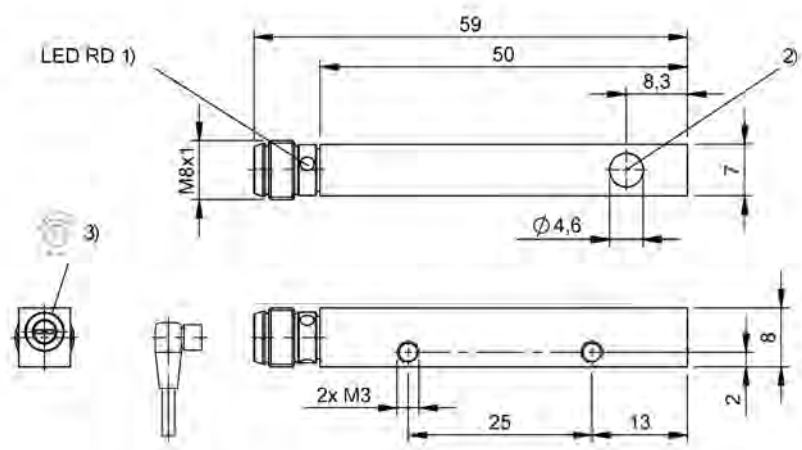


Photoelectric Sensors  
BOS R040M-PS-KD10-S49  
Order Code: BOS01YN



1) Function indicator, 2) Optical axis, 3) Sn



Basic features

|                        |                          |
|------------------------|--------------------------|
| Application            | Object detection         |
| Approval/Conformity    | CE<br>UKCA<br>WEEE       |
| Basic standard         | IEC 60947-5-2            |
| Principle of operation | Photoelectric sensor     |
| Series                 | R040M                    |
| Style                  | Connection 90°<br>Square |

Electrical data

|                                     |             |
|-------------------------------------|-------------|
| No-load current $I_0$ max. at $U_e$ | 15 mA       |
| Operating voltage $U_b$             | 10...30 VDC |
| Rated insulation voltage $U_i$      | 75 V DC     |
| Rated operating current $I_e$       | 100 mA      |
| Rated operating voltage $U_e$ DC    | 24 V        |
| Switching frequency                 | 500 Hz      |
| Turn-off delay $t_{off}$ max.       | 1.0 ms      |
| Turn-on delay $t_{on}$ max.         | 1.0 ms      |
| Voltage drop $U_d$ max. at $I_e$    | 2.5 V       |

Display/Operation

|          |                                                              |
|----------|--------------------------------------------------------------|
| Adjuster | 1-turn potentiometer                                         |
| Display  | Output function - LED red<br>Limit range - LED red, flashing |
| Setting  | Rated switching distance ( $S_n$ )                           |

Environmental conditions

|                     |             |
|---------------------|-------------|
| Ambient temperature | -10...55 °C |
| IP rating           | IP65        |

Electrical connection

|                                   |                             |
|-----------------------------------|-----------------------------|
| Connection                        | Connector, M8x1-Male, 3-pin |
| Contact, surface protection       | Gold plated                 |
| Electrical version                | 3-wire                      |
| Polarity reversal protected       | yes                         |
| Protection against device mix-ups | yes                         |
| Short-circuit protection          | yes                         |

Interface

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

Material

|                                      |                      |
|--------------------------------------|----------------------|
| Housing material                     | Brass, nickel-plated |
| Housing material, surface protection | nickel-plated        |
| Material sensing surface             | PMMA                 |

Mechanical data

|               |               |
|---------------|---------------|
| Dimension     | 59 x 7 x 8 mm |
| Mounting part | Screw M3      |

Optical features

|                                |                           |
|--------------------------------|---------------------------|
| Ambient light max.             | 5000 Lux                  |
| Beam characteristic            | Divergent                 |
| LED group per IEC 62471        | Exempt Group              |
| Light type                     | microSPOT-LED red light   |
| Principle of optical operation | Diffuse sensor, energetic |

Switching function, optical

Light-on

Range/Distance

|                             |                  |
|-----------------------------|------------------|
| Range                       | 0...50 mm        |
| Rated operating distance Sn | 50 mm Adjustable |

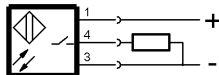
Remarks

Reference object (target): gray card, 100 x 100, 90 % remission, axial approach.

Connector Drawings



Wiring Diagrams



Opto Symbols

