

## Inductive full-metal sensor

IFK3003BBPKG/AM/V4A/US-104



### Product characteristics

|                    |                  |
|--------------------|------------------|
| Electrical design  | PNP              |
| Output function    | normally open    |
| Sensing range [mm] | 3                |
| Housing            | threaded type    |
| Dimensions [mm]    | M12 x 1 / L = 60 |

### Application

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

### 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]                          | 100           |
| Short-circuit protection                             | yes           |
| Type of short-circuit protection                     | pulsed        |
| Overload protection                                  | yes           |

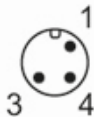
### Detection zone

|                         |         |
|-------------------------|---------|
| Sensing range [mm]      | 3       |
| Operating distance [mm] | 0...2.4 |



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| Accuracy / deviations                                                                          |                                                                                                                                                      |                         |
|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Correction factor                                                                              | steel: 1 / stainless steel: 0.6 / brass: 0.7 / aluminium: 0.6 / copper: 0.3                                                                          |                         |
| Hysteresis [% of Sr]                                                                           | 1...20                                                                                                                                               |                         |
| Operating conditions                                                                           |                                                                                                                                                      |                         |
| Ambient temperature [°C]                                                                       | -25...70                                                                                                                                             |                         |
| Protection                                                                                     | IP 67; IP 68; ("Coolant")                                                                                                                            |                         |
| 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 emission                                                                                                                                    | class B                 |
| Impact resistance                                                                              | 1 J                                                                                                                                                  |                         |
| MTTF [years]                                                                                   | 1258                                                                                                                                                 |                         |
| 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]                                                                                     | 28.3                                                                                                                                                 |                         |
| Housing                                                                                        | threaded type                                                                                                                                        |                         |
| Mounting                                                                                       | flush mountable                                                                                                                                      |                         |
| Dimensions [mm]                                                                                | M12 x 1 / L = 60                                                                                                                                     |                         |
| Thread designation                                                                             | M12 x 1                                                                                                                                              |                         |
| Materials                                                                                      | housing: stainless steel (1.4404 / 316L); sensing face: stainless steel (1.4404 / 316L); LED window: PEI; lock nuts: stainless steel (1.4404 / 316L) |                         |
| Tightening torque [Nm]                                                                         | 15                                                                                                                                                   |                         |
| Full-metal housing                                                                             | yes                                                                                                                                                  |                         |
| Displays / operating elements                                                                  |                                                                                                                                                      |                         |
| Display                                                                                        | switching status                                                                                                                                     | 4 x 90° LED, yellow     |
| Accessories                                                                                    |                                                                                                                                                      |                         |
| Items supplied                                                                                 | lock nuts: 2                                                                                                                                         |                         |
| Remarks                                                                                        |                                                                                                                                                      |                         |
| Pack quantity                                                                                  | 1 pcs.                                                                                                                                               |                         |
| Electrical connection                                                                          |                                                                                                                                                      |                         |
| <div></div> |                                                                                                                                                      |                         |

# IFC258



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### Connection



### Electrical connection - plug

Connector: 1 x M12; Contacts: gold-plated