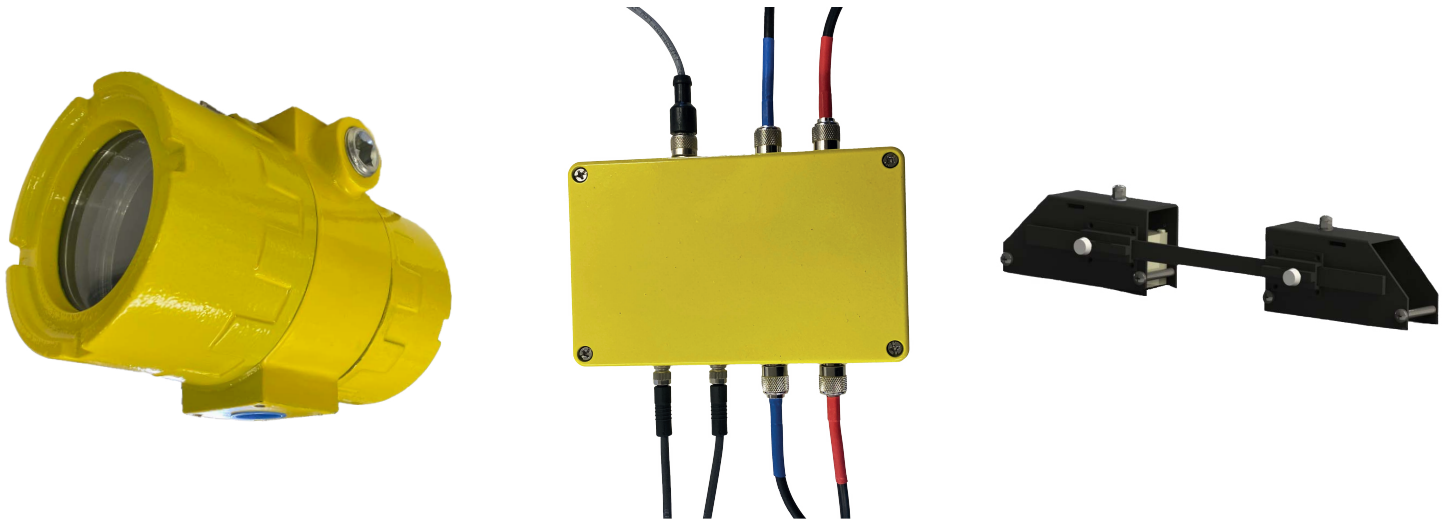


# UX5000 HazFlow

A Clamp-on hazardous area Ultrasonic Flow Meter that accurately and reliably provides flow monitoring.



## FEATURES

- ATEX/IECEX Approved
- Certified for use in hazardous areas
- Intrinsically safe transducers and measurement electronics
- Non-invasive ultrasonic technology
- Fast and easy installation
- Accurate and reliable measurement
- Suitable for a wide range of pipe sizes and pipe materials
  - Available as Kit A (2"-4" pipes)
  - Available as Kit B (4"-12" pipes)
- Sensors and local Remote Measurement Unit (RMU) provide robust measurement
- The display unit may be remote from the measurement point

## BENEFITS

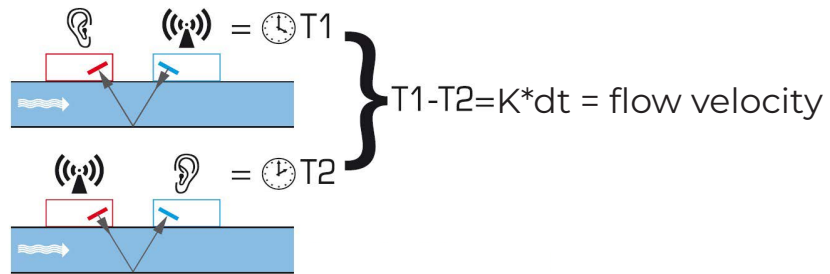
- Highly cost effective - the total cost of ownership is the lowest possible
- Suitable for hazardous and environmentally challenging environments
- Long term, drift free measurement which is maintenance free
- This solution offers the safest possible measurement in hazardous areas

## APPLICATION AREA

- Process control and system monitoring
- Liquid hydrocarbon measurement
- Process liquid measurement
- Refining
- Pipeline measurement

# UX5000 HazFlow

## MEASUREMENT PRINCIPLES



The UX5000 HazFlow is a clamp on ultrasonic flow meter that accurately measures liquid flow within a closed pipe. Installation is simple and rapid and requires no process downtime or shutdowns. Pipes are not cut or modified in any way, the installation is completely non-invasive but the flow monitoring is accurate and reliable.

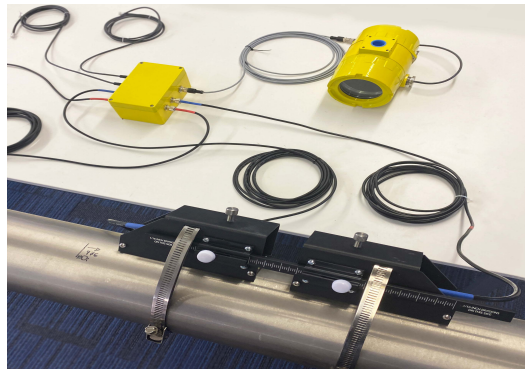
The flow is measured using Time Of Flight (Transit) ultrasonic metering. When ultrasound is transmitted between the sensors, its transit time is slightly shorter when travelling with the flow (downstream) as opposed to against (upstream). The resulting transit time difference is proportional to the velocity of the medium flow in the pipe. Having measured the flow velocity and knowing the pipe cross sectional area, the volumetric flow can be calculated.

## ULTRASONIC & HAZARDOUS AREA EXPERTISE

Micronics is part of the Rototherm Group, a company with heritage dating back to the 1840's. We design and manufacture reliable precision instrumentation for measuring pressure, temperature, level, density and flow. We have strong knowledge, experience and expertise in hazardous environments and the addition of a hazardous area clamp-on meter is a welcome addition to our range of equipment for hazardous areas.

Micronics is an established provider of non-invasive ultrasonic flow measurement solutions, and is known for accuracy and reliability. The ATEX approved solution brings the benefits of this performance to hazardous area applications.

The transducers are intrinsically safe (IS) and have separable cables. The installation is thus fast, simple and efficient.



# UX5000 HazFlow

## TECHNICAL SPECIFICATION



### Measurement Performance

Measurement Principle	Transit Time difference
Channels	1 or 2 channels may be used. Single or multiple path configurations are possible, (depending on the application and the transducers used)
Accuracy	±0,5% with field calibration
Repeatability	+/- 0.15%

### Sensors

Type	Intrinsically Safe
IP Rating	IP68
Pipe Diameter Range	2" - 12"
Standard Cable Length	5m
Sensor Temperature Range	-20 to +120 Degrees C
A	2MHz (<4 inch diameter)
B	1MHz (>4 inch diameter)

### Interfaces: Data & Control

Type	Modbus RTU
Outputs	2 current loop (4-20mA) outputs and 3 solid-state relay outputs

### Quantity Units of Measurements

Volumetric Flow	litres/sec, litres/minute; gallons/minute, cubic meters/minute, cubic metres/hour; US gallons/second, US Gallons/minute, US Gallons/hour
Flow Velocity	m/s, ft/s
Volume	Litres, cubic metres, Gallons, US Gallons
Mass	kg, lbs
Temperature	Celcius, Fahrenheit

### Hazardous Area Certification

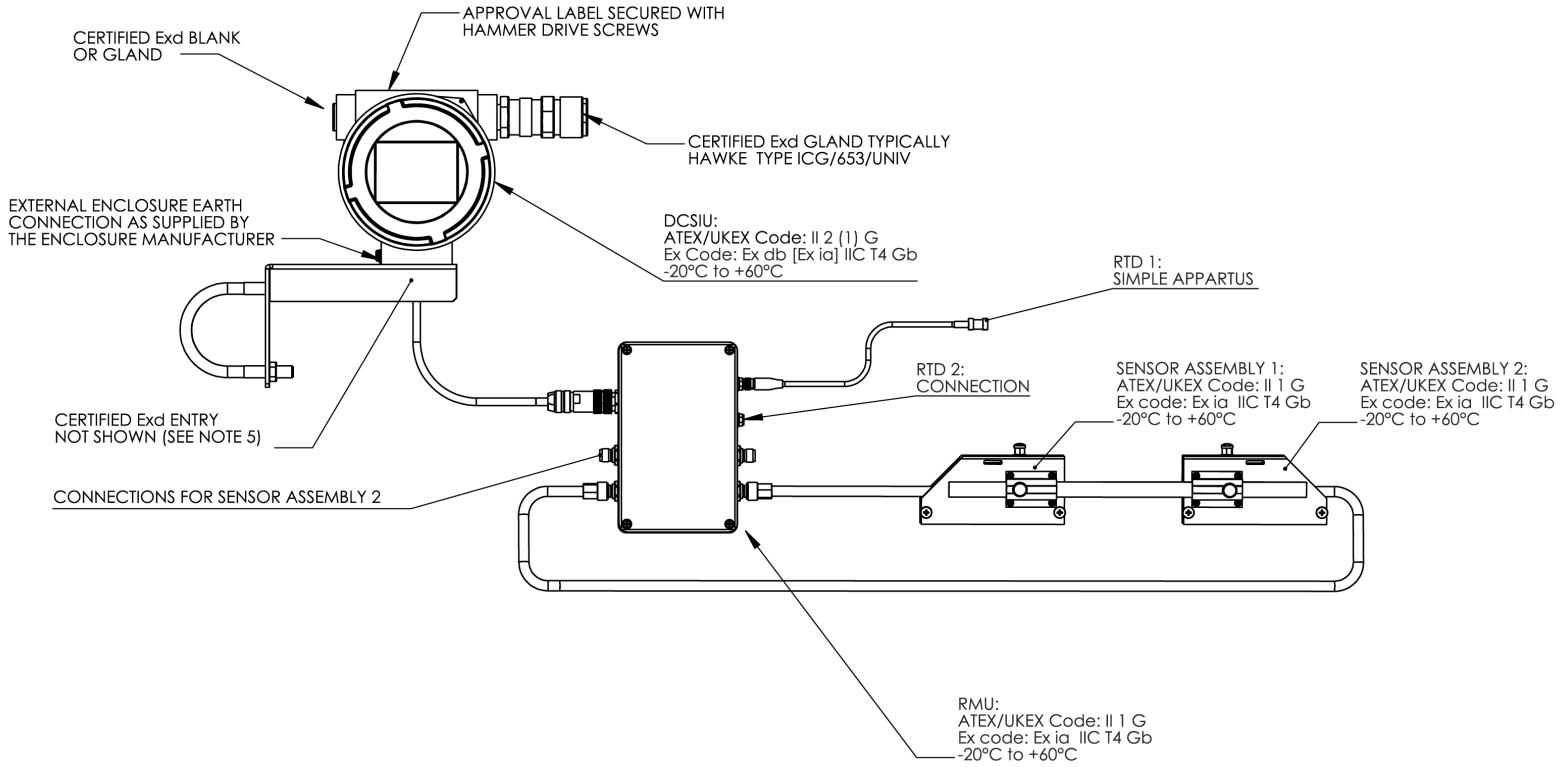
Marking	Ⓔ II 2 (1) G Ex db [Ex ja] IIC T4 Gb (-20 °C<Ta<+60 °C)
Certification ATEX	CML 22ATEX2388X
Certification ICEX	IECEX CML 22.0052X
Certification Class 1 Div 1	CML 22UKEX2389X

### General

Housing	IP67 (DCSIU display unit), IP66 (RMU remote monitoring unit)
Housing Material	Painted Cast Aluminium
Fixation	Wall and pipe mounting brackets for the DCSIU and the RMU
Operating Temperature	-20 to 60 Deg C
Display	Graphical LCD display
Weight	10kg (complete system)
Power Supply	24V 1A
Language Options	English

# UX5000 HazFlow

## TECHNICAL DIAGRAM



## DIMENSIONS

