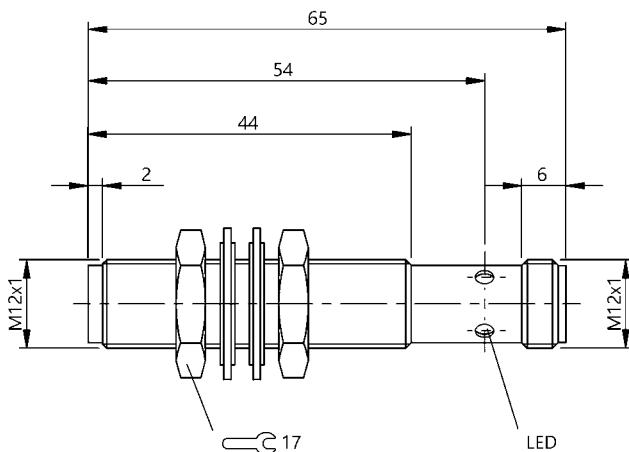


Inductive Sensors

BES M12EG1-POC20S-S04G-S

Order Code: BES02Z1

BALLUFF**Basic features**

| | |
|---------------------|---------------------|
| Additional features | Selective ferrous |
| Approval/Conformity | CE cULus WEEE |
| Basic standard | IEC 60947-5-2 |
| Target material | Selective ferrous |

Display/Operation

| | |
|--------------------|-----|
| Function indicator | yes |
| Power indicator | yes |

Electrical connection

| | |
|-----------------------------------|----------------------------|
| Connection | M12x1-Male, 4-pin, A-coded |
| Polarity reversal protected | yes |
| Protection against device mix-ups | no |
| Short-circuit protection | yes |

Electrical data

| | |
|--------------------------------------|-------------|
| Min. operating current I_m | 0 mA |
| No-load current I_0 max., damped | 14 mA |
| No-load current I_0 max., undamped | 14 mA |
| Operating voltage U_b | 10...30 VDC |
| Rated insulation voltage U_i | 75 V DC |
| Rated operating current I_e | 200 mA |
| Rated operating voltage U_e DC | 24 V |
| Rated short circuit current | 100 A |
| Ready delay t_v max. | 20 ms |
| Residual current I_r max. | 10 μ A |
| Ripple max. (% of U_e) | 15 % |
| Switching frequency | 100 Hz |
| Utilization category | DC-13 |
| Voltage drop static max. | 2 V |

Environmental conditions

| | |
|-------------------------|---------------------------------------|
| Ambient temperature | -40...70 °C |
| Contamination scale | 3 |
| EN 60068-2-27, Shock | Half-sinus, 30 g _n , 11 ms |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min |
| IP rating | IP67 |

Functional safety

| | |
|--------------|-------|
| MTTF (40 °C) | 990 a |
|--------------|-------|

Interface

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

Material

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

Mechanical data

| | |
|-------------------|--------------------|
| Dimension | Ø 12 x 65 mm |
| Installation | for flush mounting |
| Mounting length | 44.00 mm |
| Size | M12x1 |
| Tightening torque | 15 Nm |

Range/Distance

| | |
|----------------------------------|--------|
| Assured operating distance Sa | 1.6 mm |
| Hysteresis H max. (% of Sr) | 20.0 % |
| Rated operating distance Sn | 2 mm |
| Real switching distance sr | 2 mm |
| Repeat accuracy max. (% of Sr) | 5.0 % |
| Temperature drift max. (% of Sr) | 10 % |
| Tolerance Sr | ±10 % |

Remarks

EMC: Per EN60947-5-2:1998+A1:1999+A2:2004 Section 7.2.6. only when used with connector BKS S19-14-.. Shield connected at both ends.

The sensor is functional again after the overload has been eliminated.

Ferrous - Detects ferromagnetic steel

Non-Ferrous metals (such as aluminum, copper, brass) and austenitic steel are ignored.

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

