UX5000 Clamp-on Flow Meter for use in Hazardous Environments.

FEATURES:

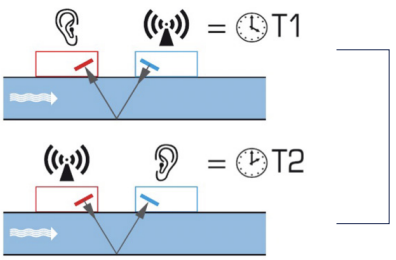
- Non-invasive, efficient, and easy installation, no process downtime
- Certified for use in hazardous areas (Zone 1 and Zone 2),
- Intrinsically Safe Measurement System including matched, wet calibrated transducers.
- Reliable measurement accuracy
- Separate Display (DCSIU) and Measurement Unit (RMU) allows flexibility in installation.
- Cost effective metering for harsh, heavy-duty applications.

APPLICATIONS:

- Applications for the UX5000 are vast. The UX5000 is ideal for harsh, heavy duty industrial applications for measuring flow of liquid in pipes – non-invasively. It is especially well-suited to the chemical, water and oil industries, typical applications include:
- Liquid flow hydrocarbons in oil industry
- Flow Measurement in Chemical Industry
- Heavy Industry Process Liquid Measurement

MEASUREMENT PRINCIPLES:

The UX5000 uses a cross correlation transit time algorithm to provide accurate flow measurements. An ultrasonic beam of a given frequency is generated and applied to the transducer crystals. This transmission goes first from the downstream transducer to the upstream transducer as shown in the upper half of Figure 1. The transmission is then made in the reverse direction, being sent from the upstream transducer to the downstream transducer as shown in the lower half of Figure 1. The speed at which the ultrasound is transmitted through the liquid is increased slightly by the velocity of the liquid through the pipe. The subsequent time difference T1-T2 is directly proportional to the liquid flow velocity.



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TECHNICAL SPECIFICATION:

Measurement Principle	Transit Time difference
Measurement Channels	1 or 2 Channel Option. Single or Multiple Path Configuration
Measurement Uncertainty	±0.5%*
Repeatability	+/- 0.15% of measured value
Applicable Fluid Types	All acoustically conductive liquids with <3 % Particulate – Air/solids
Pipe Material	Steel, Stainless Steel, Copper, Plastic Pipes For other materials please contact technical team.
Pipe Diameter Range	4" to 12" Pipe. (100-300mm)
Volumetric Flow Units	litres/sec, litres/min; gal/hr, gal/min, gallons/sec; m^3/min, m^3/hour; US gal/sec, US gal/min, US gal/hr
Flow Velocity Units	m/s, ft/s
Volume Units	Litres, m^3, gal, US gal
Mass	Kg, lbs
Temp	°C, °F
Display Unit (DCSIU)	
Marking	Ex II 2 (l)G Ex db [Ex ia} IIC T4 Gb (-20°C≤Ta≤+60°C)
Protection Rating	IP66
Mounting Options	Wall or Pipe
Material	Marine Grade Aluminium
Power supply	19 to 29V DC
Display	Graphical LCD Display
Remote Housing Unit (RMU)	
Marking	Ex II 2 (1) G Ex db [Ex ¡a] IIC T4 Gb (-20 °C<Ta<+60 °C)
Protection Rating	IP66
Mounting Options	Wall or Pipe
Material	Painted Cast Aluminium
Intrinsically Safe Transducers	
Type B	1 MHz
Marking	Ex II 2 (1) G Ex db [Ex ¡a] IIC T4 Gb (-20 °C<Ta<+60 °C)
Protection Rating	IP67
Mounting	Pipe Mounted Guide Rail
Coupling Material	Gel Pads, Grease
Temperature Sensor	
Type	Pt100 Class B 4 wire
Range	-20°C to 135°C (-4 to 275°F)
Mounting	Stainless Steel Cable Tie
Packaging	
Dims	375x375x300mm
Weight	10kg
Certification	
ATEX	CML 22ATEX2388X
UKEX	CML 22UKEX2389X
IECEx	IECEx CML 22.0052X

* Sensor Calibration on Test Rig

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