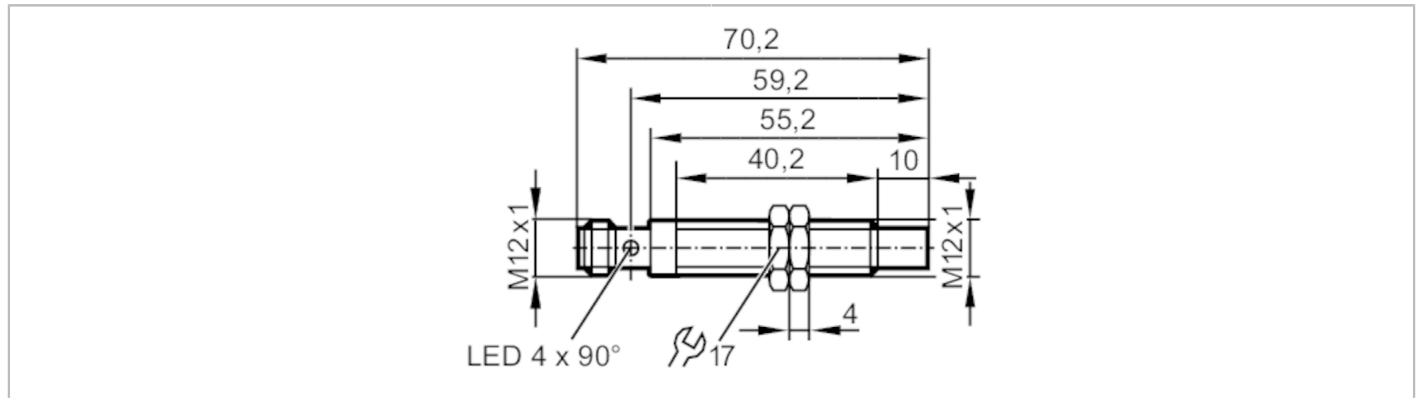


# IF505A



## Inductive full-metal sensor

IFK3006-BPKG/AM/P/US104/3G/3D





| Product characteristics                              |   |
|--|---|
| Electrical design                                    | PNP   |
| Output function                                      | normally open   |
| Sensing range [mm]                                   | 6   |
| Housing  | threaded type   |
| Dimensions [mm]                                      | M12 x 1 / L = 70.2  |
| Application  |   |
| Special feature                                      | Gold-plated contacts; Increased sensing range; Full-metal housing |
| Pressure rating [bar]                                | 100   |
| Note on pressure rating                              | sensing face  |
| Electrical data                                      |   |
| Operating voltage [V]                                | 10...36 DC  |
| Current consumption [mA]                             | < 25  |
| Protection class                                     | III; (PELV)   |
| Reverse polarity protection                          | yes   |
| Outputs  |   |
| Electrical design                                    | PNP   |
| Output function                                      | normally open   |
| Max. voltage drop switching output DC [V]            | 2.5   |
| Max. leakage current [mA]                            | 0.1   |
| Permanent current rating of switching output DC [mA] | 100   |
| Switching frequency DC [Hz]                          | 500   |
| Short-circuit protection                             | yes   |
| Type of short-circuit protection                     | pulsed  |
| Overload protection                                  | yes   |

# IF505A



## Inductive full-metal sensor

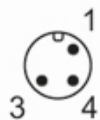
IFK3006-BPKG/AM/PI/US104/3G/3D

| Detection zone                            |                           |  |
|---|---------------------------|--|
| Sensing range                             | [mm]                      | 6  |
| Real sensing range Sr                     | [mm]                      | 6 ± 10 %   |
| Operating distance                        | [mm]                      | 0...4.9  |
| Increased sensing range                   |                           | yes  |
| Accuracy / deviations                     |                           |  |
| Correction factor                         |                           | steel: 1 / stainless steel: 1 / brass: 0.9 / aluminium: 0.75 / copper: 0.6   |
| Hysteresis                                | [% of Sr]                 | 1...20   |
| Switch point drift                        | [% of Sr]                 | -10...10   |
| Operating conditions                      |                           |  |
| Ambient temperature                       | [°C]                      | -40...60   |
| Protection                                |                           | IP 67; (when used outside the hazardous area: IP 65, IP 67, IP 68, IP 69K)   |
| Tests / approvals                         |                           |  |
| ATEX marking                              |                           |  II 3G Ex nA IIC T4 Gc X          |
|   |                           |  II 3D Ex tc IIIC T95°C Dc IP67 X |
| 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]                   | 808  |
| Mechanical data                           |                           |  |
| Weight                                    | [g]                       | 56.3   |
| Housing                                   |                           | threaded type  |
| Mounting                                  |                           | non-flush mountable  |
| Dimensions                                | [mm]                      | M12 x 1 / L = 70.2   |
| Thread designation                        |                           | M12 x 1  |
| Materials                                 |                           | stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); PEI; lock nuts: brass                             |
| Full-metal housing                        |                           | yes  |
| Displays / operating elements             |                           |  |
| Display                                   | switching status          | 4 x 90° LED, yellow  |
| Accessories                               |                           |  |
| Accessories (supplied)                    |                           | lock nuts: 2   |
| Remarks                                   |                           |  |
| Remarks                                   |                           | To maintain the EMC data:<br>Equalise potential by connecting the sensor housing to the machine earth.             |
| Pack quantity                             |                           | 1 pcs.   |
| Electrical connection - plug              |                           |  |
| Connector: 1 x M12; Contacts: gold-plated |                           |  |

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## Inductive full-metal sensor

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### Connection



### Diagrams and graphs

#### Installation

