

1) Optical axis receiver, 2) Optical axis emitter, 3) Power/short-circuit, 4) Light reception/limit area, 5) 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	button
Display	LED green: Power Limit range - LED yellow, flashing Short circuit - LED green, flashing LED yellow: Light received
Setting	Rated switching distance (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	40 mA
Operating voltage U_b	10...30 VDC
Protection class	II
Rated insulation voltage U_i	75 V DC
Rated operating current I_e	100 mA
Rated operating voltage U_e DC	24 V
Ripple max. (% of U_e)	15 %
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	-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)	468 a
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Photoelectric Sensors
BOS 18M-PUV-RD30-S4
Order Code: BOS01J8



Material

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

Mechanical data

Dimension	Ø 18 x 75 mm
Mounting	Nut M18x1
Tightening torque max.	15 Nm 30 Nm

Optical features

Ambient light max.	10000 Lux
Beam characteristic	Divergent
LED group per IEC 62471	Risk group 1
Light spot size	Ø 50 mm at 600 mm
Light type	LED, red light
Principle of optical operation	Diffuse sensor, energetic
Switching function, optical	Light/dark switching
Wave length	626 nm

Output/Interface

Supplementary output	PNP stability output
Switch function, supplementary output	Normally closed (NC)
Switching output	PNP normally open/normally closed (NO/NC)

Range/Distance

Hysteresis H max. (% of Sr)	10.0 %
Range	0...500 mm
Rated operating distance Sn	500 mm Adjustable
Temperature drift max. (% of Sr)	10 %

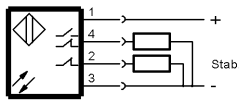
Remarks

Order accessories separately.
 The sensor is functional again after the overload has been eliminated.
 Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.
 For additional information, refer to user's guide.

Connector Drawings



Wiring Diagrams



Opto Symbols

