

2) rotatable 270°, 2) Light exit optional, 3) Cover cap, removable, 4) Light exit standard, 5) standard lens, removable, 6) Display and control panel, 7) Latch



Basic features

Additional features	Optics convertible (light exit 0°/ 90°), vertical light spot
Approval/Conformity	CE WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Contrast sensor
Series	M
Style	Square Connection can be rotated

Display/Operation

Adjuster	Slide switch (3x) Key (2x)
Display	Output function - LED red Ready - LED green Error - LED green, flashing Short circuit - LED green, flashing
Setting	Key disable on/off Time function on/off Light-on/dark-on Switching output PNP/NPN Contrast (switching point)

Electrical connection

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

Electrical data

Input function	Same function as button
Load resistance RL min. (Analog V)	2.2 kOhm
No-load current Io max. at Ue	80 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	10.0 kOhm
Rated operating current Ie	200 mA
Rated operating voltage Ue DC	24 V
Ripple max. (% of Ue)	10 %
Switching frequency	10000 Hz
Turn-off delay toff max.	0.05 ms
Turn-on delay ton max.	0.05 ms
Voltage drop Ud max. at Ie	2 V

Environmental conditions

Ambient temperature	-10...55 °C
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1.5 mm, 3x2 h
Protection degree	IP67

Material

Housing material	Zinc, Die casting, Painted
Material sensing surface	Glass
Surface protection	Painted

Remarks

Do not press key using a pointed tool.
 Order accessories separately.
 For additional information, refer to user's guide.
 Reference object (target) for analog output: gray card, 100 x 100, 90 % remission, axial approach.
 Reference object (target): Color bar card, 100 x 100, contrast yellow/white and blue/black, lateral approach of color bars.
 The sensor is functional again after the overload has been eliminated.

Mechanical data

Dimension	31 x 97.8 x 62.3 mm
Mounting	Screw M5

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Focused
Light spot size	Ø 3 mm at 9 mm
Light type	White light
Principle of optical operation	Diffuse sensor, focused
Switching function, optical	Light/dark switching
Wave length	400...700 nm

Output/Interface

Analog output	Analog, voltage 0...5.5 V
Duration of time function	20 ms
Switching output	PNP/NPN normally open/normally closed (NO/NC)
Time function	switch-off delay

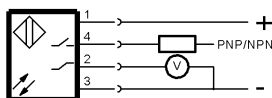
Range/Distance

Range	7...11 mm
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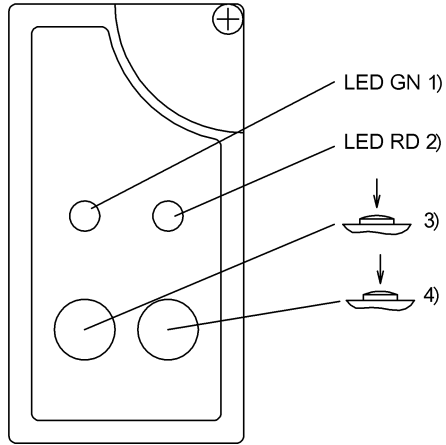
Connector Drawings



Wiring Diagrams



Help Views



- 1) stability
- 2) Output function
- 3) Store background
- 4) Store marking

Opto Symbols

