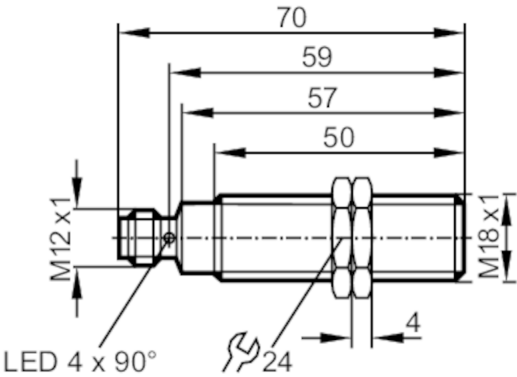


# IGM213



## Inductive sensor

IGKC008BATKG/M/US



### Product characteristics

|                    |                  |
|--------------------|------------------|
| Electrical design  | NPN              |
| Output function    | normally open    |
| Sensing range [mm] | 8                |
| Housing            | threaded type    |
| Dimensions [mm]    | M18 x 1 / L = 70 |

### Application

|                 |                                               |
|-----------------|-----------------------------------------------|
| Special feature | Gold-plated contacts; Increased sensing range |
| Application     | Use in mobile and harsh applications          |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...36 DC |
| Current consumption [mA]    | < 10       |
| Protection class            | II         |
| Reverse polarity protection | yes        |

### Outputs

|                                                      |               |
|------------------------------------------------------|---------------|
| Electrical design                                    | NPN           |
| Output function                                      | normally open |
| Max. voltage drop switching output DC [V]            | 2.5           |
| Max. leakage current [mA]                            | 0.5           |
| Permanent current rating of switching output DC [mA] | 100           |
| Switching frequency DC [Hz]                          | 200           |
| Short-circuit protection                             | yes           |
| Type of short-circuit protection                     | pulsed        |
| Overload protection                                  | yes           |

### Detection zone

|                         |          |
|-------------------------|----------|
| Sensing range [mm]      | 8        |
| Operating distance [mm] | 0...6.48 |



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|                             |                                                                                                             |                                                                                                |
|-----------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Increased sensing range     | yes                                                                                                         |                                                                                                |
| Accuracy / deviations       |                                                                                                             |                                                                                                |
| Correction factor           | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: 0.45 / copper: 0.35                               |                                                                                                |
| Hysteresis [% of Sr]        | 1...20                                                                                                      |                                                                                                |
| Operating conditions        |                                                                                                             |                                                                                                |
| Ambient temperature [°C]    | -40...85                                                                                                    |                                                                                                |
| Protection                  | IP 67; IP 69K                                                                                               |                                                                                                |
| Tests / approvals           |                                                                                                             |                                                                                                |
| EMC                         | automotive area                                                                                             |                                                                                                |
|                             | noise emission and noise immunity: 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                                                                                             | 20 g (10...3000 Hz) / -20...50 °C                                                              |
|                             |                                                                                                             | 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 / -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 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]                | 1272                                                                                                        |                                                                                                |
| UL approval                 | Ta                                                                                                          | -40...85 °C                                                                                    |
|                             | Enclosure type                                                                                              | Type 1                                                                                         |
|                             | power supply                                                                                                | Limited Voltage/Current                                                                        |
|                             | File number UL                                                                                              | E174191                                                                                        |
| Mechanical data             |                                                                                                             |                                                                                                |
| Weight [g]                  | 53.5                                                                                                        |                                                                                                |
| Housing                     | threaded type                                                                                               |                                                                                                |
| Mounting                    | flush mountable                                                                                             |                                                                                                |
| Dimensions [mm]             | M18 x 1 / L = 70                                                                                            |                                                                                                |
| Thread designation          | M18 x 1                                                                                                     |                                                                                                |
| Materials                   | housing: stainless steel (316L/1.4404); sensing face: LCP                                                   |                                                                                                |

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### Displays / operating elements

|         |                  |                     |
|---------|------------------|---------------------|
| Display | switching status | 4 x 90° LED, yellow |
|---------|------------------|---------------------|

### Accessories

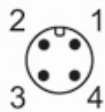
|                |              |
|----------------|--------------|
| Items supplied | lock nuts: 2 |
|----------------|--------------|

### Remarks

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

### Electrical connection - plug

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



### Connection

