

1) Optical axis, 2) Output function, 3) Sn



**Basic features**

<b>Approval/Conformity</b>	CE cULus EAC WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Principle of operation</b>	Photoelectric sensor
<b>Series</b>	18M
<b>Style</b>	Cylinder Straight optics

**Electrical data**

<b>Load capacitance max. at Ue</b>	1 µF
<b>No-load current I<sub>o</sub> max. at Ue</b>	30 mA
<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Protection class</b>	II
<b>Rated insulation voltage U<sub>i</sub></b>	50 V DC
<b>Rated operating current I<sub>e</sub></b>	200 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Ready delay t<sub>v</sub> max.</b>	300 ms
<b>Residual current I<sub>r</sub> max.</b>	50 µA
<b>Ripple max. (% of U<sub>e</sub>)</b>	10 %
<b>Switching frequency</b>	600 Hz
<b>Turn-off delay t<sub>off</sub> max.</b>	0.8 ms
<b>Turn-on delay t<sub>on</sub> max.</b>	0.8 ms
<b>Utilization category</b>	DC -13
<b>Voltage drop U<sub>d</sub> max. at I<sub>e</sub></b>	2.4 V

**Display/Operation**

<b>Adjuster</b>	18-turn potentiometer
<b>Display</b>	Output function- LED yellow
<b>Setting</b>	Rated switching distance (Sn)

**Electrical connection**

<b>Connection</b>	Connector, M12x1-Male, 4-pin
<b>Polarity reversal protected</b>	yes
<b>Protection against device mix-ups</b>	yes
<b>Short-circuit protection</b>	yes

**Environmental conditions**

<b>Ambient temperature</b>	-20...60 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 gn, 11 ms, 3x6
<b>EN 60068-2-6, Vibration</b>	10...55 Hz, amplitude 1 mm, 3x30 min
<b>Protection degree</b>	IP67

**Material**

<b>Housing material</b>	Brass, nickel plated
<b>Material sensing surface</b>	Glass
<b>Surface protection</b>	nickel plated

## Mechanical data

Dimension	Ø 18 x 81 mm
Mounting	Nut M18x1

## Optical features

Ambient light max.	5000 Lux
Light spot size	8 x 10 mm at 100 mm
Light type	LED, red light
Principle of optical operation	Diffuse sensor, triangulation
Special optical feature	Background suppression
Switching function, optical	Light-on dark-on
Wave length	660 nm

## Output/Interface

Switching output	PNP normally open (NO) PNP NC Pins 4-2
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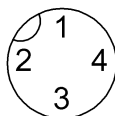
## Range/Distance

Distance deviation 18 % max. (% of Sr)	8 %
Range	40...120 mm
Rated operating distance Sn	120 mm Adjustable
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %

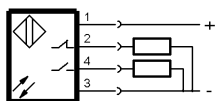
## Remarks

Order accessories separately.  
 For additional information, refer to user's guide.  
 The sensor is functional again after the overload has been eliminated.  
 Reference object (target): gray card, 200 x 200, 18 % remission, axial approach.

## Connector Drawings



## Wiring Diagrams



## Opto Symbols

