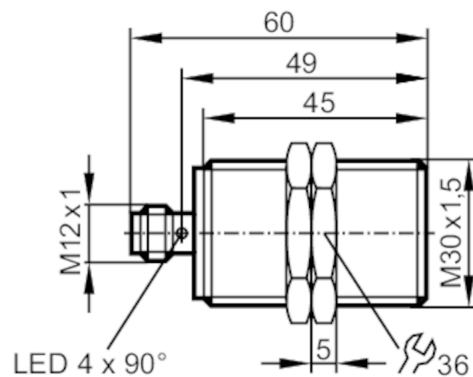


## Inductive sensor

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## Electrical data

|                             |      |                                         |
|-----------------------------|------|-----------------------------------------|
| Operating voltage           | [V]  | 10...30 DC; ("supply class 2" to cULus) |
| 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] | 100           |
| Short-circuit protection                        |      | yes           |
| Overload protection                             |      | yes           |

## Detection zone

|                         |      |           |
|-------------------------|------|-----------|
| Sensing range           | [mm] | 15        |
| Real sensing range Sr   | [mm] | 15 ± 10 % |
| Operating distance      | [mm] | 0...12.15 |
| Increased sensing range |      | yes       |

## Accuracy / deviations

|                    |           |                                                                             |
|--------------------|-----------|-----------------------------------------------------------------------------|
| Correction factor  |           | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: 0.4 / copper: 0.3 |
| Hysteresis         | [% of Sr] | 3...15                                                                      |
| Switch point drift | [% of Sr] | -10...10                                                                    |

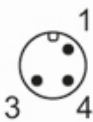
## Operating conditions

|                     |      |                                    |
|---------------------|------|------------------------------------|
| Ambient temperature | [°C] | -40...85                           |
| Protection          |      | IP 65; IP 66; IP 67; IP 68; IP 69K |



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| 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                                                                                                    |
| Vibration resistance                                                                           | EN 60068-2-6 Fc           | 20 g (10...3000 Hz) / 50 sweep cycles per frequency; 1 octave per minute in 3 axes                         |
| Shock resistance                                                                               | EN 60068-2-27 Ea          | 100 g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes                           |
| Continuous shock resistance                                                                    | EN 60068-2-29 Eb          | 40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes                                    |
| Fast temperature changes                                                                       | EN 60068-2-14 Na          | TA = -40 °C; TB = 85 °C; t1 = 30 min; t2 = < 10 s; 50 cycles                                               |
| Salt spray test                                                                                | EN 60068-2-52 Kb          | severity level 5 (4 test cycles)                                                                           |
| MTTF                                                                                           | [years]                   | 1603                                                                                                       |
| UL approval                                                                                    | Ta                        | -25...70 °C                                                                                                |
|                                                                                                | Enclosure type            | Type 1                                                                                                     |
|                                                                                                | voltage supply            | Limited Voltage/Current                                                                                    |
|                                                                                                | UL Approval no.           | A001                                                                                                       |
|                                                                                                | File number UL            | E174191                                                                                                    |
| Mechanical data                                                                                |                           |                                                                                                            |
| Weight                                                                                         | [g]                       | 120.2                                                                                                      |
| Housing                                                                                        |                           | threaded type                                                                                              |
| Mounting                                                                                       |                           | flush mountable                                                                                            |
| Dimensions                                                                                     | [mm]                      | M30 x 1.5 / L = 60                                                                                         |
| Thread designation                                                                             |                           | M30 x 1.5                                                                                                  |
| Materials                                                                                      |                           | brass white bronze coated; sensing face: PBT orange; LED window: PEI; lock nuts: brass white bronze coated |
| Displays / operating elements                                                                  |                           |                                                                                                            |
| Display                                                                                        | switching status          | 4 x LED, yellow                                                                                            |
| Accessories                                                                                    |                           |                                                                                                            |
| Accessories (supplied)                                                                         |                           | lock nuts: 2                                                                                               |
| Remarks                                                                                        |                           |                                                                                                            |
| Pack quantity                                                                                  |                           | 1 pcs.                                                                                                     |
| Electrical connection - plug                                                                   |                           |                                                                                                            |
| Connector: 1 x M12; Contacts: gold-plated                                                      |                           |                                                                                                            |
| <div></div> |                           |                                                                                                            |

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### Connection

