

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	1 μ F
Min. operating current I _m	0 mA
No-load current I _o max., damped	5 mA
No-load current I _o max., undamped	2 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	33.0 kOhm + D
Protection class	II
Rated insulation voltage U _i	250 V AC
Rated operating current I _e	200 mA
Rated operating voltage U _e DC	24 V
Rated short circuit current	100 A
Ready delay t _v max.	21 ms
Residual current I _r max.	10 μ A
Ripple max. (% of U _e)	15 %
Switching frequency	2500 Hz
Utilization category	DC -13
Voltage drop static max.	1.5 V

Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP68

Functional safety

MTTF (40 °C)	640 a
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General data

Approval/Conformity	CE cULus EAC WEEE
Basic standard	IEC 60947-5-2

Material

Housing material	Brass
Material sensing surface	PBT
Surface protection	Nickel-free coated

Mechanical data

Dimension	Ø 12 x 45 mm
Installation	for flush mounting
Size	M12x1
Tightening torque	10 Nm

Output/Interface

Switching output	PNP normally open (NO)
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Range/Distance

Assured operating distance Sa	3.2 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	4 mm

Real switching distance sr	4 mm
Repeat accuracy max. (% of Sr)	5.0 %
Switching distance marking	■ ■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

The sensor is functional again after the overload has been eliminated.
 For further information about the MTTF and B10d see MTTF / B10d certificate

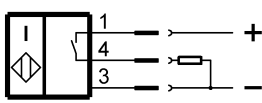
Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

Connector Drawings



A circular diagram showing the pinout of a 4-pin connector. The pins are arranged in a circle and labeled 1, 2, 3, and 4. Pin 1 is at the top right, pin 2 is at the top left, pin 3 is at the bottom left, and pin 4 is at the bottom right.

Wiring Diagrams



A schematic diagram showing a sensor symbol (a diamond with a vertical line) connected to a 4-pin terminal block. The terminal block has pins labeled 1, 2, 3, and 4. Pin 1 is connected to a positive power supply (+). Pin 2 is connected to a load (represented by a rectangle). Pin 3 is connected to a negative power supply (-). Pin 4 is connected to ground.