



Inductive sensor

IN-2004-BBOA



- 1 fixing hole  
2 threaded bush M3 Depth 5.8 mm



Product characteristics

|                    |  |                 |
|--------------------|--|-----------------|
| Output function    |  | normally closed |
| Sensing range [mm] |  | 4               |
| Housing            |  | rectangular     |
| Dimensions [mm]    |  | 40 x 12 x 26    |

Electrical data

|                             |                |
|-----------------------------|----------------|
| Operating voltage [V]       | 20...250 AC/DC |
| Protection class            | II             |
| Reverse polarity protection | yes            |

Outputs

|                                                      |                                                 |
|------------------------------------------------------|-------------------------------------------------|
| Output function                                      | normally closed                                 |
| Max. voltage drop switching output DC [V]            | 6                                               |
| Max. voltage drop switching output AC [V]            | 6.7                                             |
| Minimum load current [mA]                            | 5                                               |
| Max. leakage current [mA]                            | 2.0 (250 V AC) / 1.3 (110 V AC) / 0.8 (24 V DC) |
| Permanent current rating of switching output AC [mA] | 250; (350 (...50 °C))                           |
| Permanent current rating of switching output DC [mA] | 100                                             |
| Short-time current rating of switching output [mA]   | 2200; (50 ms / 1 Hz)                            |
| Switching frequency AC [Hz]                          | 25                                              |
| Switching frequency DC [Hz]                          | 50                                              |
| Short-circuit proof                                  | no                                              |
| Overload protection                                  | no                                              |

Detection zone

|                    |   |
|--------------------|---|
| Sensing range [mm] | 4 |
|--------------------|---|



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|                                      |                           |                                                                               |
|--------------------------------------|---------------------------|-------------------------------------------------------------------------------|
| Real sensing range Sr                | [mm]                      | 4 ± 10 %                                                                      |
| Operating distance                   | [mm]                      | 0...3.25                                                                      |
| <b>Accuracy / deviations</b>         |                           |                                                                               |
| Correction factor                    |                           | steel: 1 / stainless steel: 0.9 / brass: 0.6 / aluminium: 0.5 / copper: 0.4   |
| Hysteresis                           | [% of Sr]                 | 1...20                                                                        |
| Switch point drift                   | [% of Sr]                 | -10...10                                                                      |
| <b>Operating conditions</b>          |                           |                                                                               |
| Ambient temperature                  | [°C]                      | -25...80                                                                      |
| Protection                           |                           | IP 67                                                                         |
| <b>Tests / approvals</b>             |                           |                                                                               |
| EMC                                  | EN 61000-4-2 ESD          | 4 kV CD / 8 kV AD                                                             |
|                                      | EN 61000-4-3 HF radiated  | 3 V/m                                                                         |
|                                      | EN 61000-4-4 Burst        | 2 kV                                                                          |
|                                      | EN 61000-4-6 HF conducted | 3 V                                                                           |
|                                      | EN 55011 emission         | class B                                                                       |
| MTTF                                 | [years]                   | 609                                                                           |
| <b>Mechanical data</b>               |                           |                                                                               |
| Weight                               | [g]                       | 99.5                                                                          |
| Housing                              |                           | rectangular                                                                   |
| Mounting                             |                           | non-flush mountable                                                           |
| Dimensions                           | [mm]                      | 40 x 12 x 26                                                                  |
| Materials                            |                           | PBT                                                                           |
| <b>Fixing hole</b>                   |                           |                                                                               |
| Tightening torque                    | [Nm]                      | < 0.5                                                                         |
| <b>Threaded bush</b>                 |                           |                                                                               |
| Tightening torque                    | [Nm]                      | < 1.2; (when brass insert in contact with counterpart)                        |
| <b>Displays / operating elements</b> |                           |                                                                               |
| Display                              | switching status          | 1 x LED, yellow                                                               |
| <b>Electrical connection</b>         |                           |                                                                               |
| Required protection                  |                           | miniature fuse to IEC60127-2 sheet 1; ≤ 2 A; fast acting                      |
| <b>Remarks</b>                       |                           |                                                                               |
| Remarks                              |                           | Recommendation: Check the safe functioning of the unit after a short circuit. |
| Pack quantity                        |                           | 1 pcs.                                                                        |



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### Electrical connection

Cable: 2 m, PVC; 2 x 0.5 mm<sup>2</sup>

### Connection



Note miniature fuse to IEC60127-2 sheet 1  $\leq$  2 A fast acting  
Core colours :

BN =

brown

BU =

blue