

1) Optical axis, 2) Output function, 3) 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	Potentiometer 270°
Display	Output function- LED yellow
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 $U_e$	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.	0.33 ms
Turn-on delay $t_{on}$ max.	0.33 ms
Voltage drop $U_d$ max. at $I_e$	2 V

### Environmental conditions

Ambient temperature	-10...50 °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-1LOC-S4-C**  
**Order Code: BOS00HU**



**Functional safety**

MTTF (40 °C) 739 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 81.5 mm  
 Mounting part Nut M18x1  
 Screw M3  
 Tightening torque max. 1.5 Nm

**Optical features**

Ambient light max. 5000 Lux  
 Average power Po max. 390 µW  
 Beam characteristic Divergent  
 Laser class per IEC 60825-1 1  
 Light type Laser red light  
 Principle of optical operation Diffuse sensor, energetic  
 Pulse duration t max. 6.0 µs  
 Pulse frequency 25 kHz  
 Switching function, optical Light-on  
 Wave length 650 nm

**Range/Distance**

Range 0...350 mm  
 Rated operating distance Sn 350 mm Adjustable

**Remarks**

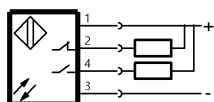
The sensor is functional again after the overload has been eliminated.  
 Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.  
 For additional information, refer to user's guide.  
 Order accessories separately.  
 For more information about MTTF and B10d see MTTF / B10d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



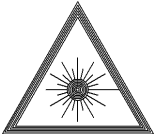
**Wiring Diagrams**



**Opto Symbols**



## Warning Symbols



LASER CLASS 1 per IEC 60825-1