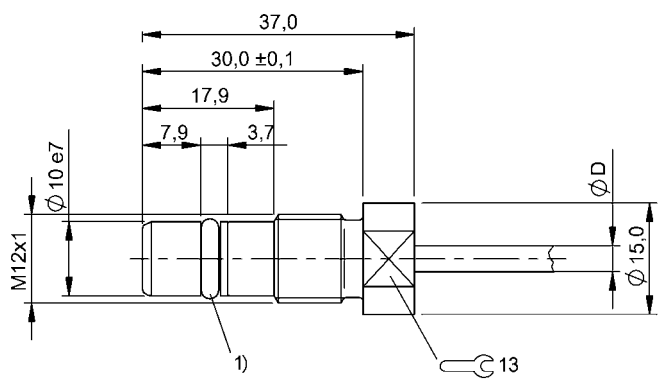


Inductive Sensors  
BES 516-300-S205-D-PU-03  
Order Code: BHS0028



1) O-Ring with thrust ring



Basic features

|                     |                    |
|---------------------|--------------------|
| Approval/Conformity | CE<br>UKCA<br>WEEE |
| Basic standard      | IEC 60947-5-2      |

Display/Operation

|                    |    |
|--------------------|----|
| Function indicator | no |
| Power indicator    | no |

Electrical connection

|                                   |                      |
|-----------------------------------|----------------------|
| Cable diameter D                  | 3.50 mm              |
| Cable length L                    | 3 m                  |
| Conductor cross-section           | 0.14 mm <sup>2</sup> |
| Connection type                   | Cable, 3.00 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 U <sub>e</sub>       | 1 µF        |
| Min. operating current I <sub>m</sub>         | 0 mA        |
| No-load current I <sub>o</sub> max., damped   | 8 mA        |
| No-load current I <sub>o</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.                      | 2.2 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) | 855 a |
|--------------|-------|

Interface

Switching output PNP normally open (NO)

Material

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

Mechanical data

Dimension Ø 12 x 37 mm  
Installation for flush mounting  
Mounting length 12.10 mm  
Mounting part M12x1  
Pressure rating max. 350 bar  
Pressure rating, note oil pressure rated  
Sealing ring, size 5.3 x 2.4 mm  
Size M12x1  
Tightening torque 20 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.

Wiring Diagrams

