

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



**Basic features**

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

**Display/Operation**

<b>Adjuster</b>	Potentiometer 270°
<b>Display</b>	Output function- LED yellow Stability - LED green
<b>Setting</b>	Rated switching distance (Sn)

**Electrical connection**

<b>Cable diameter D</b>	4.00 mm
<b>Cable length L</b>	2 m
<b>Conductor cross-section</b>	0.14 mm <sup>2</sup>
<b>Connection</b>	Cable, 2.00 m, PVC
<b>Number of conductors</b>	4
<b>Polarity reversal protected</b>	yes
<b>Short-circuit protection</b>	yes

**Electrical data**

<b>No-load current I<sub>o</sub> max. at U<sub>e</sub></b>	35 mA
<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Rated insulation voltage U<sub>i</sub></b>	75 V DC
<b>Rated operating current I<sub>e</sub></b>	100 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Ripple max. (% of U<sub>e</sub>)</b>	8 %
<b>Switching frequency</b>	1000 Hz
<b>Turn-off delay t<sub>off</sub> max.</b>	0.5 ms
<b>Turn-on delay t<sub>on</sub> max.</b>	0.5 ms
<b>Voltage drop U<sub>d</sub> max. at I<sub>e</sub></b>	2 V

Photoelectric Sensors  
**BOS 18KF-NA-1PE-C-02**  
Order Code: BOS00J4

**BALLUFF**

**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 jacket	PVC
Material sensing surface	PMMA

**Mechanical data**

Dimension	Ø 18 x 77 mm
Mounting part	Screw M3 Nut M18x1
Tightening torque max.	1.5 Nm

**Optical features**

Ambient light max.	5000 Lux
Beam characteristic	Divergent
Light type	LED infrared
Principle of optical operation	Diffuse sensor, energetic
Switching function, optical	Light-on
Wave length	880 nm

**Range/Distance**

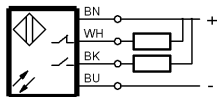
Range	0...700 mm
Rated operating distance S <sub>n</sub>	700 mm Adjustable

**Remarks**

Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.  
The sensor is functional again after the overload has been eliminated.  
For additional information, refer to user's guide.  
Order accessories separately.  
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.

**Wiring Diagrams**



**Opto Symbols**

