



**Basic features**

<b>Additional features</b>	Factor 1 Extended temperature range Housing resistant to weld spatter
<b>Approval/Conformity</b>	CE UKCA cULus WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Scope of delivery</b>	2x nut M18x1
<b>Trademark</b>	Factor 1

**Display/Operation**

<b>Function indicator</b>	yes
<b>Power indicator</b>	no

**Electrical connection**

<b>Connection</b>	M12x1-Male, 3-pin, A-coded
<b>Electrical version</b>	3-wire
<b>Polarity reversal protected</b>	yes
<b>Protection against device mix-ups</b>	yes
<b>Short-circuit protection</b>	yes

**Electrical data**

<b>Load capacitance max. at Ue</b>	1 µF
<b>Magnetic field strength, interference field</b>	100 kA/m
<b>Min. operating current Im</b>	0 mA
<b>No-load current Io max., damped</b>	30 mA
<b>No-load current Io max., undamped</b>	25 mA
<b>Operating voltage Ub</b>	10...30 VDC
<b>Output resistance Ra</b>	100.0 kOhm
<b>Protection class</b>	II
<b>Rated operating current Ie</b>	200 mA
<b>Rated operating voltage Ue DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Ready delay tv max.</b>	50 ms
<b>Ripple max. (% of Ue)</b>	15 %
<b>Switching frequency</b>	2000 Hz
<b>Utilization category</b>	DC -13
<b>Voltage drop static max.</b>	2 V

**Environmental conditions**

<b>Ambient temperature</b>	-40...85 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 gn, 11 ms
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min
<b>IP rating</b>	IP68, according to BWN Pr 20
<b>Magnetic field immune</b>	magnetic field immune (AC/DC)

**Functional safety**

<b>MTTF (40 °C)</b>	240 a
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**Interface**

<b>Switching output</b>	PNP normally open (NO)
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## Material

Housing material	Brass, PTFE coated
Material sensing surface	PBT

## Mechanical data

Dimension	Ø 18 x 66 mm
Installation	for flush mounting
Mounting length	50 mm
Size	M18x1
Tightening torque	15 Nm

## Range/Distance

Assured operating distance Sa	7.05 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	8 mm
Real switching distance sr	8 mm
Repeat accuracy max. (% of Sr)	5.0 %
Switching distance marking	■ ■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	-2 %/+5 %

## 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)

