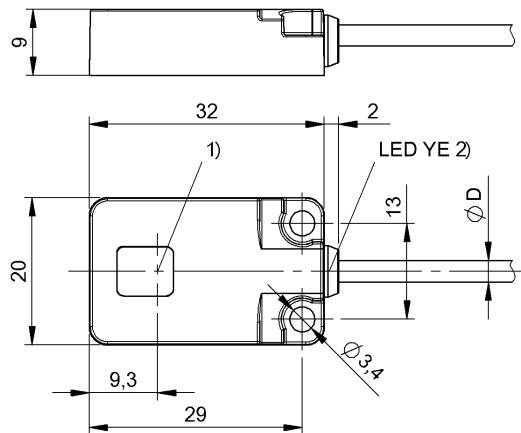


Photoelectric Sensors
BOS R01E-PO-KE20-02
Order Code: BOS0227

BALLUFF



1) Optical axis receiver, 2) Output function

CE

ECOLAB®
cUL US
LISTED



UK
CA

Basic features

| | |
|------------------------|---------------------------------------|
| Approval/Conformity | cULus CE UKCA Ecolab WEEE |
| Basic standard | IEC 60947-5-2 |
| Principle of operation | Photoelectric sensor |
| Reference emitter | BOS R01E-X-KS20-.. |
| Series | R01E |
| Style | Square Connection 90° |

Display/Operation

| | |
|---------|--|
| Display | Limit range - LED yellow, flashing LED yellow: Light received |
|---------|--|

Electrical connection

| | |
|-----------------------------------|----------------------|
| Cable diameter D | 3.00 mm |
| Cable length L | 2 m |
| Conductor cross-section | 0.14 mm ² |
| Connection | Cable, 2.00 m, PUR |
| Number of conductors | 3 |
| Polarity reversal protected | yes |
| Protection against device mix-ups | yes |
| Short-circuit protection | yes |

Electrical data

| | |
|--|-------------|
| Load capacitance max. at Ue | 0.05 µF |
| No-load current I ₀ max. at Ue | 10 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 |
| Ready delay t _v max. | 150 ms |
| Residual current I _r max. | 50 µA |
| Switching frequency | 500 Hz |
| Turn-off delay t _{off} max. | 1 ms |
| Turn-on delay t _{on} max. | 1 ms |
| Utilization category | DC-13 |
| Voltage drop U _d max. at I _e | 0.7 V |

Environmental conditions

| | |
|-------------------------|---|
| Ambient temperature | -5...55 °C |
| Contamination scale | 3 |
| EN 60068-2-27, Shock | Half-sinus, 30 g _n , 11 ms, 3x6 Half-sinus, 100 g _n , 2 ms, 3x8000 |
| EN 60068-2-6, Vibration | 10...55 Hz, amplitude 1 mm, 3x30 min 10...2000 Hz, amplitude 1 mm, 30 gn, 3x5 h |
| IP rating | IP67 |
| IP rating per DIN 40050 | IP69K |

Functional safety

| | |
|--------------|--------|
| MTTF (40 °C) | 2536 a |
|--------------|--------|

Interface

Switching output PNP normally closed (NC)

Material

Housing material 1.4404 stainless steel
Material jacket PUR
Material sensing surface PA

Mechanical data

Dimension 20 x 32 x 9 mm
Mounting part Screw M3

Optical features

Ambient light max. 5000 Lux
Light type LED, red light
Principle of optical operation Through-beam sensor
Smallest part typ. 0.4 mm at 1 m. R0 = 2 m
Switching function, optical Light-on

Range/Distance

Range 0...2.2 m
Rated operating distance Sn 2.2 m
Temperature drift max. (% of Sr) 10 %

Remarks

The sensor is functional again after the overload has been eliminated.

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.

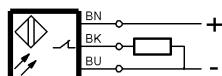
For additional information, refer to user's guide.

Order accessories separately.

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

