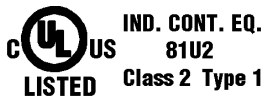


1) Sensing surface



Basic features

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

Display/Operation

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

Electrical connection

| | |
|-----------------------------------|----------------------|
| Cable diameter D | 3.00 mm |
| Cable length L | 5 m |
| Conductor cross-section | 0.14 mm ² |
| Connection type | Cable, 5.00 m, PVC |
| Number of conductors | 3 |
| Polarity reversal protected | yes |
| Protection against device mix-ups | yes |
| Short-circuit protection | yes |

Electrical data

| | |
|---|---------------|
| Load capacitance max. at Ue | 0.5 µF |
| Min. operating current I _m | 0 mA |
| No-load current I _o max., damped | 12 mA |
| No-load current I _o max., undamped | 4 mA |
| Operating voltage U _b | 10...30 VDC |
| Output resistance R _a | 33.0 kOhm + D |
| Rated insulation voltage U _i | 75 V DC |
| Rated operating current I _e | 200 mA |
| Rated operating voltage U _e DC | 24 V |
| Rated short circuit current | 100 A |
| Ready delay t _v max. | 10 ms |
| Residual current I _r max. | 80 µA |
| Ripple max. (% of U _e) | 15 % |
| Switching frequency | 5000 Hz |
| Utilization category | DC -13 |
| Voltage drop static max. | 2.5 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) | 830 a |
|--------------|-------|

Inductive Sensors
BES 516-300-S166-05
Order Code: BES017U

BALLUFF

Material

| | |
|--------------------------|-------------------|
| Housing material | Zinc, Die casting |
| Material jacket | PVC |
| Material sensing surface | PBT |

Mechanical data

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

Output/Interface

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

Range/Distance

| | |
|----------------------------------|--------|
| Assured operating distance Sa | 1.2 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 % |
| 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

