

### Basic features

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

### Display/Operation

Function indicator	no
Power indicator	no

### Electrical connection

Cable diameter D	8.00 mm
Cable length L	5 m
Conductor cross-section	0.75 mm <sup>2</sup>
Connection type	Cable, 5.00 m, Silicone
Number of conductors	4
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	no

### Electrical data

Load capacitance max. at Ue	0.15 $\mu$ F
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	15 mA
No-load current I <sub>o</sub> max., undamped	15 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	6.2 k $\Omega$ + D/10.0 k $\Omega$ + D
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	400 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	300 Hz
Utilization category	DC -13
Voltage drop static max.	1.5 V

### Environmental conditions

Ambient temperature	-25...120 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
Protection degree	IP67/ IP60 at cable exit

### Functional safety

MTTF (40 °C)	1255 a
--------------	--------

Inductive Sensors  
**BES 516-114-SA1-05**  
**Order Code: BES02H7**

**BALLUFF**

**Material**

Housing material	Brass, nickel plated
Material jacket	Silicone
Material sensing surface	PBT
Surface protection	nickel plated

**Mechanical data**

Dimension	Ø 30 x 91.5 mm
Installation	for flush mounting
Size	M30x1.5
Tightening torque	70 Nm

**Output/Interface**

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

**Range/Distance**

Assured operating distance Sa	8 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)	5 %
Tolerance Sr	±10 %

**Remarks**

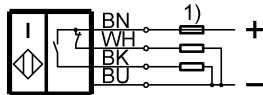
$T_a \geq 70 \text{ °C} \dots \leq 120 \text{ °C}: I_e = 400 - 5 \times (T_a - 70)$ .

Recommendation: After a short circuit check the device for proper function.

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**



1) For SCP see electrical data