



1) Sensing surface



### Basic features

Approval/Conformity	CE UKCA WEEE
Base type deviation	Sn, Ta, LED on side
Basic standard	IEC 60947-5-2

### Display/Operation

Function indicator	yes
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### Electrical connection

Cable diameter D	4.60 mm
Cable length L	2 m
Conductor cross-section	0.25 mm <sup>2</sup>
Connection type	Cable, 2.00 m, PVC
Number of conductors	4
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

### Electrical data

Load capacitance max. at U <sub>e</sub>	1 µF
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>0</sub> max., damped	32 mA
No-load current I <sub>0</sub> max., undamped	20 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	2.2 kOhm + D + LED/4.7 kOhm + D
Rated insulation voltage U <sub>i</sub>	75 V DC
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.	60 ms
Residual current I <sub>r</sub> max.	80 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	500 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

Inductive Sensors  
**BES 516-133-SA2-02**  
Order Code: **BES032P**

**BALLUFF**

**Environmental conditions**

Ambient temperature	-25...90 °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)	1015 a
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**Interface**

Switching output	PNP normally open/normally closed (NO/NC)
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**Material**

Housing material	Aluminium
Material jacket	PVC
Material sensing surface	PBT

**Mechanical data**

Dimension	50 x 25 x 10 mm
Installation	for flush mounting

**Range/Distance**

Assured operating distance Sa	4 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	4.8 mm
Real switching distance sr	4.8 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**

