



Part no.: 50126550  
**SLS46CI-40.K48-M12**  
Single beam safety device transmitter



Figure can vary

## Contents

- Technical data
- Suitable receivers
- Dimensioned drawings
- Electrical connection
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## Technical data

| <b>Basic data</b>                |   |
|----------------------------------|---|
| Series                           | 46C   |
| <b>Functions</b>                 |   |
| Functions                        | Activation input                              |
| <b>Characteristic parameters</b> |   |
| Type                             | 4, IEC/EN 61496                               |
| MTTF <sub>d</sub>                | 900 years, EN ISO 13849-1                     |
| Mission time T <sub>M</sub>      | 20 years, EN ISO 13849-1                      |
| <b>Optical data</b>              |   |
| Operating range                  | 0.25 ... 40 m                                 |
| Operating range limit            | 0.25 ... 48 m                                 |
| Light source                     | LED, Infrared                                 |
| LED light wavelength             | 940 nm  |
| Transmitted-signal shape         | Pulsed  |
| LED group                        | 1   |
| Opening angle, max.              | -2.5 ... 2.5 °                                |
| <b>Electrical data</b>           |   |
| <b>Performance data</b>          |   |
| Supply voltage                   | 24 V, DC, -20 ... 20 %, Incl. residual ripple |
| Residual ripple                  | 10 %, From U <sub>B</sub>                     |
| Open-circuit current             | 0 ... 40 mA                                   |
| <b>Inputs</b>                    |   |
| Number of activation inputs      | 1 Piece(s)                                    |
| <b>Activation inputs</b>         |   |
| Voltage type                     | DC  |
| Switching voltage                | high: ≥8V<br>low: ≤1.5V                       |
| 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 %                        |
| <b>Activation input 1</b>        |   |
| Assignment                       | Connection 1, pin 4                           |
| Active switching state           | High  |
| <b>Timing</b>                    |   |
| Switching frequency              | 250 Hz  |
| Response time                    | 2.5 ms  |
| Readiness delay                  | 300 ms  |
| <b>Connection</b>                |   |
| Number of connections            | 1 Piece(s)                                    |

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**Connection 1**

|                    |                             |
|--------------------|-----------------------------|
| Type of connection | Connector                   |
| Function           | Voltage supply<br>Signal IN |
| Thread size        | M12                         |
| Material           | Plastic                     |
| No. of pins        | 4 -pin                      |

**Mechanical data**

|                            |                           |
|----------------------------|---------------------------|
| Design                     | Cubic                     |
| Dimension (W x H x L)      | 20.5 mm x 76.3 mm x 44 mm |
| Housing material           | Plastic, PC-PBT           |
| Lens cover material        | Plastic / PMMA            |
| Net weight                 | 50 g                      |
| Housing color              | Yellow                    |
| 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 69K<br>IP 67             |
| Protection class     | III, Rating voltage 50 V    |
| Certifications       | c UL US<br>c TÜV NRTL US    |
| Standards applied    | IEC 60947-5-2, IEC/EN 61496 |

**Classification**

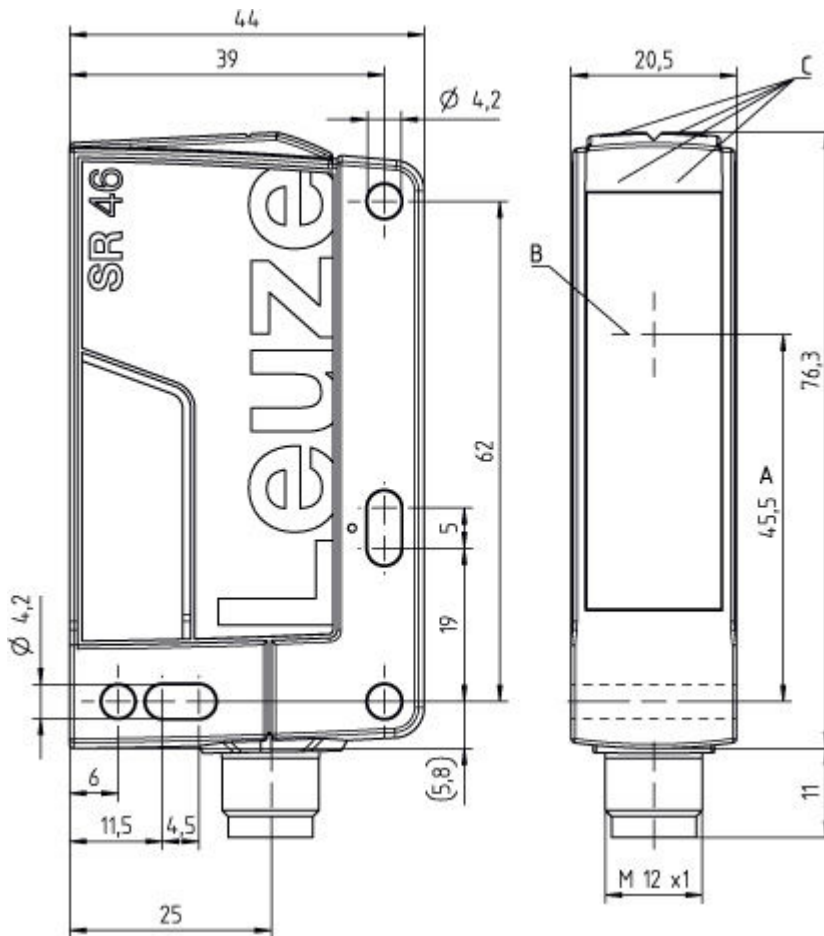
|            |          |
|------------|----------|
| eCl@ss 8.0 | 27272701 |
| eCl@ss 9.0 | 27272701 |
| ETIM 5.0   | EC001831 |

**Suitable receivers**

|   | Part no. | Designation              | Article                                  | Description  |
|---|----------|--------------------------|--|--|
|  | 50126332 | SLE46CI-40.K4/<br>4P-M12 | Single beam<br>safety device<br>receiver | Response time: 2.5 ms<br>Connection: Connector, M12, Plastic, 4 -pin |

## Dimensioned drawings

All dimensions in millimeters



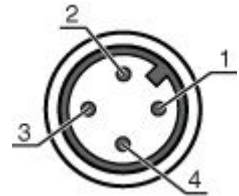
- A Optical axis
- B Transmitter and receiver
- C Green/yellow indicator diodes

## Electrical connection

| Connection 1       |                             |
|--------------------|-----------------------------|
| Type of connection | Connector                   |
| Function           | Voltage supply<br>Signal IN |
| Thread size        | M12                         |
| Type               | Male                        |
| Material           | Plastic                     |
| No. of pins        | 4 -pin                      |
| Encoding           | A-coded                     |

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| Pin | Pin assignment | Conductor color |
|-----|----------------|-----------------|
| 1   | +24V           | Brown           |
| 2   | n.c.           | White           |
| 3   | GND            | Blue            |
| 4   | Active         | Black           |





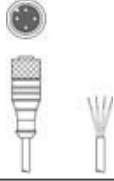

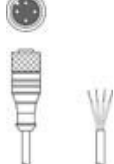
## Operation and display

### LEDs

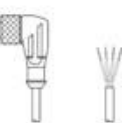
| LED | Display                  | Meaning               |
|-----|--------------------------|-----------------------|
| 1   | Green, continuous light  | Ready                 |
| 2   | Yellow, continuous light | Transmitter activated |

## Accessories

### Connection technology - Connection cables



|   | Part no. | Designation        | Article          | Description  |
|---|----------|--------------------|------------------|--|
|  | 50130654 | KD U-M12-4A-P1-020 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 2,000 mm<br>Sheathing material: PUR  |
|  | 50130657 | KD U-M12-4A-P1-050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PUR  |
|  | 50130658 | KD U-M12-4A-P1-100 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 10,000 mm<br>Sheathing material: PUR |
|  | 50130648 | KD U-M12-4A-V1-020 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 2,000 mm<br>Sheathing material: PVC  |
|  | 50130652 | KD U-M12-4A-V1-050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC  |

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|   | Part no. | Designation        | Article          | Description   |
|---|----------|--------------------|------------------|---|
|    | 50130653 | KD U-M12-4A-V1-100 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 10,000 mm<br>Sheathing material: PVC  |
|    | 50132431 | KD U-M12-4A-V1-200 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 20,000 mm<br>Sheathing material: PVC  |
|    | 50132430 | KD U-M12-4A-V1-300 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 30,000 mm<br>Sheathing material: PVC  |
|    | 50130692 | KD U-M12-4W-P1-020 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 2,000 mm<br>Sheathing material: PUR  |
|  | 50130694 | KD U-M12-4W-P1-050 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PUR  |
|  | 50130695 | KD U-M12-4W-P1-100 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 10,000 mm<br>Sheathing material: PUR |
|  | 50130688 | KD U-M12-4W-V1-020 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 2,000 mm<br>Sheathing material: PVC  |
|  | 50130690 | KD U-M12-4W-V1-050 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC  |
|  | 50130691 | KD U-M12-4W-V1-100 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 10,000 mm<br>Sheathing material: PVC |
|  | 50132641 | KD U-M12-4W-V1-200 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 20,000 mm<br>Sheathing material: PVC |

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## Mounting technology - Mounting brackets

|   | Part no. | Designation | Article          | Description   |
|---|----------|-------------|------------------|---|
|  | 50118543 | BT 300M.5   | Mounting bracket | 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: Adjustable<br>Material: Stainless steel |
|  | 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   |
|---|----------|----------------|-----------------|---|
|   | 50117253 | BTU 300M-D10   | Mounting system | Contains: 2x M4 x 25 screw, 2x M4 x 20 screw, 4x position washers<br>Design of mounting device: Mounting system<br>Fastening, at system: For 10 mm rod, Sheet-metal mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Clampable, Adjustable, Turning, 360°<br>Material: Metal                               |
|  | 50117252 | BTU 300M-D12   | Mounting system | Contains: 2x M4 x 25 screw, 2x M4 x 20 screw, 4x position washers<br>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: Clampable, Adjustable, Turning, 360°<br>Material: Metal                               |
|  | 50117251 | BTU 300M-D14   | Mounting system | Contains: 2x M4 x 25 screw, 2x M4 x 20 screw, 4x position washers<br>Design of mounting device: Mounting system<br>Fastening, at system: For 14 mm rod, Sheet-metal mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Clampable, Adjustable, Turning, 360°<br>Material: Metal                               |
|  | 50120425 | BTU 300M.5-D12 | Mounting system | Contains: 2x M4 x 25 screw, 2x M4 x 20 screw, 2x position washers, 2x M4 mounting nut<br>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: Clampable, Adjustable, Turning, 360°<br>Material: Stainless steel |
|  | 50119332 | BTU 900M-D10   | Mounting system | Contains: 2x M4 x 10 screw, 2x position washers<br>Design of mounting device: Mounting system<br>Fastening, at system: For 10 mm rod, Sheet-metal mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Clampable, Turning, 360°, Swiveling<br>Material: Metal  |
|  | 50119331 | BTU 900M-D12   | Mounting system | Contains: 2x position washers, 2x M4 x 10 screw<br>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: Clampable, Turning, 360°, Swiveling<br>Material: Metal  |


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|   | Part no. | Designation  | Article         | Description  |
|---|----------|--------------|-----------------|--|
|  | 50119330 | BTU 900M-D14 | Mounting system | Contains: 2x position washers, 2x M4 x 10 screw<br>Design of mounting device: Mounting system<br>Fastening, at system: For 14 mm rod, Sheet-metal mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Clampable, Turning, 360°, Swiveling<br>Material: Metal |


**Mounting technology - Other**

|   | Part no. | Designation | Article        | Description   |
|---|----------|-------------|----------------|---|
|  | 50136665 | BTX 046M    | Mounting plate | Contains: 2x M4 x 30 screw, 1 M4 x 12 screw<br>Design of mounting device: Mounting plate<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type<br>Material: Metal |

**Alignment aids**

|   | Part no. | Designation | Article       | Description   |
|---|----------|-------------|---------------|---|
|   | 50129659 | ARH 46C     | Alignment aid | Light source: laser, Red<br>Housing material: Metal |
|  | 50109545 | SAT 5       | Alignment aid | Housing material: Metal                             |

**Protective screens**

|   | Part no. | Designation | Article           | Description     |
|---|----------|-------------|-------------------|-----------------|
|  | 50132604 | SG 46C      | Protective screen | Material: Glass |

**Notes**

| Observe intended use!   |
|---|
| <ul style="list-style-type: none"> <li>The product may only be put into operation by competent persons.</li> <li>Only use the product in accordance with its intended use.</li> </ul> |

**ATTENTION!**

- The SLS46CK4 safety sensors are a type 4 AOPD only in combination with the MSI-TRM safety relays.
- For mounting, electrical connection and operation, the operating instructions of the MSI-TRM safety relays are to be observed.

**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)

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