



### 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 $U_e$	1 $\mu$ F
Min. operating current $I_m$	0 mA
No-load current $I_o$ max., damped	8 mA
No-load current $I_o$ max., undamped	25 mA
Operating voltage $U_b$	10...30 VDC
Output resistance $R_a$	2.2 kOhm + D + LED/4.7 kOhm + D
Protection class	II
Rated insulation voltage $U_i$	250 V AC
Rated operating current $I_e$	200 mA
Rated operating voltage $U_e$ DC	24 V
Rated short circuit current	100 A
Ready delay $t_v$ max.	10 ms
Residual current $I_r$ max.	80 $\mu$ A
Ripple max. (% of $U_e$ )	15 %
Switching frequency	300 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	IP68

### Functional safety

MTTF (40 °C)	1015 a
--------------	--------

Inductive Sensors  
**BES 516-114-S4-C**  
Order Code: BES0167

# BALLUFF

## Interface

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

## Material

**Housing material** Brass, nickel-plated  
**Material sensing surface** PA 12

## Mechanical data

**Dimension** Ø 30 x 83 mm  
**Installation** for flush mounting  
**Size** M30x1.5  
**Tightening torque** 35 Nm

## Range/Distance

**Assured operating distance Sa** 8.1 mm  
**Hysteresis H max. (% of Sr)** 15.0 %  
**Rated operating distance Sn** 10 mm  
**Real switching distance sr** 10 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.

## Connector Drawings



## Wiring Diagrams

