



1) Sensing surface



### Basic features

Approval/Conformity	CE UKCA cULus WEEE
Base type deviation	Connector weld-splatter resistant
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
Conductor cross-section	0.14 mm <sup>2</sup>
Connection	M8x1-Male, 3-pin
Connection type	Cable with connector, 0.3 m, TPE
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

### Electrical data

Load capacitance max. at U <sub>e</sub>	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 516-3005-G-SA13-E4-C-S49-00,3**  
**Order Code: BES05PL**



**Interface**

**Switching output** PNP normally open (NO)

**Material**

**Housing material** Stainless steel, coated  
**Material jacket** TPE  
**Material sensing surface** Ceramic

**Mechanical data**

**Dimension** Ø 5 x 27 mm  
**Installation** for flush mounting  
**Size** M5x0.5  
**Tightening torque** 1 Nm

**Range/Distance**

**Assured operating distance Sa** 1.21 mm  
**Hysteresis H max. (% of Sr)** 15.0 %  
**Rated operating distance Sn** 1.5 mm  
**Real switching distance sr** 1.5 mm  
**Repeat accuracy max. (% of Sr)** 5.0 %  
**Switching distance marking** ■■  
**Temperature drift max. (% of Sr)** 10 %  
**Tolerance Sr** ±10 %

**Remarks**

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

