



## Inductive sensor

IEB3003BBPKG/V4A/K1/2M/PUR



1: LED yellow



### Application

|                                   |     |
|-----------------------------------|-----|
| Magnetic-field immune             | yes |
| Max. magnetic field immunity [mT] | 300 |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 DC |
| Current consumption [mA]    | < 20       |
| Protection class            | III        |
| Reverse polarity protection | yes        |

### Outputs

|                                                      |               |
|------------------------------------------------------|---------------|
| Electrical design                                    | PNP           |
| Output function                                      | normally open |
| Max. voltage drop switching output DC [V]            | 2.5           |
| Permanent current rating of switching output DC [mA] | 100           |
| Switching frequency DC [Hz]                          | 2000          |
| Short-circuit protection                             | yes           |
| Overload protection                                  | yes           |

### Detection zone

|                               |              |
|-------------------------------|--------------|
| Sensing range [mm]            | 3            |
| Real sensing range $S_r$ [mm] | $3 \pm 10\%$ |
| Operating distance [mm]       | 0...2.43     |
| Increased sensing range       | yes          |

### Accuracy / deviations

|                                  |                                                                     |
|----------------------------------|---------------------------------------------------------------------|
| Correction factor                | steel: 1 / stainless steel: 1 / brass: 1 / aluminium: 1 / copper: 1 |
| Hysteresis [% of $S_r$ ]         | 3...15                                                              |
| Switch point drift [% of $S_r$ ] | -10...10                                                            |
| Correction factor $K = 1$        | yes                                                                 |

### Operating conditions

|                          |                                    |
|--------------------------|------------------------------------|
| Ambient temperature [°C] | -40...85                           |
| Protection               | IP 65; IP 66; IP 67; IP 68; IP 69K |



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| Tests / approvals             |                           |                                                                                                                       |
|-------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------|
| EMC                           | EN 61000-4-2 ESD          | 4 kV CD / 8 kV AD                                                                                                     |
|                               | EN 61000-4-3 HF radiated  | 10 V/m                                                                                                                |
|                               | EN 61000-4-4 Burst        | 2 kV                                                                                                                  |
|                               | EN 61000-4-6 HF conducted | 10 V                                                                                                                  |
|                               | EN 55011                  | class B                                                                                                               |
| Vibration resistance          | EN 60068-2-6 Fc           | 20 g (10...3000 Hz) / 50 sweep cycles per frequency; 1 octave per minute in 3 axes                                    |
| Shock resistance              | EN 60068-2-27 Ea          | 100 g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes                                      |
| Continuous shock resistance   | EN 60068-2-29 Eb          | 40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes                                               |
| Fast temperature changes      | EN 60068-2-14 Na          | TA = -40 °C; TB = 85 °C; t1 = 30 min; t2 = < 10 s; 50 cycles                                                          |
| Salt spray test               | EN 60068-2-52 Kb          | severity level 5 (4 test cycles)                                                                                      |
| MTTF                          | [years]                   | 747                                                                                                                   |
| UL approval                   | UL Approval no.           | A013                                                                                                                  |
| Mechanical data               |                           |                                                                                                                       |
| Weight                        | [g]                       | 39.8                                                                                                                  |
| Housing                       |                           | threaded type                                                                                                         |
| Mounting                      |                           | flush mountable                                                                                                       |
| Dimensions                    | [mm]                      | M8 x 1 / L = 37.5                                                                                                     |
| Thread designation            |                           | M8 x 1                                                                                                                |
| Materials                     |                           | stainless steel (1.4404 / 316L); sensing face: LCP white; LED window: PEI; lock nuts: stainless steel (1.4404 / 316L) |
| Displays / operating elements |                           |                                                                                                                       |
| Display                       | switching status          | 1 x LED, yellow                                                                                                       |
| Accessories                   |                           |                                                                                                                       |
| Accessories (supplied)        | lock nuts: 2              |                                                                                                                       |
| Remarks                       |                           |                                                                                                                       |
| Pack quantity                 | 1 pcs.                    |                                                                                                                       |

# IES202



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### Electrical connection

Cable: 2 m, PUR; 3 x 0.14 mm<sup>2</sup>

### Connection



Core colours :

|      |       |
|------|-------|
| BK = | black |
| BN = | brown |
| BU = | blue  |