



### Basic features

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

### Display/Operation

Function indicator	yes
Power indicator	no

### Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
Polarity reversal protected	yes
Short-circuit protection	yes

### Electrical data

Load capacitance max. at U <sub>e</sub>	1 μF
Min. operating current I <sub>m</sub>	5 mA
Operating voltage U <sub>b</sub>	10...55 VDC
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.	500 μA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	2500 Hz
Utilization category	DC -13
Voltage drop static max.	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	IP68

### Functional safety

MTTF (40 °C)	610 a
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### Interface

Switching output	Non-polarized normally open (NO)
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### Material

Housing material	Stainless steel
Material sensing surface	PA 12

### Mechanical data

Dimension	∅ 12 x 70 mm
Installation	for flush mounting
Size	M12x1
Tightening torque	20 Nm

Inductive Sensors  
**BES 516-542-S4-H**  
Order Code: **BES03P3**

# BALLUFF

### Range/Distance

Assured operating distance Sa	1.6 mm
Hysteresis H max. (% of Sr)	20.0 %
Rated operating distance Sn	2 mm

Real switching distance sr	2 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

### Connector Drawings



### Wiring Diagrams

