



### Basic features

|                     |                            |
|---------------------|----------------------------|
| Approval/Conformity | CE<br>cULus<br>EAC<br>WEEE |
| Base type deviation | Cable length               |
| 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                    | 3 m                  |
| Conductor cross-section           | 0.34 mm <sup>2</sup> |
| Connection type                   | Cable, 3.00 m, PVC   |
| Number of conductors              | 2                    |
| 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>     | 5 mA        |
| Operating voltage U <sub>b</sub>          | 10...36 VDC |
| Rated insulation voltage U <sub>i</sub>   | 75 V DC     |
| Rated operating current I <sub>e</sub>    | 100 mA      |
| Rated operating voltage U <sub>e</sub> DC | 24 V        |
| Rated short circuit current               | 100 A       |
| Ready delay t <sub>v</sub> max.           | 50 ms       |
| Residual current I <sub>r</sub> max.      | 600 µA      |
| Ripple max. (% of U <sub>e</sub> )        | 15 %        |
| Switching frequency                       | 1300 Hz     |
| Utilization category                      | DC -13      |
| Voltage drop static max.                  | 4.2 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) | 315 a |
|--------------|-------|

### Interface

|                  |                                |
|------------------|--------------------------------|
| Switching output | polarized normally closed (NC) |
|------------------|--------------------------------|

Inductive Sensors  
**BES M12MG-GOC30B-BV03**  
Order Code: **BES0474**

**BALLUFF**

**Material**

|                          |                           |
|--------------------------|---------------------------|
| Housing material         | Brass, Nickel-free coated |
| Material jacket          | PVC                       |
| Material sensing surface | PA 12                     |

**Mechanical data**

|                   |                    |
|-------------------|--------------------|
| Dimension         | Ø 12 x 43 mm       |
| Installation      | for flush mounting |
| Size              | M12x1              |
| Tightening torque | 15 Nm              |

**Range/Distance**

|                                  |        |
|----------------------------------|--------|
| Assured operating distance Sa    | 2.4 mm |
| Hysteresis H max. (% of Sr)      | 20.0 % |
| Rated operating distance Sn      | 3 mm   |
| Real switching distance sr       | 3 mm   |
| Repeat accuracy max. (% of Sr)   | 5.0 %  |
| Switching distance marking       | ■ ■    |
| Temperature drift max. (% of Sr) | 10 %   |
| Tolerance Sr                     | ±10 %  |

**Remarks**

Specify maximum attainable switching frequency (not per IEC 60947-5-2)  
Flush: See installation instructions for inductive sensors with extended range 825357.  
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**

