ULTRAFLO U1000MKII-FM

THE NEW ALTERNATIVE TO CUTTING PIPES AND MECHANICAL METERS FROM MICRONICS, FOR SIMPLE, LOW COST FLOW MEASUREMENT FROM OUTSIDE THE PIPE!

NEW!
Pipe range has been extended to 6" pipes.

MADE IN BRITAIN

The U1000MKII-FM is an ultrasonic permanent/fixed clamp-on flow metering solution for measuring flow rate and total flow with a volume pulse output and optional Modbus or 4-20mA flow proportional output, which can be used as a stand alone meter or as part of an integral management system.

Simple to install –connect power and enter the pipe inside diameter, adjust the sensors and clamp-on the pipe -no specialist skills or tools required!

A cost effective alternative to traditional in-line meter installation, plus dry servicing, providing minimum downtime and maximum availability!

Compact, rugged and reliable, the U1000MKII-FM has been designed to provide sustained performance in industrial environments.

For further information contact

HOSKIN SCIENTIFIC

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ULTRAFLO U1000MKII-FM

Industries:

- Building Services
- Energy Management
- Water Treatment
- Chemical
- Pharmaceutical
- Petrochemical
- Food

Recommended for:

- Hot water < 85°C (185°F)
- Chilled water
- Potable water
- Demineralized water
- Chilled Water with Glycol

Application/use:

- Hot water metering and flow measurement
- Flow measurement for heat metering
- Chilled water metering and flow measurement
- Flow measurement for chilled water energy metering
- Potable water metering and flow measurement
- Process water metering and flow measurement
- Ultrapure water measurement

U1000MKII-FM – Fixed Ultrasonic Flow Meter

SPECIFICATION

Measurement Technique: Ultrasonic transit time method for flow measurement.

Turn Down Ratio: 200:1

Accuracy: +/- 1% – 3% of flow reading for >0.3m/s (1 ft/s).

Flow Velocity Range: 0.1m/s – 10m/s (0.3 ft/s – 32 ft/s).

Pipe Range: Available in 2 options. ¾" – 4" Sch 40 and >4" - 6"
Note Pipe size is dependent on pipe material and internal diameter.

Water Temp Range: 0°C – 85°C (32°F – 185°F).

Pulse Output: Pulse or Frequency.
Pulse for Volume flow and Alarms.
Frequency for flow rate.
The pulse output can be configured as a loss of signal or low flow alarm.

4-20mA Output: Optional 4-20mA flow proportional output

Modbus Communication: Optional Modbus RTU slave, RS485 serial link hardware layer. Modbus connection cable is 1m.

External Power Supply: 12V – 24V +/- 10% AC/DC at 7 watts per unit.
Optional plug in 12V power supply.

Electronics Enclosure: IP54.

Input/Output Cable: 5m x 6 core for power in, 4-20mA and pulse out.

Dimensions: 250mm x 48mm x 90mm (10" x 2" x 4")
(electronics + guide rail).

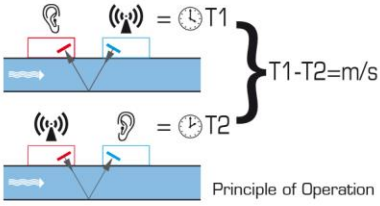
U1000MKII-FM Flow Reading Screen

U1000MKII-FM Product Features and Benefits

- Factory configured – minimal site configuration
- Adjustable guide rail & sensor assembly – simple installation
- Clamp-on – non-invasive & low install cost
- LCD with backlight – install & service information
- Integral pulse or optional modbus and 4-20mA outputs – aM&T & BEM's compatible

How does it work?

The Ultraflo is a transit time ultrasonic flow meter designed to work with clamp-on transducers, to provide accurate measurement of liquid flowing within a closed pipe, without the need for any mechanical parts to be inserted through the pipe wall or to protrude into the flow system. It takes just a few minutes to install and there is no need to shut down flow or drain the system!



Principle of Operation

When ultrasound is transmitted between the transducers, the speed at which the sound travels through the liquid is accelerated slightly by the velocity of the liquid through the pipe. When ultrasound is transmitted in the opposite direction, the flow of the liquid causes the transmitted sound to decelerate. The subsequent time difference is directly proportional to the flow velocity in the pipe. Having measured the flow velocity and knowing the pipe cross-sectional area, the volumetric flow can be easily calculated.

Simple steps for locating U1000MKII-FM on pipe

Guide rail and sensor assembly showing gel pads applied

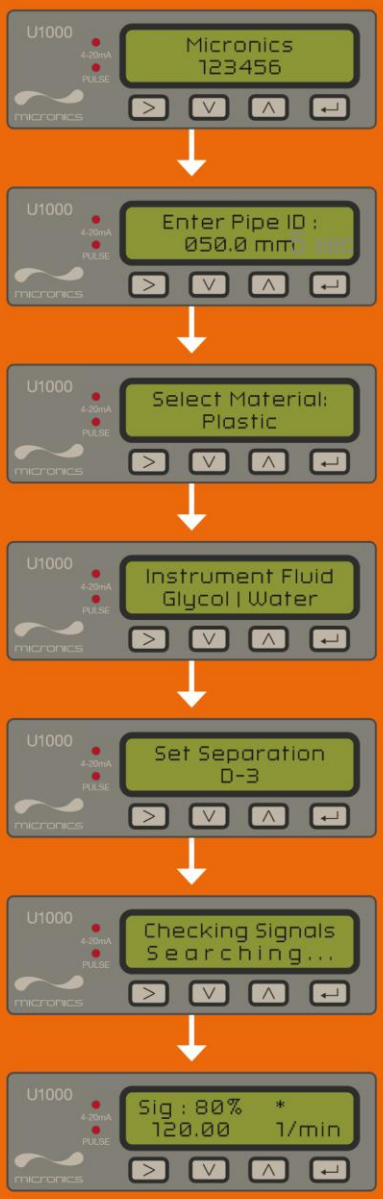
Clamp guide rail and sensor assembly to pipe and release sensor locking screws

Connect power and sensors to electronic assembly

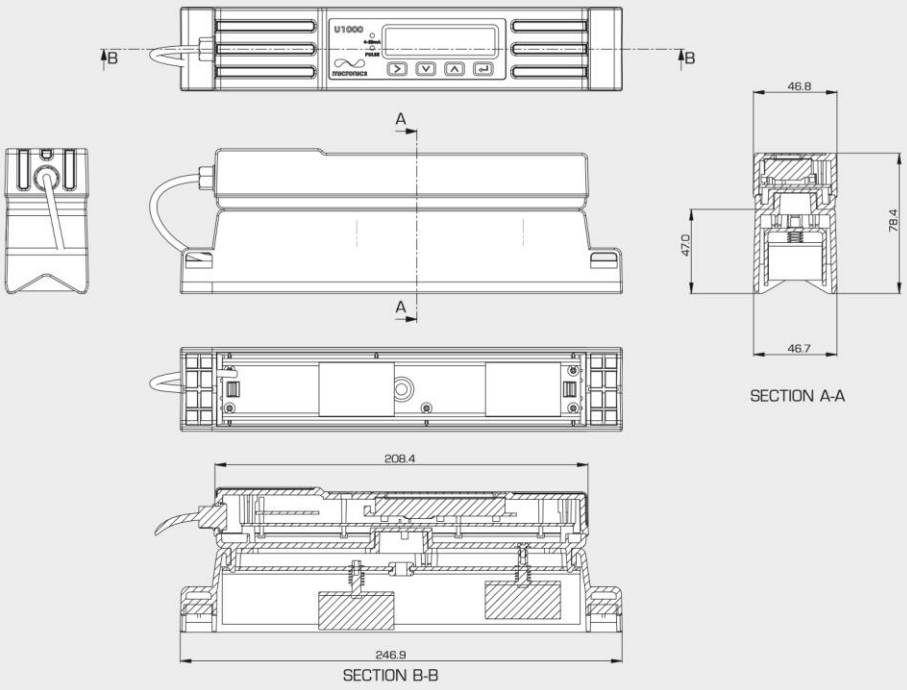
Click electronic assembly onto guide rail and sensor assembly

ULTRAFLO U1000MKII-FM

Power on configuration:



U1000MKII-FM dimensions:



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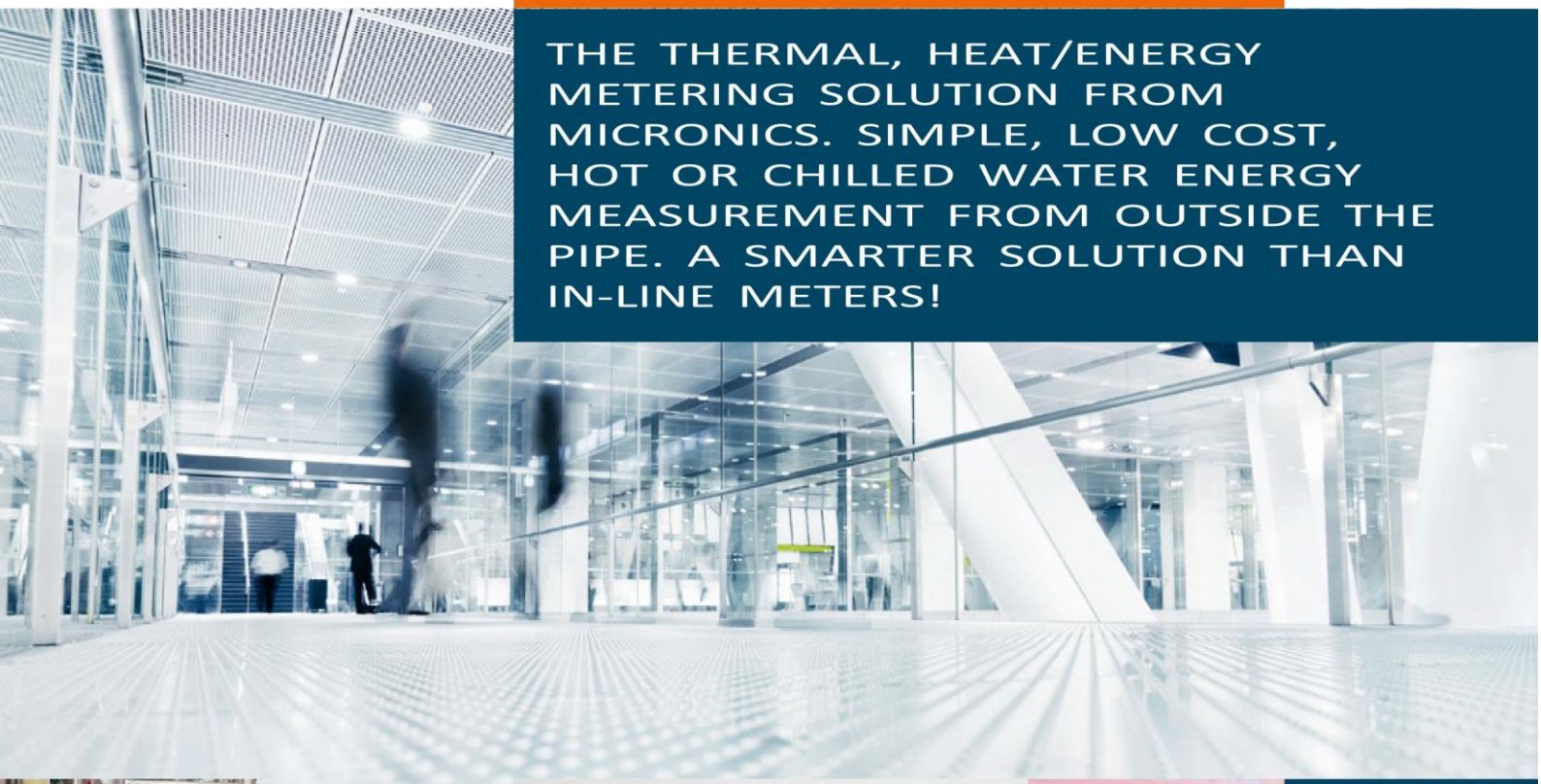
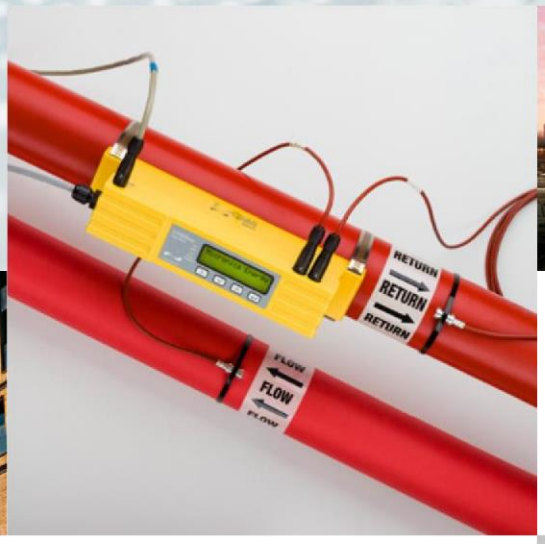
ULTRAFLO U1000MKII-HM



THE THERMAL, HEAT/ENERGY METERING SOLUTION FROM MICRONICS. SIMPLE, LOW COST, HOT OR CHILLED WATER ENERGY MEASUREMENT FROM OUTSIDE THE PIPE. A SMARTER SOLUTION THAN IN-LINE METERS!



NEW!
Pipe range has been extended to 6" pipes.

MADE IN BRITAIN

The U1000MKII-HM is an ultrasonic clamp-on thermal, heat/ energy meter that uses ultrasound to measure flow rate and PT100 temperature sensors to measure flow and return temperatures. The U1000MKII-HM displays energy rate and totalised energy with pulse output and communication options, so it can be used as a standalone meter or as an integral part of an aM&T or BEM's system.

Simple to install –connect power and enter the pipe inside diameter, adjust the sensors and clamp-on the pipe – no specialist skills or tools required!

For further information

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ULTRAFLO U1000MKII-HM

U1000MKII-HM – Fixed Ultrasonic Heat/Energy Meter with Modbus and Mbus Communication options

SPECIFICATION

Measurement Technique: Ultrasonic transit time method for flow measurement and PT100 Class B 4 wire for temperature measurement.

Turn Down Ratio: 200:1

Heat Meter Standard: The Heat/Energy calculation is designed to comply with EN1434 section 6.

Accuracy: +/- 1% – 3% of flow reading for >0.3m/s (1 ft/s).

Flow Velocity Range: 0.1m/s – 10m/s (0.3 ft/s – 32 ft/s).

Pipe Range: Available in 2 options. ¾" – 4" and >4" – 6"

Note Pipe size is dependent on pipe material and internal diameter.

Water Temp Range: 0°C – 85°C (32°F – 185°F).

Temperature sensors: Clamp-on PT100 Class B 4 wire, range 0°C – 85°C (32°F – 185°F), resolution 0.1°C (0.18°F). Minimum delta T is 0.3°C.

Output: Pulse or Frequency.

Pulse for Volume flow and Energy in kWh(BTU).

Frequency for flow rate.

The pulse output can be configured as a loss of signal or low flow alarm.

Modbus Communication: Optional Modbus RTU slave, RS485 serial link hardware layer. Energy, power, temperature and flow. Modbus connection cable is 1m.

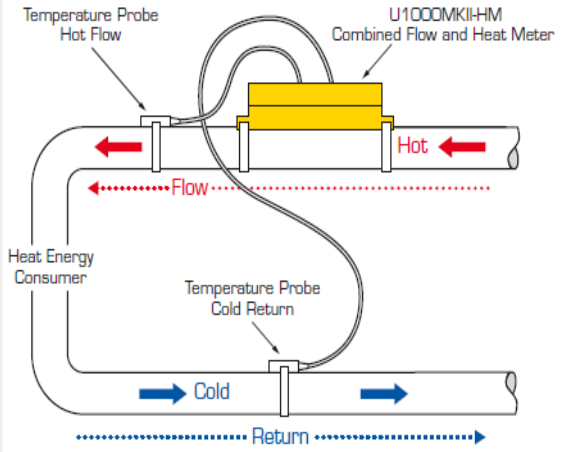
Mbus Communication: pending.

External Power Supply: 12V – 24V +/- 10% AC/DC at 7 watts per unit. Optional plug in 12V power supply.

Electronics Enclosure: IP54.

Input/Output Cable: 5m x 6 core for power in and pulse out

Dimensions: 250mm x 48mm x 90mm (10" x 2" x 4") (electronics + guide rail).



INDUSTRIES:

- Energy Management
- Building Services

RECOMMENDED FOR:

- Hot water < 85°C (185°F)
- Chilled water
- Chilled water with glycol

APPLICATION/USE:

- Heat/energy metering in energy management or building services applications for LTHW or chilled water circuits.

PIPE MATERIALS:

- Steel, Stainless Steel, Plastic and Copper

Micronics Limited accepts no responsibility or liability if this product has not been installed in accordance with the installation instructions applicable to the product.

Micronics reserve the right to alter any specification without notification.

CONTACT YOUR MICRONICS DEALER: