



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>Cable diameter D</b>	2.40 mm
<b>Cable length L</b>	0.3 m
<b>Connection</b>	M8x1-Male, 3-pin
<b>Connection type</b>	Cable with connector, 0.30 m, PUR
<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>	0.15 µF
<b>Min. operating current Im</b>	0 mA
<b>No-load current Io max., damped</b>	2 mA
<b>No-load current Io max., undamped</b>	5 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>	25 ms
<b>Residual current Ir max.</b>	10 µA
<b>Ripple max. (% of Ue)</b>	10 %
<b>Switching frequency</b>	3500 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 G03EC-POC10B-EP00,3-GS49**  
**Order Code: BES040A**



**Interface**

Switching output                      PNP normally closed (NC)

**Material**

Housing material                      Stainless steel  
 Material jacket                        PUR  
 Material sensing surface              PBT

**Mechanical data**

Dimension                                Ø 3 x 22 mm  
 Installation                              for flush mounting  
 Size                                        D3.0

**Range/Distance**

Assured operating distance Sa        0.8 mm  
 Hysteresis H max. (% of Sr)        15.0 %  
 Rated operating distance Sn        1 mm  
 Real switching distance sr        1 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.  
 The temperature drift can be below -15°C and above +60°C, up to 15% of Sr.  
 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**

