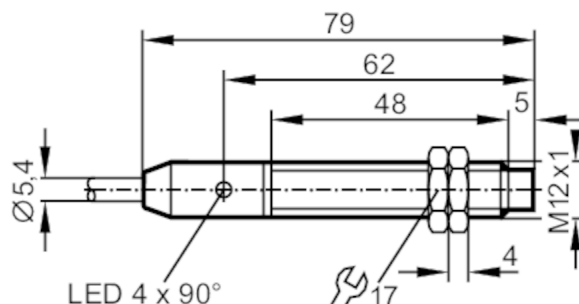




## Inductive sensor

IFKC007-ASKG/M/60V/1,5M/ZH/AMP



### Product characteristics

|                    |                  |
|--------------------|------------------|
| Electrical design  | PNP/NPN          |
| Output function    | normally open    |
| Sensing range [mm] | 7                |
| Housing            | threaded type    |
| Dimensions [mm]    | M12 x 1 / L = 79 |

### Application

|                 |                                      |
|-----------------|--------------------------------------|
| Special feature | Increased sensing range              |
| Application     | Use in mobile and harsh applications |

### Electrical data

|                             |                                  |
|-----------------------------|----------------------------------|
| Operating voltage [V]       | 10...60 DC                       |
| Current consumption [mA]    | < 10; (only in 3-wire operation) |
| Protection class            | II                               |
| Reverse polarity protection | yes                              |

### Outputs

|                                                      |                                 |
|------------------------------------------------------|---------------------------------|
| Electrical design                                    | PNP/NPN                         |
| Output function                                      | normally open                   |
| Max. voltage drop switching output DC [V]            | 2.5                             |
| Minimum load current [mA]                            | 2; (only in 2-wire operation)   |
| Max. leakage current [mA]                            | 0.5; (only in 2-wire operation) |
| Permanent current rating of switching output DC [mA] | 200                             |
| Switching frequency DC [Hz]                          | 400                             |
| Short-circuit protection                             | yes                             |
| Type of short-circuit protection                     | pulsed                          |
| Overload protection                                  | yes                             |

### Detection zone

|                               |               |
|-------------------------------|---------------|
| Sensing range [mm]            | 7             |
| Real sensing range $S_r$ [mm] | $7 \pm 10 \%$ |
| Operating distance [mm]       | 0...5.67      |



## Inductive sensor

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|                               |                                                                                                             |                                                                                                |                            |
|-------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------|
| Increased sensing range       |                                                                                                             | yes                                                                                            |                            |
| Accuracy / deviations         |                                                                                                             |                                                                                                |                            |
| Correction factor             |                                                                                                             | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminium: 0.5 / copper: 0.4                    |                            |
| 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                                                                                             | 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)                                                               |                            |
| Mechanical data               |                                                                                                             |                                                                                                |                            |
| Weight [g]                    | 138                                                                                                         |                                                                                                |                            |
| Housing                       | threaded type                                                                                               |                                                                                                |                            |
| Mounting                      | non-flush mountable                                                                                         |                                                                                                |                            |
| Dimensions [mm]               | M12 x 1 / L = 79                                                                                            |                                                                                                |                            |
| Thread designation            | M12 x 1                                                                                                     |                                                                                                |                            |
| Materials                     | housing: stainless steel; sensing face: PBT; lock nuts: brass; LED window: PEI                              |                                                                                                |                            |
| Displays / operating elements |                                                                                                             |                                                                                                |                            |
| Display                       | switching status                                                                                            | 4 x 90° LED, yellow                                                                            |                            |
| Accessories                   |                                                                                                             |                                                                                                |                            |
| Items supplied                | lock nuts: 2                                                                                                |                                                                                                |                            |

# IFM221



## Inductive sensor

IFKC007-ASKG/M/60V/1,5M/ZH/AMP

### Remarks

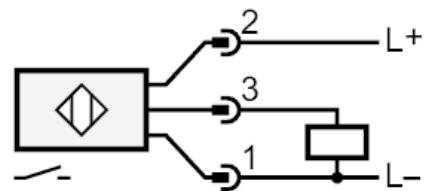
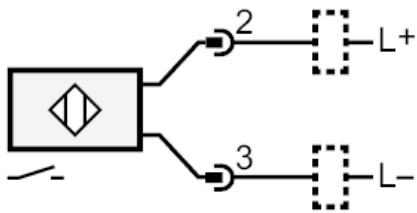
Pack quantity

1 pcs.

### Electrical connection

Cable: 1.5 m, PUR; burning behaviour to ECE R118 rev. 2; 3 x 0.5 mm<sup>2</sup>

### Connection



Connector: 1 x AMP (1-967325-2; 929974-1; 828920-1; 965784-1)