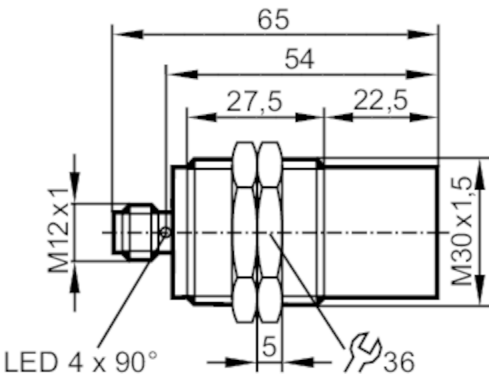




Inductive full-metal sensor

IIK3025-BPKG/AM/P/US104/3G/3D



| Product characteristics                              |                                                                   |
|------------------------------------------------------|-------------------------------------------------------------------|
| Electrical design                                    | PNP                                                               |
| Output function                                      | normally open                                                     |
| Sensing range [mm]                                   | 25                                                                |
| Housing                                              | threaded type                                                     |
| Dimensions [mm]                                      | M30 x 1.5 / L = 65                                                |
| Application                                          |                                                                   |
| Special feature                                      | Gold-plated contacts; Increased sensing range; Full-metal housing |
| Pressure rating [bar]                                | 100                                                               |
| Note on pressure rating                              | sensing face                                                      |
| Electrical data                                      |                                                                   |
| Operating voltage [V]                                | 10...30 DC                                                        |
| Current consumption [mA]                             | < 25                                                              |
| 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]                          | 250                                                               |
| Short-circuit protection                             | yes                                                               |
| Overload protection                                  | yes                                                               |
| Detection zone                                       |                                                                   |
| Sensing range [mm]                                   | 25                                                                |
| Real sensing range Sr [mm]                           | 25 ± 10 %                                                         |
| Operating distance [mm]                              | 0...20.3                                                          |
| Increased sensing range                              | yes                                                               |

# II503A



## Inductive full-metal sensor

IIK3025-BPKG/AM/P/US104/3G/3D

| Accuracy / deviations         |                                                                                                        |                                                                                                             |
|-------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Correction factor             |                                                                                                        | steel: 1 / stainless steel: 1 / brass: 0.9 / aluminium: 0.6 / copper: 0.5                                   |
| Hysteresis                    | [% of Sr]                                                                                              | 1...20                                                                                                      |
| Switch point drift            | [% of Sr]                                                                                              | -10...10                                                                                                    |
| Operating conditions          |                                                                                                        |                                                                                                             |
| Ambient temperature           |                                                                                                        | [°C] -40...60                                                                                               |
| Protection                    |                                                                                                        | IP 67; (when used outside the hazardous area: IP 65, IP 67, IP 68, IP 69K)                                  |
| Tests / approvals             |                                                                                                        |                                                                                                             |
| Approval                      |                                                                                                        | BVS 20 ATEX E 055 X; IECEx BVS 20.0042 X                                                                    |
| ATEX marking                  |                                                                                                        |  II 3G Ex ec IIC T4 Gc     |
|                               |                                                                                                        |  II 3D Ex tc IIIC T95°C Dc |
| 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             | EN 60068-2-75 Ehc                                                                                      | 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 Ea                                                                                       | 40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes                                     |
| Fast temperature change       | EN 60068-2-14 Na                                                                                       | TA = -40°C; TB = 85°C; t1 = 30 min; t2 = 10 s<br>50 cycles                                                  |
| Salt spray test               | EN 60068-2-52 Kb                                                                                       | severity level 5 (4 test cycles)                                                                            |
| MTTF                          | [years]                                                                                                | 1352                                                                                                        |
| Mechanical data               |                                                                                                        |                                                                                                             |
| Weight                        | [g]                                                                                                    | 139.771                                                                                                     |
| Housing                       |                                                                                                        | threaded type                                                                                               |
| Mounting                      |                                                                                                        | non-flush mountable                                                                                         |
| Dimensions                    | [mm]                                                                                                   | M30 x 1.5 / L = 65                                                                                          |
| Thread designation            |                                                                                                        | M30 x 1.5                                                                                                   |
| Materials                     |                                                                                                        | stainless steel (316L/1.4404); PEI; lock nuts: brass white bronze coated                                    |
| 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                       |                                                                                                        |                                                                                                             |
| Remarks                       | To maintain the EMC data:<br>Equalise potential by connecting the sensor housing to the machine earth. |                                                                                                             |
| Pack quantity                 | 1 pcs.                                                                                                 |                                                                                                             |

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## Inductive full-metal sensor

IIK3025-BPKG/AM/P/US104/3G/3D

### Electrical connection - plug

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



### Connection



### Diagrams and graphs

