

1) Optical axis receiver



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



## Display/Operation

Adjuster no

## 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 0.1 µF  
No-load current I<sub>o</sub> max. at Ue 30 mA  
Operating voltage U<sub>b</sub> 10...30 VDC  
Rated insulation voltage U<sub>i</sub> 75 V DC  
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> 2.5 V

## 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...2000 Hz, amplitude 1 mm,  
30 gn, 3x5 h  
10...55 Hz, amplitude 1 mm,  
3x30 min  
IP rating IP68/IP67  
IP rating per DIN 40050 IPx9K

## Functional safety

MTTF (40 °C) 648 a

## General data

Approval/Conformity FDA compliant  
Ecolab  
CE  
cULus  
EAC  
WEEE  
Basic standard IEC 60947-5-2  
Principle of operation Photoelectric sensor  
Reference emitter BOS 18E-X-RS20-S4  
Series 18E  
Style Cylinder  
Straight optics

## 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 data

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

## Output/Interface

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

Range	0...20 m
Rated operating distance Sn	20 m
Temperature drift max. (% of Sr)	10 %

## Remarks

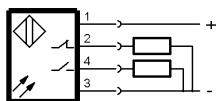
The sensor is functional again after the overload has been eliminated.  
For additional information, refer to user's guide.  
Order accessories separately.  
For further information about the MTTF and B10d see MTTF / B10d certificate

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

