



1) Sensing surface



### Basic features

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

### Display/Operation

<b>Function indicator</b>	yes
<b>Power indicator</b>	no

### Electrical connection

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

### Electrical data

<b>Load capacitance max. at Ue</b>	1 µF
<b>Min. operating current Im</b>	0 mA
<b>No-load current Io max., damped</b>	6 mA
<b>No-load current Io max., undamped</b>	2 mA
<b>Operating voltage Ub</b>	10...30 VDC
<b>Output resistance Ra</b>	Open drain
<b>Rated insulation voltage Ui</b>	75 V DC
<b>Rated operating current Ie</b>	100 mA
<b>Rated operating voltage Ue DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Ready delay tv max.</b>	21 ms
<b>Residual current Ir max.</b>	10 µA
<b>Ripple max. (% of Ue)</b>	10 %
<b>Switching frequency</b>	5000 Hz
<b>Utilization category</b>	DC -13
<b>Voltage drop static max.</b>	2 V

### Environmental conditions

<b>Ambient temperature</b>	-25...70 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 gn, 11 ms
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min
<b>IP rating</b>	IP67

### Functional safety

<b>MTTF (40 °C)</b>	305 a
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**Inductive Sensors**  
**BES 516-3005-G-E5-C-S49**  
**Order Code: BES00HF**



**Interface**

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

**Material**

**Housing material** Stainless steel  
**Material sensing surface** PBT

**Mechanical data**

**Dimension** Ø 5 x 41 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**

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**

