



## Basic features

Additional features	Factor 1 Extended temperature range weld-immune (magnetic field 100kA/m)
Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Scope of delivery	No nuts or lockwashers

## Display/Operation

Function indicator	yes
Power indicator	no

## Electrical connection

Connection	M12x1-Male, 3-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
No-load current I <sub>o</sub> max., damped	8.5 mA
No-load current I <sub>o</sub> max., undamped	4.5 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	33.0 kOhm + D
Protection class	II
Rated insulation voltage U <sub>i</sub>	250 V AC
Rated operating current I <sub>e</sub>	200 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	1 ms
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	800 Hz
Utilization category	DC -13
Voltage drop static max.	1.5 V

## Environmental conditions

Ambient temperature	-40...85 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP68
Magnetic field immune	magnetic field immune (AC/DC)

## Functional safety

MTTF (40 °C)	382 a
--------------	-------

## Interface

Switching output	PNP normally open (NO)
------------------	------------------------

## Material

Housing material	Brass, Nickel-free coated
Material sensing surface	PBT

## Mechanical data

Dimension	Ø 12 x 65 mm
Installation	for flush mounting
Mounting length	49.50 mm
Size	M12x1
Tightening torque	10 Nm

## Range/Distance

Assured operating distance Sa	1.6 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	2 mm
Real switching distance sr	2 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 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 (Schematic)

