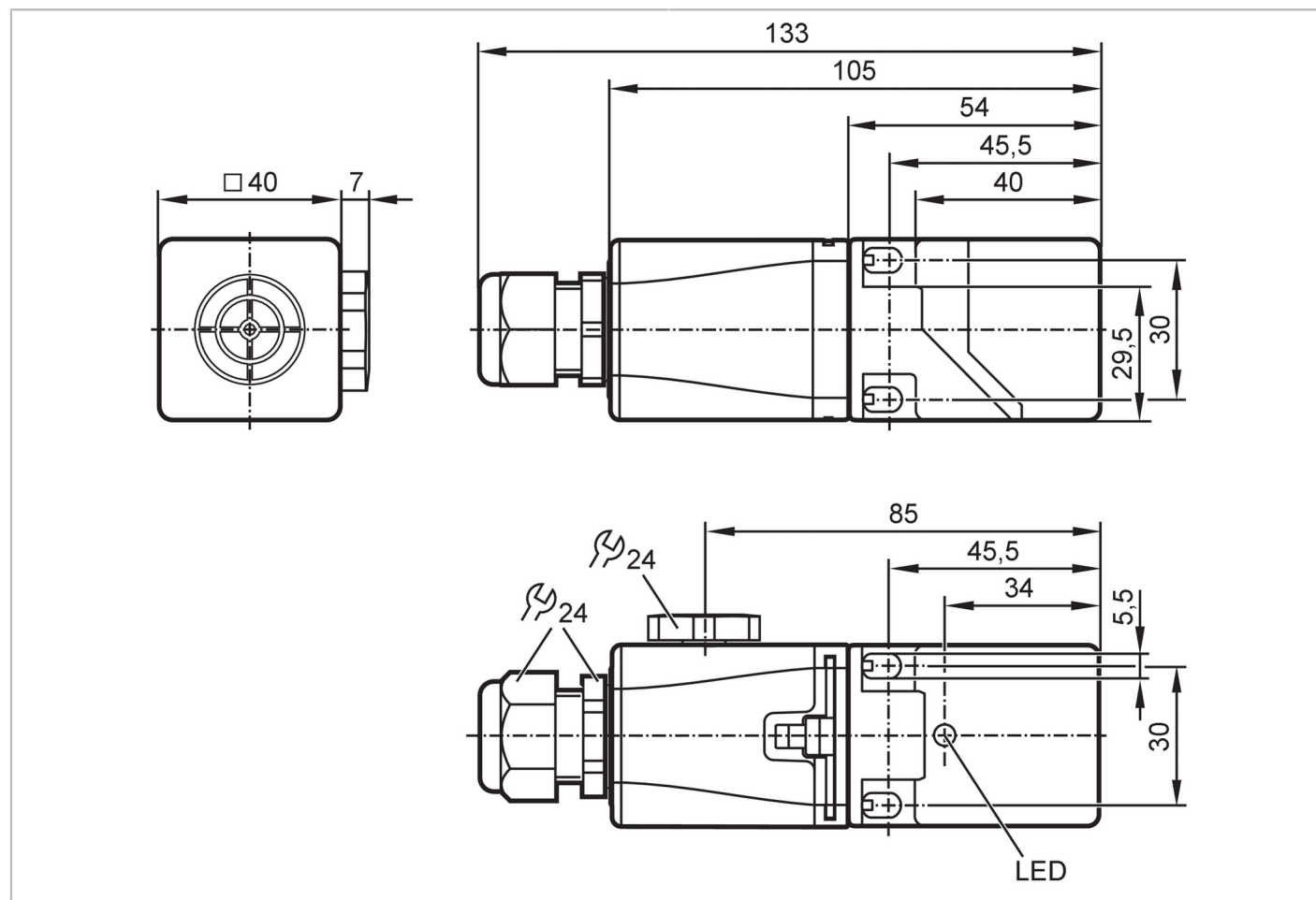


# IM001A



## Inductive sensor

IME2020BFBOA/3D



### Product characteristics

|                 |      |                                               |
|-----------------|------|-----------------------------------------------|
| Output function |      | normally open / normally closed; (selectable) |
| Sensing range   | [mm] | 20                                            |
| Housing         |      | rectangular                                   |
| Dimensions      | [mm] | 40 x 40 x 105                                 |

### Application

|             |                                     |
|-------------|-------------------------------------|
| Application | For applications in hazardous areas |
|-------------|-------------------------------------|

### Electrical data

|                             |     |                |
|-----------------------------|-----|----------------|
| Operating voltage           | [V] | 20...250 AC/DC |
| Protection class            |     | II             |
| Reverse polarity protection |     | no             |

### Outputs

|                                       |      |                                                 |
|---------------------------------------|------|-------------------------------------------------|
| Output function                       |      | normally open / normally closed; (selectable)   |
| Max. voltage drop switching output DC | [V]  | 6                                               |
| Max. voltage drop switching output AC | [V]  | 6.5                                             |
| Minimum load current                  | [mA] | 5                                               |
| Max. leakage current                  | [mA] | 2.5 (250 V AC) / 1.3 (130 V AC) / 0.8 (24 V DC) |



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|                                                 |      |                                                                |
|-------------------------------------------------|------|----------------------------------------------------------------|
| Permanent current rating of switching output AC | [mA] | 150                                                            |
| Permanent current rating of switching output DC | [mA] | 100                                                            |
| Short-time current rating of switching output   | [mA] | 2200; (20 ms / 0,5 Hz)                                         |
| Switching frequency AC                          | [Hz] | 10                                                             |
| Switching frequency DC                          | [Hz] | 10                                                             |
| Notes on switching frequency                    | [Hz] | only for resistive loads; 2 Hz for utilisation category AC-140 |
| Short-circuit proof                             |      | no                                                             |
| Overload protection                             |      | no                                                             |

## Detection zone

|                       |      |           |
|-----------------------|------|-----------|
| Sensing range         | [mm] | 20        |
| Real sensing range Sr | [mm] | 20 ± 10 % |
| Operating distance    | [mm] | 0...16.2  |

## Accuracy / deviations

|                    |           |                                                                             |
|--------------------|-----------|-----------------------------------------------------------------------------|
| Correction factor  |           | steel: 1 / stainless steel: 0.7 / brass: 0.4 / aluminium: 0.3 / copper: 0.2 |
| Hysteresis         | [% of Sr] | 1...20                                                                      |
| Switch point drift | [% of Sr] | -10...10                                                                    |

## Operating conditions

|                     |      |              |
|---------------------|------|--------------|
| Ambient temperature | [°C] | -20...60     |
| Protection          |      | IP 65; IP 67 |

## Tests / approvals

|              |         |                                                                                                               |
|--------------|---------|---------------------------------------------------------------------------------------------------------------|
| Approval     |         | BVS 20 ATEX E 056X; IECEx BVS 20.0043X                                                                        |
| ATEX marking |         |  II 3D Ex tc IIIC T95°C Dc |
| EMC          |         | EN 60947-5-2                                                                                                  |
| MTTF         | [years] | 567                                                                                                           |

## Mechanical data

|            |      |                                                                                                                             |
|------------|------|-----------------------------------------------------------------------------------------------------------------------------|
| Weight     | [g]  | 245.5                                                                                                                       |
| Housing    |      | rectangular                                                                                                                 |
| Mounting   |      | flush mountable                                                                                                             |
| Dimensions | [mm] | 40 x 40 x 105                                                                                                               |
| Materials  |      | housing: PC black; sensing face: PC black; connection module: PA black; mounting adapter: PC black; screw: steel galvanised |

## Displays / operating elements

|         |                  |                 |
|---------|------------------|-----------------|
| Display | switching status | 1 x LED, yellow |
|---------|------------------|-----------------|

## Electrical connection

|                     |  |                                                                                                      |
|---------------------|--|------------------------------------------------------------------------------------------------------|
| Required protection |  | miniature fuse to IEC60127-2 sheet 1; ≤ 2 A; fast acting; Place the fuse outside the hazardous area. |
|---------------------|--|------------------------------------------------------------------------------------------------------|

## Remarks

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

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### Electrical connection

terminals: 0.34...2.5 mm<sup>2</sup>; Cable sheath: Ø 5...9 mm

### Connection

