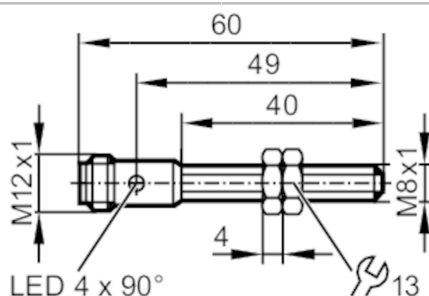


# IE5312



## Inductive sensor

IEK3002BBPKG/US-104



### Product characteristics

|                    |                 |
|--------------------|-----------------|
| Electrical design  | PNP             |
| Output function    | normally open   |
| Sensing range [mm] | 2               |
| Housing            | threaded type   |
| Dimensions [mm]    | M8 x 1 / L = 60 |

### Application

|                 |                         |
|-----------------|-------------------------|
| Special feature | Increased sensing range |
|-----------------|-------------------------|

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 DC |
| Current consumption [mA]    | < 10       |
| 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]                          | 1000          |
| Short-circuit protection                             | yes           |
| Overload protection                                  | yes           |

### Detection zone

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

### Accuracy / deviations

|                          |                                                                             |
|--------------------------|-----------------------------------------------------------------------------|
| Correction factor        | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: 0.4 / copper: 0.3 |
| Hysteresis [X01]         | 1...20                                                                      |
| Switch point drift [X01] | -10...10                                                                    |

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### Operating conditions

|                     |      |          |
|---------------------|------|----------|
| Ambient temperature | [°C] | -25...70 |
| Protection          |      | IP 67    |

### 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                       | [ANN]                     | 1379              |
| Embedded software included |                           | yes               |

### Mechanical data

|                    |      |                                                                                                               |
|--------------------|------|---------------------------------------------------------------------------------------------------------------|
| Weight             | [g]  | 23.1                                                                                                          |
| Housing            |      | threaded type                                                                                                 |
| Mounting           |      | flush mountable                                                                                               |
| Dimensions         | [mm] | M8 x 1 / L = 60                                                                                               |
| Thread designation |      | M8 x 1                                                                                                        |
| Materials          |      | 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 | 4 x 90° LED, yellow |
|---------|------------------|---------------------|

### Аксессуары

|                |              |
|----------------|--------------|
| Items supplied | lock nuts: 2 |
|----------------|--------------|

### Remarks

|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

### Electrical connection - plug

Connector: 1 x M12; coding: A



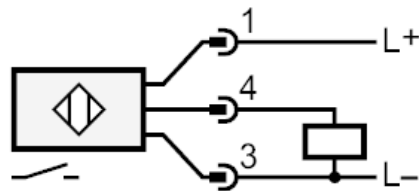
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### Connection



### Diagrams and graphs

#### Installation

