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Ultrasonic Flow Meter For Open Channels



Storage tanks | Open Channels | Corrosive liquids

Ultrasonic Flow Meter For Open Channels

Sonex open channel flow measurement works based on the level measurement of fluid over a section of channel which is designed according to standards. This section of channel is so called Parshall Flume. The Parshall Flume is an economical and accurate way of measuring water flow in open channels and non-full pipes. Originally the flume was developed to measure surface waters, water rights apportionment, and irrigation flows. However, its use has expanded to include measuring sewage flow (both in pipe and treatment plants), industrial discharges, dam seepage, and other applications. the Parshall Flume is the most commonly used and widely recognized flow measurement flume.

Ultrasonic Flow Measurement For Open Channels provides continuous, contact-free and maintenance-free flow measurement of fluids, pastes and sludges.

In the SONEX ultrasonic flow meter for open channels , the transducer is separate from the electronic circuitry. This type of level meter is used for measuring the open channel level and flow rate continuously.

The SONEX ultrasonic flow meter for open channels is resistant to water and dust.



Applications

- Storage tanks
- Open Channels
- Corrosive liquids

Technical Data

Measuring principle	<i>Ultrasonic Level Measurement & Parshall Flume Relations</i>
Measurement distance in open channels	<i>0.3 to 15 meter</i>
Frequency	<i>20 to 100 KHz</i>
Accuracy (for liquid level measurement)	<i>0.5% full range or 5 mm</i>
Accuracy (for liquid flow rate measurement)	<i>According to ISO9826 (Parshall and SANIIRI flumes)</i>
Repeatability	<i>0.2% full range or 2 mm</i>
Supply Voltage	<i>21 to 30 VDC</i>
Output	<i>RS485 / Modbus / 4-20 mA / LCD Display</i>
LCD Display output	<i>Flowrate, Total volume, Fluid level</i>
Liquid Temperature Range	<i>-10°C to 70°C</i>
Ambient Temperature Range	<i>-10°C to 60°C</i>
Temperature Compensation	<i>with temperature sensor in transducer</i>
Transducer Protection Class	<i>IP 67</i>
Electronic Box Protection Class	<i>IP 65</i>
Installation	<i>Electronic: inside box (wall mounted) Transducer: over the flume</i>
Weight	<i><4 kg</i>
Dimension (mm)	<i>Electronic box: 350 x 250 x 150 Transducer: 75 (diameter) x 130 (height)</i>
Channel Size Range	<i>No limitation (According to standard)</i>
Flow Velocity Range	<i>No limitation (According to standard)</i>
Fluid material	<i>No limitation (According to standard)</i>