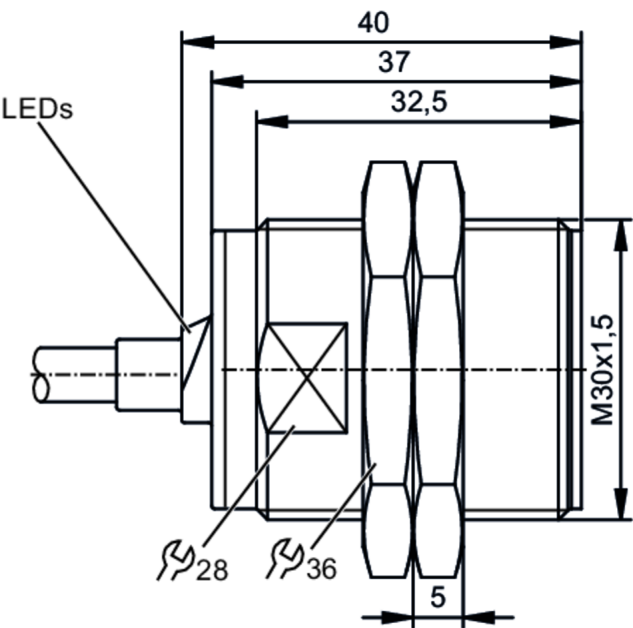


# IIR206



## Inductive full-metal sensor

IIB2012BARKG/AM/SC/0,3M/US/2LE



| Product characteristics                              |                                                                                        |
|------------------------------------------------------|----------------------------------------------------------------------------------------|
| Electrical design                                    | PNP/NPN                                                                                |
| Output function                                      | normally open                                                                          |
| Sensing range [mm]                                   | 12                                                                                     |
| Housing                                              | Threaded type                                                                          |
| Dimensions [mm]                                      | M30 x 1.5 / L = 40                                                                     |
| Application                                          |                                                                                        |
| System                                               | gold-plated contacts; Increased sensing range; Full-metal housing; optical setting aid |
| Application                                          | Inductive sensors for welding applications                                             |
| Pressure rating [bar]                                | 10                                                                                     |
| Note on pressure rating                              | sensing face                                                                           |
| Electrical data                                      |                                                                                        |
| Operating voltage [V]                                | 10...30 DC                                                                             |
| Protection class                                     | III                                                                                    |
| Reverse polarity protection                          | yes                                                                                    |
| Outputs                                              |                                                                                        |
| Electrical design                                    | PNP/NPN                                                                                |
| Output function                                      | normally open                                                                          |
| Max. voltage drop switching output DC [V]            | 5.2                                                                                    |
| Minimum load current [mA]                            | 2                                                                                      |
| Max. leakage current [mA]                            | 0.6                                                                                    |
| Permanent current rating of switching output DC [mA] | 100                                                                                    |
| Switching frequency DC [Hz]                          | 25                                                                                     |



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|                                  |                           |                                                                                                                                                                                          |
|----------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Short-circuit protection         |                           | yes                                                                                                                                                                                      |
| Type of short-circuit protection |                           | yes (non-latching)                                                                                                                                                                       |
| Overload protection              |                           | yes                                                                                                                                                                                      |
| Monitoring range                 |                           |                                                                                                                                                                                          |
| Sensing range                    | [mm]                      | 12                                                                                                                                                                                       |
| Operating distance               | [mm]                      | 0...9.72                                                                                                                                                                                 |
| Increased sensing range          |                           | yes                                                                                                                                                                                      |
| Accuracy / deviations            |                           |                                                                                                                                                                                          |
| Correction factor                |                           | steel: 1 / stainless steel: 0.7 / brass: 0.7 / aluminum: 0.5 / copper: 0.1                                                                                                               |
| Hysteresis                       | [% of Sr]                 | 1...20                                                                                                                                                                                   |
| 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 emission         | class B                                                                                                                                                                                  |
| Impact resistance                |                           | 1 J                                                                                                                                                                                      |
| MTTF                             | [years]                   | 871                                                                                                                                                                                      |
| UL approval                      | Ta                        | -25...70 °C                                                                                                                                                                              |
|                                  | Enclosure type            | Type 1                                                                                                                                                                                   |
|                                  | voltage supply            | Limited Voltage/Current                                                                                                                                                                  |
|                                  | UL approval number        | A042                                                                                                                                                                                     |
|                                  | File number UL            | E174191                                                                                                                                                                                  |
| Mechanical data                  |                           |                                                                                                                                                                                          |
| Weight                           | [g]                       | 133                                                                                                                                                                                      |
| Housing                          |                           | Threaded type                                                                                                                                                                            |
| Mounting                         |                           | flush mountable                                                                                                                                                                          |
| Dimensions                       | [mm]                      | M30 x 1.5 / L = 40                                                                                                                                                                       |
| Thread designation               |                           | M30 x 1.5                                                                                                                                                                                |
| Material                         |                           | housing: stainless steel (1.4404 / 316L) weld coated; sensing face: stainless steel (1.4404 / 316L) weld coated; cable plug: PEI; lock nuts: stainless steel (1.4404 / 316L) weld coated |
| Tightening torque                | [Nm]                      | 60                                                                                                                                                                                       |
| Full-metal housing               |                           | yes                                                                                                                                                                                      |
| Displays / operating elements    |                           |                                                                                                                                                                                          |
| Display                          | Switching status          | 1 x LED, green                                                                                                                                                                           |
|                                  | Setting aid               | 1 x LED, red                                                                                                                                                                             |
| Optical setting aid              |                           | yes                                                                                                                                                                                      |
| Accessories                      |                           |                                                                                                                                                                                          |
| Items supplied                   |                           | lock nuts: 2                                                                                                                                                                             |
| Remarks                          |                           |                                                                                                                                                                                          |
| Pack quantity                    |                           | 1 pcs.                                                                                                                                                                                   |



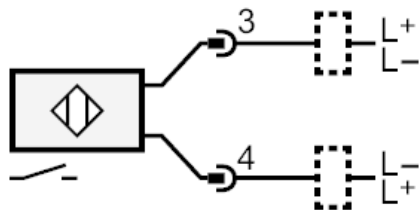
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Electrical connection - plug

Cable: 0.3 m, PVC; 2 x 0.5 mm<sup>2</sup>

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



Diagrams and graphs

Installation

