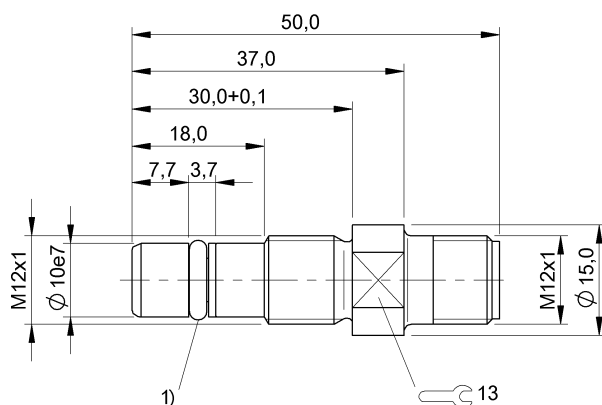
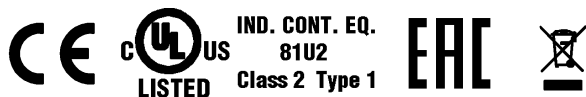




1) O-Ring with thrust ring



## 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   | 8 mA        |
| No-load current Io max., undamped | 3 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.          | 2.1 V       |

## Environmental conditions

|                         |                                 |
|-------------------------|---------------------------------|
| Ambient temperature     | -25...90 °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 |
|--------------|-------|

## General data

|                          |                            |
|--------------------------|----------------------------|
| Approval/Conformity      | CE<br>cULus<br>EAC<br>WEEE |
| Basic standard           | IEC 60947-5-2              |
| Thrust ring, part number | 705918                     |

## Material

|                          |                 |
|--------------------------|-----------------|
| Gasket, material         | NBR 70          |
| Housing material         | Stainless steel |
| Material sensing surface | EP              |
| Support ring material    | PTFE            |

## Mechanical data

|                           |                    |
|---------------------------|--------------------|
| Dimension                 | Ø 12 x 50 mm       |
| Installation              | for flush mounting |
| Mounting                  | M12x1              |
| Pressure rating max.      | 500 bar            |
| Pressure rating, note     | oil pressure rated |
| Sealing ring, part number | 631753             |
| Sealing ring, size        | 5.3 × 2.4 mm       |
| Size                      | M12x1              |
| Tightening torque         | 20 Nm ±10 %        |

## Output/Interface

|                  |                        |
|------------------|------------------------|
| Switching output | PNP normally open (NO) |
|------------------|------------------------|

## 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

The sensor is functional again after the overload has been eliminated.  
Pressure cycle rating: typ. 1 mil. Change 350 bar 90°C on Balluff test stand per BWN Pr. 12.  
Overvoltage protection using bi-directional Zener diode between Plus (+) and Minus (-).  
Installation Instructions 614804  
For further information about the 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

