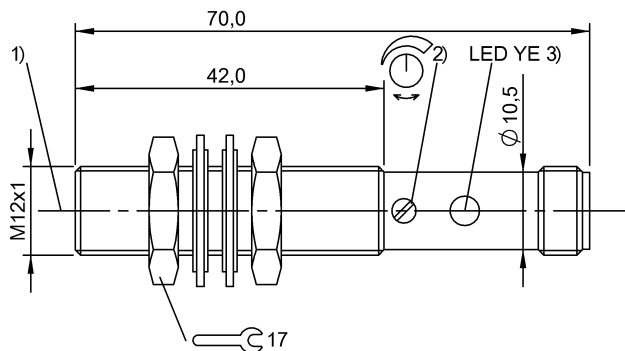




1) Optical axis, 2) Sn, 3) Output function



Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference emitter	BOS 12M-XT-LS12-..
Series	12M
Style	Cylinder Straight optics

Display/Operation

Adjuster	Potentiometer 270°
Display	Output function- LED yellow
Setting	Sensitivity (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	0.1 µF
No-load current Io max. at Ue	15 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.	20 ms
Ripple max. (% of Ue)	10 %
Switching frequency	1000 Hz
Turn-off delay toff max.	0.5 ms
Turn-on delay ton max.	0.5 ms
Utilization category	DC -13
Voltage drop Ud max. at Ie	2.5 V

Environmental conditions

Ambient temperature	-10...50 °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

Functional safety

MTTF (40 °C)	251 a
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Interface

Switching output	PNP normally closed (NC) PNP normally open (NO) Pins 4-2
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Photoelectric Sensors
BOS 12M-PA-LE10-S4
Order Code: BOS00WF

BALLUFF

Material

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

Mechanical data

Dimension	Ø 12 x 70 mm
Minimum gap, typ.	0.5mm at 3m, R0= 6m (LS12)
Mounting part	Nut M12x1
Tightening torque max.	15 Nm

Optical features

Ambient light max.	5000 Lux
Light type	Laser red light
Principle of optical operation	Through-beam sensor (receiver)
Smallest part typ.	50 µm at focal point, R0 = 3 m (LS11)
Switching function, optical	Light-on dark-on

Range/Distance

Range	0...30 m
Rated operating distance Sn	3 m, Adjustable depends on emitter
Temperature drift max. (% of Sr)	compensated

Remarks

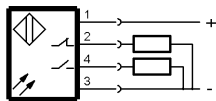
Order accessories separately.
The sensor is functional again after the overload has been eliminated.
Actuation object (target): gray card, 200 x 200, lateral approach.
For additional information, refer to user's guide.
For more information about MTTF and B10d see MTTF / B10d Certificate

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 (Schematic)



Opto Symbols

