



1) Pressure resistant area



### Basic features

|                     |               |
|---------------------|---------------|
| Approval/Conformity | CE            |
|                     | UKCA          |
|                     | cULus         |
|                     | 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                   | 1 µF        |
| No-load current I <sub>o</sub> max., damped   | 6 mA        |
| No-load current I <sub>o</sub> max., undamped | 2 mA        |
| Operating voltage U <sub>b</sub>              | 10...30 VDC |
| Output resistance R <sub>a</sub>              | 100.0 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.               | 23 ms       |
| Residual current I <sub>r</sub> max.          | 10 µA       |
| Ripple max. (% of U <sub>e</sub> )            | 10 %        |
| Switching frequency                           | 500 Hz      |
| Utilization category                          | DC -13      |
| Voltage drop static max.                      | 2 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               | IP67                                  |

### Functional safety

|              |       |
|--------------|-------|
| MTTF (40 °C) | 770 a |
|--------------|-------|

Inductive Sensors  
**BES M12EI-PSC40B-S04G-S**  
**Order Code: BES02NA**



**Interface**

Switching output PNP normally open (NO)

**Material**

Housing material Stainless steel  
 Material sensing surface Stainless steel

**Mechanical data**

Dimension Ø 12 x 65 mm  
 Installation for flush mounting  
 Pressure rating max. 60 bar  
 Pressure rating, note Pressure-resistant  
 Size M12x1  
 Tightening torque 20 Nm ±10 %

**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**

When installing in non-ferromagnetic metals, the distance x must be considered. This dimension x is described in the document "BES 2SN STEELFACE". Since the nuts supplied are made of non-ferromagnetic metal, the specified dimension x also applies here. Mounting, where the nuts are close to the active surface, is not intended. 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**

