



1) Sensing surface



Basic features

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

Display/Operation

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

Electrical connection

| | |
|-----------------------------------|----------------------|
| Cable diameter D | 2.50 mm |
| Cable length L | 5 m |
| Conductor cross-section | 0.09 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 | 0.2 µF |
| No-load current I ₀ max., damped | 10 mA |
| No-load current I ₀ max., undamped | 3 mA |
| Operating voltage U _b | 10...30 VDC |
| Output resistance R _a | Open emitter |
| Rated insulation voltage U _i | 75 V DC |
| Rated operating current I _e | 100 mA |
| Rated operating voltage U _e DC | 24 V |
| Rated short circuit current | 100 A |
| Ready delay t _v max. | 20 ms |
| Residual current I _r max. | 50 µA |
| Ripple max. (% of U _e) | 15 % |
| Switching frequency | 2500 Hz |
| Utilization category | DC -12 |
| 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 g _n , 11 ms |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min |
| IP rating | IP67 |

Functional safety

| | |
|--------------|-------|
| MTTF (40 °C) | 830 a |
|--------------|-------|

Inductive Sensors
BES R04KC-PSC15B-EV05
Order Code: **BES01YK**

BALLUFF

Interface

Switching output PNP normally open (NO)

Material

Housing material PA 6, GF30
Material jacket PVC
Material sensing surface PA 6, GF30

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) 1.0 %
Temperature drift max. (% of Sr) 10 %
Tolerance Sr ± 10 %

Mechanical data

Dimension 16 x 8 x 4.7 mm
Installation for flush mounting
Size 16x8x4.7

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

