enelsan

We Measure

ULTRASONIC FLOWMETERS

Flow

Pressure
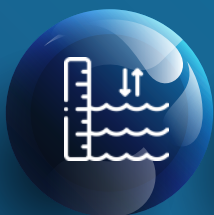
Level

Temperature

Datalogger

Control and Automation

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ULTRASONIC FLOWMETERS

The ultrasonic flowmeters works on the principle that it uses sound waves to resolve the velocity of the liquid in the pipe. The construction of an ultrasonic flow meter can be accomplished by using upstream and downstream sensors, sensor pipes and reflectors. There are two cases of no flow and flow in the pipe. In the first case, the frequency of the ultrasonic waves is transmitted into the pipe and the indication from the fluid is similar. In the second case, the frequency of the reflected wave is different due to the Doppler effect. The frequency shift increases linearly whenever the fluid flows rapidly through the pipe. The transmitter processes the signal from the wave, whose reflection determines the flow rate. The transmitter timer sends and receives ultrasonic waves in both directions in the pipe. Under no-flow conditions, the flow time is the same between the flow sensor upstream and downstream. Because it has no moving part and block the path of fluid it offers maintenance free with high accuracy good dynamic response and bi-directional flow measurement.

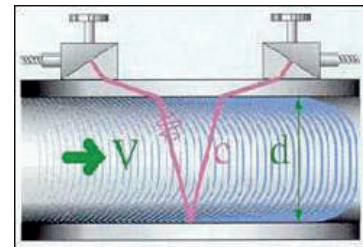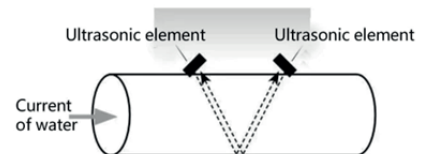| Clamp-On Ultrasonic Flowmeter	Inline Ultrasonic Flowmeter	Portable Ultrasonic Flowmeter
ETRANS-UD	ETRANS-U	ETRANS-UP

ETRANS-UD Clamp-On Ultrasonic Flowmeter Technical Specifications

|	
Measuring Range	0,3 ... 15 m/s
Accuracy	±0,5% (of M.V.)
Process Temperature	-40...+110°C (Standard) -40...+160°C (Optional)
Power Supply	24 VDC, 220 VAC
Output	4...20 mA, Pulse, RS485 MODBUS
Protection Class	IP67, IP68
Pipe Sizes	DN20...DN6000 (With different sensor types)
Recording	SD Card 4GB (Optional)

ETRANS-U Inline Ultrasonic Flowmeter Technical Specifications

Measured Range	0,3....15 m/s
Accuracy	±0,5% (of M.V.)
Process Temperature	-40...+110°C
Power Supply	24 VDC, 220 VAC
Output	4...20 mA, Pulse, RS485 MODBUS
Protection Class	IP67
Pipe Sizes	DN50...DN3000
Recording	SD Card 4GB (Optional)

ETRANS-UD Portable Ultrasonic Flowmeter Technical Specifications

Measuring Range	0,3 ... 15 m/s
Accuracy	±0,5% (of M.V.)
Process Temperature	-40...+110°C (Standard) -40...+160°C (Optional)
Power Supply	Rechargeable Battery
Output	RS232
Protection Class	IP67
Pipe Sizes	Sensor1: DN15...DN100 Sensor2: DN50...DN800 Sensor3: DN800...DN6000
Recording	Internal datalogger with max. 1000 datas
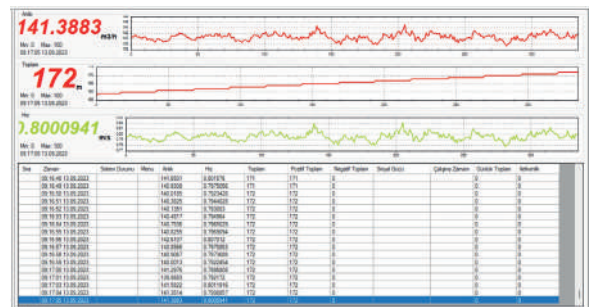
Flow Monitoring Software For Monitoring and Datalogging