



1) O-Ring with thrust ring



### Basic features

Approval/Conformity	CE UKCA cULus WEEE
Base type deviation	Tube $\varnothing$ 10, Lg
Basic standard	IEC 60947-5-2

### Display/Operation

Function indicator	no
Power indicator	no

### Electrical connection

Cable diameter D	4.60 mm
Cable length L	5 m
Conductor cross-section	0.34 mm <sup>2</sup>
Connection	M12x1-Male, 4-pin, A-coded
Connection type	Connector, 5.00 m, PUR
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

### Electrical data

Load capacitance max. at Ue	0.5 $\mu$ F
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	10 mA
No-load current I <sub>o</sub> max., undamped	1 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	33.0 kOhm + D
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.	10 ms
Residual current I <sub>r</sub> max.	10 $\mu$ A
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	1000 Hz
Utilization category	DC -13
Voltage drop static max.	1.5 V

### Environmental conditions

Ambient temperature	-25...80 °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)	720 a
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Inductive Sensors  
**BES 516-300-S149-S4-D**  
Order Code: BHS001T

**BALLUFF**

**Interface**

Switching output PNP normally open (NO)

**Material**

Housing material 1.4104 stainless steel  
Material jacket PUR  
Material sensing surface EP  
Support ring material PTFE

**Mechanical data**

Dimension  $\varnothing 16 \times 73$  mm  
Installation for flush mounting  
Mounting part M16x1  
Pressure rating max. 350 bar  
Pressure rating, note oil pressure rated  
Sealing ring, size  $11 \times 1.5$  mm  
Size M16x1  
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**

