

Surface Mounted Open Channel Flowmeter

iFlow 600X-OC

LARGE 4.5 INCHES 5 LINES COLOR LCD DISPLAY

PULSE, 4-20MA, RS485/MODBUS, DATALOGGER, GPRS

MEASURE THE VELOCITY, DEPTH AND CONDUCTIVITY
SIMULTANEOUSLY

WEATHER PROOF (IP66)

0.02MM/S TO 12M/S BI-DIRECTIONAL



SENSOR (IP68)



iFlow 600X-OC Wall-mounted Open Channel Flowmeter

The iFlow 600X-OC series flowmeter consists of Flow calculator and the sensor.

The sensor is used to measure water velocity, depth, and conductivity of water flowing in rivers, streams, open channels and pipes. When used with a companion calculator, flow rate and total flow can also be calculated.

The flow calculator can calculate the cross-sectional area of partially filled pipe, open channel stream or river, for stream or river, with up to **20 coordinate points** describing the river's shape of cross section. It is suitable for various applications.

Ultrasonic Doppler Principle in Quadrature Sampling Mode is utilised to measure water velocity. The sensor transmits ultrasonic energy through its epoxy casing into the water. Suspended sediment particles, or small gas bubbles in the water reflect some of the transmitted ultrasonic energy back to the sensor's ultrasonic receiver instrument that processes this received signal and calculates the water velocity.

Water depth is measured with two methods. An **ultrasonic depth sensor** measures water depth using the ultrasonic principle from a top mounted sensor on the instrument. Depth is also measured using the **pressure principle** from a bottom mounted sensor in the instrument. These two sensors provide flexibility in depth measurement. Some applications, for example measuring from the side of a pipe, better suits a pressure principle, while other applications in clear open channels better suit an ultrasonic principle.

The sensor has a 4 electrodes conductivity instrument (EC) included to measure the quality of the water, with four electrodes exposed to the water at the top of the instrument. Water quality is measured on an ongoing basis and this parameter can be recorded along with velocity and depth to better analyze the nature of the water in open channels and pipes.



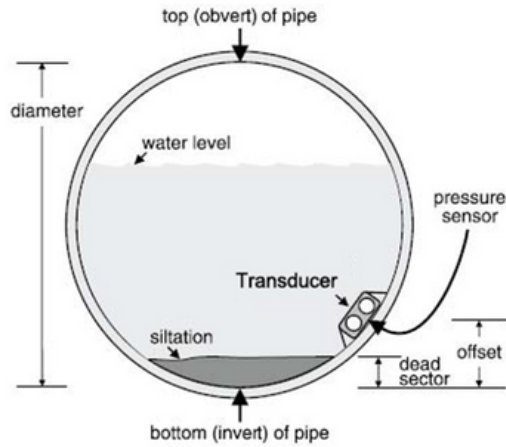
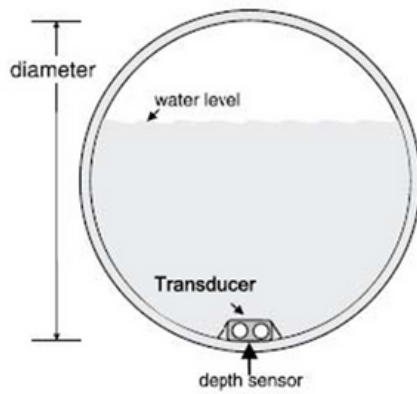
- River
- Half full pipe flow
- Open Channel
- Streams
- Effluent flow

Specifications

Calculator/Transmitter

Type:	Wall/Surface-mounted
Power supply:	220VAC & 12-24VDC; Sensor: 12VDC
IP class:	IP66
Operating temperature:	0°C ~+60°C
Case material:	Fiber Glass
Display:	4.5" color LCD
Output:	Pulse,4-20mA (Flow & Depth) ,RS485/Modbus, Datalogger, GPRS
Size:	244L×196W×114H (mm)
Weight:	2.4 kg
Data storage:	16GB
Application:	Partially Filled Pipe: 150-6000mm; Channel: width >200mm

Velocity:	Velocity range:	20mm/sec to 13.2 m/sec. Bidirectional velocity capability.
	Velocity accuracy:	±1% measured velocity
	Velocity resolution:	1mm/s
Depth (Ultrasonic):	Range:	20mm to 5000mm (5m)
	Accuracy:	±2mm
	Resolution:	1 mm
Depth (Pressure):	Range:	0mm to 10000mm (10m)
	Accuracy:	± 0.15% of measured
	Resolution:	1 mm
Electrical Conductivity (EC):	Range:	0 to 200,000 $\mu\text{S/cm}$, Typically $\pm 1\%$ of measurement
	Resolution:	±1 $\mu\text{S/cm}$
	recorded as a 16-bit value (0 to 65,535 $\mu\text{S/cm}$) or a 32-bit value (0 to 262,143 $\mu\text{S/cm}$)	
Others:	Cable:	The standard cable is 15m, the maximum option is 500m.
	Sensor material:	Epoxy-sealed body, Marine Grade 316 Stainless Steel Mounting Bracket
	Sensor size:	135mm x 50mm x 20mm (L x W x H)
	Sensor weight:	1kg with 15m of cable



For more info and application review,
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