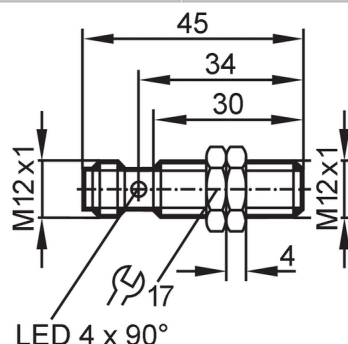


# IF5538



## Inductive sensor

IFB3002-BPKG/US-104



### Product characteristics

|                    |                  |
|--------------------|------------------|
| Electrical design  | PNP              |
| Output function    | normally open    |
| Sensing range [mm] | 2                |
| Housing            | threaded type    |
| Dimensions [mm]    | M12 x 1 / L = 45 |

### Application

|                 |                                              |
|-----------------|----------------------------------------------|
| Special feature | Gold-plated contacts                         |
| Application     | Industrial applications / factory automation |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 DC |
| Current consumption [mA]    | < 10       |
| Protection class            | II         |
| 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]                          | 1500          |
| Short-circuit protection                             | yes           |
| Type of short-circuit protection                     | pulsed        |
| Overload protection                                  | yes           |

### Detection zone

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

### 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                                                                      |

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IFB3002-BPKG/US-104

|                    |           |          |
|--------------------|-----------|----------|
| Switch point drift | [% of Sr] | -10...10 |
|--------------------|-----------|----------|

### Operating conditions

|                     |      |          |
|---------------------|------|----------|
| Ambient temperature | [°C] | -25...80 |
|---------------------|------|----------|

|            |       |
|------------|-------|
| Protection | IP 67 |
|------------|-------|

### Tests / approvals

|     |                           |                   |
|-----|---------------------------|-------------------|
| EMC | 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] | 1134 |
|------|---------|------|

### Mechanical data

|        |     |      |
|--------|-----|------|
| Weight | [g] | 25.3 |
|--------|-----|------|

|         |               |
|---------|---------------|
| Housing | threaded type |
|---------|---------------|

|          |                 |
|----------|-----------------|
| Mounting | flush mountable |
|----------|-----------------|

|            |      |                  |
|------------|------|------------------|
| Dimensions | [mm] | M12 x 1 / L = 45 |
|------------|------|------------------|

|                    |         |
|--------------------|---------|
| Thread designation | M12 x 1 |
|--------------------|---------|

|           |                                                                                                                        |
|-----------|------------------------------------------------------------------------------------------------------------------------|
| Materials | housing: brass white bronze coated; sensing face: PBT orange;<br>LED window: PEI; lock nuts: brass white bronze coated |
|-----------|------------------------------------------------------------------------------------------------------------------------|

|                   |      |   |
|-------------------|------|---|
| Tightening torque | [Nm] | 7 |
|-------------------|------|---|

### Displays / operating elements

|         |                  |                 |
|---------|------------------|-----------------|
| Display | switching status | 4 x LED, yellow |
|---------|------------------|-----------------|

### Accessories

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

### Remarks

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

### Electrical connection - plug

Connector: 1 x M12; coding: A; Contacts: 3, gold-plated



### Connection

