

1) Optical axis receiver, 2) Optical axis emitter, 3) Operating voltage, 4) Light reception/limit area, 5) Sn



Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference reflector	BOS R-1
Scope of delivery	2x nut M18x1 User manual
Series	18MR
Style	Cylinder Optics 90°

Electrical data

Load capacitance max. at U_e	0.2 μ F
No-load current I_o max. at U_e	25 mA
Operating voltage U_b	10...30 VDC
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	800 Hz
Turn-off delay t_{off} max.	0.63 ms
Turn-on delay t_{on} max.	0.63 ms
Utilization category	DC -13
Voltage drop U_d max. at I_e	2.5 V

Display/Operation

Adjuster	Potentiometer 270°
Display	LED green: Power 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

Environmental conditions

Ambient temperature	-5...55 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms, 3x6 Half-sinus, 100 gn, 2 ms, 3x8000
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm, 3x30 min 10...2000 Hz, amplitude 1 mm, 30 gn, 3x5 h
IP rating	IP67

Functional safety

MTTF (40 °C)	82 a
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Photoelectric Sensors
BOS 18MR-PA-PR20-S4S
Order Code: BOS027Z



Interface

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

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

Mechanical data

Dimension	Ø 18 x 92 mm
Mounting part	Nut M18x1
Tightening torque max.	15 Nm

Optical features

Ambient light max.	10000 Lux
Beam characteristic	Divergent
LED group per IEC 62471	Exempt Group
Light type	LED, red light
Polarizing filter	yes
Principle of optical operation	Retroreflective sensor
Switching function, optical	Light-on dark-on
Wave length	645 nm

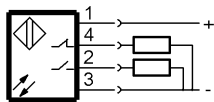
Range/Distance

Range	0...6 m
Rated operating distance Sn	6 m

Connector Drawings



Wiring Diagrams



Opto Symbols

