

1) Optical axis receiver



Basic features

Approval/Conformity	cULus CE UKCA WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference emitter	BOS 18E-XI-RS30-S4
Series	18E
Style	Cylinder Straight optics

Electrical connection

Connection	Connector, M12x1-Male, 4-pin
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	0.3 µF
No-load current I <sub>o</sub> max. at Ue	40 mA
Operating voltage U <sub>b</sub>	18...30 VDC
Protection class	II
Rated insulation voltage U <sub>i</sub>	250 V AC
Rated operating current I <sub>e</sub>	100 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	400 Hz
Turn-off delay t <sub>off</sub> max.	1.25 ms
Turn-on delay t <sub>on</sub> max.	1.25 ms
Utilization category	DC -13
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	1.5 V

Environmental conditions

Ambient temperature	-25...60 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP68
IP rating per DIN 40050	IPx9K

Functional safety

MTTF (40 °C)	597 a
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IO-Link

IO-Link Profil IDs	0x0001 SSP0
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Interface

Baud rate	38.4 kBaud
Function class, smart sensor	Identification Diagnostics Teach channel Switching signal channel
Interface	IO-Link 1.1
Interface setting option	Sensor name in application Light-on/dark-on BDC mode 1-pt./2-pt./window Teach method 2-point/dyn.
Process data OUT	Teaching active/inactive Limit range yes/no Switching state active/inactive
Process data cycle min.	3 ms
Profile	Smart Sensor
Switching output	PNP normally open/normally closed (NO/NC)

Material

Housing material	1.4571 stainless steel
Material sensing surface	Glass

Mechanical data

Dimension	Ø 18 x 75 mm
Mounting part	Nut M18x1
Tightening torque max.	15 Nm 30 Nm

Optical features

Ambient light max.	10000 Lux
Light type	LED, red light
Principle of optical operation	Through-beam sensor (receiver)
Switching function, optical	dark-on/light-on

Range/Distance

Range	0...20 m
Rated operating distance Sn	20 m Adjustable

Remarks

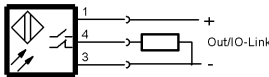
The sensor is functional again after the overload has been eliminated.  
For additional information, refer to user's guide.  
Order accessories separately.  
For more information about MTTF and B10d see MTTF / B10d Certificate

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.

Connector Drawings



Wiring Diagrams



Opto Symbols

