



1) Sensing surface  $\varnothing 8$ , 2) see remarks



### 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	4.60 mm
Cable length L	3 m
Conductor cross-section	0.34 mm <sup>2</sup>
Connection type	Cable, 3.00 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	1 $\mu$ F
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>0</sub> max., damped	9 mA
No-load current I <sub>0</sub> max., undamped	4 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	33.0 kOhm + D
Protection class	II
Rated insulation voltage U <sub>i</sub>	250 V AC
Rated operating current I <sub>e</sub>	200 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	10 ms
Residual current I <sub>r</sub> max.	80 $\mu$ A
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	400 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 g <sub>n</sub> , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

### Interface

Switching output	PNP normally open (NO)
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Inductive Sensors  
**BES R05KB-PSC40B-EV03**  
Order Code: **BES01ZC**

**BALLUFF**

**Material**

Housing material	PA 12
Material jacket	PVC
Material sensing surface	PA 12

**Mechanical data**

Dimension	40 x 12 x 26 mm
Installation	for flush mounting
Size	40x12x26
Tightening torque	0.25 Nm

**Range/Distance**

Assured operating distance Sa	3.2 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	4 mm
Real switching distance sr	4 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

**Remarks**

2) Distance A: with air or non-metallic materials = min. 17 mm  
with metal = min. 12 mm.  
The sensor is functional again after the overload has been eliminated.

**Wiring Diagrams**

