



1) Sensing surface



### Basic features

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

### Display/Operation

Function indicator	yes
Power indicator	no

### Electrical connection

Cable diameter D	3.00 mm
Cable length L	0.3 m
Connection	M8x1-Male, 3-pin
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	1 µF
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	6 mA
No-load current I <sub>o</sub> max., undamped	2 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	Open drain
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	100 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	21 ms
Residual current I <sub>r</sub> max.	10 µA
Ripple max. (% of U <sub>e</sub> )	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 g <sub>n</sub> , 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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Inductive Sensors  
**BES 516-3007-E4-C-S49-00,3**  
Order Code: BES00J3

**BALLUFF**

**Interface**

Switching output PNP normally open (NO)

**Material**

Housing material Stainless steel  
Material jacket PUR  
Material sensing surface PBT

**Mechanical data**

Dimension Ø 4 x 27 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 %

**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**

