



1) O-Ring with thrust ring



### Basic features

Approval/Conformity	CE UKCA 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 $U_e$	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	3 mA
Operating voltage $U_b$	10...30 VDC
Output resistance $R_a$	150.0 kOhm
Rated insulation voltage $U_i$	75 V DC
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.	50 ms
Residual current $I_r$ max.	10 $\mu$ A
Ripple max. (% of $U_e$ )	15 %
Switching frequency	2000 Hz
Utilization category	DC -13
Voltage drop static max.	2.1 V

### Environmental conditions

Ambient temperature	-25...80 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 $g_n$ , 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-S299-S4-D**  
Order Code: BHS004A



**Interface**

Switching output PNP normally open (NO)

**Material**

Gasket, material NBR 60-80  
Housing material Stainless steel  
Material sensing surface EP  
Support ring material PTFE

**Mechanical data**

Dimension  $\varnothing 18 \times 55$  mm  
Installation for flush mounting  
Mounting part M18x1  
Pressure rating max. 500 bar  
Pressure rating, note oil pressure rated  
Sealing ring, size  $12.42 \times 1.78$  mm  
Size M18x1  
Tightening torque 40 Nm  $\pm 10$  %

**Range/Distance**

Assured operating distance Sa 1.2 mm  
Hysteresis H max. (% of Sr) 15.0 %  
Rated operating distance Sn 1.5 mm  
Real switching distance sr 1.5 mm  
Repeat accuracy max. (% of Sr) 5.0 %  
Temperature drift max. (% of Sr) 10 %  
Tolerance Sr  $\pm 10$  %

**Remarks**

The sensor is functional again after the overload has been eliminated.  
Installation Instructions 614804  
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**

