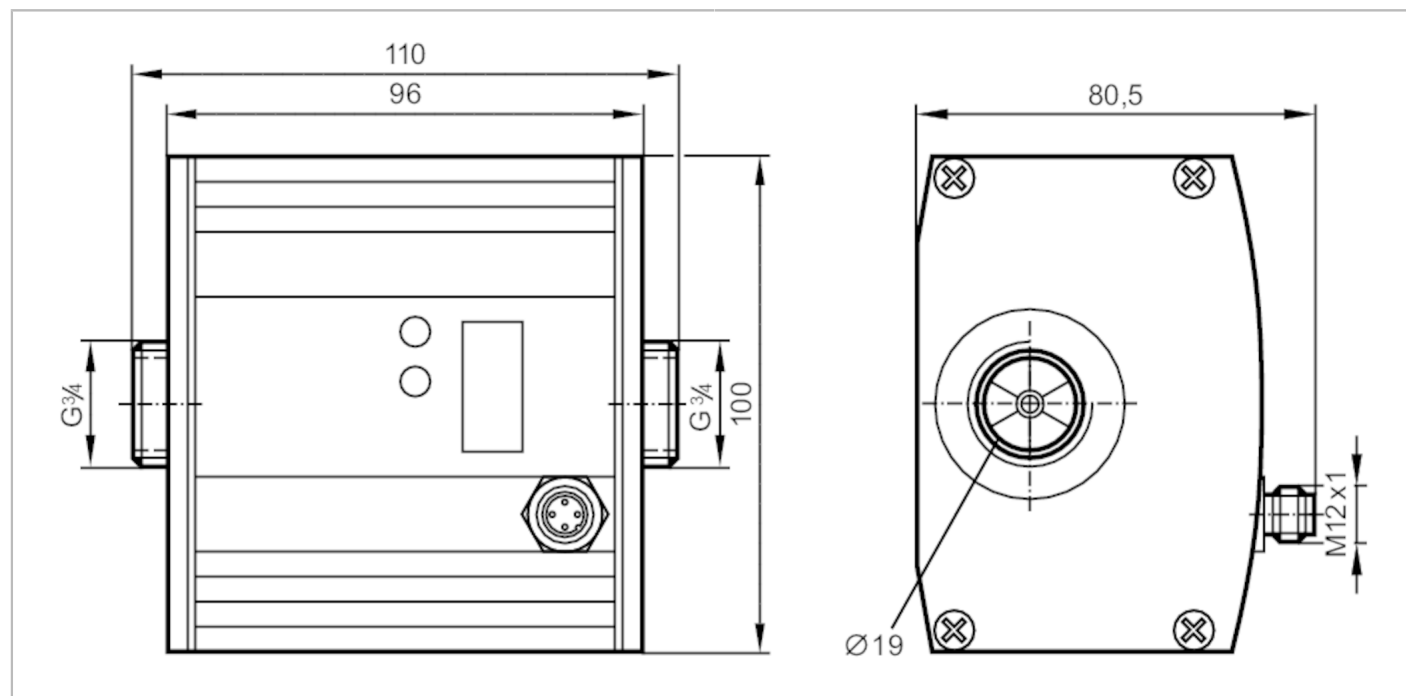


# SU7200



## Ultrasonic flow meter

SUR34HGBFPKG/W/US-100-IPF



### Application

|                         |                                                                                                                                                |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Application             | for industrial applications                                                                                                                    |
| Installation            | connection to pipe by means of an adapter                                                                                                      |
| Media                   | water; glycol solutions; coolants; oil                                                                                                         |
| Medien                  | low-viscosity oils with viscosity: 7...40 mm <sup>2</sup> /s (40 °C)<br>high-viscosity oils with viscosity: 30...68 mm <sup>2</sup> /s (40 °C) |
| Medium temperature [°C] | -10...80                                                                                                                                       |
| Pressure rating [bar]   | 16                                                                                                                                             |

### Electrical data

|                                 |                                               |
|---------------------------------|-----------------------------------------------|
| Operating voltage [V]           | 19...30 DC; (according to EN 50178 SELV/PELV) |
| Current consumption [mA]        | 100                                           |
| Min. insulation resistance [MΩ] | 100; (500 V DC)                               |
| Protection class                | III                                           |
| Reverse polarity protection     | yes                                           |
| Power-on delay time [s]         | 10                                            |



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| Outputs                                              |                                                                                                                |                |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------|
| Total number of outputs                              | 2                                                                                                              |                |
| Output signal                                        | switching signal                                                                                               |                |
| Electrical design                                    | PNP                                                                                                            |                |
| Number of digital outputs                            | 2                                                                                                              |                |
| Output function                                      | normally open / normally closed; (parameterisable)                                                             |                |
| Max. voltage drop switching output DC [V]            | 2                                                                                                              |                |
| Permanent current rating of switching output DC [mA] | 250; (per output)                                                                                              |                |
| Short-circuit protection                             | yes                                                                                                            |                |
| Type of short-circuit protection                     | pulsed                                                                                                         |                |
| Overload protection                                  | yes                                                                                                            |                |
| Measuring/setting range                              |                                                                                                                |                |
| Measuring range                                      | 0...13.2 gpm                                                                                                   | 0...50 l/min   |
| Display range                                        | 0...15.9 gpm                                                                                                   | 0...60 l/min   |
| Resolution                                           | 0.02 gpm                                                                                                       | 0.1 l/min      |
| Set point SP                                         | 0.04...13.22 gpm                                                                                               | 0.1...50 l/min |
| Reset point rP                                       | 0...13.18 gpm                                                                                                  | 0...49.9 l/min |
| Max. flow rate [l/min]                               | 60                                                                                                             |                |
| Max. flow rate [m³/h]                                | 3.6                                                                                                            |                |
| In steps of                                          | 0.02 gpm                                                                                                       | 0.1 l/min      |
| Temperature monitoring                               |                                                                                                                |                |
| Measuring range [°C]                                 | -10...80                                                                                                       |                |
| Resolution [°C]                                      | 0.2                                                                                                            |                |
| Set point SP [°C]                                    | -9.8...80                                                                                                      |                |
| Reset point rP [°C]                                  | -10...79.8                                                                                                     |                |
| In steps of [°C]                                     | 0.2                                                                                                            |                |
| Accuracy / deviations                                |                                                                                                                |                |
| Flow monitoring                                      |                                                                                                                |                |
| Accuracy (in the measuring range)                    | < ± (3 % MW + 0,2 % MEW) / < ± (5 % MW + 0,5 % MEW);<br>(water; glycol: 35%; oil: viscosity 68 mm²/s at 40 °C) |                |
| Repeatability                                        | 0,1 l/min (0,025 gpm)                                                                                          |                |
| Temperature monitoring                               |                                                                                                                |                |
| Accuracy [K]                                         | 0,2                                                                                                            |                |
| Response times                                       |                                                                                                                |                |
| Flow monitoring                                      |                                                                                                                |                |
| Response time [s]                                    | 0.25; (dAP = 0)                                                                                                |                |
| Delay time programmable dS, dr [s]                   | 0...50                                                                                                         |                |
| Damping for the switching output dAP [s]             | 0...1                                                                                                          |                |
| Temperature monitoring                               |                                                                                                                |                |
| Dynamic response T05 / T09 [s]                       | T09 = 70 (Q > 5 l/min); (water)                                                                                |                |



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| Software / programming                                                          |                                                        |                                                                                                             |                                              |
|---------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Parameter setting options                                                       |                                                        | Flow monitoring; Temperature monitoring                                                                     |                                              |
| Operating conditions                                                            |                                                        |                                                                                                             |                                              |
| Ambient temperature                                                             | [°C]                                                   | -10...60                                                                                                    |                                              |
| Storage temperature                                                             | [°C]                                                   | -25...80                                                                                                    |                                              |
| Protection                                                                      |                                                        | IP 67                                                                                                       |                                              |
| 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 61000-4-5 Surge                                     | 0,5 kV                                                                                                      |                                              |
|                                                                                 | EN 61000-4-6 HF conducted                              | 10 V                                                                                                        |                                              |
| Shock resistance                                                                |                                                        | DIN IEC 68-2-27                                                                                             | 20 g (11 ms)                                 |
| Vibration resistance                                                            |                                                        | DIN IEC 68-2-6                                                                                              | 5 g (10...2000 Hz)                           |
| MTTF                                                                            |                                                        | [years]                                                                                                     | 246                                          |
| Pressure Equipment Directive                                                    |                                                        | Sound Engineering Practice; can be used for group 2 fluids; group 1 fluids on request                       |                                              |
| Mechanical data                                                                 |                                                        |                                                                                                             |                                              |
| Weight                                                                          |                                                        | [g]                                                                                                         | 1543.2                                       |
| Materials                                                                       |                                                        | housing: AlMgSi0,5 anodised; Sealing: FKM; connector housing: brass Optalloy-plated; PA 6.6; cover film: PA |                                              |
| Materials (wetted parts)                                                        |                                                        | stainless steel (1.4404 / 316L); FKM; PES; Centellen 200                                                    |                                              |
| Process connection                                                              |                                                        | threaded connection G 3/4 flat seal                                                                         |                                              |
| Displays / operating elements                                                   |                                                        |                                                                                                             |                                              |
| Display                                                                         | Display unit                                           |                                                                                                             | 4 x LED, green (l/min, m³/h, gal/min, gal/h) |
|                                                                                 | Display unit                                           |                                                                                                             | 2 x LED, yellow (°C / °F)                    |
|                                                                                 | switching status                                       |                                                                                                             | 2 x LED, yellow                              |
|                                                                                 | measured values                                        |                                                                                                             | alphanumeric display, 4-digit                |
|                                                                                 | programming                                            |                                                                                                             | alphanumeric display, 4-digit                |
| Display unit                                                                    |                                                        | l/min; m³/h; gpm; gph; °C; °F                                                                               |                                              |
| Accessories                                                                     |                                                        |                                                                                                             |                                              |
| Accessories (supplied)                                                          |                                                        | sealings: 2, Centellen                                                                                      |                                              |
| Accessories (optional)                                                          | adapter for pipe: 1 x R1/2, stainless steel, E40178    |                                                                                                             |                                              |
|                                                                                 | adapter for pipe: 1 x 1/2 NPT, stainless steel, E40191 |                                                                                                             |                                              |
|                                                                                 | adapter for pipe: 1 x R1/2, brass, E40151              |                                                                                                             |                                              |
|                                                                                 | adapter for pipe: 1 x 1/2 NPT, brass, E40154           |                                                                                                             |                                              |
| Remarks                                                                         |                                                        |                                                                                                             |                                              |
| Remarks                                                                         |                                                        | MW = measured value                                                                                         |                                              |
|                                                                                 |                                                        | MEW = Final value of the measuring range                                                                    |                                              |
|                                                                                 |                                                        | sealing: only with supplied Centellen seals                                                                 |                                              |
| Pack quantity                                                                   |                                                        | 1 pcs.                                                                                                      |                                              |
| Electrical connection                                                           |                                                        |                                                                                                             |                                              |
| Connector: 1 x M12; Moulded body: brass, Optalloy-plated; Contacts: gold-plated |                                                        |                                                                                                             |                                              |

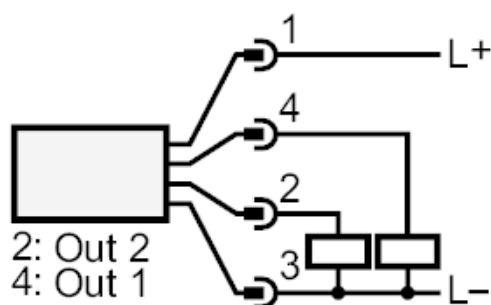
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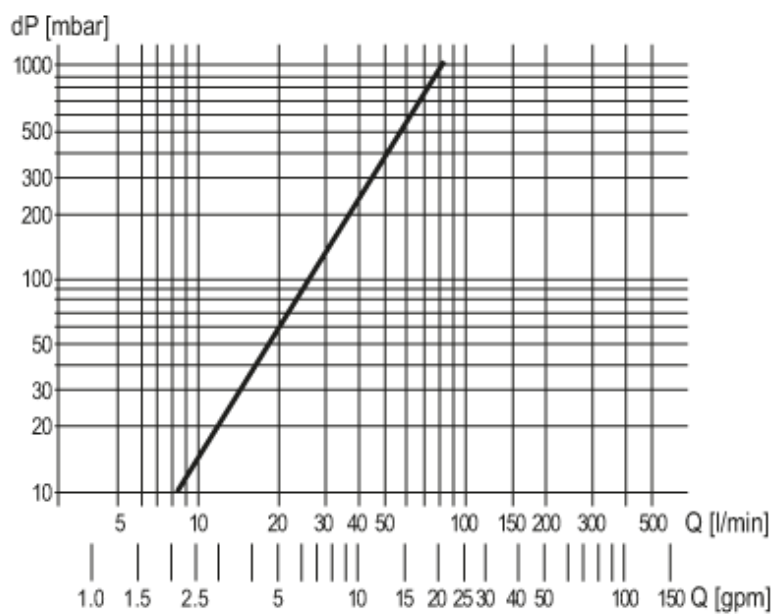


### Connection



### Diagrams and graphs

#### Pressure loss



dP Pressure loss

Q volumetric flow quantity