



1) Sensing surface



Basic features

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	2 m
Conductor cross-section	0.10 mm ²
Connection type	Cable, 2.00 m, PUR
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at U _e	1 µF
No-load current I _o max., damped	6 mA
No-load current I _o max., undamped	3 mA
Operating voltage U _b	5...30 VDC
Output resistance R _a	Open drain
Rated insulation voltage U _i	75 V DC
Rated operating current I _e	50 mA
Rated operating voltage U _e DC	24 V
Rated short circuit current	100 A
Ready delay t _v max.	21 ms
Residual current I _r max.	50 µA
Ripple max. (% of U _e)	15 %
Switching frequency	2500 Hz
Utilization category	DC -13
Voltage drop static max.	1.1 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)	305 a
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Inductive Sensors
BES R04KC-PSF15B-EP02
Order Code: **BES054K**

BALLUFF

Interface

Switching output PNP normally open (NO)

Material

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

Range/Distance

Assured operating distance S_a 1.2 mm
Hysteresis H max. (% of S_r) 15.0 %
Rated operating distance S_n 1.5 mm
Real switching distance s_r 1.5 mm
Repeat accuracy max. (% of S_r) 5.0 %
Temperature drift max. (% of S_r) 10 %
Tolerance S_r ± 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

