FLOWGENIX

ULTRASONIC FLOWMETER

The FLOWGEN–UFM Ultrasonic Flowmeter is a non-intrusive, clamp-on type flowmeter designed for accurate measurement of liquid flow in closed pipes. Using advanced transit-time ultrasonic technology, it measures the velocity of the fluid by detecting the time difference between transmitted and received ultrasonic signals along the flow path.

This innovative design eliminates the need for pipe cutting or process interruption — making it ideal for applications where cleanliness, cost-effectiveness, and easy installation are essential.

Available in AC-powered and battery-operated versions, it offers flexibility for both permanent and temporary (portable) flow measurement setups.

Image is not real .Just for reference

KEY FEATURES

- **Non-Intrusive Measurement**: Clamp-on design — no pipe cutting or pressure drop.
- **Wide Application Range**: Works with liquids such as water, oil, chemicals, and beverages.
- **High Accuracy**: ±1.0% of reading under ideal flow conditions.
- **Battery or AC Operation**: Rechargeable battery for portable use, 24VDC / 230VAC for fixed installations.
- **Easy Installation**: Quick setup without process shutdown.
- **Multiple Output Options:** 4–20mA, RS485 (Modbus-RTU), Pulse, and Relay output.
- **Data Logging Capability**: Optional built-in memory for recording flow history.

USER BENEFIT

- **Quick and Non-Invasive Setup**: No pipe modifications or process downtime.
- **Portable Operation:** Long-lasting battery version ideal for field measurements.
- **Highly Versatile**: Works on metallic, plastic, and composite pipes.
- **Low Maintenance**: No moving parts, ensuring long-term stability.
- **Smart Connectivity**: Digital outputs for easy integration with PLC, SCADA, or monitoring systems.

TECHNICAL SPECIFICATIONS

Parameter	Specification
Measuring Medium	Clean liquids with ≤5% suspended solids or bubbles
Pipe Size Range	DN15 to DN6000 mm
Accuracy	±1.0% of reading
Repeatability	±0.2%
Turndown Ratio	Up to 1:20
Sensor Type	Clamp-On (transit-time type)
Material Compatibility	Metal, PVC, HDPE, and composite pipes
Power Supply	24V DC / 230V AC / Battery (up to 12 hrs operation)
Output Signals	4–20mA, RS485 (Modbus-RTU), Pulse, Relay
Protection Class	IP65 / IP67
Ambient Temperature	−30°C to +60°C
Medium Temperature	−30°C to +160°C (with high-temp sensors)
Data Logging	Optional built-in memory (SD card / USB)
Communication Protocol	RS485 (Modbus-RTU)

MATERIAL OPTIONS

Component	Material Options
Transducer	SS304 housing with epoxy sealing
Coupling Pad	Silicone / Thermal compound
Display Window	Polycarbonate (IP67 rated)
Cable	Shielded PU cable with waterproof connector

TYPICAL APPLICATIONS

- Water and wastewater management systems
- Chilled and cooling water monitoring
- Chemical and process liquid measurement
- Food, beverage, and pharmaceutical industries
- HVAC flow balancing and building management
- Temporary or portable flow auditing

DISPLAY & INTERFACE

- Integral or remote LCD display showing:
- Flow Rate (L/min, m³/h, etc.)
- Totalized Volume
- Backlit screen for outdoor use
- Password-protected configuration
- Compact electronic housing with easy wiring access

ELECTRICAL CONNECTIONS

- RS485 (Modbus-RTU) for digital communication
- Pulse and relay outputs for batching and alarms
- Power: 24V DC, 230V AC, or rechargeable battery
- Battery life: Up to 12 hours (standard), 24 hours (extended version)

INSTALLATION GUIDELINES

- Apply coupling gel between sensor and pipe for proper signal transmission.
- Use adequate straight pipe lengths (10D upstream, 5D downstream).
- Mount sensors on the side or bottom of the pipe (avoid top for air pockets).
- Properly route and secure cables for outdoor installations.

COMMUNICATION PROTOCOL

- Modbus RTU – for PLC and SCADA integration
- HART – for diagnostics and configuration
- Pulse Output – for batch control or totalizing

MAINTENANCE & WARRANTY

- No mechanical wear parts — zero maintenance.
- Reapply coupling compound periodically for best performance.
- Standard 12-month manufacturer warranty.

ACCESSORIES OPTIONS

Accessory	Description
Remote Display Unit	Up to 50 m cable length
Flow Totalizer Panel	6-digit LED with relay output
Data Logger	RS485 / USB data recording
Mounting Kit	Includes flanges and fasteners
Cable Gland Set	IP68-rated, waterproof sealing

ORDERING INFORMATION

Code / Option	Description
Model	FLOWGEN – UFM
Pipe Size	Specify (DN15 to DN6000 mm)
Material Compatibility	Metal / PVC / HDPE / Composite
Power Supply	1 – 24V DC / 2 – 230V AC / 3 – Battery
Output Signal	1 – 4–20mA / 2 – RS485 / 3 – Pulse / 4 – Combo
Protection Class	1 – IP65 / 2 – IP67
Display Type	1 – Without / 2 – Integral / 3 – Remote
Data Logging	1 – Standard / 2 – SD Card / 3 – USB
Temperature Range	1 – Up to 90°C / 2 – 160°C (High-temp)
Mounting Kit	1 – Standard / 2 – Large Pipe
Calibration Certificate	1 – Factory / 2 – NABL Lab
Special Requirements	Mention any specific installation details

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