

## Technical data sheet

### Single light beam safety device transmitter

Part no.: 50134014

SLS518L1-K48-M12

#### Contents

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For illustration purposes only



## Technical data

### Basic data

|        |     |
|--------|-----|
| Series | 518 |
|--------|-----|

### Special version

|                 |                  |
|-----------------|------------------|
| Special version | Activation input |
|-----------------|------------------|

### Characteristic parameters

|                             |                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------|
| Type                        | 4, IEC/EN 61496, in combination with a suitable test monitoring unit, e.g. MSI-TR1B |
| SIL                         | 3, IEC 61508, in combination with a suitable test monitoring unit, e.g. MSI-TR1B    |
| SILCL                       | 3, IEC/EN 62061, in combination with a suitable test monitoring unit, e.g. MSI-TR1B |
| Performance Level (PL)      | e, EN ISO 13849-1                                                                   |
| MTTF <sub>d</sub>           | 900 years, EN ISO 13849-1                                                           |
| Mission time T <sub>M</sub> | 20 years, EN ISO 13849-1                                                            |
| Category                    | 4, EN ISO 13849, In combination with MSI-TRMB safety relay                          |

### Optical data

|                          |                                          |
|--------------------------|------------------------------------------|
| Operating range          | 0 ... 40 m                               |
| Operating range limit    | 0 ... 40 m                               |
| Light source             | Laser, Red                               |
| Wavelength               | 650 nm                                   |
| Laser class              | 1, EN 60825-1:2014, (2, EN 60825-1:2007) |
| Max. laser power         | 0.001 W                                  |
| Transmitted-signal shape | Pulsed                                   |
| Pulse duration           | 5 µs                                     |
| Opening angle, max.      | -2.5 ... 2.5 °                           |

### Electrical data

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

#### Performance data

|                               |                                               |
|-------------------------------|-----------------------------------------------|
| Supply voltage U <sub>B</sub> | 24 V, DC, -15 ... 15 %, Incl. residual ripple |
| Open-circuit current          | 35 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, pin 4 |
| Active switching state | High                |

### Time behavior

|                     |        |
|---------------------|--------|
| Switching frequency | 500 Hz |
| Response time       | 1 ms   |
| Readiness delay     | 300 ms |

### Connection

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

#### Connection 1

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

### Mechanical data

|                     |                |
|---------------------|----------------|
| Design              | Cylindrical    |
| Dimension (Ø x L)   | 22 mm x 86 mm  |
| Thread size         | M18            |
| Housing material    | Plastic        |
| Plastic housing     | ABS, UL 94-V0  |
| Lens cover material | Plastic / PMMA |
| Net weight          | 30 g           |
| Housing color       | Black          |
| Type of fastening   | Screw type     |

### Operation and display

|                 |            |
|-----------------|------------|
| Type of display | LED        |
| Number of LEDs  | 1 Piece(s) |

### Environmental data

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -10 ... 50 °C |
| Ambient temperature, storage   | -25 ... 70 °C |

### Certifications

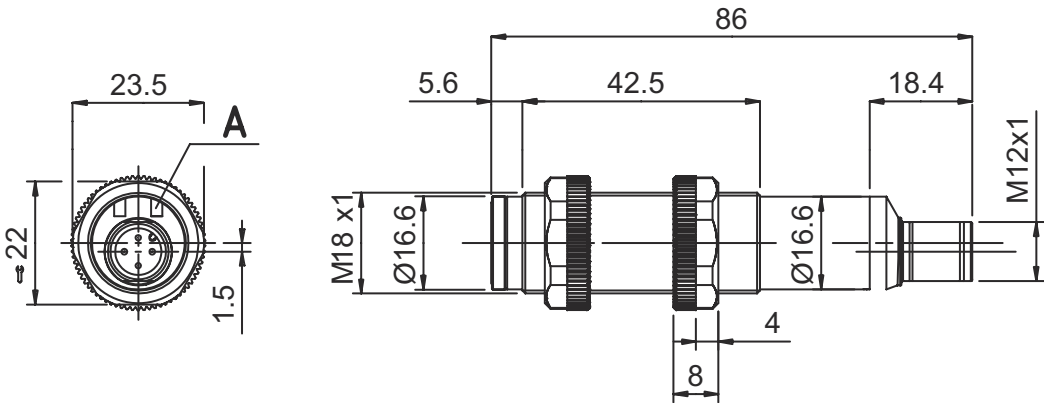
|                      |                             |
|----------------------|-----------------------------|
| Degree of protection | IP 67                       |
| Approvals            | TÜV Süd<br>UL US            |
| Standards applied    | IEC 60947-5-2, IEC/EN 61496 |

### Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| ECLASS 8.0            | 27272701 |
| ECLASS 9.0            | 27272701 |
| ETIM 5.0              | EC001831 |
| ETIM 6.0              | EC001831 |

Dimensioned drawings

All dimensions in millimeters



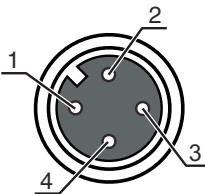
A Green LED

Electrical connection

Connection 1

|                    |                  |
|--------------------|------------------|
| Function           | Activation input |
|                    | Voltage supply   |
| Type of connection | Connector        |
| Thread size        | M12              |
| Type               | Female           |
| Material           | Plastic          |
| No. of pins        | 4 -pin           |
| Encoding           | A-coded          |

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



Operation and display

| LED | Display                 | Meaning |
|-----|-------------------------|---------|
| 1   | Green, continuous light | Ready   |

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.

Notes

For UL applications:



Only for use in "class 2" circuits

ATTENTION!



The SLS518 K4 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.

WARNING! LASER RADIATION – CLASS 1 LASER PRODUCT



The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of **laser class 1** as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to Laser Notice No. 50 from June 24, 2007.  
Observe the applicable statutory and local laser protection regulations.  
The device must not be tampered with and must not be changed in any way.  
There are no user-serviceable parts inside the device.  
Repairs must only be performed by Leuze electronic GmbH + Co. KG.

Further information

- Typ. operating range limit: max. attainable range without function reserve
- Operating range: recommended range with function reserve