

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 pc |
| GTIN |  4 046356 919937 |
| Weight per Piece (excluding packing) | 219.3 g |
| Custom tariff number | 85364900 |
| Country of origin | Germany |

Technical data

Note

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

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 |

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Ambient conditions

| | |
|--|---|
| 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

| | |
|---|--|
| 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) |

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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General

| | |
|---|---|
| Relay type | Electromechanical relay with forcibly guided contacts in accordance with EN 50205 |
| Mechanical service life | Approx. 5×10^7 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 |
| Designation | Air clearances and creepage distances between the power circuits |
| Standards/regulations | DIN EN 50178 |
| Rated surge voltage/insulation | 6 kV/safe isolation (through protective impedance) |
| Rated insulation voltage | 250 V AC |
| Pollution degree | 2 |
| Overvoltage category | III |

Connection data

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

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 |

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Approvals

Approvals

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

Ex Approvals

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

Approvals submitted

Approval details

UL Listed

cUL Listed

Functional Safety

GL

EAC

cULus Listed

Drawings

Block diagram



