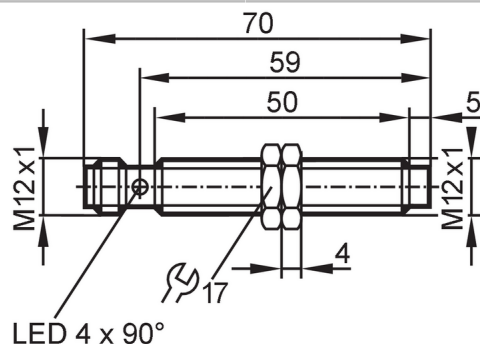


# IF5904



## Inductive sensor

IFK4004-CPKG/US-104



### Product characteristics

|                    |                  |
|--------------------|------------------|
| Electrical design  | PNP              |
| Output function    | complementary    |
| Sensing range [mm] | 4                |
| Housing            | Threaded type    |
| Dimensions [mm]    | M12 x 1 / L = 70 |

### Application

|                 |                      |
|-----------------|----------------------|
| Special feature | gold-plated contacts |
|-----------------|----------------------|

### Electrical data

|                             |              |
|-----------------------------|--------------|
| Operating voltage [V]       | 10...30 DC   |
| Current consumption [mA]    | < 10; (24 V) |
| Protection class            | II           |
| Reverse polarity protection | yes          |

### Outputs

|                                                      |               |
|------------------------------------------------------|---------------|
| Electrical design                                    | PNP           |
| Output function                                      | complementary |
| Max. voltage drop switching output DC [V]            | 2.5           |
| Permanent current rating of switching output DC [mA] | 200           |
| Switching frequency DC [Hz]                          | 1200          |
| Short-circuit protection                             | yes           |
| Overload protection                                  | yes           |

### Monitoring range

|                            |          |
|----------------------------|----------|
| Sensing range [mm]         | 4        |
| Real sensing range Sr [mm] | 4 ± 10 % |
| Operating distance [mm]    | 0...3.24 |

### Accuracy / deviations

|                              |                                                                            |
|------------------------------|----------------------------------------------------------------------------|
| Correction factor            | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.4 / copper: 0.3 |
| Hysteresis [% of Sr]         | 3...15                                                                     |
| Switch-point drift [% of Sr] | -10...10                                                                   |

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| Operating conditions                                    |                           |                                                                                                                        |
|---------------------------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------|
| Ambient temperature                                     | [°C]                      | -25...80                                                                                                               |
| Protection                                              |                           | IP 67                                                                                                                  |
| 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]                   | 1865                                                                                                                   |
| Embedded software included                              |                           | yes                                                                                                                    |
| UL approval                                             | Ta                        | -25...80 °C                                                                                                            |
|                                                         | Enclosure type            | Type 1                                                                                                                 |
|                                                         | voltage supply            | Limited Voltage/Current                                                                                                |
|                                                         | UL approval number        | A014                                                                                                                   |
|                                                         | File number UL            | E174191                                                                                                                |
| Mechanical data                                         |                           |                                                                                                                        |
| Weight                                                  | [g]                       | 30                                                                                                                     |
| Housing                                                 |                           | Threaded type                                                                                                          |
| Mounting                                                |                           | non-flush mountable                                                                                                    |
| Dimensions                                              | [mm]                      | M12 x 1 / L = 70                                                                                                       |
| Thread designation                                      |                           | M12 x 1                                                                                                                |
| Material                                                |                           | housing: brass white bronze coated; sensing face: PBT orange;<br>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.                                                                                                                 |
| Electrical connection - plug                            |                           |                                                                                                                        |
| Connector: 1 x M12; coding: A; Contacts: 4, gold-plated |                           |                                                                                                                        |
|                                                         |                           |                                                                                                                        |

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### Connection

