

PSR-SCP- 24DC/ETP/1X1 - Coupling relay



2986711

<https://www.phoenixcontact.com/us/products/2986711>

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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

Your advantages

- 1 enabling current path
- Couples digital output signals from failsafe controllers to I/O devices (valves, etc.) for electrical isolation and power adaptation
- Narrow 17.5 mm housing
- Up to SIL 3 in accordance with IEC 61508
- Long service life thanks to filtering of controller test pulses

Commercial data

Item number	2986711
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DN01
Product key	DNA161
GTIN	4046356540797
Weight per piece (including packing)	187.2 g
Weight per piece (excluding packing)	187 g
Customs tariff number	85364900
Country of origin	DE

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Technical data

Product properties

Product type	Coupling relay
Application	Safe switch on
	Low demand
Control	1-channel
Mechanical service life	approx. 10^7 cycles
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

Insulation characteristics: Air clearances and creepage distances between the power circuits

Overvoltage category	III
Degree of pollution	2

Electrical properties

Maximum power dissipation for nominal condition	1.8 W
Nominal operating mode	100% operating factor

Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V AC
Rated surge voltage/insulation	6 kV/safe isolation (through protective impedance)

Input data

General

Nominal input voltage U_N	24 V DC
Input voltage range	20.4 V DC ... 26.4 V DC
Input voltage range in reference to U_N	0.85 ... 1.1
Typical input current at U_N	75 mA
Inrush current	200 mA
Typical response time	30 ms
Recovery time	1 s
Operating voltage display	Green LED (POWER)

Output data

Contact switching type	1 enabling current path
Contact material	AgNi, gold-flashed
Maximum switching voltage	250 V AC (125 V DC)
Minimum switching voltage	15 V AC/DC
Limiting continuous current	5 A (N/O contact, pay attention to the derating)
Maximum inrush current	5 A
Inrush current, minimum	100 mA
Sq. Total current	25 A^2 ($I_{TH2} = I_{12} + \dots + I_{N2}$)
Switching power min.	1.5 W

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Connection data

Connection technology

pluggable	yes
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Conductor connection

Connection method	Screw connection
Conductor cross-section, rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section, flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 12
Stripping length	7 mm
Screw thread	M3

Dimensions

Width	17.5 mm
Height	99 mm
Depth	114.5 mm

Material specifications

Color	yellow
Housing material	PA

Characteristics

Safety data: IEC 61508 - Low demand

Safety Integrity Level (SIL)	3
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 65 °C
Maximum altitude	≤ 2000 m (Above sea level)
Max. permissible humidity (storage/transport)	≤ 85 % (Condensation and icing are not permitted based on the average annual temperature) ≤ 85 % (On an individual basis, condensation and icing are not permitted)
Shock	15g
Vibration (operation)	10 Hz ... 150 Hz, 2g

Approvals

Conformity/Approvals

UL, USA / Canada	UL applied for
Functional Safety (SIL)	SIL 3 acc. to IEC 61508

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Standards and regulations

Air clearances and creepage distances between the power circuits

Standards/regulations	DIN EN 50178
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Mounting

Mounting type	DIN rail mounting
Assembly note	in rows with zero spacing
Mounting position	optional (Observe derating)

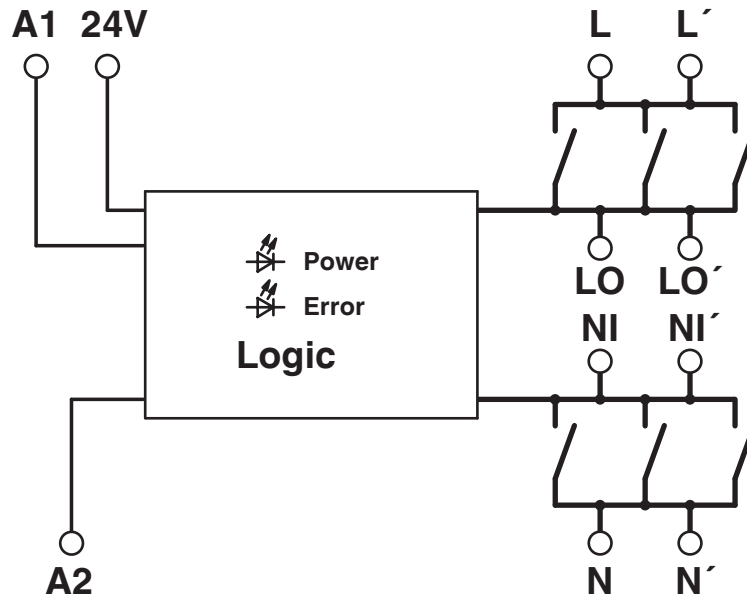
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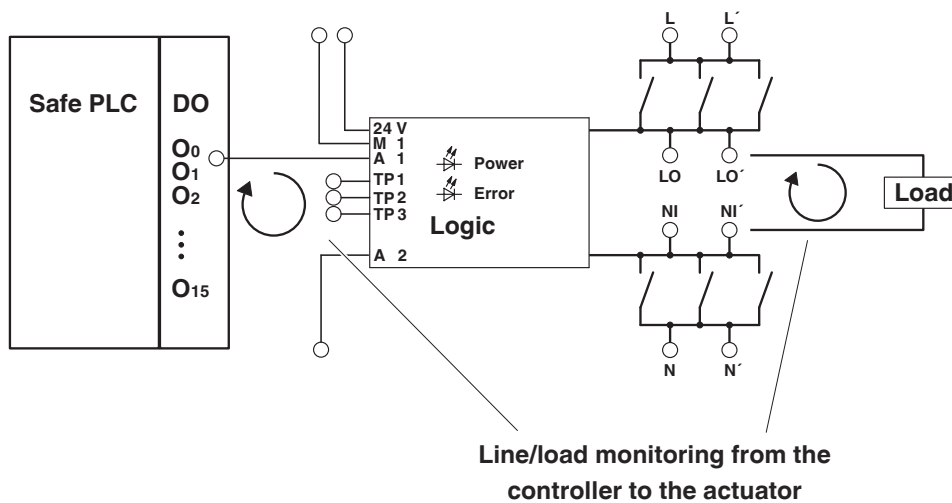
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Drawings

Circuit diagram



Circuit diagram



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Classifications

UNSPSC

UNSPSC 21.0	39122205
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
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