



Basic features

| | |
|---------------------|----------------------------|
| Application | Object detection |
| Approval/Conformity | CE cULus EAC WEEE |
| Basic standard | IEC 60947-5-2 |
| Operating mode | SIO Mode IO-Link Mode |

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 | 0.2 µF |
| Min. operating current I _m | 0 mA |
| No-load current I _o max., damped | 24 mA |
| No-load current I _o max., undamped | 20 mA |
| Operating voltage U _b | 12...30 VDC |
| Output resistance R _a | 33.0 kOhm + D |
| Protection class | II |
| Rated insulation voltage U _i | 250 V AC |
| Rated operating current I _e | 100 mA |
| Rated operating voltage U _e DC | 24 V |
| Ready delay t _v max. | 21 ms |
| Residual current I _r max. | 20 µA |
| Ripple max. (% of U _e) | 15 % |
| Switching frequency | 2000 Hz |
| Utilization category | DC -13 |
| Voltage drop static max. | 2.5 V |

Environmental conditions

| | |
|-------------------------|---------------------------------|
| Ambient temperature | -25...85 °C |
| Contamination scale | 3 |
| EN 60068-2-27, Shock | Half-sinus, 30 gn, 11 ms |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min |
| Protection degree | IP68 |

Functional safety

| | |
|--------------|-------|
| MTTF (40 °C) | 415 a |
|--------------|-------|

Inductive Sensors
BES M12MI-PSIC20C-S04G
Order Code: BES04FK



Material

| | |
|--------------------------|---------------------------|
| Housing material | Brass, Nickel-free coated |
| Material sensing surface | LCP |
| Surface protection | Nickel-free coated |

Mechanical data

| | |
|-------------------|--------------------|
| Dimension | Ø 12 x 65 mm |
| Installation | for flush mounting |
| Size | M12x1 |
| Tightening torque | 10 Nm |

Output/Interface

| | |
|--------------------------|---|
| Interface | IO-Link 1.1 |
| Interface setting option | Factory setting (Reset) SIO mode/IO-Link mode Fine adjustment ±0.05 mm |
| Process data IN | Teaching successfully reply 1 bytes Switching state Target too close/far |

Range/Distance

| | |
|-----------------------------|------------|
| Hysteresis H max. (% of Sn) | 15 % |
| Measuring range | 0.5...2 mm |
| Rated operating distance Sn | 2 mm |

Remarks

The sensor is functional again after the overload has been eliminated.
 Sensors with IO-Link function are not suitable for series or parallel wiring.
 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

