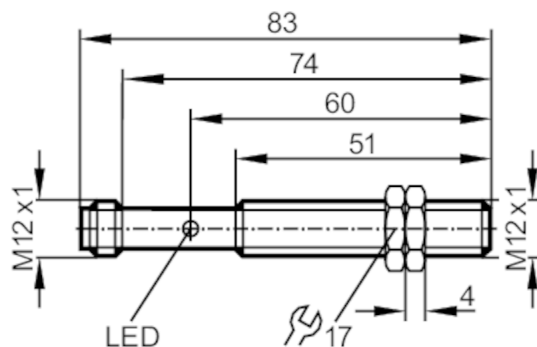




## Inductive sensor

IFA2002-FRKG/US-100-IRF



### Product characteristics

|                    |                                               |
|--------------------|-----------------------------------------------|
| Electrical design  | PNP/NPN                                       |
| Output function    | normally open / normally closed; (selectable) |
| Sensing range [mm] | 2                                             |
| Housing            | threaded type                                 |
| Dimensions [mm]    | M12 x 1 / L = 83                              |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...55 DC |
| Protection class            | II         |
| Reverse polarity protection | yes        |

### Outputs

|                                                      |                                               |
|------------------------------------------------------|-----------------------------------------------|
| Electrical design                                    | PNP/NPN                                       |
| Output function                                      | normally open / normally closed; (selectable) |
| Max. voltage drop switching output DC [V]            | 4.6                                           |
| Minimum load current [mA]                            | 4                                             |
| Max. leakage current [mA]                            | 0.5                                           |
| Permanent current rating of switching output DC [mA] | 300                                           |
| Switching frequency DC [Hz]                          | 1680                                          |
| Short-circuit protection                             | yes                                           |
| Type of short-circuit protection                     | pulsed                                        |
| Overload protection                                  | yes                                           |

### Detection zone

|                               |               |
|-------------------------------|---------------|
| Sensing range [mm]            | 2             |
| Real sensing range $S_r$ [mm] | $2 \pm 10 \%$ |
| Operating distance [mm]       | 0...1.62      |

### Accuracy / deviations

|                          |                                                                             |
|--------------------------|-----------------------------------------------------------------------------|
| Correction factor        | steel: 1 / stainless steel: 0.7 / brass: 0.4 / aluminium: 0.3 / copper: 0.2 |
| Hysteresis [% of $S_r$ ] | 1...20                                                                      |

# IF6044



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| Operating conditions          |                           |                                                                                                  |
|-------------------------------|---------------------------|--------------------------------------------------------------------------------------------------|
| Ambient temperature           | [°C]                      | -25...80                                                                                         |
| Protection                    |                           | IP 67                                                                                            |
| Tests / approvals             |                           |                                                                                                  |
| EMC                           | EN 61000-4-2 ESD          | 8 kV CD / 15 kV AD                                                                               |
|                               | EN 61000-4-3 HF radiated  | 10 V/m                                                                                           |
|                               | EN 61000-4-4 Burst        | 2 kV                                                                                             |
|                               | EN 61000-4-5 Surge        | 0,5 kV line to line, Ri: 2 Ohm                                                                   |
|                               | EN 61000-4-6 HF conducted | 10 V                                                                                             |
|                               | EN 55011                  | class B                                                                                          |
| MTTF                          | [years]                   | 1844                                                                                             |
| Mechanical data               |                           |                                                                                                  |
| Weight                        | [g]                       | 34                                                                                               |
| Housing                       |                           | threaded type                                                                                    |
| Mounting                      |                           | flush mountable                                                                                  |
| Dimensions                    | [mm]                      | M12 x 1 / L = 83                                                                                 |
| Thread designation            |                           | M12 x 1                                                                                          |
| Materials                     |                           | threaded sleeve: brass white bronze coated;<br>sensing face: PBT; end cap: TPE; lock nuts: brass |
| Displays / operating elements |                           |                                                                                                  |
| Display                       | switching status          | 1 x LED, yellow                                                                                  |
| Accessories                   |                           |                                                                                                  |
| Accessories (supplied)        |                           | lock nuts: 2                                                                                     |
| Remarks                       |                           |                                                                                                  |
| Pack quantity                 |                           | 1 pcs.                                                                                           |
| Electrical connection - plug  |                           |                                                                                                  |
| Connector: 1 x M12            |                           |                                                                                                  |
|                               |                           |                                                                                                  |

# IF6044

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