



1) Sensing surface



**Basic features**

|                            |                             |
|----------------------------|-----------------------------|
| <b>Approval/Conformity</b> | CE<br>UKCA<br>cULus<br>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>                    | 3 m                  |
| <b>Conductor cross-section</b>           | 0.14 mm <sup>2</sup> |
| <b>Connection type</b>                   | Cable, 3.00 m, PUR   |
| <b>Number of conductors</b>              | 3                    |
| <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 I<sub>m</sub></b>         | 0 mA          |
| <b>No-load current I<sub>o</sub> max., damped</b>   | 4 mA          |
| <b>No-load current I<sub>o</sub> max., undamped</b> | 12 mA         |
| <b>Operating voltage U<sub>b</sub></b>              | 10...30 VDC   |
| <b>Output resistance R<sub>a</sub></b>              | 33.0 kOhm + D |
| <b>Rated insulation voltage U<sub>i</sub></b>       | 75 V DC       |
| <b>Rated operating current I<sub>e</sub></b>        | 200 mA        |
| <b>Rated operating voltage U<sub>e</sub> DC</b>     | 24 V          |
| <b>Rated short circuit current</b>                  | 100 A         |
| <b>Ready delay t<sub>v</sub> max.</b>               | 10 ms         |
| <b>Residual current I<sub>r</sub> max.</b>          | 80 µA         |
| <b>Ripple max. (% of U<sub>e</sub>)</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 g <sub>n</sub> , 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 |
|---------------------|-------|

Inductive Sensors  
**BES Q08ZC-POC20B-BP03**  
Order Code: BES01T8

**BALLUFF**

**Interface**

Switching output                      PNP normally closed (NC)

**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.

**Wiring Diagrams**

