

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



Basic features

Approval/Conformity	CE 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 I _o max. at Ue	15 mA
Operating voltage U _b	10...30 VDC
Rated insulation voltage U _i	75 V DC
Rated operating current I _e	200 mA
Rated operating voltage U _e DC	24 V
Ready delay t _v max.	20 ms
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	2.5 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
Protection degree	IP67

Functional safety

MTTF (40 °C)	251 a
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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	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

Output/Interface

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

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

Remarks

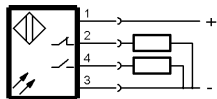
Order accessories separately.
 The sensor is functional again after the overload has been eliminated.
 Actuation object (target): gray card, 200 x 200, lateral approach.
 For additional information, refer to user's guide.
 For more information about MTTF and B10d see MTTF / B10d Certificate

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



Opto Symbols

