

1) Optical axis, 2) Sn, 3) Operating voltage, 4) Error, 5) Light reception, 6) a= 1x Sn / b= 0.5x Sn, 7) a= Dark-on / b= Light-on



Basic features

Additional features	Base unit for fiber optics cable BFO 18..
Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	30M
Style	Cylinder Straight optics

Display/Operation

Adjuster	18-turn potentiometer
Display	LED green: Power Error - LED red LED yellow: Light received
Setting	Rated switching distance (Sn)

Electrical connection

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

Electrical data

Load capacitance max. at Ue	1 µF
No-load current I _o max. at Ue	50 mA
Operating voltage U _b	11...30 VDC
Output resistance R _a	22.0 kOhm
Rated operating current I _e	200 mA
Rated operating voltage U _e DC	24 V
Ripple max. (% of U _e)	10 %
Switching frequency	15 Hz
Turn-off delay t _{off} max.	33 ms
Turn-on delay t _{on} max.	33 ms
Voltage drop U _d max. at I _e	2.5 V

Environmental conditions

Ambient temperature	-5...55 °C
IP rating	IP65

Functional safety

MTTF (40 °C)	5 a
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Interface

Switching output	NPN normally open/normally closed (NO/NC) PNP normally open/normally closed (NO/NC)
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Material

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

Mechanical data

Dimension	Ø 36 x 89 mm
Mounting part	Nut M30x1.5
Tightening torque max.	40 Nm

Optical features

Ambient light max.	1000 Lux
Beam characteristic	Divergent
Light type	Infrared
Principle of optical operation	Diffuse sensor, energetic
Switching function, optical	Light/dark switching
Wave length	880 nm

Range/Distance

Hysteresis H max. (% of Sr)	15.0 %
Range	200...2000 mm
Rated operating distance Sn	2 m Adjustable
Temperature drift max. (% of Sr)	10 %

Remarks

Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.

The sensor is functional again after the overload has been eliminated.

For additional information, refer to user's guide.

Order accessories separately.

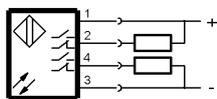
For more information about MTTF and B10d see MTTF / B10d Certificate

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

