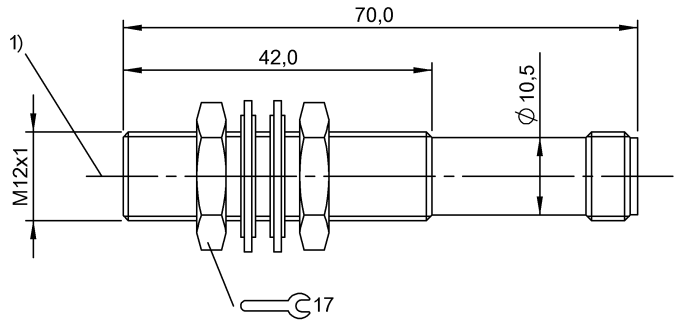
Photoelectric Sensors

BOS 12M-X-LS12-S4
Order Code: BOS00WJ



1) Optical axis

Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference receiver	BOS 12M-..-LE10-..
Series	12M
Style	Cylinder Straight optics

Electrical connection

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

Electrical data

No-load current Io max. at Ue	10 mA
Operating voltage Ub	10...30 VDC
Rated insulation voltage Ui	75 V DC
Rated operating voltage Ue DC	24 V
Ripple max. (% of Ue)	10 %

Environmental conditions

Ambient temperature	-10...50 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g_n, 11 ms, 3x6
EN 60068-2-6, Vibration	10…55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	593 a

Material

Housing material	Brass, nickel-plated
Material sensing surface	Glass
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

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Optical features

Average power Po max.	60 µW
Beam characteristic	Collimated
Laser class per IEC 60825-1	1
Light spot size	Ø 2.5 mm Light exit
Light type	Laser red light
Principle of optical operation	Through-beam sensor (Emitter)
Pulse duration t max.	2.5 µs
Pulse frequency	19.7 kHz
Pulse power Pp max.	1.5 mW
Smallest part typ.	200 µm at 2 m. R0 = 6 m
Wave length	650 nm

Range/Distance

Range	0...30 m
Rated operating distance Sn	30 m Adjustable

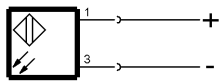
Remarks

Order accessories separately.
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

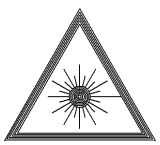
Wiring Diagrams



1) Emitter

Opto Symbols

Warning Symbols



LASER CLASS 1 per IEC 60825-1