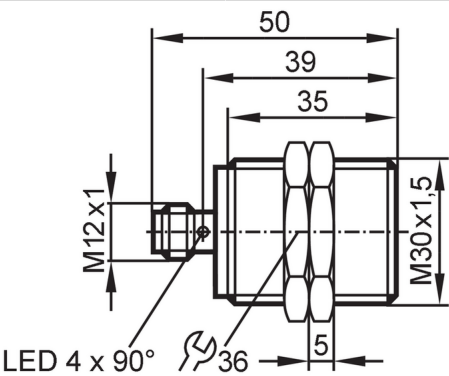




Inductive full-metal sensor

IIB3015BBPKG/AM/V4A/US-104



| Product characteristics                         |                                                                   |                    |
|-------------------------------------------------|-------------------------------------------------------------------|--------------------|
| Electrical design                               | PNP                                                               |                    |
| Output function                                 | normally open                                                     |                    |
| Sensing range                                   | [mm]                                                              | 15                 |
| Housing                                         | Threaded type                                                     |                    |
| Dimensions                                      | [mm]                                                              | M30 x 1.5 / L = 50 |
| Application                                     |                                                                   |                    |
| Special feature                                 | gold-plated contacts; Increased sensing range; Full-metal housing |                    |
| Application                                     | Industrial applications; Oils and coolants                        |                    |
| Pressure rating                                 | 100 bar                                                           | 10 MPa             |
| Note on pressure rating                         | sensing face                                                      |                    |
| 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 open                                                     |                    |
| Max. voltage drop switching output DC           | [V]                                                               | 2.5                |
| Permanent current rating of switching output DC | [mA]                                                              | 100                |
| Switching frequency DC                          | [Hz]                                                              | 50                 |
| Short-circuit protection                        | yes                                                               |                    |
| Overload protection                             | yes                                                               |                    |
| Monitoring range                                |                                                                   |                    |
| Sensing range                                   | [mm]                                                              | 15                 |
| Real sensing range Sr                           | [mm]                                                              | 15 ± 10 %          |
| Operating distance                              | [mm]                                                              | 0...12.15          |
| Increased sensing range                         | yes                                                               |                    |



## Inductive full-metal sensor

IIB3015BBPKG/AM/V4A/US-104

| Accuracy / deviations         |                                                                                                                                       |                                                                                    |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Correction factor             | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.5 / copper: 0.2                                                            |                                                                                    |
| 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                                                                                                    |                                                                                    |
| 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                                                                            |
| Impact resistance             | 1 J                                                                                                                                   |                                                                                    |
| 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                       |
| MTTF [years]                  | 1244                                                                                                                                  |                                                                                    |
| Embedded software included    | no                                                                                                                                    |                                                                                    |
| UL approval                   | Ta                                                                                                                                    | -25...70 °C                                                                        |
|                               | Enclosure type                                                                                                                        | Type 1                                                                             |
|                               | voltage supply                                                                                                                        | Limited Voltage/Current                                                            |
|                               | UL approval number                                                                                                                    | A012                                                                               |
|                               | File number UL                                                                                                                        | E174191                                                                            |
| Mechanical data               |                                                                                                                                       |                                                                                    |
| Weight [g]                    | 115                                                                                                                                   |                                                                                    |
| Housing                       | Threaded type                                                                                                                         |                                                                                    |
| Mounting                      | flush mountable                                                                                                                       |                                                                                    |
| Dimensions [mm]               | M30 x 1.5 / L = 50                                                                                                                    |                                                                                    |
| Thread designation            | M30 x 1.5                                                                                                                             |                                                                                    |
| Material                      | stainless steel (1.4404 / 316L); sensing face: stainless steel (1.4404 / 316L); LED window: PEI; lock nuts: brass white bronze coated |                                                                                    |
| Tightening torque [Nm]        | 80                                                                                                                                    |                                                                                    |
| Full-metal housing            | yes                                                                                                                                   |                                                                                    |
| Displays / operating elements |                                                                                                                                       |                                                                                    |
| Display                       | Switching status                                                                                                                      | 4 x LED, yellow                                                                    |
| Accessories                   |                                                                                                                                       |                                                                                    |
| Items supplied                | lock nuts: 2                                                                                                                          |                                                                                    |
| Remarks                       |                                                                                                                                       |                                                                                    |
| Pack quantity                 | 1 pcs.                                                                                                                                |                                                                                    |

# IIC233



## Inductive full-metal sensor

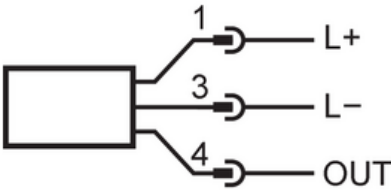
IIB3015BBPKG/AM/V4A/US-104

### Electrical connection - plug

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



### Connection



|   |     |         |
|---|-----|---------|
| 1 | L+  |         |
| 3 | L-  |         |
| 4 | OUT | DO (NO) |

DO: digital output; NO: normally open