UFM-02

Ultrasonic Flow Sensing Modules

- Wide sensing range
- High accuracy
- Low power

ScioSense®

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UFM-02

Ultrasonic Flow Sensing Modules

The UFM-02 is a family of ultrasonic flow sensing modules designed for pipe diameters ranging from 3/8” to 1.5”. These modules use ScioSense’s static, contactless ultrasonic technology, eliminating the need for moving rotors found in traditional Hall sensor-based flow sensors.

As a result, the UFM-02 has no moving parts, which extends its operational lifetime when used according to specifications.

The devices offer multiple interface options, such as SPI and pulse output, making them easy to integrate into embedded systems.

They are suitable for food-grade applications, can directly measure drinking water flow, and provide at least ±5% accuracy at higher flow rates. Additionally, the UFM-02 can detect very low flow rates, enabling applications like leakage detection and precise control of water flow and temperature in various appliances.

Features

- Accurate flow measurement
- Compact and easy integration
- Low power consumption
- Cost-Effectiveness
- Robustness and durability
- Fast response time
- Customizability

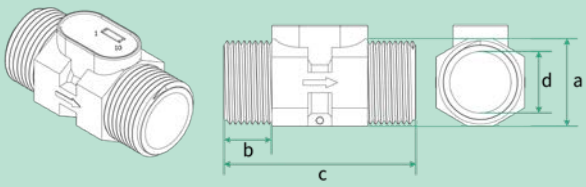
Benefits

- Reliable detection and consistent performance
- Small form factor for embedded systems
- Suitable for battery-powered or energy-efficient systems
- Long operational life with minimal maintenance
- Real-time monitoring for dynamic flow conditions
- Flexible OEM integration

Application Areas

- Water purifiers
- Sanitary Equipment
- Boilers, tankless heaters
- Heat pumps
- Dispensers (water, beverage)
- Cooling
- Coffee machines
- Pool service equipment
- Irrigation
- Cleaning Equipment

Mechanical Outline



Properties

- Supply Voltage: 3,6V....6V
- Average Supply Current: 50µA
- Storage temperature: –25 … +100 °C
- Operating ambient temperature: –25 … +85 °C
- Operating water temperature: 0 … +60 °C
- Ambient relative humidity: 0 … 85 % RH
- Maximum water pressure: 4.0 MPa

Dimensions

Nominal pipe diameter and Thread	3/8”	1/2”	3/4”	1”	1 ½”	Unit
Module width a	21.3	21.3	27.5	34.5	47.8	mm
Inner diameter d	10.5	13.3	17	22	35.5	mm
Thread lenght b	11.5	11.5	16.5	18.5	21.5	mm
Total spool piece lenght c	60	60	70	75	80	mm

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