# Technical data sheet
# Single light beam safety device receiver
Part no.: 50121915
SLE46C-70.K2/4P-M12

For Illustration purposes only

**Contents**

# Technical data

Leuze

## Basic data

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

## Functions

| | |
|---|---|
| **Functions** | Alignment indicator |
| | Diagnostic output |

## 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 |
| **$MTTF_d$** | 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 a suitable test monitoring unit, e.g. MSI-TR1B |

## Electrical data

| | |
|---|---|
| **Protective circuit** | Polarity reversal protection |
| | Short circuit protected |

### Performance data

| | |
|---|---|
| **Supply voltage $U_B$** | 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, type.** | 23 V |
| **Voltage type** | DC |
| **Switching current, max.** | 100 mA |
| **Switching voltage** | high: ≥($U_B$-2V) |
| | low: ≤ 2 V |

#### 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 |

## 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 OUT |
| | Voltage supply |
| **Type of connection** | Connector |
| **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 |
| **Plastic housing** | 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

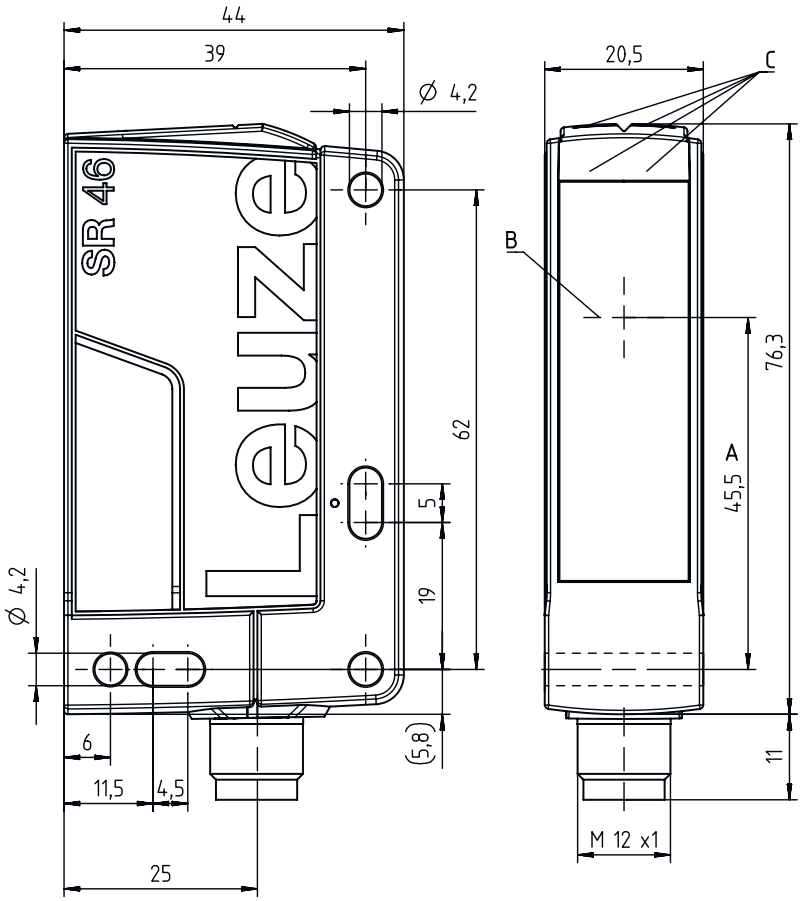
| | |
|---|---|
| **Degree of protection** | IP 67 |
| | IP 69K |
| **Protection class** | III, Rating voltage 50 V |
| **Approvals** | c TÜV NRTL US |
| | c UL US |
| | TÜV Süd |
| **Standards applied** | IEC 60947-5-2, IEC/EN 61496 |

# 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



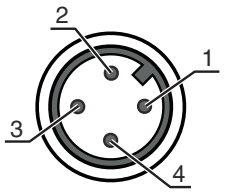

A Optical axis
B Transmitter and receiver
C Green/yellow indicator diodes

# Electrical connection

## Connection 1

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

| Pin | Pin assignment |
|---|---|
| 1 | +24 V |
| 2 | Diagnosis |
| 3 | GND |
| 4 | OUT |




# Operation and display

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

# Suitable transmitters

| | Part no. | Designation | Article | Description |
|---|---|---|---|---|
|  | 50121907 | SLS46C-70.K28-M12 | Single light beam safety device transmitter | Operating range: 5 ... 70 m<br>Operating range limit: 5 ... 80 m<br>Light source: LED, Red<br>Response time: 2.5 ms<br>Connection: Connector, M12, Plastic, 4 -pin |

# 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

- Light source: Average life expectancy 100,000 h 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 | |

## Connection technology - Connection cables

| | Part no. | Designation | Article | Description |
|---|---|---|---|---|
|  | 50130690 | KD U-M12-4W-V1-050 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin<br>Connector, LED: No<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5.000 mm<br>Sheathing material: PVC |

## 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 |

# Accessories

## 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 |

## 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.