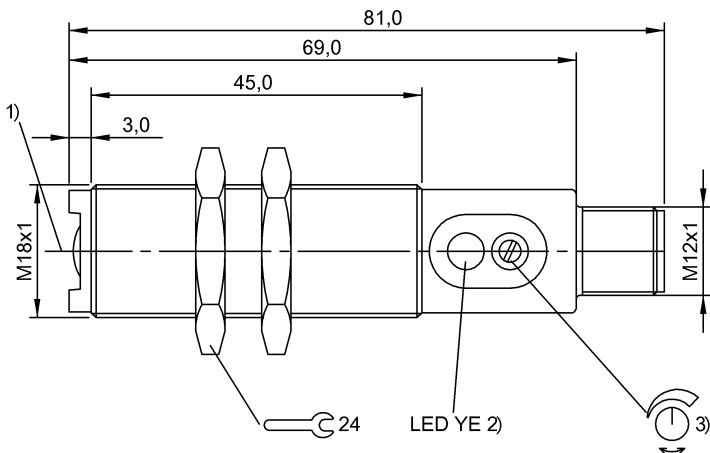




1) Optical axis, 2) Output function, 3) Sn



Basic features

Approval/Conformity	CE cULus EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	18M
Style	Cylinder Straight optics

Display/Operation

Adjuster	18-turn potentiometer
Display	Output function- LED yellow
Setting	Rated switching distance (Sn)

Electrical connection

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

Electrical data

Load capacitance max. at Ue	1 µF
No-load current Io max. at Ue	30 mA
Operating voltage Ub	10...30 VDC
Protection class	II
Rated insulation voltage Ui	50 V DC
Rated operating current Ie	200 mA
Rated operating voltage Ue DC	24 V
Ready delay tv max.	300 ms
Residual current Ir max.	50 µA
Ripple max. (% of Ue)	10 %
Switching frequency	600 Hz
Turn-off delay toff max.	0.8 ms
Turn-on delay ton max.	0.8 ms
Utilization category	DC -13
Voltage drop Ud max. at Ie	2.4 V

Environmental conditions

Ambient temperature	-20...60 °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
IP rating	IP67

Interface

Switching output	PNP normally open (NO) PNP NC Pins 4-2
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Photoelectric Sensors
BOS 18M-PA-1HA-S4-C
Order Code: BOS007W

BALLUFF

Material

Housing material	Brass, nickel plated
Material sensing surface	Glass
Surface protection	nickel-plated

Mechanical data

Dimension	Ø 18 x 81 mm
Mounting part	Nut M18x1

Optical features

Ambient light max.	5000 Lux
Light spot size	8 x 10 mm at 100 mm
Light type	LED, red light
Principle of optical operation	Diffuse sensor, triangulation
Special optical feature	Background suppression
Switching function, optical	Light-on dark-on
Wave length	660 nm

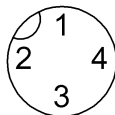
Range/Distance

Distance deviation 18 % max. (% of Sr)	8 %
Range	40...120 mm
Rated operating distance Sn	120 mm Adjustable
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %

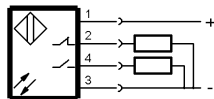
Remarks

Order accessories separately.
For additional information, refer to user's guide.
The sensor is functional again after the overload has been eliminated.
Reference object (target): gray card, 200 x 200, 18 % remission, axial approach.

Connector Drawings



Wiring Diagrams



Opto Symbols

