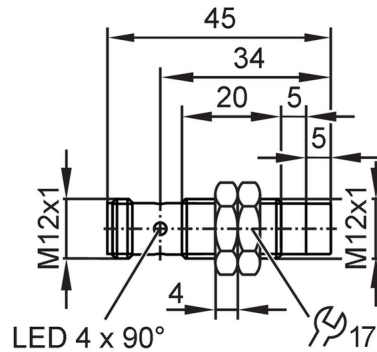


# IFS290



## Inductive sensor

IFB3010-BPKG/K1/US-104



| Product characteristics                              |   |
|--|---|
| Electrical design                                    | PNP   |
| Output function                                      | normally open   |
| Sensing range [mm]                                   | 10  |
| Housing  | threaded type   |
| Dimensions [mm]                                      | M12 x 1 / L = 45  |
| Application  |   |
| Special feature                                      | Gold-plated contacts; Increased sensing range; Correction factor K = 1; Magnetic-field immune                       |
| Application  | Suitable for industrial, mobile, cooling and lubricating applications; Industrial applications / factory automation |
| Magnetic-field immune                                | yes   |
| Max. magnetic field immunity [mT]                    | 300   |
| 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]                          | 2000  |
| Short-circuit protection                             | yes   |
| Overload protection                                  | yes   |
| Detection zone                                       |   |
| Sensing range [mm]                                   | 10  |
| Real sensing range Sr [mm]                           | 10 ± 10 %   |
| Operating distance [mm]                              | 0...8.1   |
| Increased sensing range                              | yes   |

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IFB3010-BPKG/K1/US-104

| Accuracy / deviations         |  |  |
|-------------------------------|--|--|
| Correction factor             | steel: 1 / stainless steel: 1 / brass: 1 / aluminium: 1 / copper: 1  |  |
| Hysteresis [% of Sr]          | 3...15   |  |
| Switch point drift [% of Sr]  | -10...10   |  |
| Correction factor K = 1       | yes  |  |
| Operating conditions          |  |  |
| Ambient temperature [°C]      | -40...85   |  |
| 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  |
| 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 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]                  | 474  |  |
| Embedded software included    | yes  |  |
| UL approval                   | Ta   | -25...70 °C  |
|                               | Enclosure type   | Type 1   |
|                               | power supply   | Limited Voltage/Current  |
|                               | UL approval no.  | A005   |
| File number UL                | E174191  |  |
| Mechanical data               |  |  |
| Weight [g]                    | 23   |  |
| Housing                       | threaded type  |  |
| Mounting                      | non-flush mountable  |  |
| Dimensions [mm]               | M12 x 1 / L = 45   |  |
| Thread designation            | M12 x 1  |  |
| Materials                     | housing: brass white bronze coated; sensing face: LCP white; LED window: PEI; lock nuts: brass white bronze coated |  |
| Displays / operating elements |  |  |
| Display                       | switching status   | 4 x LED, yellow  |
| Accessories                   |  |  |
| Items supplied                | lock nuts: 2   |  |
| Remarks                       |  |  |
| Pack quantity                 | 1 pcs.   |  |

# IFS290

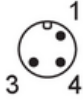


## Inductive sensor

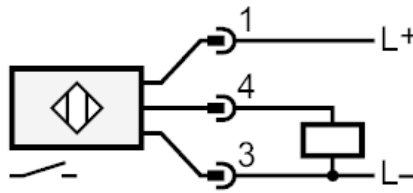
IFB3010-BPKG/K1/US-104

### Electrical connection - plug

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



### Connection



### Diagrams and graphs

#### Installation

