

1) Optical axis, 2) Output function, 3) Stability, 4) Sn



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

Display/Operation

Adjuster	Potentiometer 270°
Display	Output function- LED yellow Stability - LED green
Setting	Sensitivity (Sn)

Electrical connection

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

Electrical data

No-load current I <sub>o</sub> max. at U <sub>e</sub>	35 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> )	8 %
Switching frequency	1000 Hz
Turn-off delay t <sub>off</sub> max.	0.5 ms
Turn-on delay t <sub>on</sub> max.	0.5 ms
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	2 V

Photoelectric Sensors  
BOS 18KF-NA-1QD-S4-C  
Order Code: BOS00J7



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)	774 a
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Interface

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

Housing material	PBT
Material sensing surface	PMMA

Mechanical data

Dimension	Ø 18 x 81.5 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, red light
Polarizing filter	yes
Principle of optical operation	Retroreflective sensor
Switching function, optical	dark-on
Wave length	660 nm

Range/Distance

Range	0...4.5 m
Rated operating distance Sn	4.5 m, Adjustable

Remarks

The sensor is functional again after the overload has been eliminated.

Polarizing filters prevent spurious switching due to reflecting and shiny parts.

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.

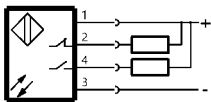
For more information about MTTF and B10d see MTTF / B10d Certificate

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



Opto Symbols

