

## Basic features

Approval/Conformity	CE UKCA cULus WEEE
Base type deviation	no marking
Basic standard	IEC 60947-5-2

## Display/Operation

Function indicator	no
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 µF
Min. operating current Im	0 mA
No-load current Io max., damped	20 mA
No-load current Io max., undamped	12 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	2.2 kOhm + D
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	130 mA
Rated operating voltage Ue DC	24 V
Rated short circuit current	100 A
Ready delay tv max.	10 ms
Residual current Ir max.	80 µA
Ripple max. (% of Ue)	15 %
Switching frequency	200 Hz
Utilization category	DC -13
Voltage drop static max.	3.5 V

## Environmental conditions

Ambient temperature	-40...105 °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, according to BWN Pr. 27
IP rating per DIN 40050	IP69K

## Functional safety

MTTF (40 °C)	1620 a
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## Interface

Switching output	PNP normally open (NO)
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## Material

Housing material	Stainless steel
Material sensing surface	PA 12

## Mechanical data

Dimension	Ø 30 x 45 mm
Installation	for flush mounting
Mounting length	30.00 mm
Size	M30x1.5
Tightening torque	80 Nm

## Range/Distance

Assured operating distance Sa	8 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	10 mm
Real switching distance sr	10 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

## Remarks

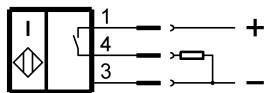
The sensor is functional again after the overload has been eliminated.  
 \*Current reduction max. 30 min at:  $T_a \geq 70 \text{ °C} \dots \leq 105 \text{ °C}$ :  $I_e = 130 - 2.86 \times (T_a - 70)$ .  
 For more information about MTTF and B10d see MTTF / B10d Certificate

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



## Technical Drawings

