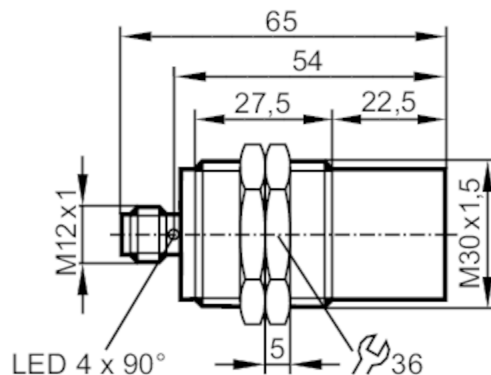




## Inductive full-metal sensor

IIK3025-BPKG/AM/P/US-104



## Product characteristics

|                   |      |                    |
|-------------------|------|--------------------|
| Electrical design |      | PNP                |
| Output function   |      | normally open      |
| Sensing range     | [mm] | 25                 |
| Dimensions        | [mm] | M30 x 1.5 / L = 65 |

## Application

|                         |       |                                                                               |
|-------------------------|-------|-------------------------------------------------------------------------------|
| Special feature         |       | Gold-plated contacts; Increased sensing range; Full-metal housing             |
| Application             |       | constant cleaning with aggressive cleaning agents; regular cleaning processes |
| Pressure rating         | [bar] | 100                                                                           |
| Note on pressure rating |       | sensing face                                                                  |

## Electrical data

|                             |      |            |
|-----------------------------|------|------------|
| Operating voltage           | [V]  | 10...30 DC |
| Current consumption         | [mA] | < 20       |
| Protection class            |      | III        |
| 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] | 100           |
| Short-circuit protection                        |      | yes           |
| Overload protection                             |      | yes           |

## Detection zone

|                         |      |           |
|-------------------------|------|-----------|
| Sensing range           | [mm] | 25        |
| Real sensing range Sr   | [mm] | 25 ± 10 % |
| Operating distance      | [mm] | 0...20.25 |
| Increased sensing range |      | yes       |



## Inductive full-metal sensor

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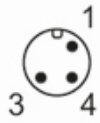
| Accuracy / deviations         |                                                                                                                                                      |                                                                                  |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Correction factor             | steel: 1 / stainless steel: 1 / brass: 0.9 / aluminium: 0.6 / copper: 0.5                                                                            |                                                                                  |
| Hysteresis                    | [% of Sr]                                                                                                                                            | 3...15                                                                           |
| Switch point drift            | [% of Sr]                                                                                                                                            | -10...10                                                                         |
| Operating conditions          |                                                                                                                                                      |                                                                                  |
| Ambient temperature           | [°C]                                                                                                                                                 | 0...100                                                                          |
| 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 emission                                                                                                                                    | class B                                                                          |
| Impact resistance             | 1 J                                                                                                                                                  |                                                                                  |
| Vibration resistance          | EN 60068-2-6 Fc                                                                                                                                      | 20 g (10...3000 Hz) / 50 sweep cycles, 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 change       | EN 60068-2-14 Nc                                                                                                                                     | TA = 0°C; TB =100°C; t1 = 30 min; t2 = < 10 s<br>50 cycles                       |
| MTTF                          | [years]                                                                                                                                              | 1386                                                                             |
| Embedded software included    | yes                                                                                                                                                  |                                                                                  |
| UL approval                   | Ta                                                                                                                                                   | 0...70 °C                                                                        |
|                               | Enclosure type                                                                                                                                       | Type 1                                                                           |
|                               | power supply                                                                                                                                         | Limited Voltage/Current                                                          |
|                               | UL Approval no.                                                                                                                                      | A012                                                                             |
|                               | File number UL                                                                                                                                       | E174191                                                                          |
| Mechanical data               |                                                                                                                                                      |                                                                                  |
| Weight                        | [g]                                                                                                                                                  | 165.165                                                                          |
| Mounting                      | non-flush mountable                                                                                                                                  |                                                                                  |
| Dimensions                    | [mm]                                                                                                                                                 | M30 x 1.5 / L = 65                                                               |
| Thread designation            | M30 x 1.5                                                                                                                                            |                                                                                  |
| Materials                     | housing: stainless steel (1.4404 / 316L); sensing face: stainless steel (1.4404 / 316L); LED window: PEI; lock nuts: stainless steel (1.4404 / 316L) |                                                                                  |
| Tightening torque             | [Nm]                                                                                                                                                 | 80                                                                               |
| Full-metal housing            | yes                                                                                                                                                  |                                                                                  |
| Displays / operating elements |                                                                                                                                                      |                                                                                  |
| Display                       | switching status                                                                                                                                     | 4 x 90° LED, yellow                                                              |
| Accessories                   |                                                                                                                                                      |                                                                                  |
| Items supplied                | lock nuts: 2                                                                                                                                         |                                                                                  |
| Remarks                       |                                                                                                                                                      |                                                                                  |
| Pack quantity                 | 1 pcs.                                                                                                                                               |                                                                                  |

## Inductive full-metal sensor

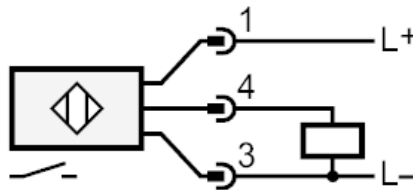
IIK3025-BPKG/AM/P/US-104

### Electrical connection

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



### Connection



### Diagrams and graphs

