

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>Connection</b>	Connector, M12x1-Male, 4-pin
<b>Polarity reversal protected</b>	yes
<b>Short-circuit protection</b>	yes

### Electrical data

<b>No-load current <math>I_0</math> max. at <math>U_e</math></b>	35 mA
<b>Operating voltage <math>U_b</math></b>	10...30 VDC
<b>Rated insulation voltage <math>U_i</math></b>	75 V DC
<b>Rated operating current <math>I_e</math></b>	100 mA
<b>Rated operating voltage <math>U_e</math> DC</b>	24 V
<b>Ripple max. (% of <math>U_e</math>)</b>	8 %
<b>Switching frequency</b>	1000 Hz
<b>Turn-off delay <math>t_{off}</math> max.</b>	0.5 ms
<b>Turn-on delay <math>t_{on}</math> max.</b>	0.5 ms
<b>Voltage drop <math>U_d</math> max. at <math>I_e</math></b>	2 V

Photoelectric Sensors  
**BOS 18KF-PA-1PD-S4-C**  
**Order Code: BOS00JZ**



**Environmental conditions**

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

**Functional safety**

<b>MTTF (40 °C)</b>	774 a
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**Interface**

<b>Switching output</b>	PNP normally closed (NC) PNP normally open (NO) Pins 4-2
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**Material**

<b>Housing material</b>	PBT
<b>Material sensing surface</b>	PMMA

**Mechanical data**

<b>Dimension</b>	Ø 18 x 81.5 mm
<b>Mounting part</b>	Screw M3 Nut M18x1
<b>Tightening torque max.</b>	1.5 Nm

**Optical features**

<b>Ambient light max.</b>	5000 Lux
<b>Beam characteristic</b>	Divergent
<b>Light spot size</b>	Ø 100 mm at 300 mm
<b>Light type</b>	LED infrared
<b>Principle of optical operation</b>	Diffuse sensor, energetic
<b>Switching function, optical</b>	Light-on
<b>Wave length</b>	880 nm

**Range/Distance**

<b>Range</b>	0...400 mm
<b>Rated operating distance S<sub>n</sub></b>	400 mm Adjustable

**Remarks**

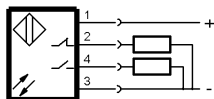
The sensor is functional again after the overload has been eliminated.  
 Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.  
 For additional information, refer to user's guide.  
 Order accessories separately.  
 For more information about MTTF and B10d see MTTF / B10d 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.

**Connector Drawings**



**Wiring Diagrams**



**Opto Symbols**

