



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	3.00 mm
Cable length L	5 m
Conductor cross-section	0.14 mm <sup>2</sup>
Connection type	Cable, 5.00 m, TPU
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 <sub>0</sub> max., damped	10 mA
No-load current I <sub>0</sub> max., undamped	3 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	Open collector
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	100 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	15 ms
Residual current I <sub>r</sub> max.	1 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	3000 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 <sub>n</sub> , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

### Functional safety

MTTF (40 °C)	830 a
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Inductive Sensors  
**BES R03KC-PSC30B-EP05**  
Order Code: BES01WT

**BALLUFF**

**Interface**

Switching output PNP normally open (NO)

**Material**

Housing material PA 6, GF30  
Material jacket TPU  
Material sensing surface PA 6, GF30/black

**Range/Distance**

Assured operating distance Sa 2.4 mm  
Hysteresis H max. (% of Sr) 15.0 %  
Rated operating distance Sn 3 mm  
Real switching distance sr 3 mm  
Repeat accuracy max. (% of Sr) 5.0 %  
Temperature drift max. (% of Sr) 10 %  
Tolerance Sr ±10 %

**Mechanical data**

Dimension 30 x 10 x 6 mm  
Installation for flush mounting  
Size 30x10x6

**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**

