



## Inductive sensor

IFK2007-FRKG/2LED/US-104



## Product characteristics

|                    |                                               |
|--------------------|-----------------------------------------------|
| Electrical design  | PNP/NPN                                       |
| Output function    | normally open / normally closed; (selectable) |
| Sensing range [mm] | 7                                             |
| Housing            | threaded type                                 |
| Dimensions [mm]    | M12 x 1 / L = 60                              |

## Application

|                 |                                                                    |
|-----------------|--------------------------------------------------------------------|
| Special feature | Gold-plated contacts; Increased sensing range; Optical setting aid |
| Application     | Industrial applications / factory automation                       |

## Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 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]                            | 1                                             |
| Permanent current rating of switching output DC [mA] | 100                                           |
| Switching frequency DC [Hz]                          | 500                                           |
| Short-circuit protection                             | yes                                           |
| Type of short-circuit protection                     | pulsed                                        |
| Overload protection                                  | yes                                           |

## Detection zone

|                               |              |
|-------------------------------|--------------|
| Sensing range [mm]            | 7            |
| Real sensing range $S_r$ [mm] | $7 \pm 10\%$ |
| Operating distance [mm]       | 0...5.7      |
| Increased sensing range       | yes          |



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| Accuracy / deviations         |                           |                                                                                                                        |
|-------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------|
| Correction factor             |                           | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: 0.5 / copper: 0.4                                            |
| Hysteresis                    | [% of Sr]                 | 3...15                                                                                                                 |
| Switch point drift            | [% of Sr]                 | -10...10                                                                                                               |
| Operating conditions          |                           |                                                                                                                        |
| Ambient temperature           |                           | [°C] -25...70                                                                                                          |
| Protection                    |                           | IP 68; ("Coolant")                                                                                                     |
| 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 61000-4-5 Surge        | 0,5 kV line to line, Ri: 2 Ohm                                                                                         |
|                               | EN 61000-4-6 HF conducted | 10 V                                                                                                                   |
|                               | EN 55011                  | class B                                                                                                                |
| MTTF                          | [years]                   | 1428                                                                                                                   |
| UL approval                   | Ta                        | -25...70 °C                                                                                                            |
|                               | Enclosure type            | Type 1                                                                                                                 |
|                               | power supply              | Limited Voltage/Current                                                                                                |
|                               | UL Approval no.           | A038                                                                                                                   |
|                               | File number UL            | E174191                                                                                                                |
| Mechanical data               |                           |                                                                                                                        |
| Weight                        | [g]                       | 28.2                                                                                                                   |
| Housing                       |                           | threaded type                                                                                                          |
| Mounting                      |                           | non-flush mountable                                                                                                    |
| Dimensions                    | [mm]                      | M12 x 1 / L = 60                                                                                                       |
| Thread designation            |                           | M12 x 1                                                                                                                |
| Materials                     |                           | housing: brass white bronze coated; sensing face: PBT orange;<br>LED window: PEI; lock nuts: brass white bronze coated |
| Tightening torque             | [Nm]                      | 7                                                                                                                      |
| Displays / operating elements |                           |                                                                                                                        |
| Display                       | switching status          | 4 x 90° LED, yellow                                                                                                    |
|                               | setting aid               | 1 x LED, red                                                                                                           |
| Optical setting aid           |                           | yes                                                                                                                    |
| Accessories                   |                           |                                                                                                                        |
| Items supplied                |                           | lock nuts: 2                                                                                                           |
| Remarks                       |                           |                                                                                                                        |
| Pack quantity                 |                           | 1 pcs.                                                                                                                 |

# IF5898



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### Electrical connection - plug

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



### Connection

