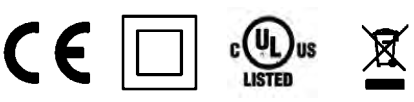
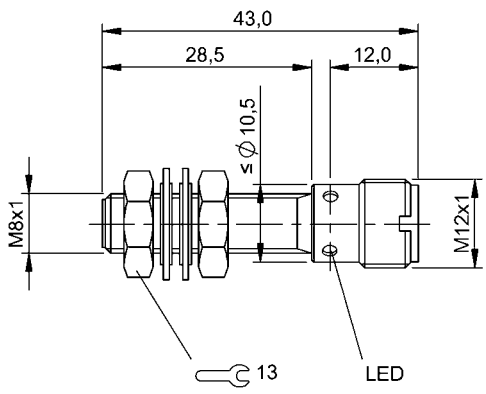


Inductive Sensors  
BES M08EE-PSC20B-S04G-101  
Order Code: BES0149



Basic features

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

Display/Operation

|                    |     |
|--------------------|-----|
| Function indicator | yes |
| 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                   | 0.5 $\mu$ F   |
| Min. operating current I <sub>m</sub>         | 0 mA          |
| No-load current I <sub>o</sub> max., damped   | 9 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>              | 33.0 kOhm + D |
| Protection class                              | II            |
| Rated insulation voltage U <sub>i</sub>       | 250 V AC      |
| 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.               | 20 ms         |
| Residual current I <sub>r</sub> max.          | 20 $\mu$ A    |
| Ripple max. (% of U <sub>e</sub> )            | 15 %          |
| Switching frequency                           | 1500 Hz       |
| Utilization category                          | DC -13        |
| Voltage drop static max.                      | 2.5 V         |

Environmental conditions

|                         |                                       |
|-------------------------|---------------------------------------|
| Ambient temperature     | -25...70 °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                                  |

Interface

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

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Material

|                          |                 |
|--------------------------|-----------------|
| Housing material         | Stainless steel |
| Material sensing surface | ceramic coated  |

Mechanical data

|                   |                    |
|-------------------|--------------------|
| Dimension         | Ø 8 x 43 mm        |
| Installation      | for flush mounting |
| Mounting length   | 28.00 mm           |
| Size              | M8x1               |
| Tightening torque | 8 Nm               |

Range/Distance

|                                  |        |
|----------------------------------|--------|
| Assured operating distance Sa    | 1.4 mm |
| Hysteresis H max. (% of Sr)      | 15.0 % |
| Rated operating distance Sn      | 2 mm   |
| Real switching distance sr       | 2 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.  
Flush: See installation instructions for inductive sensors with extended range 825357.  
Sn: reduced by the coating thickness of 0.2 mm.

Connector Drawings



Wiring Diagrams

