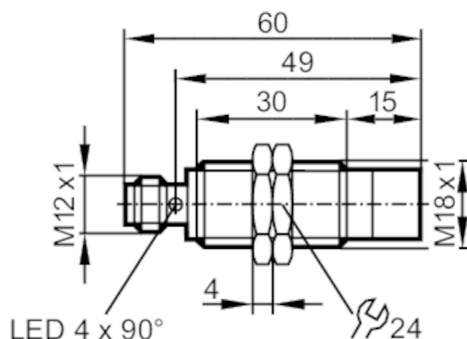




## Inductive sensor

IGK3012-BPKG/K1/V4A/US-104



| Application                                          |  |                                                                     |
|------------------------------------------------------|--|---------------------------------------------------------------------|
| Magnetic-field immune                                |  | yes                                                                 |
| Max. magnetic field immunity [mT]                    |  | 300                                                                 |
| 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]                          |  | 2000                                                                |
| Short-circuit protection                             |  | yes                                                                 |
| Overload protection                                  |  | yes                                                                 |
| Detection zone                                       |  |                                                                     |
| Sensing range [mm]                                   |  | 12                                                                  |
| Real sensing range $S_r$ [mm]                        |  | $12 \pm 10 \%$                                                      |
| Operating distance [mm]                              |  | 0...9.72                                                            |
| Increased sensing range                              |  | yes                                                                 |
| Accuracy / deviations                                |  |                                                                     |
| Correction factor                                    |  | steel: 1 / stainless steel: 1 / brass: 1 / aluminium: 1 / copper: 1 |
| Hysteresis [% of $S_r$ ]                             |  | 3...15                                                              |
| Switch point drift [% of $S_r$ ]                     |  | -10...10                                                            |
| Correction factor $K = 1$                            |  | yes                                                                 |
| Operating conditions                                 |  |                                                                     |
| Ambient temperature [°C]                             |  | -40...85                                                            |
| Protection                                           |  | IP 65; IP 66; IP 67; IP 68; IP 69K                                  |



## Inductive sensor

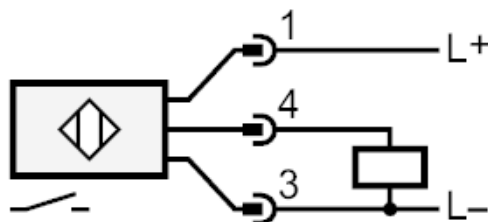
IGK3012-BPKG/K1/V4A/US-104

| 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 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate 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 60068-2-29 Eb          | 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]                   | 470                                                                                                                   |
| UL approval                                                                                    | Ta                        | -25...70 °C                                                                                                           |
|                                                                                                | Enclosure type            | Type 1                                                                                                                |
|                                                                                                | voltage supply            | Limited Voltage/Current                                                                                               |
|                                                                                                | UL Approval no.           | A005                                                                                                                  |
|                                                                                                | File number UL            | E174191                                                                                                               |
| Mechanical data                                                                                |                           |                                                                                                                       |
| Weight                                                                                         | [g]                       | 42.2                                                                                                                  |
| Housing                                                                                        |                           | threaded type                                                                                                         |
| Mounting                                                                                       |                           | non-flush mountable                                                                                                   |
| Dimensions                                                                                     | [mm]                      | M18 x 1 / L = 60                                                                                                      |
| Thread designation                                                                             |                           | M18 x 1                                                                                                               |
| Materials                                                                                      |                           | stainless steel (1.4404 / 316L); sensing face: LCP white; LED window: PEI; lock nuts: stainless steel (1.4404 / 316L) |
| Displays / operating elements                                                                  |                           |                                                                                                                       |
| Display                                                                                        | switching status          | 4 x LED, yellow                                                                                                       |
| Accessories                                                                                    |                           |                                                                                                                       |
| Accessories (supplied)                                                                         |                           | lock nuts: 2                                                                                                          |
| Remarks                                                                                        |                           |                                                                                                                       |
| Pack quantity                                                                                  |                           | 1 pcs.                                                                                                                |
| Electrical connection - plug                                                                   |                           |                                                                                                                       |
| Connector: 1 x M12; Contacts: gold-plated                                                      |                           |                                                                                                                       |
| <div></div> |                           |                                                                                                                       |

## Inductive sensor

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### Connection



### Diagrams and graphs

#### Installation

