

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

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Two-channel speed and downtime monitor 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

Product Features

- 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 |
| Weight per Piece (excluding packing) | 346.8 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 |
|-------------------------|---|

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 |

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

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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) |
| 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 | approx. 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, $\tau = 0 \text{ ms}$) |
| | 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 |
| Output fuse | 6 A gL |

General

| | |
|-------------------------|---|
| Relay type | Electromechanical relay with forcibly guided contacts in accordance with EN 50205 |
| Mechanical service life | > 50 x 10 ⁶ cycles |
| Net weight | 365 g |

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General

| | |
|---|---------------------------|
| Mounting type | DIN rail mounting |
| Assembly instructions | In rows with zero spacing |
| Degree of protection | IP54 |
| | IP20 |
| Min. degree of protection of inst. location | IP54 |
| Mounting position | any |
| Control | Two-channel |
| Parameters as per EN ISO 13849 | 4 |
| Stop category | 0 |
| Parameters for IEC 61508 | 3 |
| Interfaces | Encoder |

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 |

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.) |
| Pollution degree | 2 |
| Overvoltage category | III |
| Safety Integrity Level Claim Limit (SIL CL) | 3 |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27371102 |
| eCl@ss 4.1 | 27371102 |

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

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 5.0 | 27371901 |
| eCl@ss 5.1 | 27371901 |
| eCl@ss 6.0 | 27371819 |
| eCl@ss 7.0 | 27371819 |
| eCl@ss 8.0 | 27371811 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC001449 |
| ETIM 3.0 | EC001449 |
| ETIM 4.0 | EC001449 |
| ETIM 5.0 | EC001448 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211901 |
| UNSPSC 7.0901 | 39121501 |
| UNSPSC 11 | 39121501 |
| UNSPSC 12.01 | 39121501 |
| UNSPSC 13.2 | 39121501 |

Approvals

Approvals

Approvals

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

Ex Approvals

Approvals submitted

Approval details

| |
|-----------|
| UL Listed |
|-----------|

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

Approvals

cUL Listed

Functional Safety

Functional Safety

UL Listed

cUL Listed

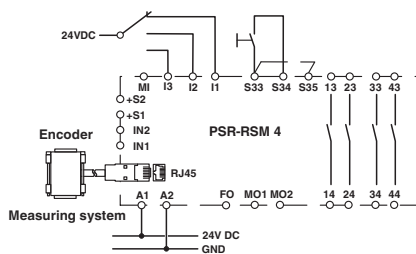
EAC

EAC

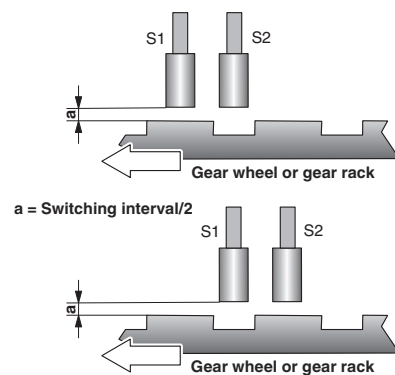
cULus Listed

Drawings

Diagram

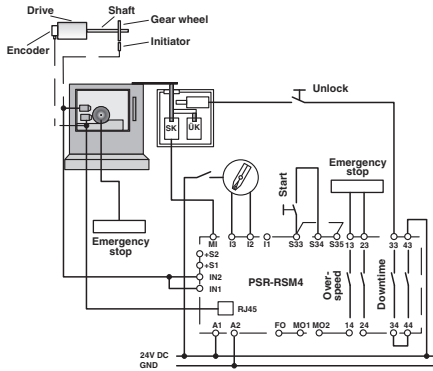


Diagram

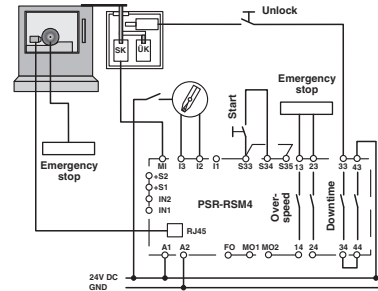


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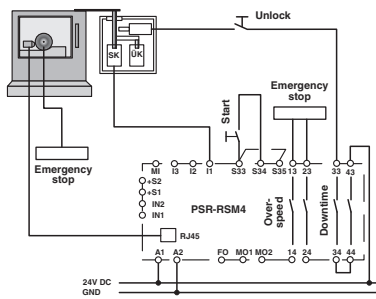
Diagram



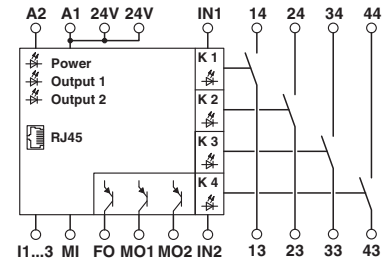
Diagram



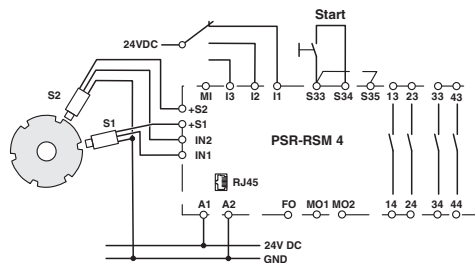
Diagram



Circuit diagram



Circuit diagram



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Application drawing

