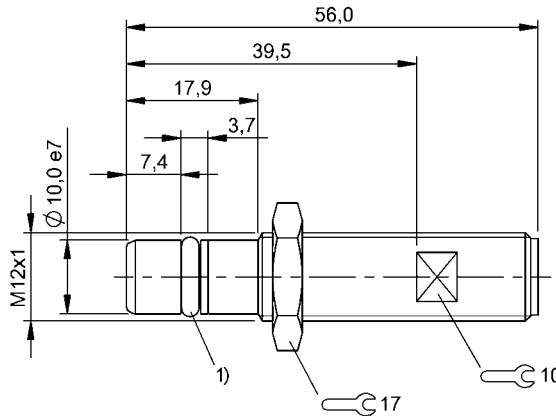


Inductive Sensors  
BES 516-300-S305-S4-D  
Order Code: BHS004F



1) O-Ring with thrust ring



Basic features

|                     |                             |
|---------------------|-----------------------------|
| Approval/Conformity | cULus<br>CE<br>UKCA<br>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 Im         | 0 mA        |
| No-load current Io max., damped   | 3 mA        |
| No-load current Io max., undamped | 8 mA        |
| Operating voltage Ub              | 10...30 VDC |
| Output resistance Ra              | 150.0 kOhm  |
| Rated insulation voltage Ui       | 75 V DC     |
| Rated operating current Ie        | 200 mA      |
| Rated operating voltage Ue DC     | 24 V        |
| Rated short circuit current       | 100 A       |
| Ready delay tv max.               | 50 ms       |
| Residual current Ir max.          | 10 µA       |
| Ripple max. (% of Ue)             | 15 %        |
| Switching frequency               | 2000 Hz     |
| Utilization category              | DC -13      |
| Voltage drop static max.          | 2.2 V       |

Environmental conditions

|                         |                                 |
|-------------------------|---------------------------------|
| Ambient temperature     | -25...80 °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 |
| IP rating               | IP68                            |

Functional safety

|              |       |
|--------------|-------|
| MTTF (40 °C) | 855 a |
|--------------|-------|

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Interface

Switching output PNP normally closed (NC)

Material

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

Mechanical data

Dimension Ø 12 x 56 mm  
Installation for flush mounting  
Mounting length 21.60 mm  
Mounting part M12x1  
Pressure rating max. 500 bar  
Pressure rating, note oil pressure rated  
Sealing ring, size 5.3 x 2.4 mm  
Size M12x1  
Tightening torque 15 Nm ±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 ±10 %

Remarks

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

