

1) Optical axis, 2) Sn, 3) Stability, 4) Output function



Basic features

Approval/Conformity	CE cULus EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	12M
Style	Cylinder Straight optics
Trademark	Global

Display/Operation

Adjuster	button
Display	Output function- LED yellow Stability - LED green
Setting	Light-on/dark-on Rated switching distance (Sn)

Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Polarity reversal protected	yes
Short-circuit protection	yes

Electrical data

Input function	Key disable on/off Same function as button
Load capacitance max. at Ue	0.3 μ F
No-load current I_o max. at Ue	25 mA
Operating voltage U_b	10...30 VDC
Protection class	II
Rated operating current I_e	100 mA
Rated operating voltage U_e DC	24 V
Ripple max. (% of U_e)	10 %
Switching frequency	1000 Hz
Turn-off delay t_{off} max.	0.5 ms
Turn-on delay t_{on} max.	0.5 ms
Utilization category	DC -13
Voltage drop U_d max. at I_e	2.4 V

Environmental conditions

Ambient temperature	-20...60 °C
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.5 mm, 3x30 min
Protection degree	IP67

Material

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

Photoelectric Sensors
BOS 12M-PU-1HA-S4-C
Order Code: BOS007T



Mechanical data

Dimension	Ø 12 x 74 mm
Mounting	Nut M12x1
Tightening torque max.	10 Nm

Optical features

Ambient light max.	5000 Lux
Light spot size	5 x 5 mm at 50 mm
Light type	LED, red light
Principle of optical operation	Diffuse sensor, triangulation
Special optical feature	Background suppression
Switching function, optical	Light/dark switching
Wave length	660 nm

Output/Interface

Switching output	PNP normally open/normally closed (NO/NC)
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Range/Distance

Distance deviation 18 % max. (% of Sr)	3 % on 90 % rem., S=10...50 mm
Range	10...60 mm
Rated operating distance Sn	60 mm Adjustable

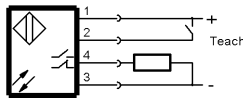
Remarks

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.
 For additional information, refer to user's guide.
 Order accessories separately.
 Do not press key using a pointed tool.
 Reference object (target): gray card, 200 x 200, 18 % remission, axial approach.

Connector Drawings



Wiring Diagrams



Opto Symbols

