



### Basic features

Approval/Conformity	CE UKCA 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
Protection against device mix-ups	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	15 mA
No-load current $I_o$ max., undamped	10 mA
Operating voltage $U_b$	10...55 VDC
Output resistance $R_a$	33.0 kOhm + D/33.0 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	150 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)	500 a
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Inductive Sensors  
**BES 516-114-G-S4-H**  
**Order Code: BES0166**



**Interface**

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

**Material**

**Housing material** Brass, Nickel-free coated  
**Material sensing surface** PA 12

**Mechanical data**

**Dimension** Ø 30 x 83 mm  
**Installation** for flush mounting  
**Size** M30x1.5  
**Tightening torque** 70 Nm

**Range/Distance**

**Assured operating distance Sa** 12 mm  
**Hysteresis H max. (% of Sr)** 15.0 %  
**Rated operating distance Sn** 15 mm  
**Real switching distance sr** 15 mm  
**Repeat accuracy max. (% of Sr)** 5.0 %  
**Switching distance marking** ■■  
**Temperature drift max. (% of Sr)** 10 %  
**Tolerance Sr** ±10 %

**Remarks**

The sensor is functional again after the overload has been eliminated.  
 Flush: See installation instructions for inductive sensors with extended range 825357.  
 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**

