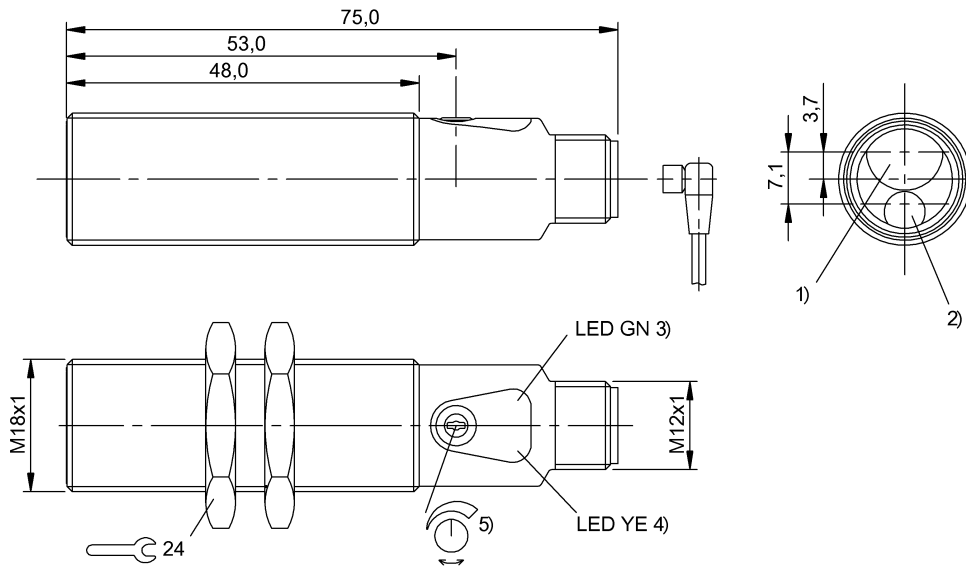


## BOS 18M-PS-LH22-S4 BOS002H



1) Optical axis receiver 2) Optical axis emitter 3) Power/short-circuit 4) Output function/Error 5) Sn



LISTED IND. CONT. EQ. 81U2  
for use in the secondary of  
a class 2 source of supply



### Display/Operation

|          |                               |
|----------|-------------------------------|
| Adjuster | Potentiometer 10-turn (1x)    |
| Setting  | Rated switching distance (Sn) |

### Electrical connection

|                             |                                  |
|-----------------------------|----------------------------------|
| Connection                  | M12x1-Connector, 4-pole, A-coded |
| Contact, surface protection | Gold plated                      |
| Polarity reversal protected | yes                              |
| Short-circuit protection    | yes                              |

### Electrical data

|                                |             |
|--------------------------------|-------------|
| Hysteresis H max. (% of Sr)    | 5.0 %       |
| Load capacitance max. at Ue    | 0.1 µF      |
| No-load current Io max. at Ue  | 30 mA       |
| Operating voltage Ub           | 10...30 VDC |
| Pollution degree               | 3           |
| Protected against miswiring    | yes         |
| Pulse duration t max.          | 10000 µs    |
| Rated insulation voltage Ui    | 75 V DC     |
| Rated operating current Ie DC  | 100 mA      |
| Rated operating voltage Ue DC  | 24 V        |
| Ready delay tv max.            | 100 ms      |
| Repeat accuracy max. (% of Sr) | 1.0 %       |
| Residual current Ir max.       | 10 µA       |
| Switching frequency            | 500 Hz      |
| Turn-off delay toff max.       | 1 ms        |
| Turn-on delay ton max.         | 1 ms        |
| Utilization category           | DC -13      |
| Voltage drop Ud max. at Ie     | 2.5 V       |

### Environmental conditions

|                           |            |
|---------------------------|------------|
| Ambient temperature       | -5...55 °C |
| Protection class          | II         |
| Protection type IEC 60529 | IP67       |

### General data

|                     |                             |
|---------------------|-----------------------------|
| Approval/Conformity | CE<br>cULus                 |
| Basic standard      | IEC 60947-5-2               |
| Series              | 18M                         |
| Style               | Cylinder<br>Straight optics |

### Material

|                          |               |
|--------------------------|---------------|
| Housing material         | Brass         |
| Material sensing surface | PMMA          |
| Surface protection       | nickel plates |

### Mechanical data

|                                       |                      |
|---------------------------------------|----------------------|
| Dimension                             | Ø 18 x 75 mm         |
| Distance deviation 6 % max. (% of Sr) | 16.0 %               |
| Fastening detail                      | Nut M18x1            |
| Smallest part typ.                    | 50 µm at focal point |
| Tightening torque max.                | 15 Nm<br>30 Nm       |

### Optical data

|                       |                          |
|-----------------------|--------------------------|
| Ambient light max.    | 10000 Lux                |
| Average power Po max. | 1 mW                     |
| Beam characteristic   | Focus, typical at 100 mm |

## BOS 18M-PS-LH22-S4 BOS002H

|                             |                        |
|-----------------------------|------------------------|
| Laser class per IEC 60825-1 | 2                      |
| Light type                  | Laser Red light        |
| Special optical feature     | Background suppression |
| Wave length                 | 660 nm                 |

|                                      |                    |
|--------------------------------------|--------------------|
| Range                                | 30...150 mm        |
| Rated operating distance $S_n$       | 150 mm, Adjustable |
| Ripple max. (% of $U_e$ )            | 15 %               |
| Temperature drift max. (% of $S_r$ ) | 15 %               |

### Output/Interface

|                  |                        |
|------------------|------------------------|
| Switching output | PNP Normally open (NO) |
|------------------|------------------------|

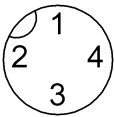
### Range/Distance

|                                            |             |
|--------------------------------------------|-------------|
| Distance deviation 18 % max. (% of $S_r$ ) | 8 %         |
| Measuring range                            | 30...150 mm |

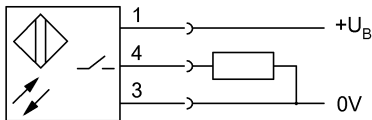
### Remarks

Order accessories separately.  
For additional information, refer to user's guide.  
The sensor is functional again after the overload has been eliminated.  
Reference object (target): gray card, 100 x 100 90 % remission, axial approach.

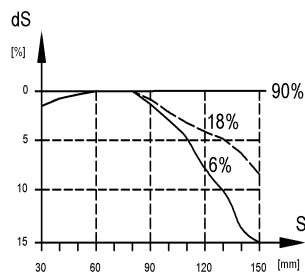
### Connector view



### Wiring Diagram

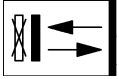


### Diagram

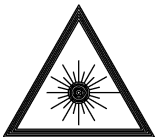


BOS 18M-PS-LH22-S4  
BOS002H

## Symbols for Optoelectronic Sensors



## Warning Symbols



LASER BEAM - DO NOT STARE INTO THE LIGHT BEAM!

LASER CLASS 2 per IEC60825-1: 2003-10