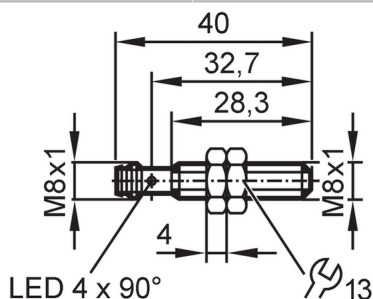




## Inductive sensor

IEBC003BBSKG/AS



## Product characteristics

|                    |                 |
|--------------------|-----------------|
| Electrical design  | PNP/NPN         |
| Output function    | normally closed |
| Sensing range [mm] | 3               |
| Housing            | threaded type   |
| Dimensions [mm]    | M8 x 1 / L = 40 |

## Application

|             |                                                                                 |
|-------------|---------------------------------------------------------------------------------|
| Application | Industrial applications / factory automation; For use where space is restricted |
|-------------|---------------------------------------------------------------------------------|

## Electrical data

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

## Outputs

|                                                      |                                |
|------------------------------------------------------|--------------------------------|
| Electrical design                                    | PNP/NPN                        |
| Output function                                      | normally closed                |
| Max. voltage drop switching output DC [V]            | 3.5                            |
| Minimum load current [mA]                            | 2; (only in 2-wire operation)  |
| Max. leakage current [mA]                            | 0.5; (nur im 3-Leiter Betrieb) |
| Permanent current rating of switching output DC [mA] | 100                            |
| Switching frequency DC [Hz]                          | 800                            |
| Short-circuit protection                             | yes                            |
| Overload protection                                  | yes                            |

## Detection zone

|                               |               |
|-------------------------------|---------------|
| Sensing range [mm]            | 3             |
| Real sensing range $S_r$ [mm] | $3 \pm 10 \%$ |
| Operating distance [mm]       | 0...2.4       |

## Accuracy / deviations

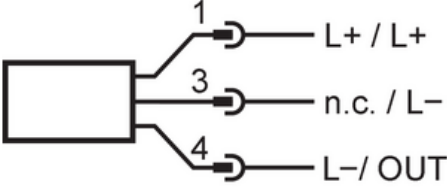
|                          |                                                                             |
|--------------------------|-----------------------------------------------------------------------------|
| Correction factor        | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: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

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## Inductive sensor

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| Operating conditions                                                                 |                           |                                                                                                                         |
|--------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Ambient temperature                                                                  | [°C]                      | 0...60                                                                                                                  |
| Protection                                                                           |                           | IP 65; IP 67; (with ifm socket duly screwed on)                                                                         |
| Tests / approvals                                                                    |                           |                                                                                                                         |
| EMC                                                                                  | EN 60947-5-2              |                                                                                                                         |
|                                                                                      | 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 61000-4-6 HF conducted | 10 V                                                                                                                    |
|                                                                                      | EN 55011                  | class B                                                                                                                 |
| MTTF                                                                                 | [years]                   | 403                                                                                                                     |
| Embedded software included                                                           |                           | no                                                                                                                      |
| UL approval                                                                          | Ta                        | 0...60 °C                                                                                                               |
|                                                                                      | Enclosure type            | Type 1                                                                                                                  |
|                                                                                      | voltage supply            | Limited Voltage/Current                                                                                                 |
|                                                                                      | UL approval no.           | A017                                                                                                                    |
|                                                                                      | File number UL            | E174191                                                                                                                 |
| Mechanical data                                                                      |                           |                                                                                                                         |
| Weight                                                                               | [g]                       | 14                                                                                                                      |
| Housing                                                                              |                           | threaded type                                                                                                           |
| Mounting                                                                             |                           | flush mountable                                                                                                         |
| Dimensions                                                                           | [mm]                      | M8 x 1 / L = 40                                                                                                         |
| Thread designation                                                                   |                           | M8 x 1                                                                                                                  |
| Materials                                                                            |                           | housing: brass white bronze coated; sensing face: LCP orange;<br>LED window: PPSU; lock nuts: brass white bronze coated |
| Tightening torque                                                                    | [Nm]                      | A = 5 mm: 1,5 Nm; B = 2 Nm                                                                                              |
| Displays / operating elements                                                        |                           |                                                                                                                         |
| Display                                                                              | switching status          | 4 LED, yellow                                                                                                           |
| Accessories                                                                          |                           |                                                                                                                         |
| Items supplied                                                                       |                           | lock nuts: 2                                                                                                            |
| Remarks                                                                              |                           |                                                                                                                         |
| Pack quantity                                                                        |                           | 1 pcs.                                                                                                                  |
| Electrical connection - plug                                                         |                           |                                                                                                                         |
| Connector: 1 x M8; coding: A; Contacts: 3                                            |                           |                                                                                                                         |
|   |                           |                                                                                                                         |
|  |                           |                                                                                                                         |

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## Inductive sensor

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| 2-wire PNP                              |      |               |  |
|-----------------------------------------|------|---------------|--|
| 1                                       | L+   |               |  |
| 3                                       | n.c. |               |  |
| 4                                       | L-   | DO (NC) (PNP) |  |
| 2-wire NPN                              |      |               |  |
| 1                                       | L+   | DO (NC) (NPN) |  |
| 3                                       | n.c. |               |  |
| 4                                       | L-   |               |  |
| 3-wire PNP                              |      |               |  |
| 1                                       | L+   |               |  |
| 3                                       | L-   |               |  |
| 4                                       | OUT  | DO (NC) (PNP) |  |
| DO: digital output; NC: normally closed |      |               |  |

### Diagrams and graphs

Installation

