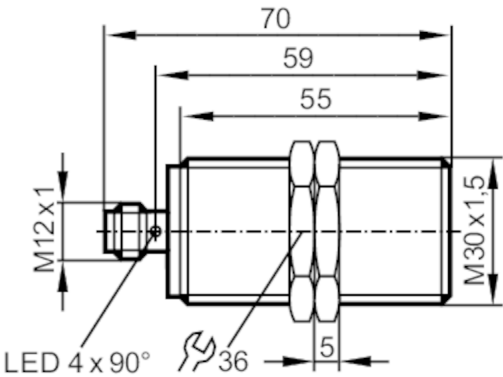




Inductive sensor

IIK3012BBPKG/60V/V4A/US-104



| Product characteristics                         |      |                                               |
|-------------------------------------------------|------|-----------------------------------------------|
| Electrical design                               |      | PNP                                           |
| Output function                                 |      | normally open                                 |
| Sensing range                                   | [mm] | 12                                            |
| Housing                                         |      | Threaded type                                 |
| Dimensions                                      | [mm] | M30 x 1.5 / L = 70                            |
| Application                                     |      |                                               |
| System                                          |      | gold-plated contacts; Increased sensing range |
| Application                                     |      | Use in mobile and harsh applications          |
| Electrical data                                 |      |                                               |
| Operating voltage                               | [V]  | 10...60 DC                                    |
| Current consumption                             | [mA] | < 10                                          |
| Protection class                                |      | II                                            |
| 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] | 200                                           |
| Switching frequency DC                          | [Hz] | 100                                           |
| Short-circuit protection                        |      | yes                                           |
| Type of short-circuit protection                |      | yes (non-latching)                            |
| Overload protection                             |      | yes                                           |
| Monitoring range                                |      |                                               |
| Sensing range                                   | [mm] | 12                                            |
| Real sensing range Sr                           | [mm] | 12 ± 10 %                                     |
| Operating distance                              | [mm] | 0...9.72                                      |
| Increased sensing range                         |      | yes                                           |



## Inductive sensor

IHK3012BBPKG/60V/V4A/US-104

| Accuracy / deviations       |                                                                                                             |                                                                                                |
|-----------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Correction factor           |                                                                                                             | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.4 / copper: 0.3                     |
| Hysteresis                  | [% of Sr]                                                                                                   | 1...20                                                                                         |
| Switch-point drift          | [% of Sr]                                                                                                   | -10...10                                                                                       |
| Operating conditions        |                                                                                                             |                                                                                                |
| Ambient temperature         | [°C]                                                                                                        | -40...85                                                                                       |
| Protection                  |                                                                                                             | IP 67; IP 69K                                                                                  |
| Tests / approvals           |                                                                                                             |                                                                                                |
| EMC                         | Automotive area                                                                                             |                                                                                                |
|                             | Noise emission and noise interference: ECE R10                                                              | E1 type approval                                                                               |
|                             | noise immunity according to DIN ISO 11452-2                                                                 | 100 V/m                                                                                        |
|                             | conducted interference in 24 V networks to ISO 7637-2: 2004 (pulse 1 to 4) and ISO16750-2: 2012 (load dump) |                                                                                                |
|                             | pulse                                                                                                       | 1 2a 2b 3a 3b 4 Load dump                                                                      |
|                             | Severity level                                                                                              | III III III III III Test A                                                                     |
|                             | Failure criterion                                                                                           | C A C A A C C                                                                                  |
|                             | 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 61000-4-5 Surge                                                                                          | 0,5 kV mains line to line                                                                      |
|                             | EN 61000-4-6 HF conducted                                                                                   | 10 V                                                                                           |
|                             | EN 55011                                                                                                    | class B                                                                                        |
|                             | Vibration resistance                                                                                        | EN 60068-2-6 Fc                                                                                |
|                             |                                                                                                             | 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 / -40...85 °C |
| Continuous shock resistance | EN 60068-2-27                                                                                               | 40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes / -20...50 °C          |
| 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]                                                                                                     | 1079                                                                                           |
| UL approval                 | Ta                                                                                                          | 0...40 °C                                                                                      |
|                             | Enclosure type                                                                                              | Type 1                                                                                         |
|                             | voltage supply                                                                                              | Hazardous voltage                                                                              |
|                             | UL approval number                                                                                          | A050                                                                                           |
|                             | File number UL                                                                                              | E174191                                                                                        |
| Mechanical data             |                                                                                                             |                                                                                                |
| Weight                      | [g]                                                                                                         | 126                                                                                            |
| Housing                     |                                                                                                             | Threaded type                                                                                  |
| Mounting                    |                                                                                                             | flush mountable                                                                                |
| Dimensions                  | [mm]                                                                                                        | M30 x 1.5 / L = 70                                                                             |
| Thread designation          |                                                                                                             | M30 x 1.5                                                                                      |

IIM208



Inductive sensor

IIK3012BBPKG/60V/V4A/US-104

|                   |                                                                                                                          |    |
|-------------------|--------------------------------------------------------------------------------------------------------------------------|----|
| Material          | housing: stainless steel (1.4404 / 316L); sensing face: LCP white; LED window: PEI; lock nuts: brass white bronze coated |    |
| Tightening torque | [Nm]                                                                                                                     | 80 |

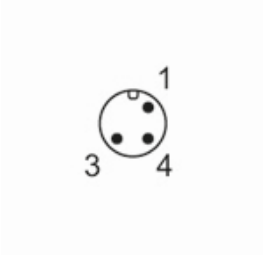
| Displays / operating elements |                  |                     |
|-------------------------------|------------------|---------------------|
| Display                       | Switching status | 4 x 90° LED, yellow |

| Accessories    |              |  |
|----------------|--------------|--|
| Items supplied | lock nuts: 2 |  |

| Remarks       |        |  |
|---------------|--------|--|
| Pack quantity | 1 pcs. |  |

Electrical connection - plug

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



Connection

