



1) Sensing surface



Basic features

| | |
|---------------------|----------------------------|
| Approval/Conformity | CE cULus EAC WEEE |
| Basic standard | IEC 60947-5-2 |

Display/Operation

| | |
|--------------------|-----|
| Function indicator | yes |
| Power indicator | no |

Electrical connection

| | |
|-----------------------------------|-----------------------------------|
| Cable diameter D | 2.40 mm |
| Cable length L | 0.3 m |
| Connection | M8x1-Male, 3-pin |
| Connection type | Cable with connector, 0.30 m, PUR |
| Polarity reversal protected | yes |
| Protection against device mix-ups | yes |
| Short-circuit protection | yes |

Electrical data

| | |
|-----------------------------------|-------------|
| Load capacitance max. at Ue | 0.15 µF |
| Min. operating current Im | 0 mA |
| No-load current Io max., damped | 5 mA |
| No-load current Io max., undamped | 2 mA |
| Operating voltage Ub | 10...30 VDC |
| Output resistance Ra | Open drain |
| Rated insulation voltage Ui | 75 V DC |
| Rated operating current Ie | 100 mA |
| Rated operating voltage Ue DC | 24 V |
| Rated short circuit current | 100 A |
| Ready delay tv max. | 25 ms |
| Residual current Ir max. | 10 µA |
| Ripple max. (% of Ue) | 10 % |
| Switching frequency | 3500 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 gn, 11 ms |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min |
| Protection degree | IP67 |

Functional safety

| | |
|--------------|-------|
| MTTF (40 °C) | 305 a |
|--------------|-------|

Inductive Sensors
BES G03EC-PSC10B-EP00,3-GS49
Order Code: BES0409

BALLUFF

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 |

Output/Interface

| | |
|------------------|------------------------|
| Switching output | PNP normally open (NO) |
|------------------|------------------------|

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

