



1) Sensing surface



Basic features

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

Display/Operation

Function indicator	yes
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Electrical connection

Cable diameter D	4.50 mm
Cable length L	0.3 m
Connection	M12x1-Male, 4-pin, A-coded
Connection type	Cable with connector, 0.30 m, PUR
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	0.5 µF
Min. operating current I _m	0 mA
No-load current I _o max., damped	6 mA
No-load current I _o max., undamped	2 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	33.0 kOhm
Rated insulation voltage U _i	75 V DC
Rated operating current I _e	100 mA
Rated operating voltage U _e DC	24 V
Rated short circuit current	100 A
Ready delay t _v max.	21 ms
Residual current I _r max.	20 µA
Ripple max. (% of U _e)	10 %
Switching frequency	1000 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

Environmental conditions

Ambient temperature	-40...85 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	305 a
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Interface

Switching output PNP normally open (NO)

Material

Housing material 1.4305 stainless steel
 Material jacket PUR
 Material sensing surface LCP

Mechanical data

Dimension $\varnothing 12 \times 12$ mm
 Installation for flush mounting
 Mounting length 11.40 mm
 Size M12x1
 Tightening torque 4 Nm

Range/Distance

Assured operating distance S_a 3.2 mm
 Hysteresis H max. (% of S_r) 15.0 %
 Rated operating distance S_n 4 mm
 Real switching distance s_r 4 mm
 Repeat accuracy max. (% of S_r) 5.0 %
 Switching distance marking ■■
 Temperature drift max. (% of S_r) 10 %
 Tolerance S_r ± 10 %

Connector Drawings



Wiring Diagrams (Schematic)

