

Safety device - PSR-SPP- 24DC/RSM4/4X1 - 2981541

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Two-channel zero speed and overspeed safety relay up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, 4 N/O contacts, suitable for connecting incremental encoders and initiators, plug-in spring-cage terminal block, width: 45 mm

Why buy this product

- Easy configuration via software (PSR-RSM4)
- Up to SIL 3 according to IEC 61508
- Standard sensors can be connected



Key Commercial Data

Packing unit	1 STK
GTIN	 4 017918 996833
GTIN	4017918996833
Weight per Piece (excluding packing)	369.900 g
Custom tariff number	90328900
Country of origin	Germany

Technical data

Note

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

Width	45 mm
Height	112 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C

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Technical data

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)
Maximum altitude	max. 2000 m (Above sea level)

Input data

Nominal input voltage U_N	24 V DC
Input voltage range in reference to U_N	0.85 ... 1.1
Typical input current at U_N	100 mA
Voltage at input/start and feedback circuit	24 V DC
Typical response time	15 ms
Typical release time	12 ms
Recovery time	1 s
Status display	Green LED
Limit frequency	2 kHz (IN1, IN2)
	400 kHz (RJ45)

Output data

Contact type	4 enabling current paths
Contact material	AgNi10, + 5 μ m Au
Minimum switching voltage	100 mV AC/DC
Maximum switching voltage	250 V AC/DC (when the gold layer is destroyed)
	60 V AC/DC (With gold layer existing)
Limiting continuous current	5 A
	100 mA (alarm outputs)
Inrush current, minimum	1 mA
Maximum inrush current	6 A
Sq. Total current	$42.25 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2)$
Interrupting rating (ohmic load) max.	67 W (24 V DC, $\tau = 0$ ms)
	36 W (48 V DC, $\tau = 0$ ms)
	43 MW (110 V DC, $\tau = 0$ ms)
	68 MW (220 V DC, $\tau = 0$ ms)
Switching capacity min.	1 mW
Output fuse	6 A gL

General

Relay type	Electromechanical relay with forcibly guided contacts in accordance with EN 50205
Mechanical service life	$> 50 \times 10^6$ cycles
Nominal operating mode	100% operating factor
Net weight	369.9 g
Mounting type	DIN rail mounting
Assembly instructions	In rows with zero spacing

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Technical data

General

Mounting position	any
Degree of protection	IP54
	IP20
Min. degree of protection of inst. location	IP54
Control	Two-channel
Housing color	yellow
Interfaces	Encoder

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

Stop category	0
Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	3
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	3
Designation	EN ISO 13849
Performance level (PL)	e
Category	4
Safety Integrity Level Claim Limit (SIL CL)	3

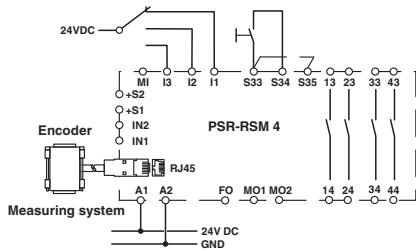
Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	EN 60664/VDE 0110
Rated insulation voltage	250 V
Rated surge voltage/insulation	4 kV / Basic isolation, (safe isolation, reinforced insulation and 6 kV between input circuit and enabling current paths.)
Degree of pollution	2
Overvoltage category	III

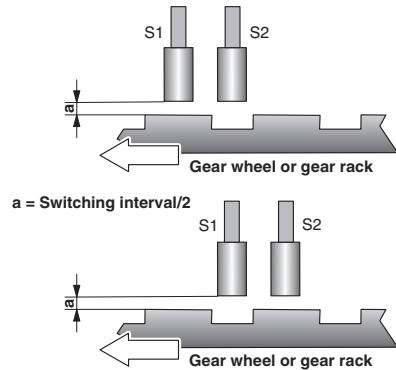
Drawings

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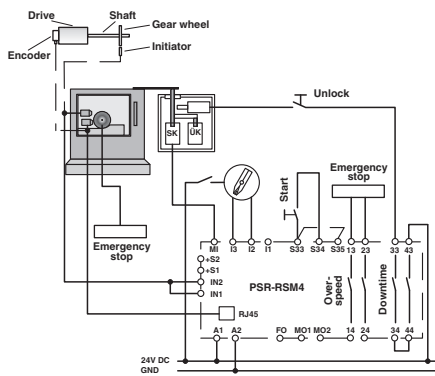
Diagram



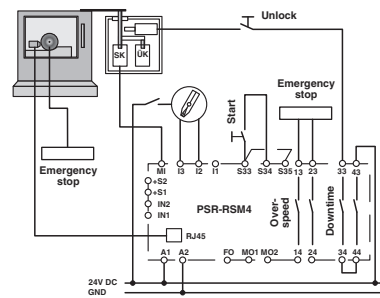
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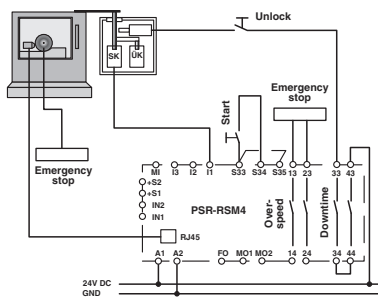
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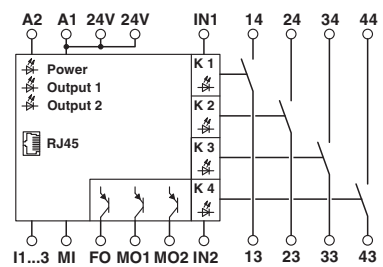
Diagram



Diagram

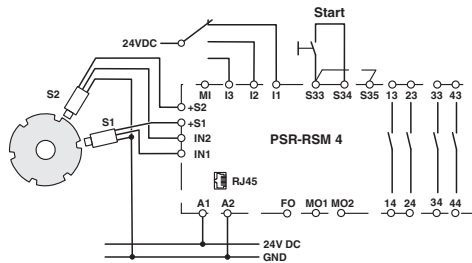


Circuit diagram

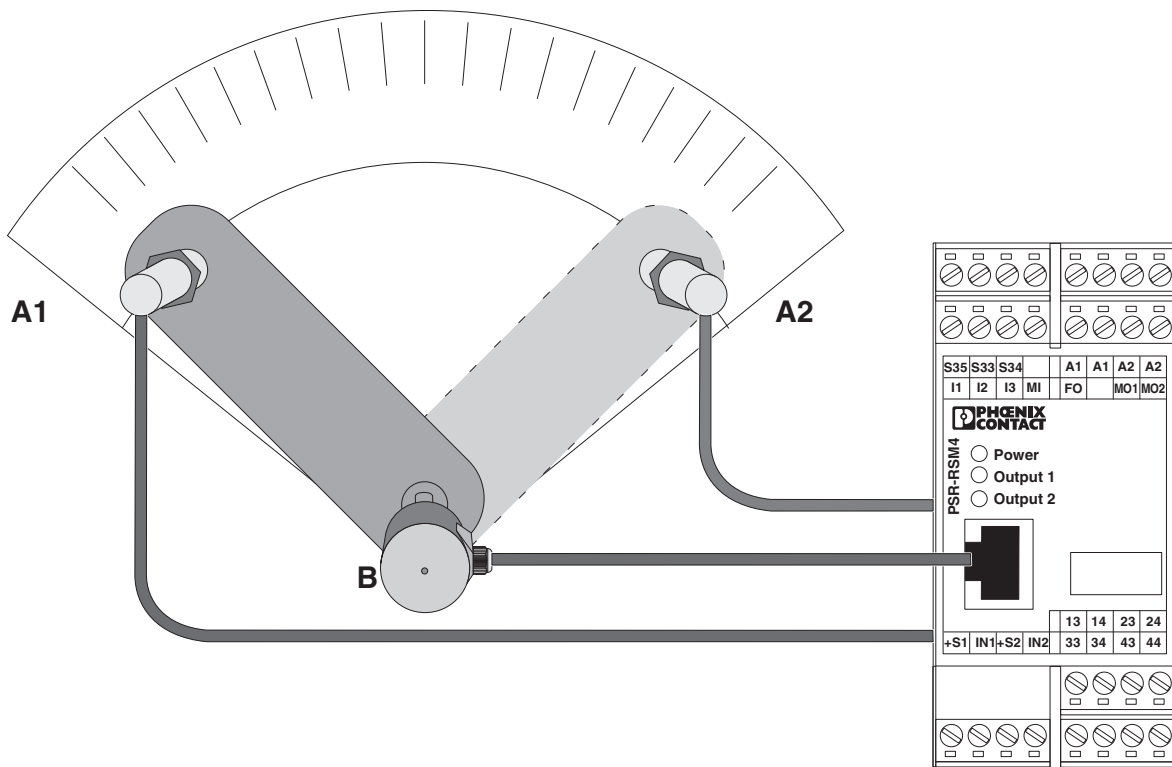


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Circuit diagram



Application drawing



Classifications

eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371901

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Classifications

eCl@ss

eCl@ss 5.1	27371901
eCl@ss 6.0	27371819
eCl@ss 7.0	27371819
eCl@ss 8.0	27371811
eCl@ss 9.0	27371811

ETIM

ETIM 2.0	EC001449
ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001448
ETIM 6.0	EC001448

UNSPSC

UNSPSC 6.01	30211901
UNSPSC 7.0901	39121501
UNSPSC 11	39121501
UNSPSC 12.01	39121501
UNSPSC 13.2	39122331

Approvals


Approvals

Approvals

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

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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Approvals

Functional Safety		01/205/5199.02/16
EAC		EAC-Zulassung
EAC		7500651.22.01.00245
EAC		7500651.22.01.00244
cULus Listed		

Accessories

Accessories

Adapter cable

Adapter cable - CABLE-25/8/250/RSM/E-SIMO611D - 2901746



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 25/8-pos., cable length: 2.5 m, for controller: Siemens, Heidenhain

Adapter cable - CABLE-15/8/250/RSM/INDEL - 2902338



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: Indel

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Accessories

Adapter cable - CABLE- 9/8/250/RSM/ELAU - 2902984



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 9/8-pos., cable length: 2.5 m, for controller: ELAU

Adapter cable - CABLE-15/8/100/RSM/BM - 2904108



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 1 m, for controller: Baumüller

Adapter cable - CABLE-25/8/250/RSM/SIMO611D - 2981583



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 25/8-pos., cable length: 2.5 m, for controller: Siemens, Heidenhain

Adapter cable - CABLE-25/8/250/RSM/ARADDEX - 2981596



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 25/8-pos., cable length: 2.5 m, for controller: Aradex

Adapter cable - CABLE-15/8/250/RSM/SIMO611D - 2981606



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: Siemens, Heidenhain

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Accessories

Adapter cable - CABLE-15/8/250/RSM/MHD/G - 2981619



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: Indramat

Adapter cable - CABLE-15/8/250/RSM/SIN800 - 2981622



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: Siemens

Adapter cable - CABLE-15/8/250/RSM/FM-NC - 2981635



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: Siemens

Adapter cable - CABLE-15/8/250/RSM/DKC - 2981648



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: Indramat

Adapter cable - CABLE-15/8/250/RSM/AMK - 2981651



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: AMK

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Accessories

Adapter cable - CABLE-15/8/250/RSM/SEW-X15 - 2981664



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: SEW

Adapter cable - CABLE-15/8/250/RSM/PD - 2981758



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: Parker Drives

Adapter cable - CABLE- 9/8/250/RSM/LENZE - 2981826



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 9/8-pos., cable length: 2.5 m, for controller: Lenze

Adapter cable - CABLE-15/8/250/RSM/KINETIX - 2986698



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: Allen-Bradley (Kinetix)

Adapter cable - CABLE-15/8/250/RSM/IHDUNI-SP - 2986973



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), 15/8-pos., cable length: 2.5 m, for controller: Control Techniques, type: Unidrive SP

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Accessories

Adapter cable - CABLE-15/8/250/RSM/INDRADYN-2 - 2986986



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), cable length: 2.5 m, for controller: Bosch Rexroth Indramat, type: Indradrive - IndraDyn

Adapter cable - CABLE-20/8/250/RSM/FANUC - 2986999



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MOTIONSTOP), cable length: 2.5 m, for controller: FANUC CN

Configuration and diagnostics

Software - PSR-CONF-WIN1.0 - 2981554



Configuration software for parameterizing the PSR-RSM4 safe downtime and over-speed safety relay, with programming cable