



1) Sensing surface



IND. CONT. EQ.
81U2
Class 2 Type 1

Basic features

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

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Connection	M8x1-Male, 3-pin
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	1 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	Open drain
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.	10 µA
Ripple max. (% of U_e)	10 %
Switching frequency	5000 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 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
Protection degree	IP67

Functional safety

MTTF (40 °C)	305 a
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Inductive Sensors
BES 516-3007-E5-C-S49
Order Code: BES00J5

BALLUFF

Material

Housing material	Stainless steel
Material sensing surface	PBT

Mechanical data

Dimension	Ø 4 x 41 mm
Installation	for flush mounting
Size	D4.0

Range/Distance

Assured operating distance Sa	0.65 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	0.8 mm
Real switching distance sr	0.8 mm
Repeat accuracy max. (% of Sr)	5.0 %
Switching distance marking	■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Output/Interface

Switching output	PNP normally open (NO)
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Remarks

The sensor is functional again after the overload has been eliminated.
EMC: Surge resistance
External protection circuit is required. Document 825345, Section 2.
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

