



## Basic features

Additional features	Factor 1 Weld immune Housing resistant to weld spatter
Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Trademark	Factor 1

## 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 $\mu$ F
Magnetic field strength, interference field	100 kA/m
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	33 mA
No-load current I <sub>o</sub> max., undamped	25 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	33.0 k $\Omega$ m + D
Rated insulation voltage U <sub>i</sub>	75 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.	30 ms
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	80 Hz
Utilization category	DC -13
Voltage drop static max.	2 V

## Environmental conditions

Ambient temperature	-25...70 °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	IP67
Magnetic field immune	magnetic field immune (AC/DC)

## Functional safety

MTTF (40 °C)	260 a
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## Interface

Switching output	PNP normally open (NO)
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## Material

<b>Housing material</b>	Stainless steel, weld spatter resistant, coated
<b>Material sensing surface</b>	Stainless steel, coated

## Mechanical data

<b>Dimension</b>	Ø 12 x 65 mm
<b>Installation</b>	for flush mounting
<b>Size</b>	M12x1
<b>Tightening torque</b>	15 Nm

## Range/Distance

<b>Assured operating distance Sa</b>	2.9 mm
<b>Hysteresis H max. (% of Sr)</b>	15.0 %
<b>Rated operating distance Sn</b>	4 mm
<b>Real switching distance sr</b>	4 mm
<b>Repeat accuracy max. (% of Sr)</b>	5.0 %
<b>Switching distance marking</b>	■ ■
<b>Temperature drift max. (% of Sr)</b>	15 %
<b>Tolerance Sr</b>	±15 %

## Remarks

The sensor is functional again after the overload has been eliminated.

Installation permitted only in clamp without positive stop.

Installation notice: flush in Al or non-ferrous metal Sr = 0.7 x Sn

Use nuts and lockwashers provided.

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

