

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



Display/Operation

Adjuster	no
Display	LED green: Power Limit range - LED yellow, flashing LED yellow: Light received

Electrical connection

Cable diameter D	4.60 mm
Cable length L	2 m
Conductor cross-section	0.34 mm ²
Connection	Cable, 2.00 m, PVC
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at U _e	0.2 µF
No-load current I ₀ max. at U _e	20 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	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	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

General data

Approval/Conformity	CE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	12M
Style	Cylinder Straight optics
Trademark	Global

Material

Housing material	Brass
Material jacket	PVC
Material sensing surface	PMMA
Surface protection	nickel plated

Mechanical data

Dimension	Ø 12 x 60 mm
Mounting	Nut M12x1
Tightening torque max.	7 Nm 15 Nm

Optical data

Ambient light max.	10000 Lux
Beam characteristic	Divergent
LED group per IEC 62471	Exempt Group
Light spot size	22 x 22 mm at 200 mm
Light type	LED, red light
Principle of optical operation	Diffuse sensor, energetic
Switching function, optical	Light-on
Wave length	650 nm

Output/Interface

Switching output	PNP normally closed (NC)
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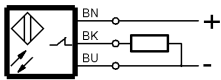
Range/Distance

Hysteresis H max. (% of Sr)	10.0 %
Range	1...200 mm
Rated operating distance S _n	200 mm
Temperature drift max. (% of Sr)	10 %

Remarks

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.
 Order accessories separately.

Wiring Diagram



Symbols for Optoelectronic Sensors

