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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Safety relays - PSR-PIP-24DC/MXF2/4X1/2X2/B - 2903256

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Multifunctional safety relay for emergency stop and safety doors up to SIL 3, Cat. 4, PL e, automatically or manually monitored activation, 4 N/O contacts, 3 safety functions, 2 shutdown levels, fixed push-in terminal blocks

Why buy this product

- Up to Cat.4/PL e according to EN ISO 13849-1, SILCL 3 according to EN 62061, SIL 3 according to IEC 61508
- 3 safety functions in one device
- Low housing width of only 22.5mm
- No software configuration required
- Also available with push-in connection



Key Commercial Data

| | |
|--------------|---------------|
| Packing unit | 1 STK |
| GTIN | |
| GTIN | 4046356729802 |

Technical data

Note

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

Dimensions

| | |
|--------|----------|
| Width | 22.5 mm |
| Height | 106.4 mm |
| Depth | 114.5 mm |

Ambient conditions

| | |
|--|---|
| Ambient temperature (operation) | -20 °C ... 45 °C (see derating curve) |
| Ambient temperature (storage/transport) | -25 °C ... 85 °C |
| Max. permissible relative humidity (operation) | 75 % (on average, 85% infrequently, non-condensing) |

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Ambient conditions

| | |
|---|---|
| Max. permissible humidity (storage/transport) | 75 % (on average, 85% infrequently, non-condensing) |
| Maximum altitude | ≤ 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 | 125 mA (with actuated relays) |
| | 55 mA (Two-channel 24 V/0 V + max. 200 mA control (message outputs 32/62) with non-actuated relays) |
| Current consumption | typ. 5 mA (I_{max}/I_x inputs) |
| | 20 mA (in electric torque) |
| Voltage at input/start and feedback circuit | 24 V -15 %; +10 % (first channel: 24 V; second channel: 0 V) |
| Typical response time | 175 ms (monitored/manual start) |
| | 250 ms (automatic start) |
| Typ. starting time with U_s | 250 ms (when controlled via A1) |
| Typical release time | 25 ms (when controlled via S11/S12 and S21/S22) |
| | 20 ms (when controlled via A1) |
| Concurrence input 1/2 | ∞ |
| Recovery time | 1 s (Availability time after activation of sensor circuit: 100ms) |
| Status display | 5 green LEDs |
| Maximum switching frequency | 0.5 Hz |
| Max. permissible overall conductor resistance | 100 Ω |
| Filter time | max. 1.5 ms (Test pulse duration; for all equivalent inputs) |
| | min. 7.5 ms (Test pulse rate; for all equivalent inputs) |

Output data

| | |
|--|---|
| Contact type | 4 enabling current paths |
| | 2 semiconductor alarm outputs |
| Contact material | AgCuNi, +0,2 -0,4 μm Au |
| Minimum switching voltage | 10 V AC/DC |
| Maximum switching voltage | 250 V AC/DC |
| Limiting continuous current | 6 A (N/O contact) |
| | max. 100 mA (Alarm output (24 V DC)) |
| Inrush current, minimum | 10 mA |
| Maximum inrush current | 6 A |
| Sq. Total current | $72 A^2 (I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2)$ |
| Interrupting rating (ohmic load) max. | 1500 VA (250 V AC, τ = 0 ms) |
| | 66 W (220 V DC, τ = 0 ms) |
| | 66 W (110 V DC, τ = 0 ms) |
| | 100 W (48 V DC, τ = 0 ms) |
| | 144 W (24 V DC, τ = 0 ms) |
| Maximum interrupting rating (inductive load) | 48 W (24 V DC, τ = 40 ms) |

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Output data

| | |
|-------------------------|--|
| | 43 W (48 V DC, $\tau = 40$ ms) |
| Switching capacity min. | 0.1 W |
| Output fuse | 6 A gL/gG NEOZED (N/O contact) |
| | 4 A gL/gG NEOZED (for low-demand applications) |

General

| | |
|---|---|
| Relay type | Electromechanical relay with forcibly guided contacts in accordance with EN 50205 |
| Mechanical service life | 10×10^6 cycles |
| Nominal operating mode | 100% operating factor |
| Net weight | 26.1 g |
| Mounting type | DIN rail mounting |
| Assembly instructions | See derating curve |
| Mounting position | vertical or horizontal |
| Degree of protection | IP20 |
| Min. degree of protection of inst. location | IP54 |
| Control | one and two channel |
| Housing color | yellow |

Connection data

| | |
|---------------------------------------|---------------------|
| Connection method | Push-in connection |
| pluggable | no |
| 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 | 10 mm |

Safety-related characteristic data

| | |
|---|--|
| Stop category | 0 |
| Safety Integrity Level (SIL) | 3 |
| | 3 |
| Designation | EN ISO 13849 |
| Performance level (PL) | e (5 A DC13; 3 A AC15; 8760 cycles/year) |
| Category | 4 |
| Safety Integrity Level Claim Limit (SIL CL) | 3 |
| Designation | EN 50156 |
| Safety Integrity Level (SIL) | 3 |

Standards and Regulations

| | |
|-------------|--|
| Designation | Air clearances and creepage distances between the power circuits |
|-------------|--|

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Technical data

Standards and Regulations

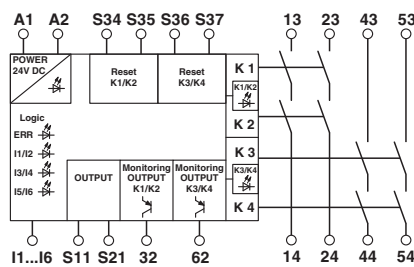
| | |
|--------------------------------|--|
| Standards/regulations | DIN EN 50178/VDE 0160 |
| Rated insulation voltage | 250 V AC |
| Rated surge voltage/insulation | 4 kV/basic isolation (safe isolation, reinforced insulation and 6 kV between input circuit, enabling current paths and safety circuit 1 (13/14, 23/24) and safety circuit 2 (43/44, 53/54).) |
| Degree of pollution | 2 |
| Overvoltage category | III |

Environmental Product Compliance

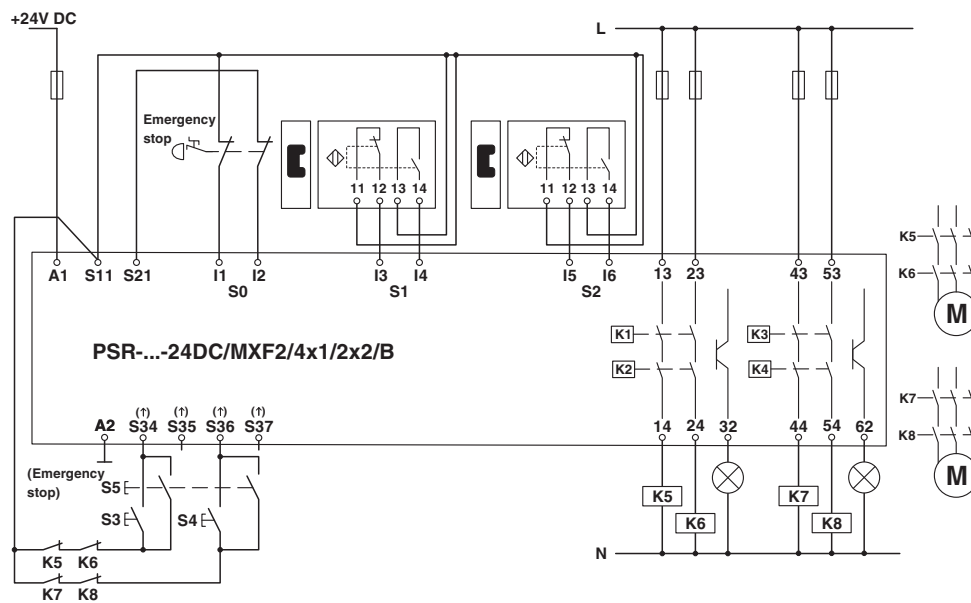
| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Drawings

Circuit diagram

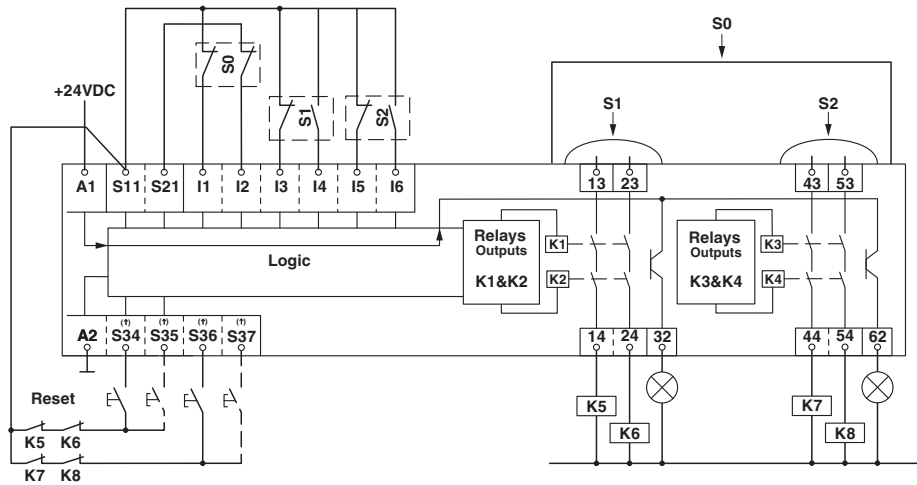


Circuit diagram

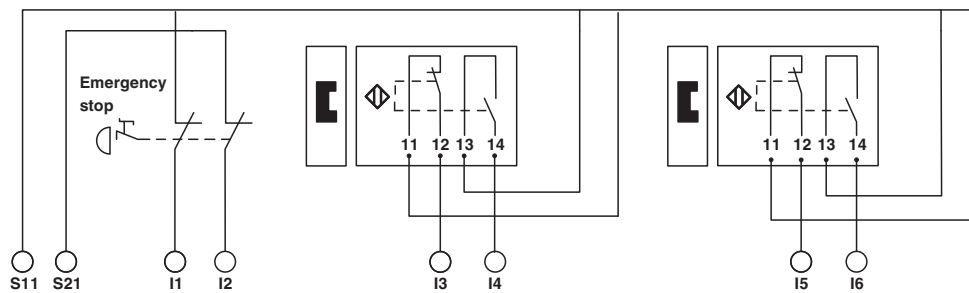


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Circuit diagram



Circuit diagram



Approvals

Approvals

Approvals

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

Ex Approvals

Approval details

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Approvals

| | | | |
|-------------------|--|---|--------------------------|
| Functional Safety | | | 01/205/5353.00/13 |
| 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 |
| EAC | | | RU C- DE.A*30.B.01082 |
| cULus Listed | | | |

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