

1) Optical axis, 2) Sn, 3) Output function, 4) Operating voltage



Basic features

Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	18MR
Style	Cylinder Optics 90°

Display/Operation

Adjuster	Potentiometer 270°
Display	Output function- LED yellow LED green: Power
Setting	Rated switching distance (Sn)

Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Polarity reversal protected	yes
Short-circuit protection	yes

Electrical data

No-load current I_0 max. at U_e	35 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)	8 %
Switching frequency	1500 Hz
Turn-off delay t_{off} max.	0.33 ms
Turn-on delay t_{on} max.	0.33 ms
Voltage drop U_d max. at I_e	2 V

Environmental conditions

Ambient temperature	-10...50 °C
EN 60068-2-27, Shock	Half-sinus, 50 gn, 500 ms, 3x3
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.5 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	739 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 18MR-PA-LD10-S4
Order Code: BOS0142

BALLUFF

Material

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

Mechanical data

Dimension	Ø 18 x 93.5 mm
Mounting part	Nut M18x1
Tightening torque max.	22 Nm

Optical features

Ambient light max.	5000 Lux
Average power Po max.	390 µW
Beam characteristic	Divergent
Laser class per IEC 60825-1	1
Light type	Laser red light
Principle of optical operation	Diffuse sensor, energetic
Pulse duration t max.	6.0 µs
Pulse frequency	25 kHz
Switching function, optical	Light-on
Wave length	650 nm

Range/Distance

Range	0...250 mm
Rated operating distance Sn	250 mm Adjustable

Remarks

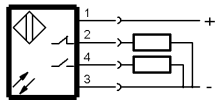
Order accessories separately.
For additional information, refer to user's guide.
Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.
The sensor is functional again after the overload has been eliminated.
For more information about MTTF and B10d see MTTF / B10d Certificate

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



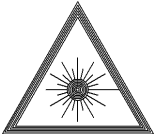
Wiring Diagrams



Opto Symbols



Warning Symbols



LASER CLASS 1 per IEC 60825-1