



1) Active surface Sensor 1, 2) Active surface Sensor 2, 3) Washer



Basic features

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

Display/Operation

Function indicator	no
Power indicator	no

Electrical connection

Cable diameter D	3.70 mm
Connection	M12x1-Male, 4-pin, A-coded
Connection type	Cable with connector, PVC
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	15 mA
No-load current I _o max., undamped	10 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	4.7 kOhm + D
Rated insulation voltage U _i	75 V DC
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.	30 ms
Residual current I _r max.	50 μ A
Ripple max. (% of U _e)	15 %
Switching frequency	700 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

Environmental conditions

Ambient temperature	10...100 °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
Protection degree	IP67

Functional safety

MTTF (40 °C)	1180 a
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Material

Housing material	Stainless steel
Material jacket	PVC
Material sensing surface	POM

Mechanical data

Dimension	Ø 7.9 x 24 mm
Installation	for flush mounting
Size	D7.9

Output/Interface

Switching output	PNP normally open (NO)
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Range/Distance

Assured operating distance Sa	0.8 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	1 mm
Real switching distance sr	1 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.
 When using an AC bridge, an electrolytic capacitor $\geq 10\mu\text{F}/40\text{V}$ parallel to Vs is recommended.
 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

