



Automatización Eléctrica
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Coupling relay - PSR-PC50-1NO-1DO-24DC-SP - 2904665

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Coupling relay for SIL 3 low-demand applications, couples digital output signals to the I/O, 1 enabling current path, module for F&G applications, test pulse filter, plug-in spring-cage terminal block, width: 17.5 mm

The figure shows a version with a screw connection

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 919920

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	117.4 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)

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Technical data

Ambient conditions

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 (between LO/LO' and NI/NI'; taking into account the load in the event of short-circuit + cable resistance)
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

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Technical data

Alarm outputs

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	212.4 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	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
Stripping length	8 mm

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

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Technical data

Standards and Regulations

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

Approvals

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

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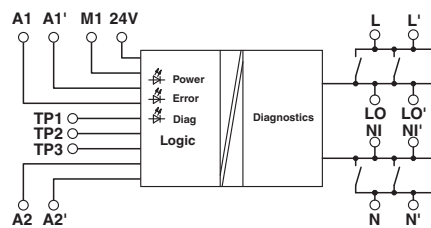
Approvals

EAC

cULus Listed

Drawings

Block diagram



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Product	Code	Reference	Product link
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