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Single or two-channel contact extension for OSSD signals (e.g., light grid), 3 N/O contacts, 1 N/C contact, up to Cat. 4 PL e according to EN ISO 13849, SIL 3 according to EN 62061, plug-in spring-cage terminal block, width: 22.5 mm

The figure shows a version with a screw connection

#### Article description

The contact extension device is specifically designed for use in conjunction with electrosensitive protective equipment such as light grids. These systems generally have clocked OSSD signals which enable cross circuits in the cabling to be detected. The relay is resistant to the test pulses generated by the electrosensitive protective equipment receiver. Applications up to PL e or SIL 3 can therefore be implemented without the need for additional traceability to the device on the EDM circuit.







#### Key commercial data

| package_quantity | 1             |
|------------------|---------------|
| GTIN             | 4046356751704 |

### Technical data

#### Note

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

#### **Dimensions**

| Width  | 22.5 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                                        |
| Max. permissible relative humidity (operation) | 75 % (on average, 85% infrequently, non-condensing) |
| Max. permissible humidity (storage/transport)  | 75 % (on average, 85% infrequently, non-condensing) |
| Shock                                          | 15g                                                 |
| Vibration (operation)                          | 10 Hz150 Hz, 2g                                     |
| Maximum altitude                               | ≤ 2000 m (Above sea level)                          |

Input data



## Technical data

## Input data

| Nominal input voltage U <sub>N</sub>               | 24 V DC                  |
|----------------------------------------------------|--------------------------|
| Input voltage range in reference to U <sub>N</sub> | 0.85 1.1                 |
| Typical input current at U <sub>N</sub>            | 70 mA DC                 |
| Voltage at input/start and feedback circuit        | 24 V DC                  |
| Typical response time                              | 25 ms                    |
| Typ. starting time with U <sub>s</sub>             | 100 ms (automatic start) |
| Typical release time                               | 10 ms                    |
| Concurrence input 1/2                              | ∞                        |
| Recovery time                                      | 1 s                      |

## Output data

| •                                            |                                                                                                                     |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Contact type                                 | 3 enabling current paths                                                                                            |
| Contact type                                 | 1 signaling current path                                                                                            |
| Contact material                             | AgSnO <sub>2</sub>                                                                                                  |
| Minimum switching voltage                    | 15 V AC/DC                                                                                                          |
| Maximum switching voltage                    | 250 V                                                                                                               |
| Limiting continuous current                  | 6 A                                                                                                                 |
| Inrush current, minimum                      | 25 mA                                                                                                               |
| Sq. Total current                            | $72 \text{ A}^2 \left( \left  1_{\text{TH}} \right ^2 = \left  1_1^2 + \left  1_2^2 + \left  1_3^2 \right  \right)$ |
| Interrupting rating (ohmic load) max.        | 144 W (24 V DC, τ = 0 ms)                                                                                           |
| Interrupting rating (ohmic load) max.        | 288 W (48 V DC, τ = 0 ms)                                                                                           |
| Interrupting rating (ohmic load) max.        | 77 W (110 V DC, τ = 0 ms)                                                                                           |
| Interrupting rating (ohmic load) max.        | 88 W (220 V DC, τ = 0 ms)                                                                                           |
| Interrupting rating (ohmic load) max.        | 1500 VA (250 V AC, τ = 0 ms)                                                                                        |
| Maximum interrupting rating (inductive load) | 48 W (24 V DC, τ = 40 ms)                                                                                           |
| Maximum interrupting rating (inductive load) | 40 W (48 V DC, τ = 40 ms)                                                                                           |
| Maximum interrupting rating (inductive load) | 35 W (110 V DC, τ = 40 ms)                                                                                          |
| Maximum interrupting rating (inductive load) | 33 W (220 V DC, τ = 40 ms)                                                                                          |
| Switching capacity min.                      | 0.4 W                                                                                                               |
| Output fuse                                  | 10 A gL/gG NEOZED (N/O contact)                                                                                     |
| Output fuse                                  | 4 A gL/gG NEOZED (Signaling current path)                                                                           |
|                                              |                                                                                                                     |

## General

| Relay type                                  | Electromechanical relay with forcibly guided contacts in accordance with EN 50205 |
|---------------------------------------------|-----------------------------------------------------------------------------------|
| Mechanical service life                     | Approx. 10 <sup>7</sup> cycles                                                    |
| Nominal operating mode                      | 100% operating factor                                                             |
| Net weight                                  | 209.9 g                                                                           |
| Mounting type                               | DIN rail mounting                                                                 |
| Mounting position                           | any                                                                               |
| Degree of protection                        | IP20                                                                              |
| Min. degree of protection of inst. location | IP54                                                                              |



## Technical data

#### General

| Control          | one and two channel         |
|------------------|-----------------------------|
| Housing material | Polyamide PA non-reinforced |
| Housing color    | yellow                      |

#### Connection data

| Connection method                     | Spring-cage connection |
|---------------------------------------|------------------------|
| pluggable                             | Yes                    |
| Conductor cross section solid min.    | 0.2 mm²                |
| Conductor cross section solid max.    | 1.5 mm²                |
| Conductor cross section flexible min. | 0.2 mm²                |
| Conductor cross section flexible max. | 1.5 mm²                |
| 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)                      | е                       |
| Category                                    | 4                       |
| Designation                                 | EN 62061                |
| Safety Integrity Level Claim Limit (SIL CL) | 3                       |

## Standards and Regulations

| Shock                          | 15g                                                                                                                        |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Designation                    | Air clearances and creepage distances between the power circuits                                                           |
| Standards/regulations          | DIN EN 50178/VDE 0160                                                                                                      |
| 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                                                                                                                        |
| Vibration (operation)          | 10 Hz150 Hz, 2g                                                                                                            |

## **Environmental Product Compliance**

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



## Classifications

## eCl@ss

| eCI@ss 4.0 | 27371102 |
|------------|----------|
| eCl@ss 4.1 | 27371102 |
| eCI@ss 5.0 | 27371901 |
| eCI@ss 5.1 | 27371901 |
| eCI@ss 6.0 | 27371819 |
| eCI@ss 7.0 | 27371819 |
| eCI@ss 8.0 | 27371819 |
| eCI@ss 9.0 | 27371819 |

#### **ETIM**

| ETIM 3.0 | EC001449 |
|----------|----------|
| ETIM 4.0 | EC001449 |
| ETIM 5.0 | EC001449 |
| ETIM 6.0 | EC001449 |

#### **UNSPSC**

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

## Approvals

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

Approval details

| Functional Safety Ass |  |
|-----------------------|--|
|-----------------------|--|

UL Listed

cUL Listed ⊚

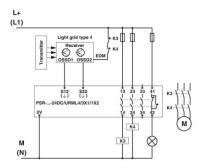
EAC III

cULus Listed №

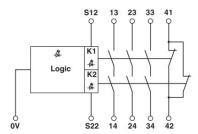
## **Drawings**



#### Application drawing



## Circuit diagram



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