

1) Optical axis, 2) Output function, 3) 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
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_0 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	1500 Hz
Turn-off delay t_{off} max.	0.33 ms
Turn-on delay t_{on} max.	0.33 ms
Voltage drop U_d max. at I_e	2 V

Photoelectric Sensors
BOS 18KF-NA-1LQP-S4-C
Order Code: BOS00HY

BALLUFF

Environmental conditions

Ambient temperature	-10...50 °C
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 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)	739 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	Screw M3
	Nut M18x1

Optical features

Ambient light max.	5000 Lux
Average power Po max.	390 µW
Blind zone	100 mm
Laser class per IEC 60825-1	1
Light type	Laser red light
Polarizing filter	yes
Principle of optical operation	Retroreflective sensor
Pulse duration t max.	6.0 µs
Pulse frequency	25 kHz
Switching function, optical	dark-on
Wave length	650 nm

Range/Distance

Range	0...16 m
Rated operating distance Sn	16 m, Adjustable

Remarks

Order accessories separately.

For additional information, refer to user's guide.

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

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

Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.

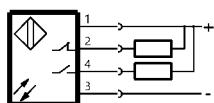
For more information about MTTF and B10d see MTTF / B10d Certificate

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



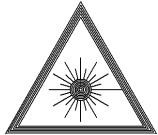
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Opto Symbols



Warning Symbols



LASER CLASS 1 per IEC 60825-1