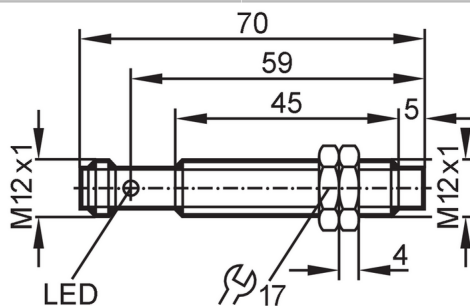


# GF711S



## 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 sub-function | safe state when properly undamped       |
| Application                 | Industrial applications                 |

### 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                                          |

### Monitoring range

|                                        |         |
|----------------------------------------|---------|
| Enable zone [mm]                       | 0.5...4 |
| Safe switching-off distance s(ar) [mm] | 6       |



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| Reaction 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                                           |
| Ionizing 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                                        |
| Shock resistance                                    | IEC 60947-5-2             |                                                |
| Vibration resistance                                | IEC 60947-5-2             |                                                |
| 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]                       | 109.45                                         |
| Housing                                             |                           | Threaded type                                  |
| Mounting                                            |                           | non-flush mountable                            |
| Dimensions                                          | [mm]                      | M12 x 1 / L = 70                               |
| Thread designation                                  |                           | M12 x 1                                        |
| Material                                            |                           | stainless steel (1.4404 / 316L); PBT           |

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Displays / operating elements

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

Accessories

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

Remarks

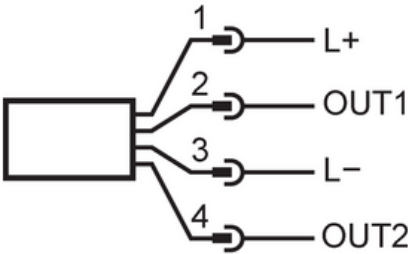
|               |                                                                                                                                                        |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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: 4, gold-plated



Connection



|             |      |       |
|-------------|------|-------|
| 1           | L+   |       |
| 2           | OUT1 | OSSD1 |
| 3           | L-   |       |
| 4           | OUT2 | OSSD2 |
| OUT: Output |      |       |