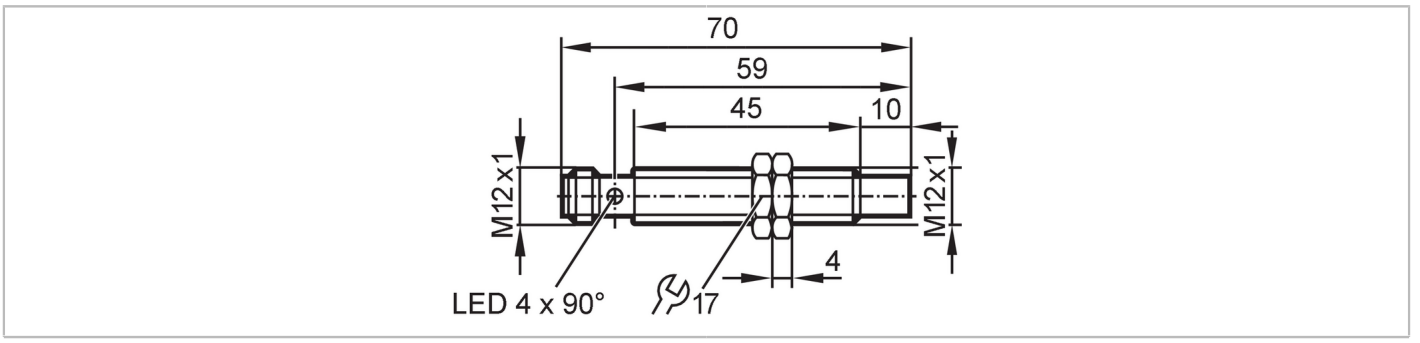
# IF505A

## 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 | |
| **Application** | | | |
| Special feature | | Gold-plated contacts; Increased sensing range; Full-metal housing | |
| Application | | For applications in hazardous areas | |
| Pressure rating | | 100 bar | 10 MPa |
| Note on pressure rating | | sensing face | |
| **Electrical data** | | | |
| Operating voltage | [V] | 10...30 DC | |
| Current consumption | [mA] | < 25 | |
| 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] | 500 | |
| Short-circuit protection | | yes | |
| Overload protection | | yes | |
| **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: 0.8 / copper: 0.6 | |
| Hysteresis | [% of Sr] | 1...20 | |

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| | | | |
|---|---|---|---|
| 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** | | | |
| Approval | | BVS 20 ATEX E 055 X; IECEx BVS 20.0042 X | |
| ATEX marking | | II 3G Ex ec IIC T4 Gc | |
| | | II 3D Ex tc IIIC T95°C Dc | |
| 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 | | EN 60068-2-75 Ehc | 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 60068-2-27 Ea | 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 |
| Salt spray test | | EN 60068-2-52 Kb | severity level 5 (4 test cycles) |
| MTTF | [years] | 1355 | |
| **Mechanical data** | | | |
| Weight | [g] | 64.866 | |
| Housing | | threaded type | |
| Mounting | | non-flush mountable | |
| Dimensions | [mm] | M12 x 1 / L = 70 | |
| Thread designation | | M12 x 1 | |
| Materials | | stainless steel (316L/1.4404); PEI; lock nuts: brass white bronze coated | |
| 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** | | | |
| Remarks | | To maintain the EMC data: | |
| | | Equalise potential by connecting the sensor housing to the machine earth. | |
| Pack quantity | | 1 pcs. | |

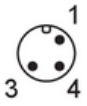
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## Inductive full-metal sensor

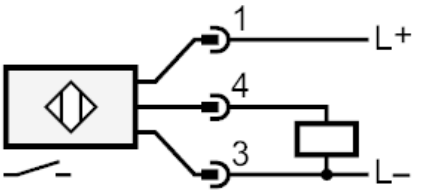
IFK3006-BPKG/AM/P/US104/3G/3D

## Electrical connection - plug

Connector: 1 x M12; coding: A; Contacts: 3, gold-plated




### Connection




## Diagrams and graphs

