

1) Optical axis receiver



IND. CONT. EQ.
 81U2
 Class 2 Type 1



Basic features

Approval/Conformity	CE cULus Ecolab FDA compliant EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference emitter	BOS 18E-X-IS20-S4
Series	18E
Style	Cylinder Straight optics

Electrical data

Load capacitance max. at Ue	0.1 µF
No-load current I_o max. at Ue	30 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
Ripple max. (% of U_e)	15 %
Switching frequency	400 Hz
Turn-off delay t_{off} max.	1.25 ms
Turn-on delay t_{on} max.	1.25 ms
Utilization category	DC -13
Voltage drop U_d max. at I_e	2.5 V

Display/Operation

Adjuster	no
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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

Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms, 3x6 Half-sinus, 100 gn, 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 per DIN 40050	IPx9K
Protection degree	IP68/IP67

Functional safety

MTTF (40 °C)	646 a
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Material

Housing material	Stainless steel (1.4404)
Material sensing surface	Glass

Mechanical data

Dimension	Ø 18 x 75 mm
Mounting	Nut M18x1
Tightening torque max.	40 Nm

Optical features

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

Output/Interface

Switching output	PNP normally open (NO) PNP NC Pins 4-2
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Range/Distance

Range	0...50 m
Rated operating distance Sn	50 m
Temperature drift max. (% of Sr)	10 %

Remarks

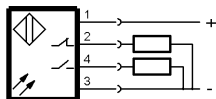
Order accessories separately.
For additional information, refer to user's guide.
The sensor is functional again after the overload has been eliminated.
For more information about MTTF and B10d see MTTF / B10d Certificate

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



Opto Symbols

