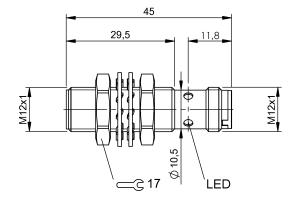
# Inductive Sensors BES M12ME-POC40B-S04G-003 Order Code: BES00EC

# BALLUFF





#### **Basic features**

| Approval/Conformity   | CE<br>UKCA<br>cULus<br>WFFF |
|-----------------------|-----------------------------|
| Basic standard        | IEC 60947-5-2               |
| Trademark             | Global                      |
| Display/Operation     |                             |
| Function indicator    | yes                         |
| Power indicator       | no                          |
| Electrical connection |                             |
| Connection            | M12x1-Male, 4-pin, A-coded  |

| Connection                        | M12x1-Male, 4-pin, A-co |
|-----------------------------------|-------------------------|
| 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 lo max., damped   | 2 mA          |
| No-load current Io max., undamped | 5 mA          |
| Operating voltage Ub              | 1030 VDC      |
| Output resistance Ra              | 33.0 kOhm + D |
| Protection class                  | II            |
| Rated insulation voltage Ui       | 250 V AC      |
| Rated operating current le        | 200 mA        |
| Rated operating voltage Ue DC     | 24 V          |
| Rated short circuit current       | 100 A         |
| Ready delay tv max.               | 21 ms         |
| Residual current Ir max.          | 10 µA         |
| Ripple max. (% of Ue)             | 15 %          |
| Switching frequency               | 2500 Hz       |
| Utilization category              | DC -13        |
| Voltage drop static max.          | 1.5 V         |
| voltage urop static IIIdx.        | 1.5 V         |

## Environmental conditions

| Ambient temperature     | -2570 °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)            | 640 a                                 |

Interface

Switching output

PNP normally closed (NC)

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#### Material

| Matorial                 |                           |
|--------------------------|---------------------------|
| Housing material         | Brass, Nickel-free coated |
| Material sensing surface | PBT                       |
|                          |                           |
| Mechanical data          |                           |
| Dimension                | Ø 12 x 45 mm              |
| Installation             | for flush mounting        |
| Mounting length          | 29.50 mm                  |
| Size                     | M12x1                     |
| Tightening torque        | 10 Nm                     |
|                          |                           |

#### Range/Distance

| Assured operating distance Sa    | 3.2 mm |
|----------------------------------|--------|
| Hysteresis H max. (% of Sr)      | 15.0 % |
| Rated operating distance Sn      | 4 mm   |
| Real switching distance sr       | 4 mm   |
| Repeat accuracy max. (% of Sr)   | 5.0 %  |
| Switching distance marking       |        |
| Temperature drift max. (% of Sr) | 10 %   |
| Tolerance Sr                     | ±10 %  |
|                                  |        |

#### Remarks

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

