

# IE5092



## Inductive sensor

IEB3001-ANKG/US-104



### Product characteristics

|                    |                 |
|--------------------|-----------------|
| Electrical design  | NPN             |
| Output function    | normally open   |
| Sensing range [mm] | 1               |
| Housing            | Threaded type   |
| Dimensions [mm]    | M8 x 1 / L = 50 |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 DC |
| Current consumption [mA]    | < 10       |
| Protection class            | III        |
| Reverse polarity protection | yes        |

### Outputs

|                                                      |               |
|------------------------------------------------------|---------------|
| Electrical design                                    | NPN           |
| 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]                          | 750           |
| 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 $S_r$ ]         | 1...20                                                                     |
| Switch-point drift [% of $S_r$ ] | -10...10                                                                   |

### Operating conditions

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

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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]                   | 1322                    |
| UL approval | Ta                        | -25...70 °C             |
|             | Enclosure type            | Type 1                  |
|             | voltage supply            | Limited Voltage/Current |
|             | UL approval number        | A028                    |
|             | File number UL            | E174191                 |

### Mechanical data

|                    |      |                                                                                                               |
|--------------------|------|---------------------------------------------------------------------------------------------------------------|
| Weight             | [g]  | 20.5                                                                                                          |
| Housing            |      | Threaded type                                                                                                 |
| Mounting           |      | flush mountable                                                                                               |
| Dimensions         | [mm] | M8 x 1 / L = 50                                                                                               |
| 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 x M8 |
|----------------|-------------------|

### Remarks

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

### Electrical connection - plug

Connector: 1 x M12; coding: A



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### Connection



### Diagrams and graphs

#### Installation

