

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

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	1000 Hz
Turn-off delay $t_{off}$ max.	0.5 ms
Turn-on delay $t_{on}$ max.	0.5 ms
Voltage drop $U_d$ max. at $I_e$	2 V

### 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

Photoelectric Sensors  
**BOS 18KF-NA-1XA-S4-C**  
Order Code: BOS00JF



### Functional safety

MTTF (40 °C) 838 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 71.5 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...100 mm  
Rated operating distance  $S_n$  100 mm

### Remarks

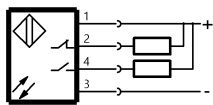
The sensor is functional again after the overload has been eliminated.  
Reference object (target): gray card, 100 x 100, 90 % remission, axial approach.  
For additional information, refer to user's guide.  
Order accessories separately.  
For more information about MTTF and B10d see MTTF / B10d Certificate

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

