# Leuze electronic

the *sensor* people

**Part no.: 50121921**
# SLE46CI-40.K2/4P-M12
## Single beam safety device receiver

Figure can vary
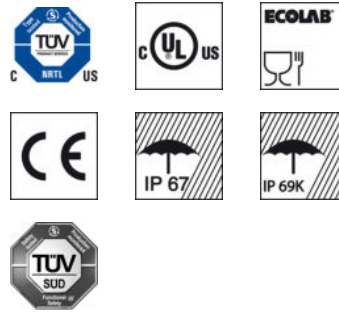
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SMART **SENSOR** BUSINESS

## Part no.: 50121921 – SLE46CI-40.K2/4P-M12 – Single beam safety device

### Technical data

| *Basic data* | |
| --- | --- |
| Series | 46C |

| *Functions* | |
| --- | --- |
| Functions | Diagnostic output<br>Alignment indicator |

| *Characteristic parameters* | |
| --- | --- |
| Type | 2, IEC/EN 61496 |
| Performance Level (PL) | c, EN ISO 13849-1:2008, In combination with MSI-TRMB-01 or MSI-TRMB-02 safety relay |
| $MTTF_d$ | 400 years, EN ISO 13849-1 |
| Mission time $T_M$ | 20 years, EN ISO 13849-1 |
| Category | 2, EN ISO 13849:2008, In combination with MSI-TRMB-01 or MSI-TRMB-02 safety relay |

| *Electrical data* | |
| --- | --- |
| Protective circuit | Short circuit protected<br>Polarity reversal protection |
| *Performance data* | |
| Supply voltage | 24 V, DC, -20 ... 20 %, Incl. residual ripple |
| Residual ripple | 10 %, From $U_B$ |
| Open-circuit current | 0 ... 15 mA |
| *Outputs* | |
| Number of digital switching outputs | 2 Piece(s) |
| *Switching outputs* | |
| Switching voltage high, min. | 22 V |
| Switching voltage low, max. | 2 V |
| Switching voltage, typ. | 23 V |
| Voltage type | DC |
| Switching current, max. | 100 mA |
| *Switching output 1* | |
| Assignment | Connection 1, pin 2 |
| Switching element | Transistor, PNP |
| Switching principle | Dark switching |
| Function | Diagnostic output |
| *Switching output 2* | |
| Assignment | Connection 1, pin 4 |
| Switching element | Transistor, PNP |
| Switching principle | Light switching |
| Function | Switching output |

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

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

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# Part no.: 50121921 – SLE46CI-40.K2/4P-M12 – Single beam safety device

| Connection 1 | |
|---|---|
| Type of connection | Connector |
| Function | Signal OUT<br>Voltage supply |
| 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 | 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 69K<br>IP 67 |
| Protection class | III, Rating voltage 50 V |
| Certifications | TÜV Süd<br>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 transmitters

| | Part no. | Designation | Article | Description |
|---|---|---|---|---|
|  | 50121913 | SLS46CI-40.K28-M12 | Single beam safety device transmitter | Operating range: 0.5 ... 40 m<br>Operating range limit: 0.5 ... 48 m<br>Light source: LED, Infrared<br>Response time: 2.5 ms<br>Connection: Connector, M12, Plastic, 4 -pin |

## Part no.: 50121921 – SLE46CI-40.K2/4P-M12 – Single beam safety device

### Dimensioned drawings

All dimensions in millimeters
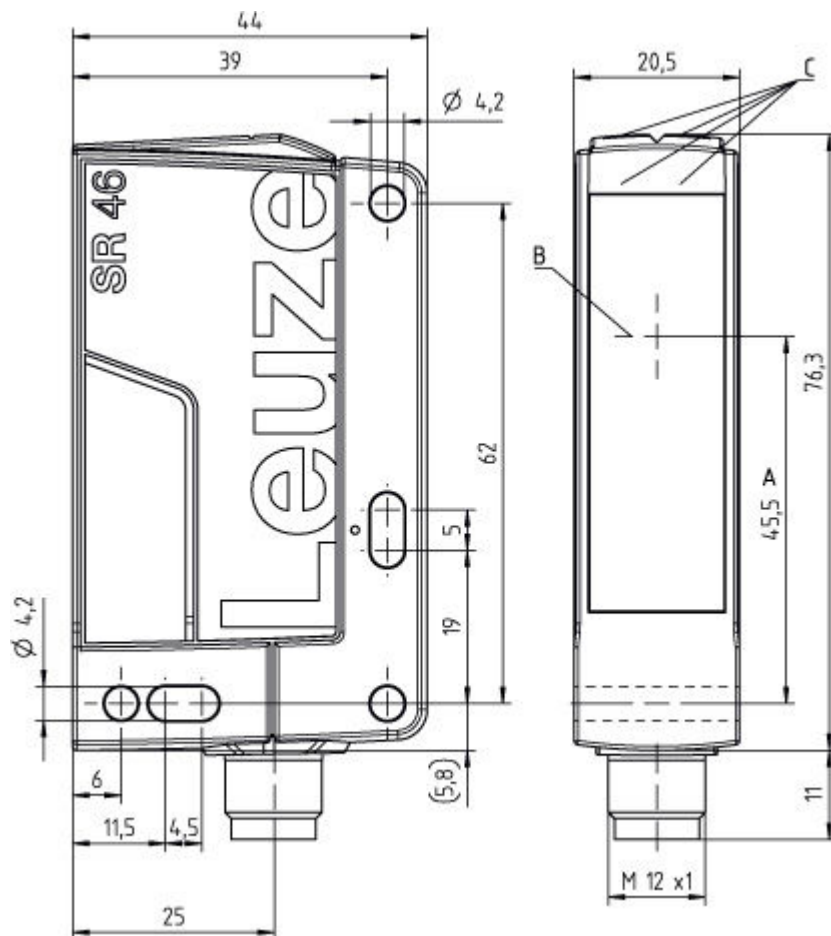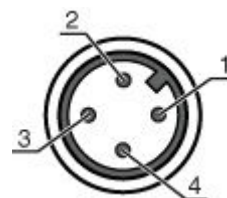


A     Optical axis
B     Transmitter and receiver
C     Green/yellow indicator diodes

### Electrical connection

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

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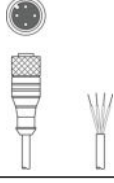4 / 8

| Pin | Pin assignment |
|-----|----------------|
| 1 | +24V |
| 2 | Diagnosis |
| 3 | GND |
| 4 | OUT |
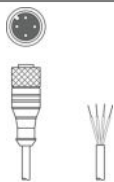
## Operation and display

### LEDs

| LED | Display | Meaning |
|-----|---------|---------|
| 1 | Green, continuous light | Ready |
| 2 | Yellow, continuous light | Light path free |

## 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 |

## Mounting technology - Mounting brackets

| | Part no. | Designation | Article | Description |
|---|---|---|---|---|
| | 50118543 | BT 300M.5 | Mounting bracket | Design of mounting device: Angle, L-shape<br>Mounting bracket, 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>Mounting bracket, 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>Mounting bracket, 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>Mounting bracket, 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>Mounting bracket, 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>Mounting bracket, 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 |
| | 50122797 | BTU 346M-D12 | Mounting system | Contains: 2x M4 x 25 screw, 2x position washers<br>Design of mounting device: Mounting system<br>Mounting bracket, at system: For 12 mm rod, Sheet-metal mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Turning, 360°, Clampable, Adjustable<br>Material: Metal |
| | 50122798 | BTU 346M.5-D12 | Mounting system | Design of mounting device: Mounting system<br>Mounting bracket, at system: For 12 mm rod, Sheet-metal mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Turning, 360°, Clampable, Adjustable<br>Material: Stainless steel |

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| | Part no. | Designation | Article | Description |
|---|---|---|---|---|
| | 50119332 | BTU 900M-D10 | Mounting system | Contains: 2x M4 x 10 screw, 2x position washers<br>Design of mounting device: Mounting system<br>Mounting bracket, 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>Mounting bracket, 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 |
| | 50119330 | BTU 900M-D14 | Mounting system | Contains: 2x position washers, 2x M4 x 10 screw<br>Design of mounting device: Mounting system<br>Mounting bracket, 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>Mounting bracket, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type<br>Material: Metal |

## Notes

| **Observe intended use!** |
|---|
| • The product may only be put into operation by competent persons.<br><br>• Only use the product in accordance with its intended use. |

| **For UL applications:** |
|---|
| • Certification: UL 508, C22.2 No.14-13<br><br>• Only for use in "class 2" circuits<br><br>• 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) |

• Light source: Average life expectancy 100,000 h at an ambient temperature of 25 °C

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