

## Technical data sheet

### Single light beam safety device transmitter

Part no.: 50121912

SLS46CI-70.K28



For illustration purposes only

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## Technical data

### Basic data

|        |     |
|--------|-----|
| Series | 46C |
|--------|-----|

### Functions

|           |                  |
|-----------|------------------|
| Functions | Activation input |
|-----------|------------------|

### Characteristic parameters

|                             |                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------|
| Type                        | 2, IEC/EN 61496, in combination with a suitable test monitoring unit, e.g. MSI-TR1B        |
| SIL                         | 1, IEC 61508, in combination with a suitable test monitoring unit, e.g. MSI-TR1B           |
| SILCL                       | 1, IEC/EN 62061, in combination with a suitable test monitoring unit, e.g. MSI-TR1B        |
| Performance Level (PL)      | c, EN ISO 13849-1:2008, In combination with a suitable test monitoring unit, e.g. MSI-TR1B |
| MTTF <sub>d</sub>           | 400 years, EN ISO 13849-1                                                                  |
| PFH <sub>D</sub>            | 3E-10 per hour                                                                             |
| Mission time T <sub>M</sub> | 20 years, EN ISO 13849-1                                                                   |
| Category                    | 2, EN ISO 13849, In combination with a suitable test monitoring unit, e.g. MSI-TR1B        |

### Optical data

|                          |               |
|--------------------------|---------------|
| Operating range          | 5 ... 70 m    |
| Operating range limit    | 5 ... 80 m    |
| Light source             | LED, Infrared |
| Wavelength               | 940 nm        |
| Transmitted-signal shape | Pulsed        |
| LED group                | 1             |
| Opening angle, max.      | -5 ... 5 °    |

### Electrical data

|                    |                                                         |
|--------------------|---------------------------------------------------------|
| Protective circuit | Polarity reversal protection<br>Short circuit protected |
|--------------------|---------------------------------------------------------|

#### Performance data

|                               |                                               |
|-------------------------------|-----------------------------------------------|
| Supply voltage U <sub>B</sub> | 24 V, DC, -20 ... 20 %, Incl. residual ripple |
| Residual ripple               | 10 %, From U <sub>B</sub>                     |
| Open-circuit current          | 0 ... 40 mA                                   |

#### Inputs

|                             |            |
|-----------------------------|------------|
| Number of activation inputs | 1 Piece(s) |
|-----------------------------|------------|

#### Activation inputs

|                              |                           |
|------------------------------|---------------------------|
| Voltage type                 | DC                        |
| Switching voltage            | high: ≥8V<br>low: ≤ 1.5 V |
| Switching voltage high, min. | 8 V                       |
| Switching voltage low, max.  | 1.5 V                     |
| Activation/disable delay     | 1 ms                      |
| Input resistance             | 10,000 Ω, -30 ... 30 %    |

#### Activation input 1

|                        |                           |
|------------------------|---------------------------|
| Assignment             | Connection 1, conductor 4 |
| Active switching state | High                      |

### Time behavior

|                     |        |
|---------------------|--------|
| Switching frequency | 250 Hz |
| Response time       | 2.5 ms |
| Readiness delay     | 300 ms |

### Connection

|                       |            |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
|-----------------------|------------|

#### Connection 1

|                      |                             |
|----------------------|-----------------------------|
| Function             | Signal IN<br>Voltage supply |
| Type of connection   | Cable                       |
| Cable length         | 2,000 mm                    |
| Sheathing material   | PUR                         |
| Number of conductors | 4 -wire                     |
| Wire cross section   | 0.21 mm²                    |

### Mechanical data

|                            |                           |
|----------------------------|---------------------------|
| Design                     | Cubic                     |
| Dimension (W x H x L)      | 20.5 mm x 76.3 mm x 44 mm |
| Housing material           | Plastic                   |
| Plastic housing            | PC-PBT                    |
| Lens cover material        | Plastic / PMMA            |
| Net weight                 | 100 g                     |
| Housing color              | Red                       |
| Type of fastening          | Through-hole mounting     |
| Compatibility of materials | ECOLAB                    |

### Operation and display

|                 |            |
|-----------------|------------|
| Type of display | LED        |
| Number of LEDs  | 2 Piece(s) |

### Environmental data

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -30 ... 60 °C |
| Ambient temperature, storage   | -30 ... 70 °C |

### Certifications

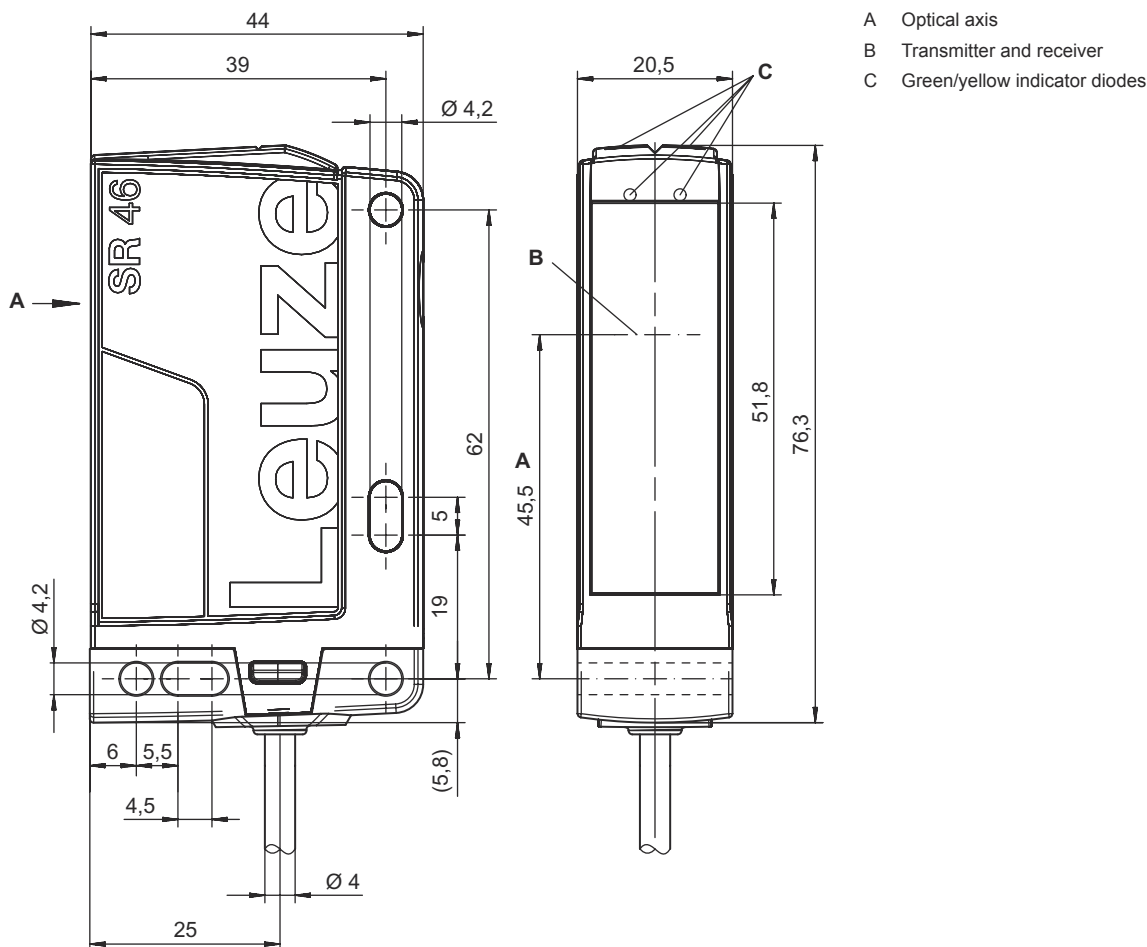
|                      |                             |
|----------------------|-----------------------------|
| Degree of protection | IP 67<br>IP 69K             |
| Protection class     | III, Rating voltage 50V     |
| Approvals            | c UL US                     |
| Standards applied    | IEC 60947-5-2, IEC/EN 61496 |

## Technical data

|                       |          |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| ECLASS 5.1.4          | 27272701 |
| ECLASS 8.0            | 27272701 |
| ECLASS 9.0            | 27272701 |
| ECLASS 10.0           | 27272701 |
| ECLASS 11.0           | 27272701 |
| ECLASS 12.0           | 27272701 |
| ECLASS 13.0           | 27272701 |
| ECLASS 14.0           | 27272701 |
| ECLASS 15.0           | 27272701 |
| ETIM 5.0              | EC001831 |
| ETIM 6.0              | EC001831 |
| ETIM 7.0              | EC001831 |
| ETIM 8.0              | EC001831 |
| ETIM 9.0              | EC001831 |
| ETIM 10.0             | EC001831 |

## Dimensioned drawings

All dimensions in millimeters



## Electrical connection

### Connection 1

|                      |                |
|----------------------|----------------|
| Function             | Signal IN      |
|                      | Voltage supply |
| Type of connection   | Cable          |
| Cable length         | 2,000 mm       |
| Sheathing material   | PUR            |
| Cable color          | Black          |
| Number of conductors | 4 -wire        |
| Wire cross section   | 0.21 mm²       |

### Conductor color

### Conductor assignment

|       |        |
|-------|--------|
| Brown | +24 V  |
| White | n.c.   |
| Blue  | GND    |
| Black | Active |

## Operation and display

| LED | Display                  | Meaning               |
|-----|--------------------------|-----------------------|
| 1   | Green, continuous light  | Ready                 |
| 2   | Yellow, continuous light | Transmitter activated |

## Suitable receivers

|                                                                                     | Part no. | Designation      | Article                                  | Description                                               |
|-------------------------------------------------------------------------------------|----------|------------------|------------------------------------------|-----------------------------------------------------------|
|  | 50121920 | SLE46CI-70.K2/4P | Single light beam safety device receiver | Response time: 2.5 ms<br>Connection: Cable, 2,000 mm, PUR |

## Notes



### Observe intended use!



- ⚡ The product may only be put into operation by competent persons.
- ⚡ Only use the product in accordance with its intended use.

### For UL applications:



- ⚡ Certification: UL 508, C22.2 No.14-13
- ⚡ Only for use in "class 2" circuits
- ⚡ These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/ CYJV7 or PVVA/PVVA7)

## Further information

- Typ. operating range limit: max. attainable range without function reserve
- Operating range: recommended range with function reserve
- Light source: Average life expectancy 100,000h at an ambient temperature of 25 °C

## Accessories

### Connection technology - Connection unit

|                                                                                   | Part no. | Designation | Article      | Description |
|-----------------------------------------------------------------------------------|----------|-------------|--------------|-------------|
|  | 547958   | MSI-TR1B-01 | Safety relay |             |
|                                                                                   | 547959   | MSI-TR1B-02 | Safety relay |             |

### Mounting technology - Mounting brackets

|                                                                                     | Part no. | Designation | Article         | Description                                                                                                                                                                              |
|-------------------------------------------------------------------------------------|----------|-------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50105315 | BT 46       | Mounting device | Design of mounting device: Angle, L-shape<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Rigid<br>Material: Metal |

### Mounting technology - Rod mounts

|                                                                                     | Part no. | Designation  | Article         | Description                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------|----------|--------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50122797 | BTU 346M-D12 | Mounting system | Design of mounting device: Mounting system<br>Fastening, at system: For 12 mm rod, Sheet-metal mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Turning, 360°, Adjustable, Clampable<br>Material: Metal |

Accessories

Muting - Mounting systems

|                                                                                   | Part no. | Designation  | Article         | Description                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------|----------|--------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50117252 | BTU 300M-D12 | Mounting system | Design of mounting device: Mounting system<br>Fastening, at system: For 12 mm rod, Sheet-metal mounting<br>Mounting bracket, at device: Screw type, Suited for M4 screws<br>Type of mounting device: Clampable, Adjustable, Turning, 360°<br>Material: Metal |

| Note                                                                             |                                                                                                                           |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
|  | A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page. |