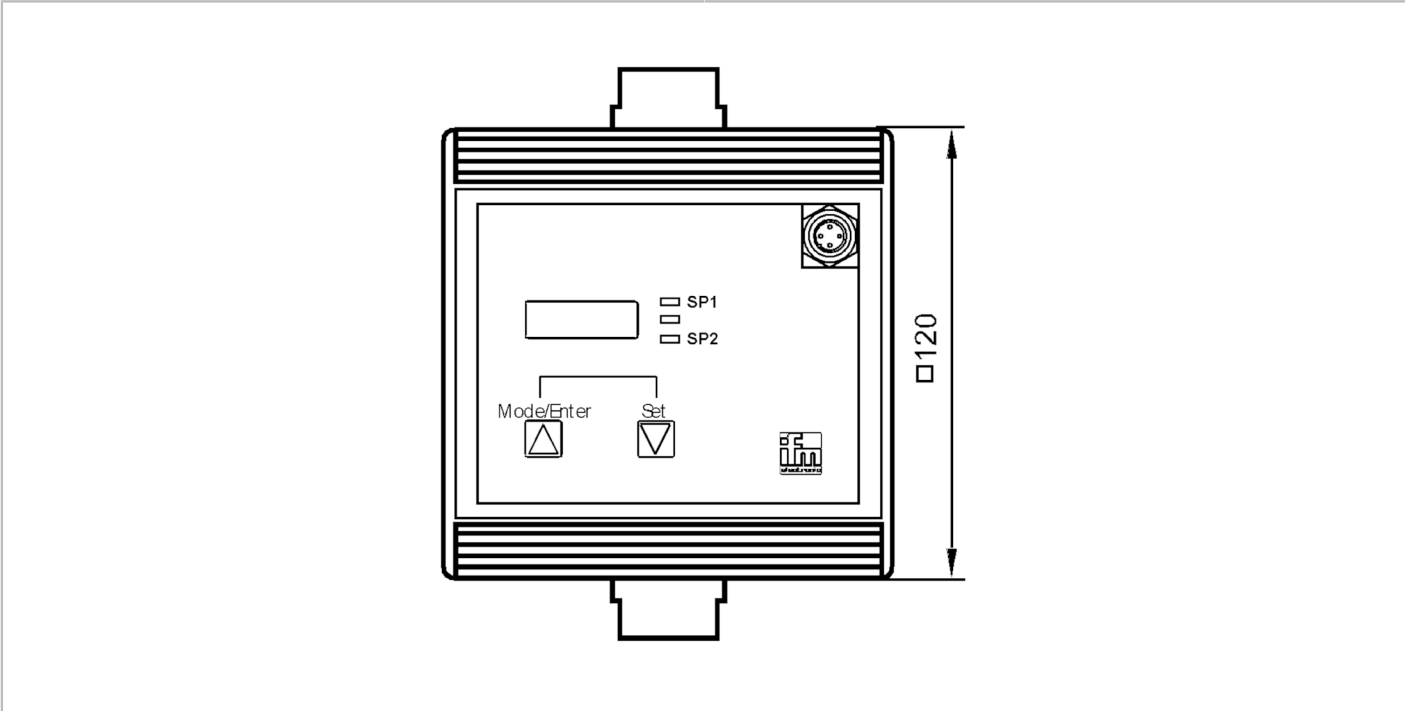




Ultrasonic flow meter

SUR12XXXFRKG/W/US-100-IPF

Article no longer available - archive entry



Product characteristics

|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analog outputs: 1 |
| Measuring range [l/min]      | 0...20                                                    |
| Process connection           | threaded connection G 1/2                                 |

Application

|                         |                             |
|-------------------------|-----------------------------|
| System                  | gold-plated contacts        |
| Application             | Monitoring of cooling water |
| Medium temperature [°C] | 5...80                      |
| Pressure rating [bar]   | 16                          |

Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 20...28 DC |
| Current consumption [mA]    | < 60       |
| Protection class            | III        |
| Reverse polarity protection | yes        |
| Power-on delay time [s]     | 10         |

Inputs / outputs

|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Number of inputs and outputs | Number of digital outputs: 2; Number of analog outputs: 1 |
|------------------------------|-----------------------------------------------------------|

Outputs

|                           |                                                 |
|---------------------------|-------------------------------------------------|
| Total number of outputs   | 2                                               |
| Output signal             | switching signal; analog signal; (configurable) |
| Electrical design         | PNP/NPN                                         |
| Number of digital outputs | 2                                               |



## Ultrasonic flow meter

SUR12XXXFRKG/W/US-100-IPF

|                                                      |                                                                                                                                                                                |                    |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Output function                                      | normally open / closed; (configurable)                                                                                                                                         |                    |
| Max. voltage drop switching output DC [V]            | 2                                                                                                                                                                              |                    |
| Permanent current rating of switching output DC [mA] | 250; (per output)                                                                                                                                                              |                    |
| Number of analog outputs                             | 1                                                                                                                                                                              |                    |
| Analog current output [mA]                           | 4...20; (scalable)                                                                                                                                                             |                    |
| Max. load [Ω]                                        | 500                                                                                                                                                                            |                    |
| Analog voltage output [V]                            | 0...10; (scalable)                                                                                                                                                             |                    |
| Min. load resistance [Ω]                             | 2000                                                                                                                                                                           |                    |
| Short-circuit protection                             | yes                                                                                                                                                                            |                    |
| Type of short-circuit protection                     | yes (non-latching)                                                                                                                                                             |                    |
| Overload protection                                  | yes                                                                                                                                                                            |                    |
| Measuring/setting range                              |                                                                                                                                                                                |                    |
| Measuring range [l/min]                              | 0...20                                                                                                                                                                         |                    |
| Display range [l/min]                                | 0...24                                                                                                                                                                         |                    |
| Set point SP [l/min]                                 | 0.2...24                                                                                                                                                                       |                    |
| Reset point rP [l/min]                               | 0...23.8                                                                                                                                                                       |                    |
| Analog start point ASP [l/min]                       | 0...16                                                                                                                                                                         |                    |
| Analog end point AEP [l/min]                         | 8...24                                                                                                                                                                         |                    |
| In steps of [l/min]                                  | 0.1                                                                                                                                                                            |                    |
| Accuracy / deviations                                |                                                                                                                                                                                |                    |
| Flow monitoring                                      |                                                                                                                                                                                |                    |
| Max. temperature gradient of medium [K/min]          | 200                                                                                                                                                                            |                    |
| Accuracy (in the measuring range)                    | < ± 3                                                                                                                                                                          |                    |
| Reaction times                                       |                                                                                                                                                                                |                    |
| Flow monitoring                                      |                                                                                                                                                                                |                    |
| Response time [s]                                    | 1                                                                                                                                                                              |                    |
| Delay time programmable dS, dr [s]                   | 0...50                                                                                                                                                                         |                    |
| Software / programming                               |                                                                                                                                                                                |                    |
| Parameter setting options                            | hysteresis / window; normally open / closed; switching logic; current/voltage output; Start-up delay; adaptation of displayed values; display can be deactivated; Display unit |                    |
| Operating conditions                                 |                                                                                                                                                                                |                    |
| Ambient temperature [°C]                             | 10...60                                                                                                                                                                        |                    |
| Protection                                           | IP 65                                                                                                                                                                          |                    |
| Tests / approvals                                    |                                                                                                                                                                                |                    |
| EMC                                                  | 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 61000-4-6 HF conducted                                                                                                                                                      | 10 V               |
| Shock resistance                                     | DIN IEC 68-2-27                                                                                                                                                                | 30 g (11 ms)       |
| Vibration resistance                                 | DIN IEC 68-2-6                                                                                                                                                                 | 5 g (10...2000 Hz) |

SU0501



Ultrasonic flow meter

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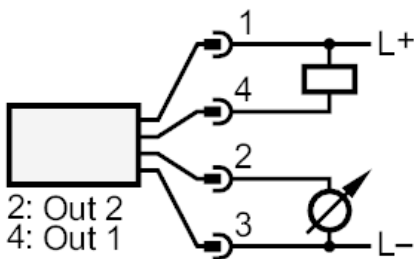
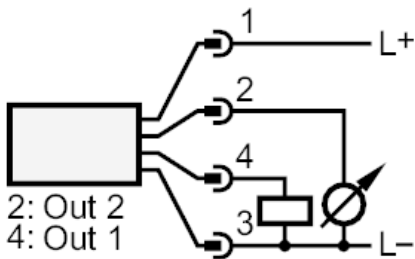
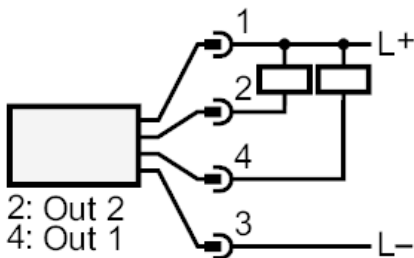
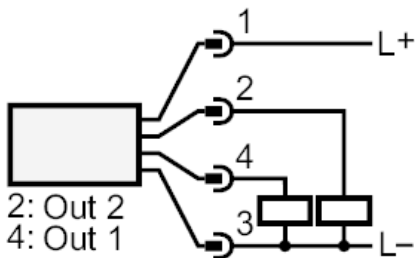
| Mechanical data               |                                                                                                                          |                       |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Material                      | brass; ABS; PA                                                                                                           |                       |
| Materials (wetted parts)      | bronze (2.1096.01); stainless steel (1.4435 / 316L); PPR (Hostalen); EPDM 80 Shore A; PES (Ultrason 2010); Centellen 200 |                       |
| Process connection            | threaded connection G 1/2                                                                                                |                       |
| Displays / operating elements |                                                                                                                          |                       |
| Display                       | Switching status                                                                                                         | 2 x LED, yellow       |
|                               | Calibration indicator                                                                                                    | 1 x LED, yellow       |
|                               | Measured values                                                                                                          | 7-segment LED display |
|                               | Programming                                                                                                              | 7-segment LED display |
| Display unit                  | l/min; gpm; l/h; gph; m³/h                                                                                               |                       |
| Remarks                       |                                                                                                                          |                       |
| Pack quantity                 | 1 pcs.                                                                                                                   |                       |

Electrical connection

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



Connection



OUT1: Switching output  
OUT2: Switching output  
analog output