



## Basic features

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

## Display/Operation

Function indicator	no
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 Ue	1 µF
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>0</sub> max., damped	8 mA
No-load current I <sub>0</sub> max., undamped	3 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	150.0 kOhm
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.	50 ms
Residual current I <sub>r</sub> max.	10 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	2000 Hz
Utilization category	DC -13
Voltage drop static max.	2.1 V

## 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	IP68

## Functional safety

MTTF (40 °C)	855 a
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**Inductive Sensors**  
**BES 516-300-S355-S4-D**  
**Order Code: BHS0093**



**Material**

<b>Housing material</b>	Stainless steel (1.4104)
<b>Material sensing surface</b>	EP

**Mechanical data**

<b>Dimension</b>	8 x 8 x 77.1 mm
<b>Installation</b>	for flush mounting
<b>Mounting</b>	M12x1
<b>Pressure rating max.</b>	500 bar
<b>Pressure rating, note</b>	oil pressure rated
<b>Sealing ring, size</b>	9.8 x 14.4 x 1.5 mm
<b>Size</b>	M12x1
<b>Tightening torque</b>	20 Nm ±10 %

**Output/Interface**

<b>Switching output</b>	PNP normally open (NO)
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**Range/Distance**

<b>Assured operating distance Sa</b>	1.2 mm
<b>Hysteresis H max. (% of Sr)</b>	15.0 %
<b>Rated operating distance Sn</b>	1.5 mm
<b>Real switching distance sr</b>	1.5 mm
<b>Repeat accuracy max. (% of Sr)</b>	5.0 %
<b>Temperature drift max. (% of Sr)</b>	10 %
<b>Tolerance Sr</b>	±10 %

**Remarks**

The sensor is functional again after the overload has been eliminated.  
 Overvoltage protection using bi-directional Zener diode between Plus (+) and Minus (-).  
 Pressure cycle rating: 2 mil. Change Putzmeister test stand  
 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**

