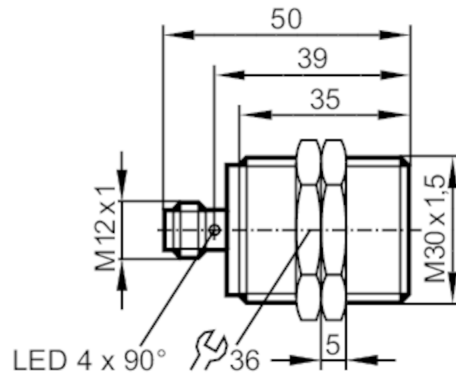




## Inductive sensor

IIB3015BBNKG/US-104



## 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 closed |
| 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]                | 1594                      |                                                                                    |
| 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]         | 109.4                                                                                                         |
| Housing            | threaded type                                                                                                 |
| Mounting           | flush mountable                                                                                               |
| Dimensions [mm]    | M30 x 1.5 / L = 50                                                                                            |
| Thread designation | M30 x 1.5                                                                                                     |
| Materials          | brass white bronze coated; sensing face: PBT orange;<br>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



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### Connection

