

1) Optical axis, 2) Output function



### 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

Display	Output function- LED yellow
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### Electrical connection

Cable diameter D	4.00 mm
Cable length L	2 m
Conductor cross-section	0.14 mm <sup>2</sup>
Connection	Cable, 2.00 m, PVC
Number of conductors	4
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-PA-1XA-C-02**  
**Order Code: BOS00K8**



**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>	838 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 jacket</b>	PVC
<b>Material sensing surface</b>	PMMA

**Mechanical data**

<b>Dimension</b>	Ø 18 x 67 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 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**

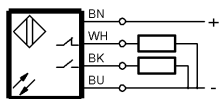
<b>Range</b>	0...100 mm
<b>Rated operating distance S<sub>n</sub></b>	100 mm

**Remarks**

Reference object (target): gray card, 100 x 100, 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**

