

## Inductive full-metal sensor

IGB3008BBPKG/AM/V4A/US-104



### Product characteristics

|                    |                  |
|--------------------|------------------|
| Electrical design  | PNP              |
| Output function    | normally open    |
| Sensing range [mm] | 8                |
| Housing            | threaded type    |
| Dimensions [mm]    | M18 x 1 / L = 45 |

### Application

|                         |                                                                   |
|-------------------------|-------------------------------------------------------------------|
| Special feature         | Gold-plated contacts; Increased sensing range; Full-metal housing |
| Application             | Use in machine tools, coolants and lubricants                     |
| Pressure rating [bar]   | 100                                                               |
| Pressure rating [MPa]   | 10                                                                |
| Note on pressure rating | sensing face                                                      |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 DC |
| Current consumption [mA]    | < 10       |
| 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]                          | 100           |
| Short-circuit protection                             | yes           |
| Overload protection                                  | yes           |

### Detection zone

|                               |               |
|-------------------------------|---------------|
| Sensing range [mm]            | 8             |
| Real sensing range $S_r$ [mm] | $8 \pm 10 \%$ |
| Operating distance [mm]       | 0...6.48      |
| Increased sensing range       | yes           |



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| Accuracy / deviations         |                                                                                                                                       |                                                                                  |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Correction factor             | steel: 1 / stainless steel: 0.7 / brass: 0.6 / aluminium: 0.5 / copper: 0.2                                                           |                                                                                  |
| Hysteresis                    | [% of Sr]                                                                                                                             | 3...15                                                                           |
| Switch point drift            | [% of Sr]                                                                                                                             | -10...10                                                                         |
| Operating conditions          |                                                                                                                                       |                                                                                  |
| Ambient temperature           | [°C]                                                                                                                                  | -40...85                                                                         |
| Protection                    | IP 65; IP 66; IP 67; IP 68; IP 69K                                                                                                    |                                                                                  |
| 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                                                                          |
| Impact resistance             |                                                                                                                                       | 1 J                                                                              |
| Vibration resistance          | EN 60068-2-6 Fc                                                                                                                       | 20 g (10...3000 Hz) / 50 sweep cycles, 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 change       | EN 60068-2-14 Na                                                                                                                      | TA = -40 °C; TB = 85 °C; t1 = 30 min; t2 = < 10 s; 50 cycles                     |
| Embedded software included    | yes                                                                                                                                   |                                                                                  |
| UL approval                   | Ta                                                                                                                                    | -25...70 °C                                                                      |
|                               | Enclosure type                                                                                                                        | Type 1                                                                           |
|                               | power supply                                                                                                                          | Limited Voltage/Current                                                          |
|                               | UL Approval no.                                                                                                                       | A012                                                                             |
|                               | File number UL                                                                                                                        | E174191                                                                          |
| Mechanical data               |                                                                                                                                       |                                                                                  |
| Weight                        | [g]                                                                                                                                   | 44                                                                               |
| Housing                       | threaded type                                                                                                                         |                                                                                  |
| Mounting                      | flush mountable                                                                                                                       |                                                                                  |
| Dimensions                    | [mm]                                                                                                                                  | M18 x 1 / L = 45                                                                 |
| Thread designation            | M18 x 1                                                                                                                               |                                                                                  |
| Materials                     | stainless steel (316L/1.4404); sensing face: stainless steel (316L/1.4404); LED window: PEI; lock nuts: stainless steel (316L/1.4404) |                                                                                  |
| Tightening torque             | [Nm]                                                                                                                                  | 50                                                                               |
| Full-metal housing            | yes                                                                                                                                   |                                                                                  |
| Displays / operating elements |                                                                                                                                       |                                                                                  |
| Display                       | switching status                                                                                                                      | 4 x LED, yellow                                                                  |
| Accessories                   |                                                                                                                                       |                                                                                  |
| Items supplied                | lock nuts: 2                                                                                                                          |                                                                                  |
| Remarks                       |                                                                                                                                       |                                                                                  |
| Pack quantity                 | 1 pcs.                                                                                                                                |                                                                                  |

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### Electrical connection - plug

Connector: 1 x M12; coding: A; Contacts: gold-plated



### Connection

