

1) Optical axis, 2) Output function



Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference reflector	BOS R-1
Series	18KF
Style	Flat cylinder Straight optics
Trademark	Global

Electrical data

No-load current $I_o$ max. at $U_e$	35 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 $U_e$ )	8 %
Switching frequency	1000 Hz
Turn-off delay $t_{off}$ max.	0.5 ms
Turn-on delay $t_{on}$ max.	0.5 ms
Voltage drop $U_d$ max. at $I_e$	2 V

Display/Operation

Display	Output function- LED yellow
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Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Polarity reversal protected	yes
Short-circuit protection	yes

Environmental conditions

Ambient temperature	-25...55 °C
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.5 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C) 834 a

Interface

Switching output PNP normally closed (NC)  
PNP normally open (NO) Pins 4-2

Material

Housing material PBT  
Material sensing surface PMMA

Mechanical data

Dimension Ø 18 x 71.5 mm  
Mounting part Nut M18x1  
Screw M3  
Tightening torque max. 1.5 Nm

Optical features

Ambient light max. 5000 Lux  
Blind zone 100 mm  
Light type LED infrared  
Polarizing filter no  
Principle of optical operation Retroreflective sensor  
Switching function, optical dark-on  
Wave length 880 nm

Range/Distance

Range 0...5 m  
Rated operating distance Sn 5 m, Adjustable

Remarks

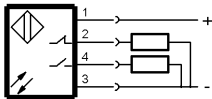
The sensor is functional again after the overload has been eliminated.  
For additional information, refer to user's guide.  
Order accessories separately.  
Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.  
For more information 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 (Schematic)



Opto Symbols

