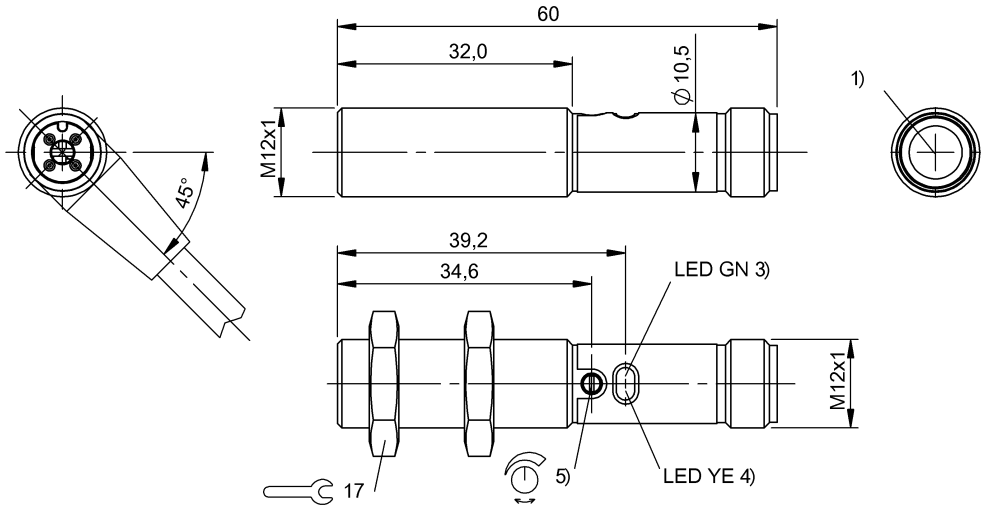
Photoelectric Sensors

BOS 12M-PA-RE10-S4
Order Code: BOS024U



1) Optical axis receiver, 3) Operating voltage, 4) Light reception/limit area, 5) Sn

IND. CONT. EQ. 81U2 Class 2 Type 1

Basic features

Approval/Conformity	CE cULus EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference emitter	BOS 12M-X-RS10-S4
Series	12M
Style	Cylinder Straight optics

Display/Operation

Adjuster	Potentiometer 270°
Display	LED green: Power Short circuit - LED green, flashing LED yellow: Light received Limit range - LED yellow, flashing
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	0.2 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	100 mA
Rated operating voltage Ue DC	24 V
Ripple max. (% of Ue)	15 %
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	1.5 V

Environmental conditions

Ambient temperature	-5...55 °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)	1175 a

Material

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

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Mechanical data

Dimension	Ø 12 x 60 mm
Mounting	Nut M12x1
Tightening torque max.	7 Nm

Optical features

Ambient light max.	10000 Lux
Light type	LED, red light
Principle of optical operation	Through-beam sensor (receiver)
Switching function, optical	Light-on dark-on

Output/Interface

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

Range/Distance

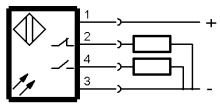
Range	0...8 m
Rated operating distance Sn	8 m Adjustable
Temperature drift max. (% of Sr)	10 %

Remarks

Order accessories separately.
For additional information, refer to user's guide.
The sensor is functional again after the overload has been eliminated.

Connector Drawings

Wiring Diagrams



Opto Symbols