



## Inductive sensor

IGK3012-ANKG/2M/PUR



1 LED yellow



### Product characteristics

|                    |                  |
|--------------------|------------------|
| Electrical design  | NPN              |
| Output function    | normally open    |
| Sensing range [mm] | 12               |
| Housing            | threaded type    |
| Dimensions [mm]    | M18 x 1 / L = 60 |

### Application

|                 |                                                                                                                     |
|-----------------|---------------------------------------------------------------------------------------------------------------------|
| Special feature | Increased sensing range                                                                                             |
| Application     | Suitable for industrial, mobile, cooling and lubricating applications; Industrial applications / factory automation |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 DC |
| Current consumption [mA]    | < 10       |
| Protection class            | III        |
| Reverse polarity protection | yes        |

### Outputs

|                                                      |               |
|------------------------------------------------------|---------------|
| Electrical design                                    | NPN           |
| 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]                          | 300           |
| 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: 0.7 / brass: 0.5 / aluminium: 0.4 / copper: 0.3 |
| Hysteresis [% of $S_r$ ] | 3...15                                                                      |



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|                                      |                           |                                                                                                            |
|--------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------|
| Switch point drift                   | [% of Sr]                 | -10...10                                                                                                   |
| <b>Operating conditions</b>          |                           |                                                                                                            |
| Ambient temperature                  | [°C]                      | -40...85                                                                                                   |
| Protection                           |                           | IP 65; IP 66; IP 67; IP 68; IP 69K                                                                         |
| <b>Tests / approvals</b>             |                           |                                                                                                            |
| 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 (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 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]                   | 850                                                                                                        |
| Embedded software included           |                           | yes                                                                                                        |
| UL approval                          | Ta                        | -25...75 °C                                                                                                |
|                                      | Enclosure type            | Type 1                                                                                                     |
|                                      | power supply              | Limited Voltage/Current                                                                                    |
|                                      | UL Approval no.           | A002                                                                                                       |
|                                      | File number UL            | E174191                                                                                                    |
| <b>Mechanical data</b>               |                           |                                                                                                            |
| Weight                               | [g]                       | 91.7                                                                                                       |
| Housing                              |                           | threaded type                                                                                              |
| Mounting                             |                           | non-flush mountable                                                                                        |
| Dimensions                           | [mm]                      | M18 x 1 / L = 60                                                                                           |
| Thread designation                   |                           | M18 x 1                                                                                                    |
| Materials                            |                           | brass white bronze coated; sensing face: PBT orange; LED window: PEI; lock nuts: brass white bronze coated |
| <b>Displays / operating elements</b> |                           |                                                                                                            |
| Display                              | switching status          | 1 x LED, yellow                                                                                            |
| <b>Accessories</b>                   |                           |                                                                                                            |
| Items supplied                       |                           | lock nuts: 2                                                                                               |
| <b>Remarks</b>                       |                           |                                                                                                            |
| Pack quantity                        |                           | 1 pcs.                                                                                                     |

# IGS247



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### Electrical connection

Cable: 2 m, PUR, Ø 4 mm; burning behaviour to ECE R118 rev. 2; 3 x 0.34 mm<sup>2</sup>

### Connection



|      |                |
|------|----------------|
| BK = | Core colours : |
| BN = | black          |
| BU = | brown          |
|      | blue           |