



## Inductive sensor

IGB2012-ARKG/M/US-104-ARS



### Product characteristics

|                    |                  |
|--------------------|------------------|
| Electrical design  | PNP/NPN          |
| Output function    | normally open    |
| Sensing range [mm] | 12               |
| Housing            | threaded type    |
| Dimensions [mm]    | M18 x 1 / L = 51 |

### Application

|                 |                                               |
|-----------------|-----------------------------------------------|
| Special feature | Gold-plated contacts; Increased sensing range |
| Application     | Use in machine tools, coolants and lubricants |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 DC |
| Protection class            | II         |
| Reverse polarity protection | yes        |

### Outputs

|                                                      |               |
|------------------------------------------------------|---------------|
| Electrical design                                    | PNP/NPN       |
| Output function                                      | normally open |
| Max. voltage drop switching output DC [V]            | 2.5           |
| Minimum load current [mA]                            | 2             |
| Max. leakage current [mA]                            | 0.5           |
| Permanent current rating of switching output DC [mA] | 100           |
| Switching frequency DC [Hz]                          | 250           |
| Short-circuit protection                             | yes           |
| Type of short-circuit protection                     | pulsed        |
| Overload protection                                  | yes           |



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| Detection zone                            |                           |                                                                                                                  |
|-------------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------|
| Sensing range                             | [mm]                      | 12                                                                                                               |
| Real sensing range Sr                     | [mm]                      | 12 ± 10 %                                                                                                        |
| Operating distance                        | [mm]                      | 0...9.7                                                                                                          |
| Increased sensing range                   |                           | yes                                                                                                              |
| Accuracy / deviations                     |                           |                                                                                                                  |
| Correction factor                         |                           | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: 0.4 / copper: 0.3                                      |
| Hysteresis                                | [% of Sr]                 | 3...15                                                                                                           |
| Switch point drift                        | [% of Sr]                 | -10...10                                                                                                         |
| Operating conditions                      |                           |                                                                                                                  |
| Ambient temperature                       | [°C]                      | -25...70                                                                                                         |
| Protection                                |                           | 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                  | class B                                                                                                          |
| MTTF                                      | [years]                   | 2655                                                                                                             |
| UL approval                               | Ta                        | 0...40 °C                                                                                                        |
|                                           | Enclosure type            | Type 1                                                                                                           |
|                                           | voltage supply            | Hazardous voltage                                                                                                |
|                                           | File number UL            | E174191                                                                                                          |
| Mechanical data                           |                           |                                                                                                                  |
| Weight                                    | [g]                       | 44.3                                                                                                             |
| Housing                                   |                           | threaded type                                                                                                    |
| Mounting                                  |                           | non-flush mountable                                                                                              |
| Dimensions                                | [mm]                      | M18 x 1 / L = 51                                                                                                 |
| Thread designation                        |                           | M18 x 1                                                                                                          |
| Materials                                 |                           | brass white bronze coated; sensing face: LCP                                                                     |
| Displays / operating elements             |                           |                                                                                                                  |
| Display                                   | switching status          | 4 x 90° LED, yellow                                                                                              |
| Accessories                               |                           |                                                                                                                  |
| Accessories (supplied)                    |                           | lock nuts: 2                                                                                                     |
| Remarks                                   |                           |                                                                                                                  |
| Remarks                                   |                           | Conventional 3-wire npn sensors can be replaced.<br>In this case pin 1 (grey in the wiring diagram) is not used. |
| Pack quantity                             |                           | 1 pcs.                                                                                                           |
| Electrical connection - plug              |                           |                                                                                                                  |
| Connector: 1 x M12; Contacts: gold-plated |                           |                                                                                                                  |

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### Connection

