

Universal
engineers

U-100

Ultrasonic clamp-on flow meter



MICRONICS

Through measurement comes control...

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The U-100 is a Clamp-On Ultrasonic "Time of Flight" flow meter, suitable for use on small bore pipes from 50mm to 100mm NB, carrying liquids having a Temperature range of +5° to +80°C.

The clamp-on transducers are contained within a guide rail that is attached to the electronics housing and they are supplied as an integrated factory calibrated unit ready to mount directly on to the pipe. After the complete assembly is clamped to the pipe the spring-loaded transducers are lowered so that they make contact to the pipe surface via a "DRY" greaseless interface or ultrasonic couplant as required.

The meter arrives ready to 'power up' and switch on having been factory calibrated for a particular application, all details of which will have been supplied by the customer.

Current, Pulse or RS232 outputs are available and are factory scaled. These outputs can be re-configured by the user via the RS232 port using a portable PC, should this be necessary.

The operational status of the meter and the flow status are indicated by Red and Green LED's and detailed interrogation of the meter diagnostics is accessible via the RS232 port. All configuration details are held permanently in the built in memory and remain stored during power down.

The U-100 incorporates many unique features:

- It is simple to install with installation time cut to a matter of minutes
- No longer requires a grease interface between transducer and pipe surface, for most applications.
- Is non invasive and can be easily installed and serviced without the need to cut the pipe.
- Causes absolutely no pressure drop and therefore helps to reduce pump power consumption

Competitively priced, the U-100 can compete favourably with most in-line meters that require extensive pipe work modifications, as installing and / or removing the instrument for servicing does not require pipe drainage, drilling or cutting.

Applications for the U-100 include:

- Secondary metering in heating, building management and ventilating systems using water bourne energy supplies.
- Dosing control and flow monitoring for water treatment plants.
- Non-Invasive metering for super clean liquids in the Semi-conductor, pharmaceutical, food and beverage industries.

Specification:

Power:	90-260VAC,50/60Hz or 20-28VDC, 5W
Pipe range:	50mm to 100mm Nominal Bore
Liquids:	Any acoustically compatible liquid with solids content and aeration <2% by volume.
Application temperature:	+5°C to +80°C
Electronics Operating Range:	+5°C to +50°C
Storage Temperature Range:	-5°C to +65°C
Outputs:	RS232, Pulse (1/second max.), 0/4-20mA. All galvanically isolated

Performance:

Flow Range:	50mm bore - 1.0 l/sec. to 15 l/sec. 60mm bore - 1.5 l/sec. to 25 l/sec. 75mm bore - 2.5 l/sec to 40 l/sec 100mm bore - 4.0 l/sec to 60 l/sec
Typical Accuracy:	± 1 to 3% of flow over 10% to 100% or 0.1 l/sec whichever is the greatest.
Repeatability:	±1%
Linearity:	±1% of calibrated range.

Micronics Ltd reserves the right to change this specification at any time without notice.



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