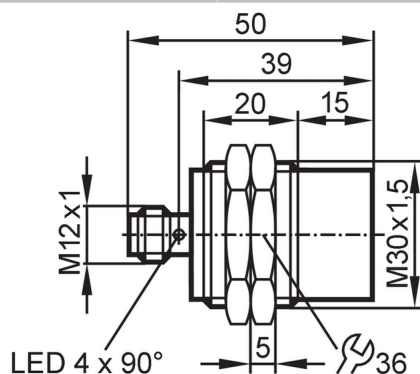




## Inductive sensor

IIB3022-APKG/US-104



## Product characteristics

|                    |                    |
|--------------------|--------------------|
| Electrical design  | PNP                |
| Output function    | normally closed    |
| Sensing range [mm] | 22                 |
| Housing            | Threaded type      |
| Dimensions [mm]    | M30 x 1.5 / L = 50 |

## Application

|                 |                                                                                                |
|-----------------|------------------------------------------------------------------------------------------------|
| Special feature | gold-plated contacts; Increased sensing range                                                  |
| Application     | Suitable for industrial, mobile, cooling and lubricating applications; Industrial applications |

## Electrical data

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

## Outputs

|                                                      |                 |
|------------------------------------------------------|-----------------|
| Electrical design                                    | PNP             |
| 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             |

## Monitoring range

|                               |               |
|-------------------------------|---------------|
| Sensing range [mm]            | 22            |
| Real sensing range $S_r$ [mm] | $22 \pm 10\%$ |
| Operating distance [mm]       | 0...17.82     |
| Increased sensing range       | yes           |

## Accuracy / deviations

|                          |                                                                            |
|--------------------------|----------------------------------------------------------------------------|
| Correction factor        | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.4 / copper: 0.3 |
| Hysteresis [% of $S_r$ ] | 3...15                                                                     |



## Inductive sensor

IIB3022-APKG/US-104

|                    |           |          |
|--------------------|-----------|----------|
| 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 |

## 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 60068-2-27             | 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]                   | 1134                                                                               |
| Embedded software included  |                           | no                                                                                 |
| UL approval                 | Ta                        | -25...70 °C                                                                        |
|                             | Enclosure type            | Type 1                                                                             |
|                             | voltage supply            | Limited Voltage/Current                                                            |
|                             | UL approval number        | A001                                                                               |
|                             | File number UL            | E174191                                                                            |

## Mechanical data

|                    |      |                                                                                                                        |
|--------------------|------|------------------------------------------------------------------------------------------------------------------------|
| Weight             | [g]  | 98.2                                                                                                                   |
| Housing            |      | Threaded type                                                                                                          |
| Mounting           |      | non-flush mountable                                                                                                    |
| Dimensions         | [mm] | M30 x 1.5 / L = 50                                                                                                     |
| Thread designation |      | M30 x 1.5                                                                                                              |
| Material           |      | housing: 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

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

## Remarks

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

## Electrical connection - plug

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



# IIS247



## Inductive sensor

IIB3022-APKG/US-104

### Connection

