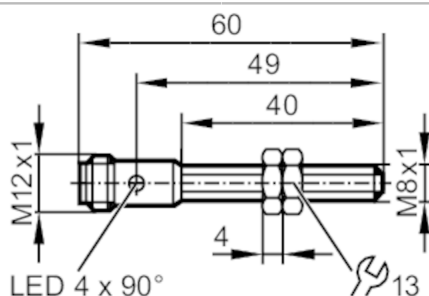


# IE5203



## Inductive sensor

IEK2001-FRKG/US-104



### Product characteristics

|                    |                                      |
|--------------------|--------------------------------------|
| Electrical design  | PNP/NPN                              |
| Output function    | normally open / closed; (selectable) |
| Sensing range [mm] | 1                                    |
| Housing            | Threaded type                        |
| Dimensions [mm]    | M8 x 1 / L = 60                      |

### Electrical data

|                          |           |
|--------------------------|-----------|
| Operating voltage [V]    | 5...30 DC |
| Current consumption [mA] | < 10      |
| Protection class         | III       |

### Outputs

|                                                      |                                      |
|------------------------------------------------------|--------------------------------------|
| Electrical design                                    | PNP/NPN                              |
| Output function                                      | normally open / closed; (selectable) |
| Max. voltage drop switching output DC [V]            | 4.6                                  |
| Minimum load current [mA]                            | 4                                    |
| Max. leakage current [mA]                            | 0.8                                  |
| Permanent current rating of switching output DC [mA] | 100                                  |
| Switching frequency DC [Hz]                          | 2000                                 |
| Short-circuit protection                             | yes                                  |
| Overload protection                                  | yes                                  |

### Monitoring range

|                               |              |
|-------------------------------|--------------|
| Sensing range [mm]            | 1            |
| Real sensing range $S_r$ [mm] | $1 \pm 10\%$ |
| Operating distance [mm]       | 0...0.81     |
| Increased sensing range       | no           |

### Accuracy / deviations

|                              |                                                                            |
|------------------------------|----------------------------------------------------------------------------|
| Correction factor            | steel: 1 / stainless steel: 0.7 / brass: 0.3 / aluminum: 0.3 / copper: 0.1 |
| Hysteresis [% of Sr]         | 1...20                                                                     |
| Switch-point drift [% of Sr] | -10...10                                                                   |

### Operating conditions

|                          |          |
|--------------------------|----------|
| Ambient temperature [°C] | -25...80 |
| Protection               | IP 67    |

# IE5203



## Inductive sensor

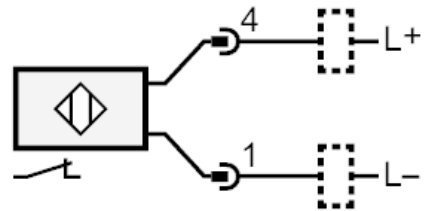
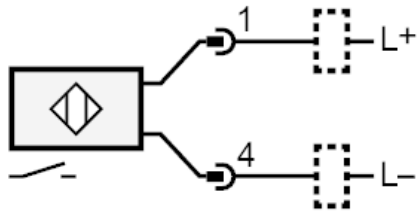
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| Tests / approvals             |                           |                                                                                                               |
|-------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------|
| EMC                           | EN 61000-4-2 ESD          | 4 kV CD / 8 kV AD                                                                                             |
|                               | EN 61000-4-3 HF radiated  | 3 V/m                                                                                                         |
|                               | EN 61000-4-4 Burst        | 2 kV                                                                                                          |
|                               | EN 61000-4-6 HF conducted | 3 V                                                                                                           |
|                               | EN 55011                  | class B                                                                                                       |
| MTTF                          | [years]                   | 1703                                                                                                          |
| UL approval                   | Ta                        | -25...70 °C                                                                                                   |
|                               | Enclosure type            | Type 1                                                                                                        |
|                               | voltage supply            | Limited Voltage/Current                                                                                       |
|                               | UL approval number        | A029                                                                                                          |
|                               | File number UL            | E174191                                                                                                       |
| Mechanical data               |                           |                                                                                                               |
| Weight                        | [g]                       | 22.5                                                                                                          |
| Housing                       |                           | Threaded type                                                                                                 |
| Mounting                      |                           | flush mountable                                                                                               |
| Dimensions                    | [mm]                      | M8 x 1 / L = 60                                                                                               |
| Thread designation            |                           | M8 x 1                                                                                                        |
| Material                      |                           | brass white bronze coated; sensing face: LCP orange;<br>LED window: PEI; lock nuts: brass white bronze coated |
| Tightening torque             | [Nm]                      | A = 5 mm: 1,5 Nm; B: 2 Nm                                                                                     |
| Full-metal housing            |                           | no                                                                                                            |
| Displays / operating elements |                           |                                                                                                               |
| Display                       | Switching status          | 1 x LED, yellow                                                                                               |
| Accessories                   |                           |                                                                                                               |
| Items supplied                |                           | lock nuts: 2                                                                                                  |
| Remarks                       |                           |                                                                                                               |
| Pack quantity                 |                           | 1 pcs.                                                                                                        |
| Electrical connection - plug  |                           |                                                                                                               |
| Connector: 1 x M12; coding: A |                           |                                                                                                               |
|                               |                           |                                                                                                               |

## Inductive sensor

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### Connection



### Diagrams and graphs

#### Installation

