



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>	3.00 mm
<b>Cable length L</b>	0.5 m
<b>Connection</b>	M8x1-Male, 3-pin
<b>Connection type</b>	Cable with connector, 0.50 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>	0.5 µF
<b>Min. operating current Im</b>	0 mA
<b>No-load current Io max., damped</b>	12 mA
<b>No-load current Io max., undamped</b>	4 mA
<b>Operating voltage Ub</b>	10...30 VDC
<b>Output resistance Ra</b>	33.0 kOhm + D
<b>Rated insulation voltage Ui</b>	75 V DC
<b>Rated operating current Ie</b>	200 mA
<b>Rated operating voltage Ue DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Ready delay tv max.</b>	10 ms
<b>Residual current Ir max.</b>	80 µA
<b>Ripple max. (% of Ue)</b>	15 %
<b>Switching frequency</b>	3000 Hz
<b>Utilization category</b>	DC -13
<b>Voltage drop static max.</b>	2.5 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>	830 a
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Inductive Sensors  
**BES Q08ZC-PSC20B-BP00,5-GS49**  
Order Code: **BES01TM**

**BALLUFF**

**Interface**

Switching output                      PNP normally open (NO)

**Material**

Housing material                      Zinc, Die casting  
Material jacket                         PUR  
Material sensing surface               PBT

**Mechanical data**

Dimension                                40 x 8 x 8 mm  
Installation                                for flush mounting  
Size                                         8x8

**Range/Distance**

Assured operating distance Sa        1.6 mm  
Hysteresis H max. (% of Sr)         15.0 %  
Rated operating distance Sn         2 mm  
Real switching distance sr             2 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.  
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**

