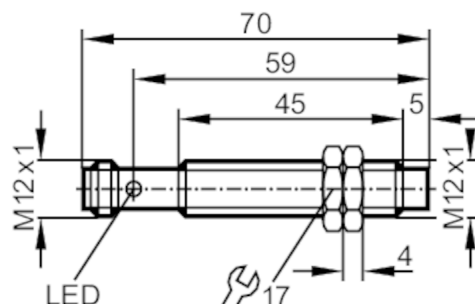


# GF711S



## Fail-safe inductive sensor

GIFA4004-2PS/SIL2/V4A/US



### Product characteristics

|                   |                      |
|-------------------|----------------------|
| Electrical design | PNP                  |
| Output function   | 2 x OSSD (A1 and A2) |
| Enable zone [mm]  | 0.5...4              |
| Housing           | threaded type        |
| Dimensions [mm]   | M12 x 1 / L = 70     |

### Application

|                         |                                         |
|-------------------------|-----------------------------------------|
| Special feature         | Gold-plated contacts                    |
| Type of operation       | continuous operation (maintenance-free) |
| Safety-related function | safe state when undamped                |
| Application             | industrial application                  |

### Electrical data

|                               |              |
|-------------------------------|--------------|
| Operating voltage [V]         | 19.2...30 DC |
| Rated insulation voltage [V]  | 30           |
| Current consumption [mA]      | < 20         |
| Protection class              | III          |
| Reverse polarity protection   | yes          |
| Max. power-on delay time [ms] | 1000         |

### Outputs

|                                                      |                                             |
|------------------------------------------------------|---------------------------------------------|
| Electrical design                                    | PNP                                         |
| Output function                                      | 2 x OSSD (A1 and A2)                        |
| Max. voltage drop switching output DC [V]            | 2.5; (30 mA)                                |
| Permanent current rating of switching output DC [mA] | 100                                         |
| Output data                                          | Interface type C class 1                    |
| Output voltage at 24 V                               | compatible with EN 61131-2 inputs type 1, 2 |
| Short-circuit protection                             | yes                                         |
| Overload protection                                  | no                                          |
| Max. capacitive load CL_max [nF]                     | 20                                          |

### Detection zone

|                  |         |
|------------------|---------|
| Enable zone [mm] | 0.5...4 |
|------------------|---------|

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|                                      |      |   |
|--------------------------------------|------|---|
| Safe switching-off distance<br>s(ar) | [mm] | 6 |
|--------------------------------------|------|---|

### Response times

|                                                     |      |    |
|-----------------------------------------------------|------|----|
| Response time to safety request                     | [ms] | 1  |
| Response time when approaching the enable zone      | [ms] | 1  |
| Risk time (response time for safety-related faults) | [ms] | 20 |

### Operating conditions

|                                    |       |                                                |
|------------------------------------|-------|------------------------------------------------|
| Applications                       |       | class C to EN 60654-1 weatherproof application |
| Ambient temperature                | [°C]  | -25...70                                       |
| Note on ambient temperature        |       | operational life ≤ 87600 h                     |
| Ambient temperature                | [°C]  | 10...40                                        |
| Note on ambient temperature        |       | operational life ≤ 175200 h                    |
| Rate of temperature change [K/min] |       | 0.5                                            |
| Max. relative air humidity         | [%]   | briefly: 5...95 %; permanent: 5...70 %         |
| Air pressure                       | [kPa] | 80...106                                       |
| Max. height above sea level        | [m]   | 2000                                           |
| Ionising radiation                 |       | not permissible                                |
| Salt spray                         |       | no                                             |
| Protection                         |       | IP 65; IP 67                                   |

### Tests / approvals

|                      |                           |                         |
|----------------------|---------------------------|-------------------------|
| EMC                  | IEC 60947-5-2             |                         |
|                      | IEC 60947-5-3             |                         |
|                      | EN 60947-5-3              |                         |
|                      | EN 61000-4-2 ESD          | 6 kV CD / 8 kV AD       |
|                      | EN 61000-4-3 HF radiated  | 20 V/m                  |
|                      | EN 61000-4-4 Burst        | 2 kV                    |
|                      | EN 61000-4-6 HF conducted | 10 V                    |
|                      | EN 61000-4-8              | 30 A/m                  |
|                      | EN 55011                  | class B                 |
|                      | IEC 60947-5-2             |                         |
| Shock resistance     | IEC 60947-5-2             |                         |
| Vibration resistance | IEC 60947-5-2             |                         |
| UL approval          | Ta                        | -25...70 °C             |
|                      | Enclosure type            | Type 1                  |
|                      | power supply              | Limited Voltage/Current |
|                      | File number UL            | E174191                 |

### Safety classification

|                                         |       |                                    |
|-----------------------------------------|-------|------------------------------------|
| Complies with the requirements          |       | ISO 13849-1: 2015 category 2, PL d |
|                                         |       | IEC 61508 SIL 2                    |
|                                         |       | IEC 62061 SIL 2                    |
| Mission time TM                         | [h]   | ≤ 175200                           |
| Mission time TM (additional indication) |       | 20 years                           |
| PFH                                     | [1/h] | 1,0E-07                            |

### Mechanical data

|        |     |       |
|--------|-----|-------|
| Weight | [g] | 105.5 |
|--------|-----|-------|

GF711S



Fail-safe inductive sensor

GIFA4004-2PS/SIL2/V4A/US

|                    |                                    |
|--------------------|------------------------------------|
| Housing            | threaded type                      |
| Mounting           | non-flush mountable                |
| Dimensions [mm]    | M12 x 1 / L = 70                   |
| Thread designation | M12 x 1                            |
| Materials          | stainless steel (316L/1.4404); PBT |

Displays / operating elements

|         |           |                 |
|---------|-----------|-----------------|
| Display | operation | 1 x LED, green  |
|         | signal    | 1 x LED, yellow |

Accessories

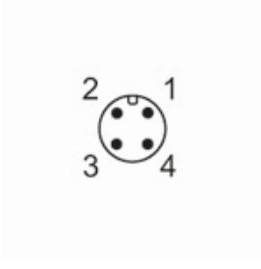
|                |              |
|----------------|--------------|
| Items supplied | lock nuts: 2 |
|----------------|--------------|

Remarks

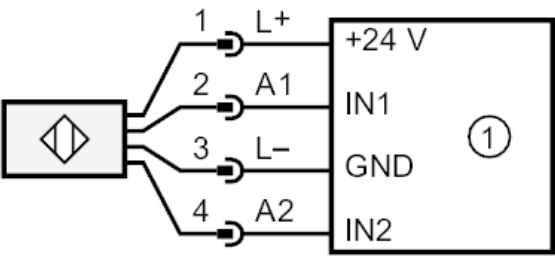
|               |                                                                                                                                                        |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Remarks       | Unless stated otherwise, all data refer to the reference target plate to IEC 60947-5-2 over the whole temperature range.<br>(FE360 = ST37K) 12x12x1 mm |
| Pack quantity | 1 pcs.                                                                                                                                                 |

Electrical connection - plug

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



Connection



1: safety-related logic unit