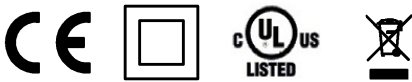




1) Sensing surface



**Basic features**

Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2
Trademark	Global

**Display/Operation**

Function indicator	yes
Power indicator	no

**Electrical connection**

Cable diameter D	4.60 mm
Cable length L	2 m
Conductor cross-section	0.34 mm <sup>2</sup>
Connection type	Cable, 2.00 m, TPU
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	2 mA
No-load current I <sub>o</sub> max., undamped	5 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.	21 ms
Residual current I <sub>r</sub> max.	30 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	2500 Hz
Utilization category	DC -13
Voltage drop static max.	1.5 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, according to BWN Pr 20

**Functional safety**

MTTF (40 °C)	850 a
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Inductive Sensors  
**BES M12MD-POC40B-BP02-003**  
Order Code: BES00E3

**BALLUFF**

**Interface**

Switching output                      PNP normally closed (NC)

**Material**

Housing material                      Brass, Nickel-free coated  
Material jacket                        TPU  
Material sensing surface              PBT

**Mechanical data**

Dimension                                Ø 12 x 33 mm  
Installation                                for flush mounting  
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.

**Wiring Diagrams**

