulation	6 kV/safe isolation (through protective impedance)
Degree of pollution	2
Overvoltage category	III
Vibration (operation)	2g
Conformance	CE-compliant
ATEX	# II 3 G Ex nA nC IIC T4 Gc
IECEX	Ex nA nC IIC T4 Gc
UL, USA / Canada	cULus
	Class I, Zone 2, AEx nA nC IIC T4 / Ex nA nC IIC Gc T4 X
GL	C, EMC2

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## Classifications

### eCl@ss

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

### ETIM

ETIM 4.0	EC001449
ETIM 5.0	EC001449

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / Functional Safety / GL / EAC / cULus Listed

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#### Ex Approvals

UL Listed / cUL Listed / IECEx / ATEX / cULus Listed

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#### Approvals submitted

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### Approval details

UL Listed

cUL Listed

Functional Safety

GL

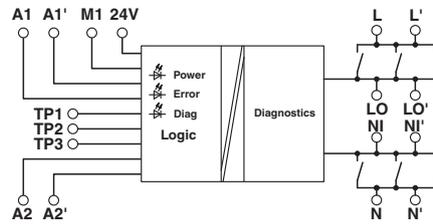
EAC

cULus Listed

# Coupling relay - PSR-PC50-1NO-1DO-24DC-SC - 2904664

## Drawings

Block diagram



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Product	Code	Reference	Product link
Coupling relay for SIL 3 low demand applications, couples digital output signals to the periphery, 1 enabling current path, module for F&G applications, test pulse filter, plug-in screw connection, 17.5 mm width	2904664	PSR-PC50-1NO-1DO-24DC-SC	<a href="#">Buy on EAN</a>