

Flow velocity sensor



The exact and real time knowledge of water discharge is of central importance for the operation of waste water treatment facilities, cost allocation in sewage networks and management of communal and industrial water resources.

The PV continuously measures the water or effluent velocity through ducts, pipes and open canals in sewer networks, water treatment plants and industrial facilities.

Versions

| Art | Version |
|-------|---|
| 21767 | PV incl. SOMFLOW velocity sensor and controller |

Scope of delivery

| Qty | Name |
|-----|--|
| 1 | PQ-Controller |
| 1 | SOMFLOW ultrasonic Doppler velocity sensor |

Accessories

| Art | Accessories |
|-----|-------------|
|-----|-------------|

Specifications

| SOMFLOW ultrasonic Doppler sensor | |
|-----------------------------------|--|
| Measurement range | Bi-directional 0.01 to 5 m/s (0.03 to 16.4 ft/s) |
| Accuracy | ± 2 % of reading if V ≥ 0.5m/s (1.64 ft/s) ± 0.01 m/s (± 0.03 ft/s) if V < 0.5m/s (1.64 ft/s) |
| Resolution | 1 mm/s (0.003ft/s) |
| Minimum fluid level | 5 mm (0.59 in) to 20mm (0.79in) above base of sensor, provided transducers fully |

| SOMFLOW ultrasonic Doppler sensor | |
|-----------------------------------|---|
| | wetted |
| Immersion | up to 1 bar |
| Principle | Doppler sensor using twin 1 MHz transducers |
| Operating temperature | -20 to +60 °C (fluid non-freezing) |
| Storage temperature | -20 to +70 °C |
| Size L x B x H | 122 x 46 x 19 mm |
| Weight | 1.1 kg (incl. 10-m cable) |
| Material | PVDF, polyurethane, 316 Stainless steel |

| PQ-Controller | |
|-----------------------|---|
| Power supply | 9...28 VDC; Overvoltage and reverse voltage protection deep-discharge protected if used with optional battery |
| Outputs | - RS-485 (9600...115200 Baud), Modbus RTU - SDI-12 (version 1.3) - 3x 4 ... 20 mA output (level, velocity and flow) - Impulse output of flow volume - Switch for limit monitoring |
| Measurement interval | 2 s ... 12 h (default 60 s) |
| Statistics interval | 10 s ... 12 h |
| Operating temperature | -40...60 °C (-40...140 °F) |
| Storage temperature | -40...60 °C (-40...140 °F) |
| Protection rating | IP67 |

| PQ-Controller | |
|----------------------|--|
| Lightning protection | Integrated protection against indirect lightning with a discharge capacity of 6 kA Ppp |
| Housing material | Aluminium, powder coated |
| Power supply | 9...28 VDC; Overvoltage and reverse voltage protection deep-discharge protected if used with optional battery |

