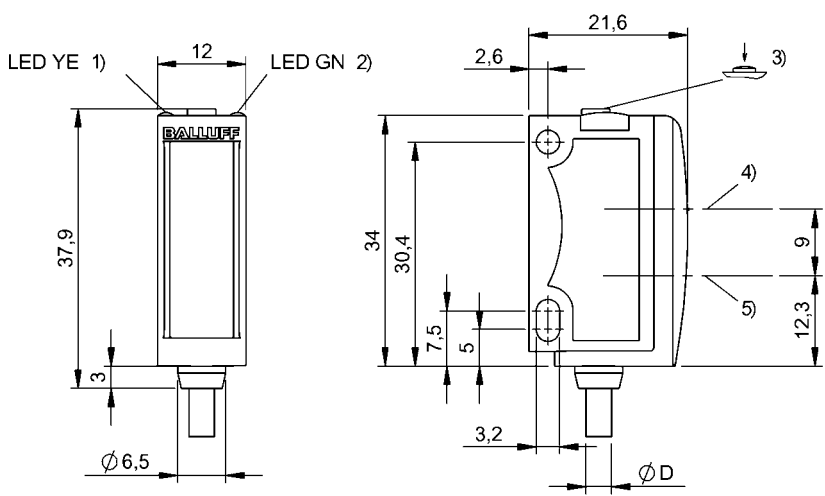


Photoelectric Sensors
BOS 6K-NU-RD10-02
Order Code: BOS01LP



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



Basic features

| | |
|------------------------|-------------------------------|
| Approval/Conformity | cULus CE Ecolab WEEE |
| Basic standard | IEC 60947-5-2 |
| Principle of operation | Photoelectric sensor |
| Series | 6K |
| Style | Square Connection 90° |

Display/Operation

| | |
|----------|--|
| Adjuster | button |
| Display | Output function- LED yellow LED green: Power |
| Setting | Light-on/dark-on Rated switching distance (Sn) Teach mode Stand./Dyn./Obj. |

Electrical connection

| | |
|-----------------------------|--------------------|
| Cable diameter D | 3.50 mm |
| Cable length L | 2 m |
| Conductor cross-section | 0.14 mm² |
| Connection | Cable, 2.00 m, PVC |
| Number of conductors | 4 |
| Polarity reversal protected | yes |
| Short-circuit protection | yes |

Electrical data

| | |
|---|---|
| Input function | Same function as button Key disable on/off |
| 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) | 12 % |
| Switching frequency | 1000 Hz |
| Turn-off delay t _{off} max. | 0.5 ms |
| Turn-on delay t _{on} max. | 0.5 ms |
| Voltage drop U _d max. at I _e | 2.4 V |

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 |
| IP rating per DIN 40050 | IP69K |

Functional safety

| | |
|--------------|-------|
| MTTF (40 °C) | 499 a |
|--------------|-------|

Interface

| | |
|------------------|---|
| Switching output | NPN normally open/normally closed (NO/NC) |
|------------------|---|

Material

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

Mechanical data

| | |
|---------------|---------------------|
| Dimension | 12 x 37.9 x 21.6 mm |
| Mounting part | Screw M3 |

Optical features

| | |
|--------------------------------|---------------------------|
| Ambient light max. | 5000 Lux |
| Beam characteristic | Divergent |
| Light spot size | 20 x 20 mm at 180 mm |
| Light type | LED, red light |
| Principle of optical operation | Diffuse sensor, energetic |
| Switching function, optical | Light/dark switching |
| Wave length | 660 nm |

Range/Distance

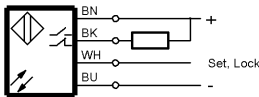
| | |
|-----------------------------|-------------------|
| Hysteresis H max. (% of Sr) | 10.0 % |
| Range | 0...800 mm |
| Rated operating distance Sn | 800 mm Adjustable |

Remarks

The sensor is functional again after the overload has been eliminated.
When using as a UL product the ambient temperature Ta max. must not exceed 50°C.
For additional information, refer to user's guide.
Order accessories separately.
Do not press key using a pointed tool.
Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.
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.

Wiring Diagrams



Opto Symbols

