

Safety device - PSR-SCP- 24DC/RSM4/4X1 - 2981538

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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 screw connection terminal blocks, width: 45 mm

Your advantages

- ✓ 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 pc
GTIN	 4 017918 996826
GTIN	4017918996826

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	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °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)
Maximum altitude	max. 2000 m (Above sea level)

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Technical data

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	approx. 24 V DC
Typical response time	15 ms
Typical release time	12 ms
Recovery time	1 s
Status display	Green LED
Protective circuit	Surge protection Suppressor diode
Limit frequency	2 kHz (IN1, IN2)
	400 kHz (RJ45)

Output data

Contact type	4 enabling current paths
Contact material	AgNi10, + 5 μ m Au
Maximum switching voltage	250 V AC/DC (when the gold layer is destroyed)
	60 V AC/DC (with gold layer existing)
Minimum switching voltage	100 mV AC/DC
Limiting continuous current	5 A
	100 mA (alarm outputs)
Maximum inrush current	6 A
Inrush current, minimum	1 mA
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, $\tau = 0 \text{ ms}$)
	36 W (48 V DC, $\tau = 0 \text{ ms}$)
	43 MW (110 V DC, $\tau = 0 \text{ ms}$)
	68 MW (220 V DC, $\tau = 0 \text{ ms}$)
Switching capacity min.	1 mW
Mechanical service life	> 50x 10^6 cycles
Output fuse	6 A gL

General

Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3
Nominal operating mode	100% operating factor
Net weight	365 g
Mounting position	any
Mounting type	DIN rail mounting
Assembly instructions	In rows with zero spacing
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Housing color	yellow

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Connection data

Connection method	Screw connection
pluggable	Yes
Conductor cross section solid	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

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

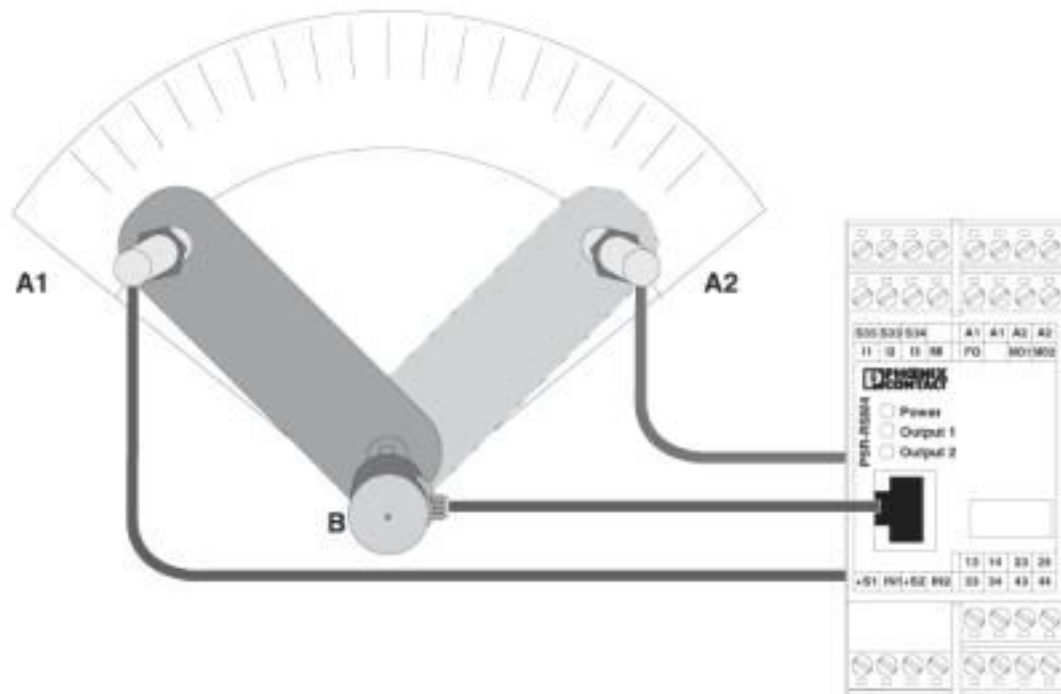
Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

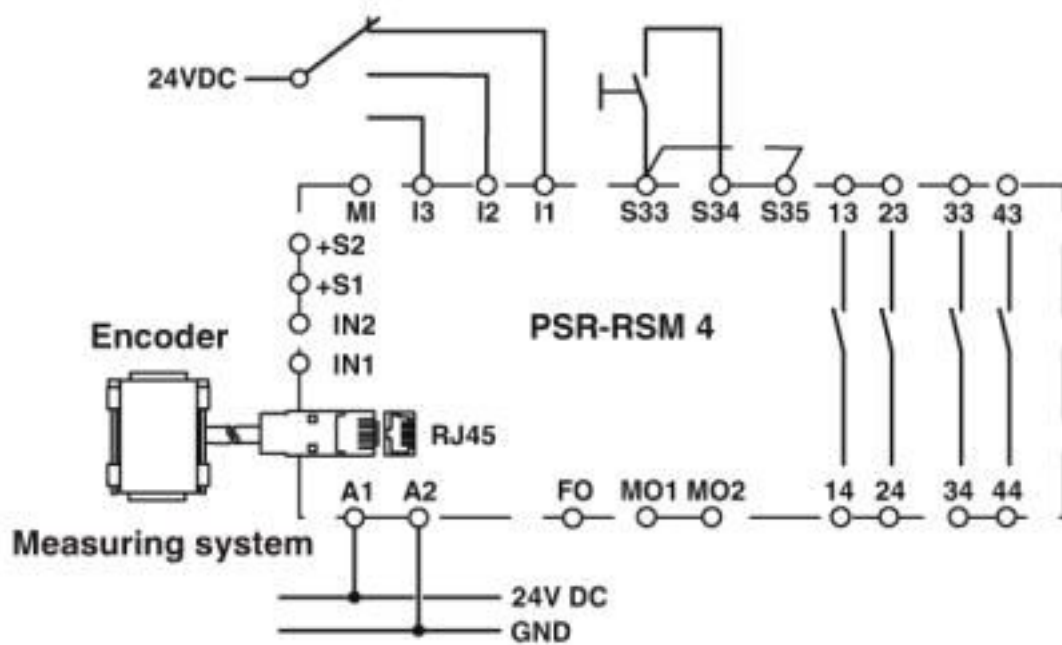
Drawings

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Application drawing

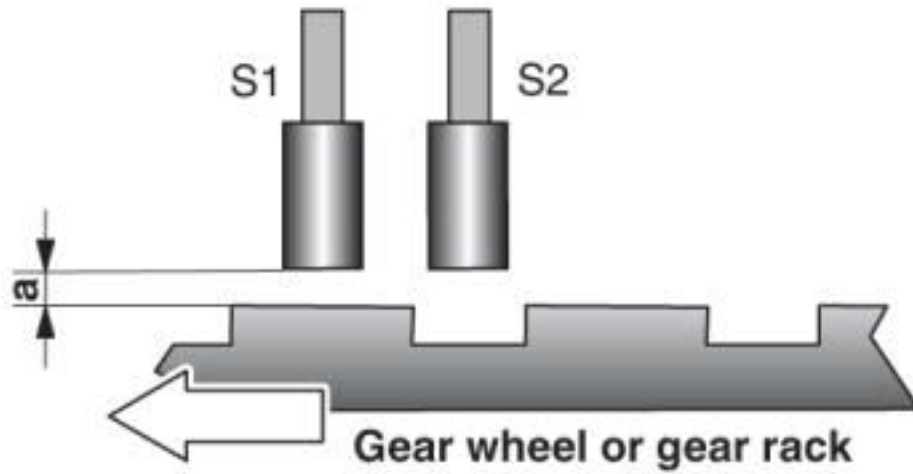


Diagram

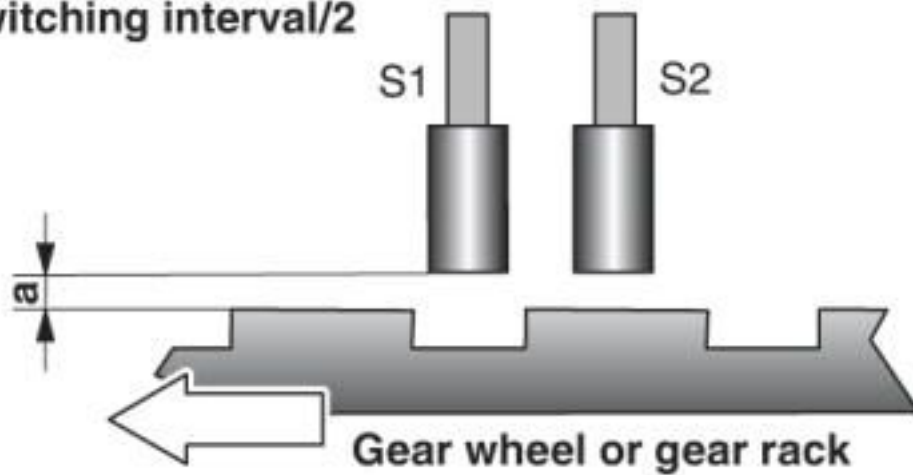


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Diagram

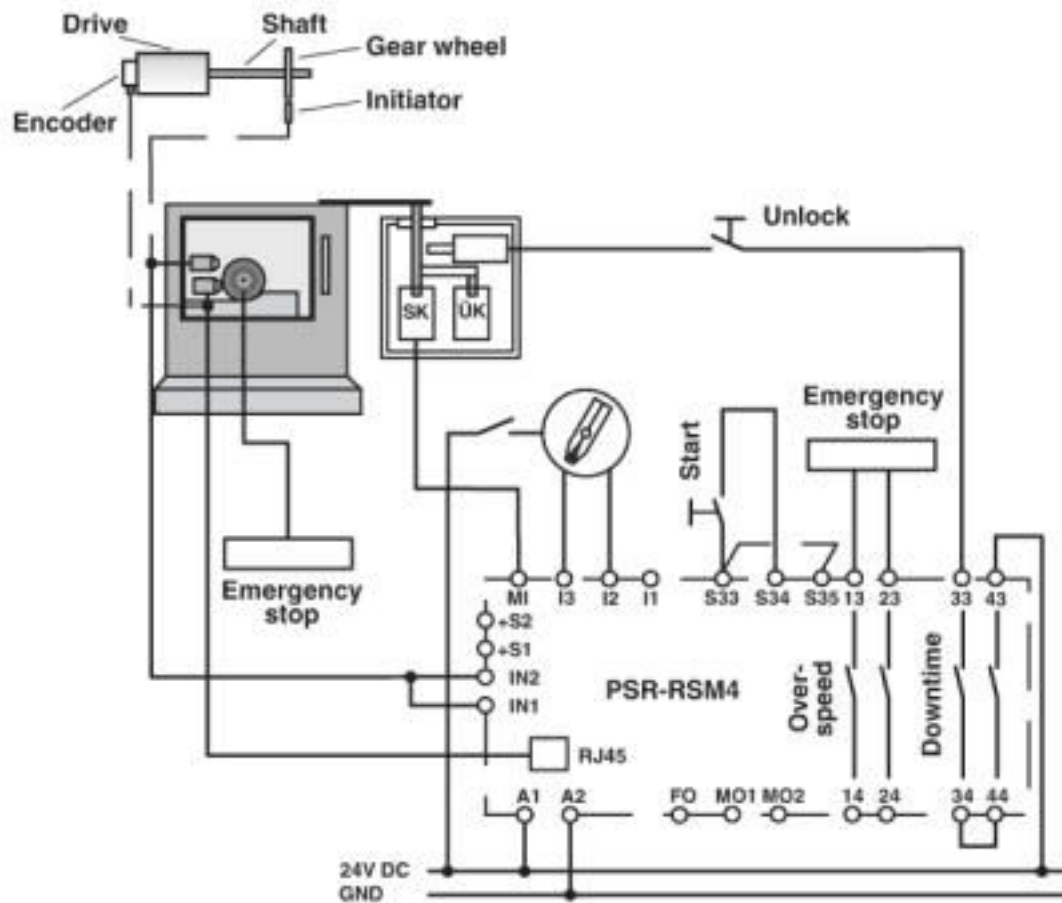


a = Switching interval/2



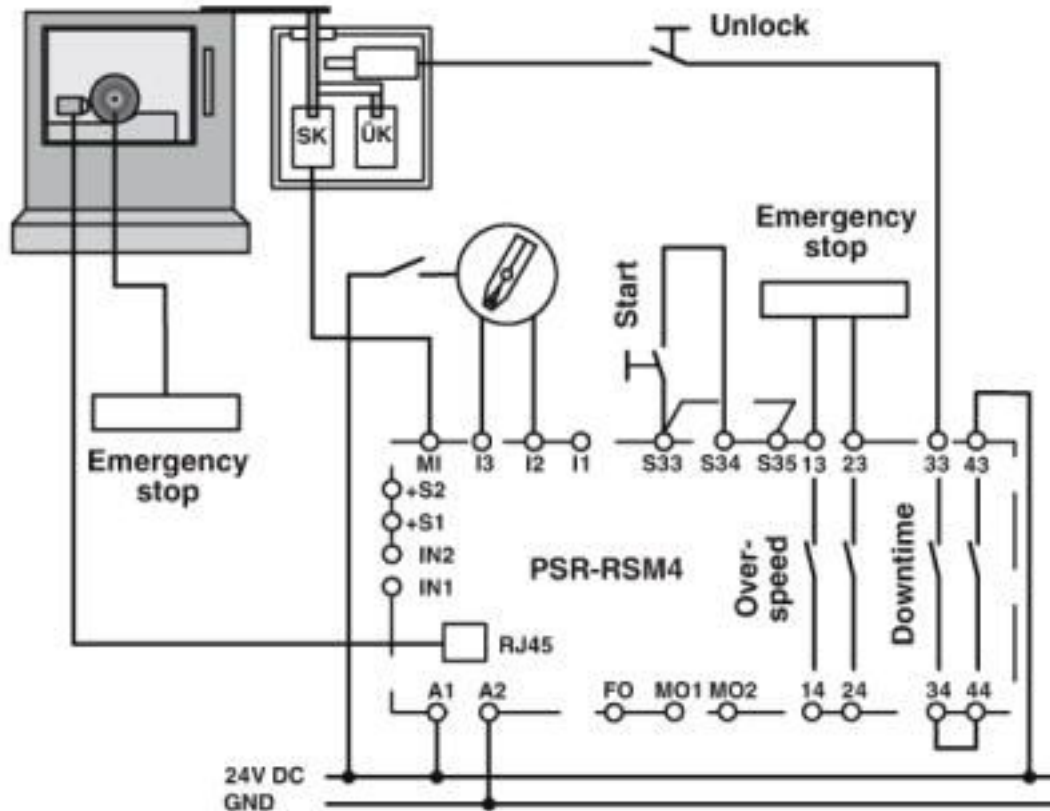
Safety device - PSR-SCP- 24DC/RSM4/4X1 - 2981538

Diagram



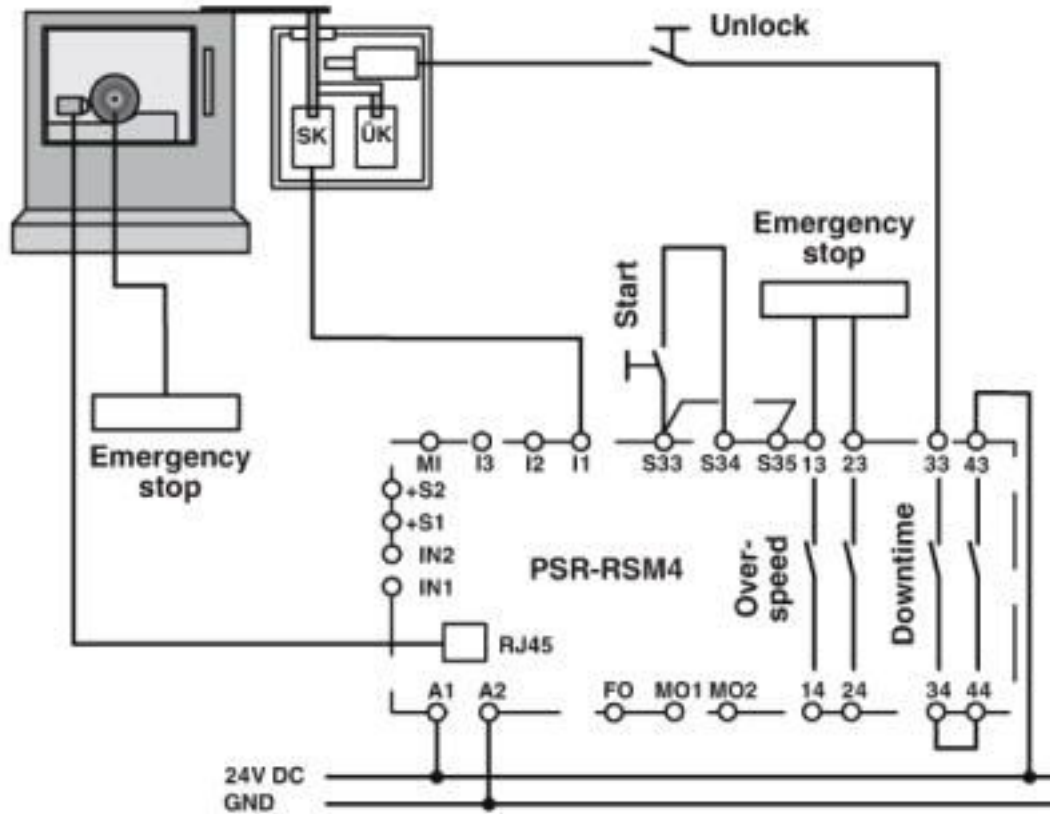
Safety device - PSR-SCP- 24DC/RSM4/4X1 - 2981538

Diagram



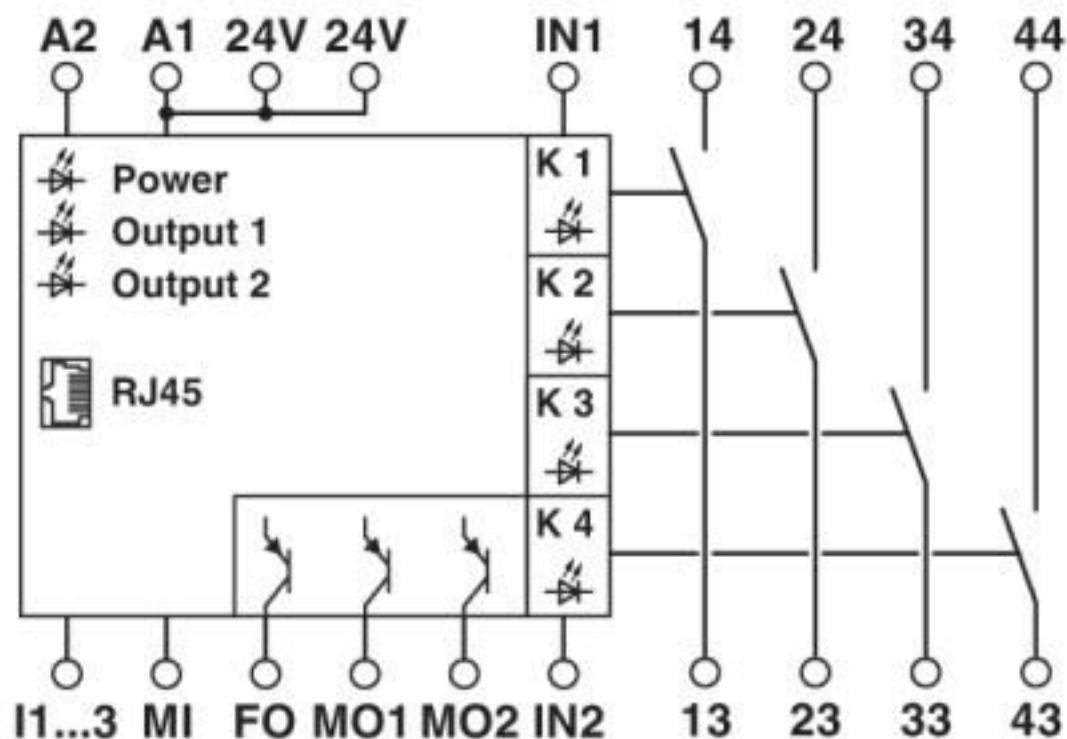
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Diagram

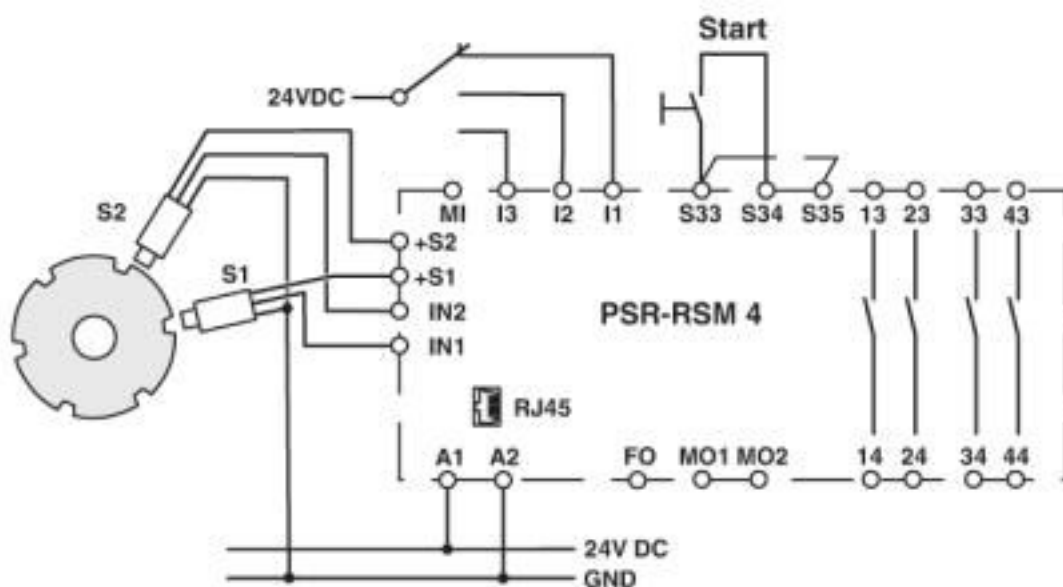


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Circuit diagram



Circuit diagram



Classifications

eCl@ss

eCl@ss 10.0.1

27371811

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Classifications

eCl@ss

eCl@ss 4.0	40020600
eCl@ss 4.1	40020600
eCl@ss 5.0	27371900
eCl@ss 5.1	27371900
eCl@ss 6.0	27371800
eCl@ss 7.0	27371811
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
ETIM 7.0	EC001448

UNSPSC

UNSPSC 6.01	30211901
UNSPSC 7.0901	39121501
UNSPSC 11	39121501
UNSPSC 12.01	39121501
UNSPSC 13.2	39122331
UNSPSC 18.0	39122331
UNSPSC 19.0	39122331
UNSPSC 20.0	39122331
UNSPSC 21.0	39122331

Approvals

Approvals

Approvals

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

Ex Approvals

Approval details

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Approvals

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
Functional Safety			01/205/5199.02/16
EAC			EAC-Zulassung
EAC			RU C- DE.A*30.B.01082
EAC			RU C- DE.A*30.B.01082
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-MM30), 25/8-pos., cable length: 2.5 m, for controller: Siemens, Heidenhain

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Accessories

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



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MM30), 15/8-pos., cable length: 2.5 m, for controller: INDEL

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



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MM30), 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-MM30), 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-MM30), 25/8-pos., cable length: 2.5 m, for controller: Siemens, Heidenhain

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



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MM30), 25/8-pos., cable length: 2.5 m, for controller: Aradex

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Accessories

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



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MM30), 15/8-pos., cable length: 2.5 m, for controller: Siemens, Heidenhain

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



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MM30), 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-MM30), 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-MM30), 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-MM30), 15/8-pos., cable length: 2.5 m, for controller: Indramat

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Accessories

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



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MM30), 15/8-pos., cable length: 2.5 m, for controller: AMK

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



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MM30), 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-MM30), 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-MM30), 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-MM30), 15/8-pos., cable length: 2.5 m, for controller: Allen-Bradley (Kinetix)

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Accessories

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



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MM30), 15/8-pos., cable length: 2.5 m, for controller: Control Techniques, type: Unidrive SP

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



Cable adapter for PSR over-speed safety relays (PSR-RSM4 and PSR-MM30), 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-MM30), 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

Mouser Electronics

Authorized Distributor

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