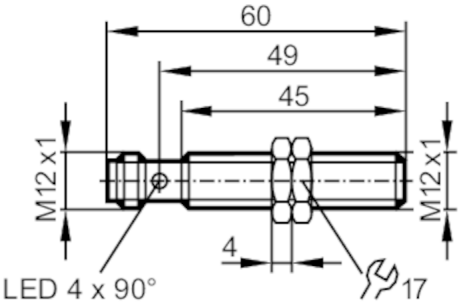
# IFT258

## Inductive full-metal sensor

IFK3004BFRKG/AM/IO/US-104




EC 1935/2004 IO-Link

| | | |
|---|---|---|
| **Product characteristics** | | |
| Electrical design | | PNP/NPN; (parameterisable) |
| Output function | | normally open / normally closed; (parameterisable) |
| Communication interface | | IO-Link |
| Housing | | threaded type |
| Dimensions | [mm] | M12 x 1 / L = 60 |
| **Application** | | |
| Special feature | | Gold-plated contacts |
| Application | | constant cleaning with aggressive cleaning agents; regular cleaning processes |
| Pressure rating | [bar] | 100 |
| Note on pressure rating | | sensing face |
| **Electrical data** | | |
| Operating voltage | [V] | 10...30 DC |
| Current consumption | [mA] | < 15 |
| Protection class | | III |
| Reverse polarity protection | | yes |
| **Outputs** | | |
| Electrical design | | PNP/NPN; (parameterisable) |
| Output function | | normally open / normally closed; (parameterisable) |
| 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** | | |
| Switch point IO-Link | [mm] | 0.7...3.51; (parameterisable) |
| Measuring range IO-Link | [mm] | 0.375...3.75 |
| **Accuracy / deviations** | | |
| Correction factor | | steel: 1 / stainless steel: 0.7 / brass: 0.8 / aluminium: 0.6 / copper: 0.3 |
| Hysteresis | [% of Sr] | 3...15 |

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| | | | |
|---|---|---|---|
| Linearity error IO-Link | [%] | ± 2; (of the final value of the measuring range) | |
| Repeatability IO-Link | [%] | ± 1; (of the final value of the measuring range) | |
| Temperature coefficient | | ± 0,2 %/K; (of the final value of the measuring range) | |
| **Interfaces** | | | |
| Communication interface | | IO-Link | |
| Transmission type | | COM2 (38,4 kBaud) | |
| IO-Link revision | | 1.1 | |
| SDCI standard | | IEC 61131-9 | |
| Profiles | | Smart Sensor: Identification and diagnosis; Multi-channel, two setpoint switching sensor, type 0 Generic Profiled Sensor; Teach Channel | |
| SIO mode | | yes | |
| Required master port type | | A | |
| Min. process cycle time | [ms] | 3.2 | |
| Supported DeviceIDs | | **Type of operation** | **DeviceID** |
| | | default | 1090 |
| **Operating conditions** | | | |
| Ambient temperature | [°C] | 0...100 | |
| 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 60068-2-27 | 40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes |
| Fast temperature change | | EN 60068-2-14 Nc | TA = 0°C; TB = 100°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] | 635 | |
| Embedded software included | | yes | |
| UL approval | | Ta | -25...70 °C |
| | | Enclosure type | Type 1 |
| | | power supply | Limited Voltage/Current |
| | | UL Approval no. | A008 |
| | | File number UL | E174191 |
| **Mechanical data** | | | |
| Weight | [g] | 29.2 | |
| Housing | | threaded type | |
| Mounting | | flush mountable | |
| Dimensions | [mm] | M12 x 1 / L = 60 | |
| Thread designation | | M12 x 1 | |

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| | | |
|---|---|---|
| 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] | 15 |

### Displays / operating elements

| | | |
|---|---|---|
| Display | switching status | 4 x LED, yellow |

### Accessories

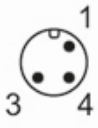
| | |
|---|---|
| Items supplied | lock nuts: 2 |

### Remarks

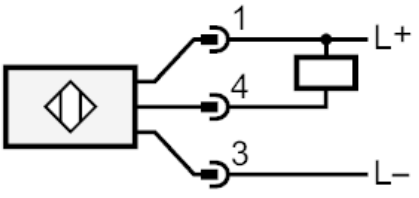
| | |
|---|---|
| Pack quantity | 1 pcs. |

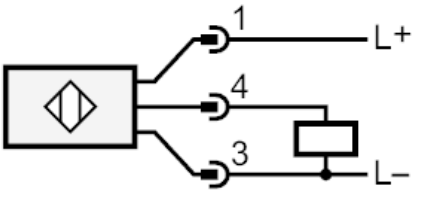
### Electrical connection - plug

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




Connection




| | |
|---|---|
| 4 | OUT / IO-Link |