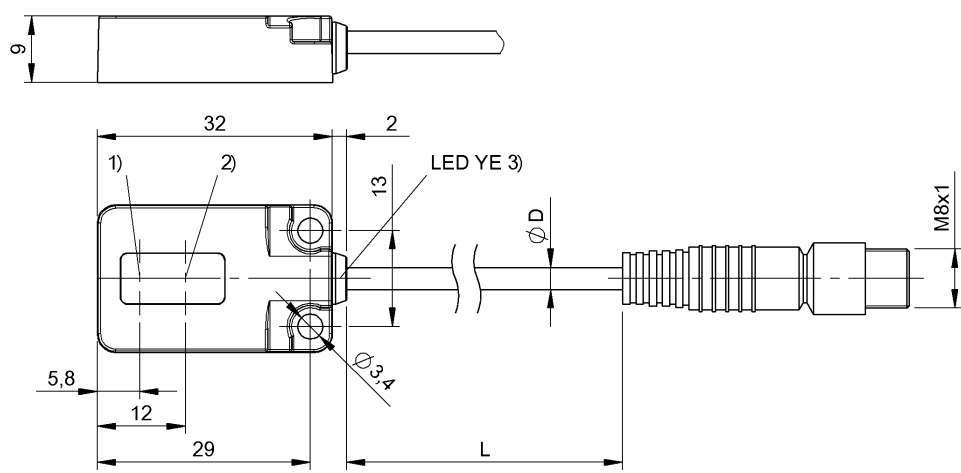


Photoelectric Sensors
BOS R01E-UI-KH22-00,2-S49
Order Code: BOS0265



1) Optical axis emitter, 2) Optical axis receiver, 3) Output function



Basic features

Approval/Conformity	cULus CE UKCA Ecolab WEEE
Basic standard	IEC 60947-5-2
Operating mode	SIO Mode IO-Link Mode
Principle of operation	Photoelectric sensor
Series	R01E
Style	Square Connection 90°

Display/Operation

Display	Limit range - LED yellow, flashing LED yellow: Light received
Setting	Rated switching distance (Sn) Hysteresis

Electrical connection

Cable diameter D	3.00 mm
Cable length L	0.2 m
Connection	Cable with connector, M8x1-Male, 3-pin, 0.20 m, PUR
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	0.1 µF
No-load current Io max. at Ue	20 mA
Operating voltage Ub	10...30 VDC
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	100 mA
Rated operating voltage Ue DC	24 V
Ready delay tv max.	10 ms
Residual current Ir max.	50 µA
Ripple max. (% of Ue)	5 %
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	0.7 V

Environmental conditions

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

Functional safety

MTTF (40 °C) 466 a

IO-Link

IO-Link Profil IDs 0x0001 SSP0

Interface

Baud rate 38.4 kBaud
Function class, smart sensor Switching signal channel
Interface IO-Link 1.1
Interface setting option BDC mode 1-pt./2-pt./window
Process data IN Teaching active/inactive
Limit range yes/no
Switching state active/inactive
Profile Smart Sensor
Switching output PNP normally open (NO)

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
Beam characteristic Divergent
LED group per IEC 62471 Exempt Group
Light spot size Ø 3.0 mm Light exit
Light type LED, red light
Principle of optical operation Diffuse sensor, triangulation
Special optical feature Background suppression
Switching function, optical Light-on
Wave length 650 nm

Range/Distance

Hysteresis H max. (% of Sr) 8.0 %
Range 50...100 mm
Rated operating distance Sn 100 mm Adjustable
Repeat accuracy max. (% of Sr) 2 %
Temperature drift max. (% of Sr) 10 %

Remarks

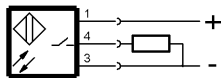
Order accessories separately.
For additional information, refer to user's guide.
Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.
Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.
The sensor is functional again after the overload has been eliminated.
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



Photoelectric Sensors
BOS R01E-UI-KH22-00,2-S49
Order Code: BOS0265



Opto Symbols

