

1) Optical axis, 2) Output function, 3) stability/error, 4) Sn



Basic features

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

Display/Operation

Adjuster	button
Display	Output function- LED yellow Error - LED green, flashing Stability - LED green
Setting	Rated switching distance (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	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)	8 %
Switching frequency	500 Hz
Turn-off delay t_{off} max.	1 ms
Turn-on delay t_{on} max.	1 ms
Voltage drop U_d max. at I_e	2 V

Photoelectric Sensors
BOS 18KF-NA-1HA-S4-C
Order Code: BOS00HR



Environmental conditions

Ambient temperature	-25...55 °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)	700 a
---------------------	-------

Interface

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

Material

Housing material	PBT
Material sensing surface	PMMA

Mechanical data

Dimension	Ø 18 x 96 mm
Mounting part	Screw M3 Nut M18x1
Tightening torque max.	1.5 Nm

Optical features

Ambient light max.	5000 Lux
Light spot size	Ø 8 mm at 100 mm
Light type	LED, red light
Principle of optical operation	Diffuse sensor, triangulation
Special optical feature	Background suppression
Switching function, optical	Light/dark switching
Wave length	630 nm

Range/Distance

Range	50...100 mm
Rated operating distance S_n	100 mm Adjustable

Remarks

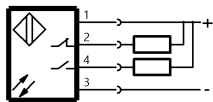
The sensor is functional again after the overload has been eliminated.
 Order accessories separately.
 For additional information, refer to user's guide.
 Do not press key using a pointed tool.
 Reference object (target): gray card, 100 x 100, 90 % remission, axial approach.
 For more information about 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

