

# PSR-SCP- 24DC/ESD/5X1/1X2/300


Order No.: 2981428



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2981428>

Safety relay to emergency stop and safety door monitoring up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, one- or two-channel operation, automatic or manual activation, 3 N/O contacts, 1 N/C contact, 2 N/O contacts switch-off delay set at 0 to 300 s



| Commercial data          |   |
|--------------------------|---|
| GTIN (EAN)               | 4 017918 975227  |
| sales group              | G520  |
| Pack                     | 1 pcs.  |
| Customs tariff           | 85364900  |
| Catalog page information | Page 14 (IF-2011)   |

#### Product notes

WEEE/RoHS-compliant since: 11/23/2006



<http://www.download.phoenixcontact.com>  
Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation. The General Terms and Conditions of Use apply to Internet downloads.

#### 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 $U_N$            | 155 mA DC    |

|   |  |
|---|--|
| Voltage at input/start and feedback circuit   | Approx. 24 V DC                                    |
| Typical response time                         | 70 ms (manual start)<br>600 ms (Auto-start)        |
| Typical release time                          | 20 ms (undelayed contacts)                         |
| Typical release time range                    | 0.2 s ... 300 s                                    |
| Concurrence input 1/2                         | Infinite   |
| Recovery time                                 | 1 s  |
| Max. permissible overall conductor resistance | 22 Ω (Input and start circuits at U <sub>N</sub> ) |

#### Output data

|  |  |
|--|--|
| Contact type                                 | 3 enabling current paths undelayed, 2 delayed, 1 signaling current path undelayed  |
| Contact material                             | AgSnO <sub>2</sub>   |
| Maximum switching voltage                    | 250 V AC/DC  |
| Minimum switching voltage                    | 15 V AC/DC   |
| Limiting continuous current                  | 6 A (N/O contact)<br>3 A (N/C contact)   |
| Maximum inrush current                       | 6 A  |
| Inrush current, minimum                      | 25 mA  |
| Sq. Total current                            | $55 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2 + I_5^2)$  |
| Interrupting rating (ohmic load) max.        | 144 W (24 V DC, τ = 0 ms)<br>288 W (48 V DC, τ = 0 ms)<br>77 W (110 V DC, τ = 0 ms)<br>88 W (220 V DC, τ = 0 ms)<br>1500 VA (250 V AC, τ = 0 ms) |
| Maximum interrupting rating (inductive load) | 42 W (24 V DC, τ = 40 ms)<br>40 W (48 V DC, τ = 40 ms)<br>35 W (110 V DC, τ = 40 ms)<br>33 W (220 V DC, τ = 40 ms)                               |
| Switching capacity min.                      | 0.4 W  |
| Output fuse                                  | 6 A fast blow (undelayed)<br>10 A gL/gG NEOZED (delayed)   |

#### General data

|        |          |
|--------|----------|
| Width  | 45 mm    |
| Height | 99 mm    |
| Depth  | 114.5 mm |

|   |   |
|---|---|
| Ambient temperature (operation)         | -20 °C ... 55 °C  |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C  |
| Relay type                              | Electromechanically forcibly guided, dust-proof relay.  |
| Mechanical service life                 | Approx. 10 <sup>7</sup> cycles  |
| Mounting position                       | Any   |
| Category in acc. with EN 954-1          | 3 (For delayed contacts)<br>4 (For non-delayed contacts)  |
| Stop category                           | 0 (For non-delayed contacts)<br>1 (For delayed contacts)  |
| Name                                    | Air and creepage distances between the power circuits   |
| Standards/regulations                   | DIN EN 50178/VDE 0160   |
| Rated surge voltage / insulation        | 4 kV / basic isolation, (safe isolation, reinforced insulation and 6 kV between the enabling current paths ( <b>13/14, 23/24, 33/34</b> ) and the remaining current paths and between <b>13/14, 23/24, 33/34</b> between each other.) |
| Rated insulation voltage                | 250 V   |
| Pollution degree                        | 2   |
| Surge voltage category                  | III   |

#### Connection data

|  |                     |
|--|---------------------|
| Conductor cross section solid min.     | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.     | 2.5 mm <sup>2</sup> |
| Conductor cross section stranded min.  | 0.2 mm <sup>2</sup> |
| Conductor cross section stranded max.  | 2.5 mm <sup>2</sup> |
| Conductor cross section AWG/kcmil min. | 24                  |
| Conductor cross section AWG/kcmil max  | 12                  |
| Stripping length                       | 7 mm                |
| Screw thread                           | M3                  |
| Connection method                      | Screw connection    |

#### Certificates / Approvals

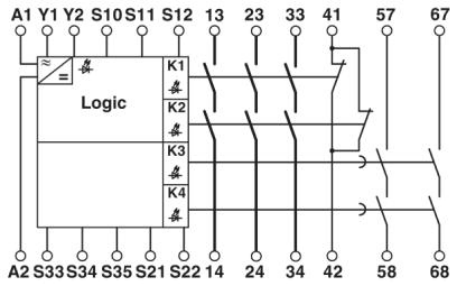


Certification

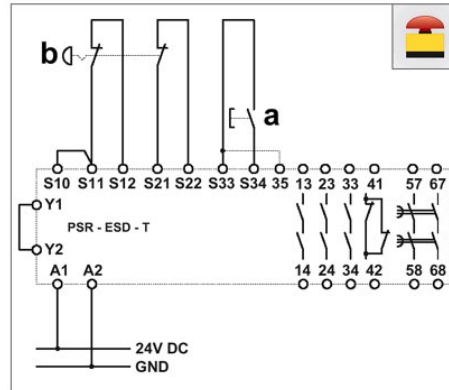
CUL Listed, GOST, TUEV-RH, UL Listed

Diagrams/Drawings

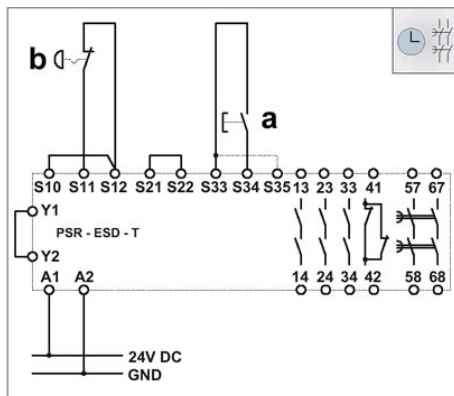
Circuit diagram



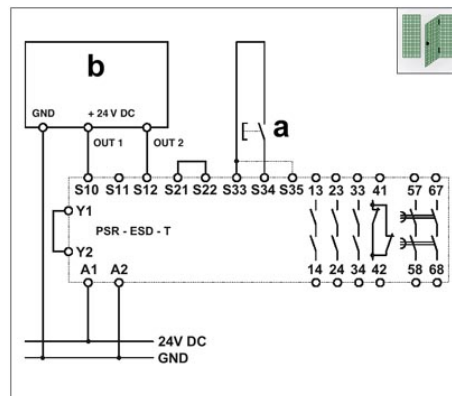
1 = logics



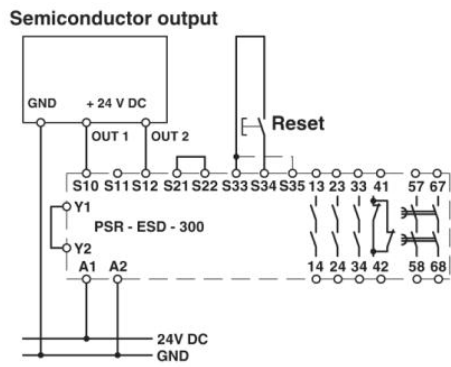
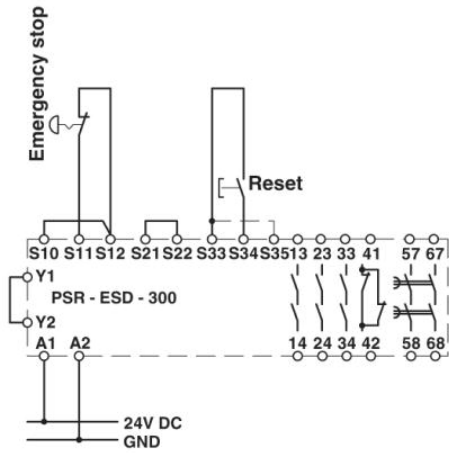
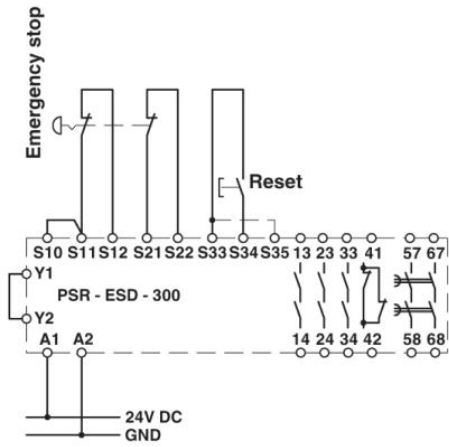
a = RESET  
 b = Emergency stop  
 Two-channel emergency stop circuit with cross circuiting detection and monitored reset button (bridge on S33/S35: Automatic activation), suitable up to safety category 4.



a = RESET  
 b = Emergency stop  
 Single-channel emergency stop circuit with monitored reset button (bridge on S33/S35: Automatic activation), suitable up to safety category 2, safety category 4 only when automatically disconnecting switches are used and cables are installed in separate plastic sheaths.



a = RESET  
 b = semiconductor output  
 Two-channel limit switch monitoring with semiconductor output and monitored reset button (bridge on S33/S35: Automatic activation), suitable up to safety category 4 depending on the limit switch.



**Address**

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