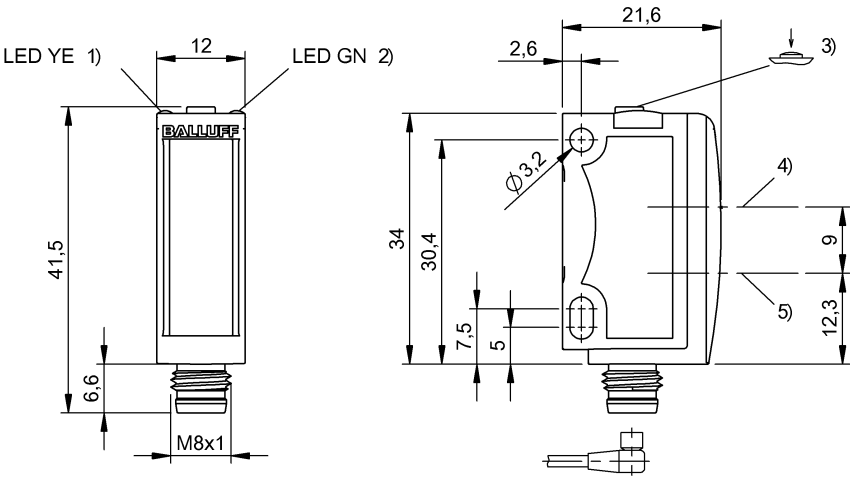




1) Output function, 2) Operating voltage, 3) Sn, light/dark, 4) Optical axis receiver, 5) Optical axis emitter



#### Basic features

|                        |                             |
|------------------------|-----------------------------|
| Approval/Conformity    | CE<br>UKCA<br>cULus<br>WEEE |
| Basic standard         | IEC 60947-5-2               |
| Operating mode         | SIO Mode<br>IO-Link Mode    |
| Principle of operation | Photoelectric sensor        |
| Series                 | 6K                          |
| Style                  | Square<br>Connection 90°    |

#### Display/Operation

|          |                                               |
|----------|-----------------------------------------------|
| Adjuster | button                                        |
| Display  | LED green: Power<br>LED yellow: Output active |

#### Electrical connection

|                             |                             |
|-----------------------------|-----------------------------|
| Connection                  | Connector, M8x1-Male, 4-pin |
| Polarity reversal protected | yes                         |
| Short-circuit protection    | yes                         |

#### Electrical data

|                                     |                                               |
|-------------------------------------|-----------------------------------------------|
| Input function                      | Key disable on/off<br>Same function as button |
| No-load current $I_o$ max. at $U_e$ | 30 mA                                         |
| Operating voltage $U_b$             | 10...30 VDC                                   |
| Protection class                    | II                                            |
| Rated operating current $I_e$       | 100 mA                                        |
| Rated operating voltage $U_e$ DC    | 24 V                                          |
| Ripple max. (% of $U_e$ )           | 10 %                                          |
| Switching frequency                 | 1000 Hz                                       |
| Turn-off delay $t_{off}$ max.       | 0.5 ms                                        |
| Turn-on delay $t_{on}$ max.         | 0.5 ms                                        |

#### Environmental conditions

|                         |                                        |
|-------------------------|----------------------------------------|
| Ambient temperature     | -20...60 °C                            |
| EN 60068-2-27, Shock    | Half-sinus, 30 $g_n$ , 11 ms, 3x6      |
| EN 60068-2-6, Vibration | 10...55 Hz, amplitude 0.5 mm, 3x30 min |
| IP rating               | IP67, IP69                             |
| Storage temperature     | -20...80 °C                            |

#### Functional safety

|              |       |
|--------------|-------|
| MTTF (40 °C) | 400 a |
|--------------|-------|

IO-Link

|                          |                                                                                                           |
|--------------------------|-----------------------------------------------------------------------------------------------------------|
| IO-Link Profil IDs       | 0x000E SSP 2.7<br>0x4000 Identification and<br>Diagnosis                                                  |
| IO-Link function classes | 0x800C Transducer Disable<br>0x8011 Multi Teach Two Value<br>0x8012 Multi Teach Dynamic<br>0x8101 Locator |

Interface

|                  |                       |
|------------------|-----------------------|
| Baud rate        | COM2 (38.4 kBaud)     |
| Interface        | IO-Link-Device 1.1.3  |
| Switching output | PNP/NPN/IO-Link NO/NC |

Material

|                          |      |
|--------------------------|------|
| Housing material         | ABS  |
| Material sensing surface | PMMA |

Mechanical data

|               |                   |
|---------------|-------------------|
| Dimension     | 12 x 34 x 21.6 mm |
| Mounting part | Screw M3          |

Optical features

|                                |                               |
|--------------------------------|-------------------------------|
| Beam characteristic            | Divergent                     |
| Light spot size                | 15 x 15 mm at 200 mm          |
| Light type                     | LED, red light                |
| Principle of optical operation | Diffuse sensor, triangulation |
| Special optical feature        | Background suppression        |
| Switching function, optical    | Light/dark switching          |
| Wave length                    | 632 nm                        |

Range/Distance

|                                        |            |
|----------------------------------------|------------|
| Distance deviation 18 % max. (% of Sr) | 3 %        |
| Hysteresis H max. (% of Sr)            | 2 %        |
| Range                                  | 1...200 mm |
| Rated operating distance Sn            | 200 mm     |

Remarks

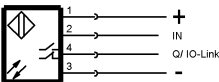
The sensor is functional again after the overload has been eliminated.  
Reference object (target): gray card, 100 x 100, 90 % remission, axial approach.  
Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.  
For additional information, refer to user's guide.  
Order accessories separately.  
Do not press key using a pointed tool.  
When using as a UL product the ambient temperature Ta max. must not exceed 50°C.  
For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

Connector Drawings



Wiring Diagrams (Schematic)



Opto Symbols

