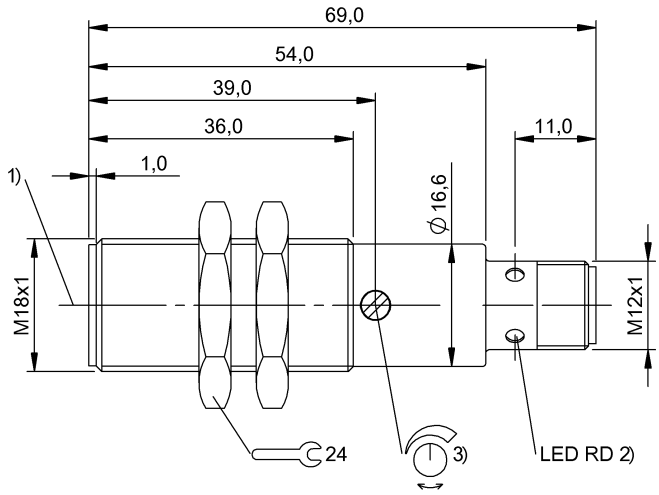
Photoelectric Sensors

BOS 18M-PA-1PD-E5-C-S4
Order Code: BOS0049



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

IND. CONT. EQ.
81U2
Class 2 Type 1

Basic features

Additional features	Base unit for fiber optics cable BFO 18..
Approval/Conformity	CE cULus EAC
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	18M
Style	Cylinder Straight optics

Display/Operation

Adjuster	Potentiometer 270°
Display	Output function - LED red
Setting	Rated switching distance (Sn)

Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	0.3 µF
No-load current Io max. at Ue	20 mA
Operating voltage Ub	10...30 VDC
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	200 mA
Rated operating voltage Ue DC	24 V
Ready delay tv max.	100 ms
Residual current Ir max.	80 µA
Ripple max. (% of Ue)	10 %
Switching frequency	100 Hz
Turn-off delay toff max.	5 ms
Turn-on delay ton max.	5 ms
Utilization category	DC -13
Voltage drop Ud max. at Ie	2.5 V

Environmental conditions

Ambient temperature	-5...55 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms, 3x6
EN 60068-2-6, Vibration	10…55 Hz, amplitude 1 mm, 3x30 min
Protection degree	IP67

Material

Housing material	Brass, nickel plated
Material sensing surface	PMMA
Surface protection	nickel plated

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Mechanical data

Dimension	Ø 18 x 69 mm
Mounting	Nut M18x1
Tightening torque max.	35 Nm

Optical features

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

Output/Interface

Switching output	PNP normally open (NO) PNP NC Pins 4-2

Range/Distance

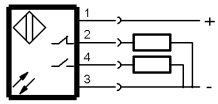
Hysteresis H max. (% of Sr)	25.0 %
Range	0...400 mm
Rated operating distance Sn	400 mm Adjustable
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %

Remarks

Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.
Order accessories separately.
The sensor is functional again after the overload has been eliminated.
Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.

Connector Drawings

Wiring Diagrams



Opto Symbols