



Basic features

| | |
|---------------------|---------------------|
| Additional features | Weld immune |
| Approval/Conformity | cULus CE WEEE |
| Base type deviation | Ceramic coating |
| 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 U_e | 1 μ F |
| Magnetic field strength, interference field | 100 kA/m |
| Min. operating current I_m | 0 mA |
| No-load current I_o max., damped | 15 mA |
| No-load current I_o max., undamped | 10 mA |
| Operating voltage U_b | 10...30 VDC |
| Protection class | II |
| Rated insulation voltage U_i | 250 V AC |
| 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. | 15 ms |
| Residual current I_r max. | 80 μ A |
| Ripple max. (% of U_e) | 10 % |
| Switching frequency | 2500 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 _n , 11 ms |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min |
| IP rating | IP67 |
| Magnetic field immune | magnetic field immune (AC/DC) |

Interface

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

Inductive Sensors
BES M18MF1-PSC50A-S04G-W01
Order Code: **BES02KA**



Material

| | |
|--------------------------|--------------------|
| Housing material | Brass, PTFE coated |
| Material sensing surface | ceramic coated |

Mechanical data

| | |
|-------------------|--------------------|
| Dimension | Ø 18 x 50 mm |
| Installation | for flush mounting |
| Size | M18x1 |
| Tightening torque | 12 Nm |

Range/Distance

| | |
|----------------------------------|--------|
| Assured operating distance Sa | 3.9 mm |
| Hysteresis H max. (% of Sr) | 15.0 % |
| Rated operating distance Sn | 5 mm |
| Real switching distance sr | 5 mm |
| Repeat accuracy max. (% of Sr) | 5.0 % |
| Temperature drift max. (% of Sr) | 10 % |
| Tolerance Sr | ±10 % |

Remarks

Sn: reduced by the coating thickness of 0.2 mm.
The sensor is functional again after the overload has been eliminated.

Connector Drawings



Wiring Diagrams

