

graphic or numeric form on a large LCD. Accuracy is typically 1 to 2% of reading with clamp-on and better than 1% with wetted transducers. The range is 0.1 to 40 feet (30.5 mm to 12.2 meters) per second, for a turn down ratio of 400 to 1. Current and RS232 outputs are standard. Thermal or impact printers are optionally available.

Trouble-Free Performance

Measurement is non-contaminating and obstructionless, causing no pressure drop. There are no moving parts to wear out or orifices to clog. Transducers are made of stainless steel or high-temperature plastics.

Fluid Types

The TransPort is effective for acoustically conductive single-phase liquids or liquids which may have a second phase present. This includes some oil/water mixtures, some slurries, and most clear liquids. Due to an innovative acoustic signal-coding technique, the TransPort can handle liquids with higher concentrations of entrained solids or gas bubbles than was previously possible. (The maximum void fraction depends on bubble size and distribution, the transducer, interrogation carrier frequency, path length and pipe configuration. Consult the factory for further details.) Energy flows may be calculated for water and water/ethylene glycol mixtures.

OVERALL SPECIFICATIONS

Flow Accuracy % of Reading (when utilizing clamp-on transducers):

Velocity > 1 foot/second (> 0.3 m/s),
±2% typical or
±1% calibrated accuracy
Velocity ≤ 1 foot/second (≤ 0.3 m/s),
±0.03 feet/second
(±0.01 meters/second)
maximum error

Range:

0.1 to 40 feet/second
(0.03 to 12.2 meters/second)

Repeatability:

±0.2% to 0.5% (clamp-on transducers)

Energy Accuracy % of Reading:

The accuracy of the energy measurement is a combination of the accuracy of the flow and temperature measurements.

Accuracy of 1% is typical for calibrated systems.

Note: Above specifications require straight run of 10 diameters upstream and 5 diameters downstream.

TRANSDUCER SPECIFICATIONS

Ultrasonic Transducers:

Standard

All Panametrics clamp-on and wetted transducers

Note: Transducers for special applications are available. Flow cells are also available. Consult factory for details.

Mounting

Slide track mounting fixture

Temperature Transducers:

Loop powered 3-wire platinum RTD's;
Clamp-on and wetted (thermowell)
types are available

Accuracy

0.1°C, wetted RTD's (matched pairs)

Range

-20° to 260°C

ELECTRICAL SPECIFICATIONS

Internal Batteries:

Batteries

4 C-size NiCd high-energy rechargeable batteries

Battery Life

8 to 10 hours of continuous operation typical

Recharge Time

16 to 20 hours using external charger

Power Supply/Charger:

Input

100/120/200/260 VAC ±10%,
50/60 Hz, 5 W maximum

Output

12 V DC unregulated

Note: The unit may also be powered/charged by any DC source that provides voltage of 10 to 28 VDC.

Dimensions:

Size

5 x 9 x 2.3 inches (12.7 x 22.9 x 5.8 cm)

Weight

2.2 pounds (1 kg)

Environmental:

Operating Temperature

-10° to 50°C

Storage Temperature

-20° to 50°C

Note: To ensure maximum battery life storage temperature, exceeding 35°C is not recommended for long periods of time.

Operating Modes:

Flow Measurement

Transit-time clamp-on or wetted transducers

Energy

Two loop powered temperature transmitter inputs to calculate energy flow

Input/Output Specifications:

Keypad

30-key tactile feedback membrane keypad

Display

64 x 128 pixel LCD graphic display

(specifications continued on overleaf)

ELECTRICAL SPECIFICATIONS *(continued)*

Printer/Terminal

One RS232 port for printer, terminal or PC

Analog Output

One 0/4 to 20 mA current output (550 Ω maximum load)

Analog Input

Two 4 to 20 mA analog inputs with switchable 16 V supply for loop powered temperature transmitters

Acoustic

One pair of LEMO™ coaxial transducer connectors

Cable length 25 feet (8 m) standard, Up to 1000 feet (305 m) optional

Operational Specifications:

Site Parameter Programming

Menu driven operator interface using keypad and "soft" function keys

On-line help functions including pipe tables

Storage for saving parameters for up to 20 sites

Data Logging

Memory capacity to log over 40,000 flow data points

Keypad programmable for log units, update times, start and stop time

Display Functions

Graphic display shows flow in numeric or graphic format

Also displays logged data

Printer Output

Supports several thermal and impact printers

Output data in numeric or graphic ("strip chart") format

AVAILABLE OPTIONS

Thickness Measuring Mode:

Transducer

Panametrics dual element transducer

Pipe Thickness Range

0.05 to 3.0 inches (1.3 to 76.2 mm)

Pipe Materials

Most standard metal and plastic pipe materials

Accuracy

$\pm 1\%$ typical or ± 0.002 inches (± 0.05 mm)

Display Resolution

± 0.001 inches (± 0.01 mm)

PIPE SIZE & MATERIALS

Clamp-on Transducers:

Materials

All metals and most plastics (consult the factory for concrete, composite materials and highly corroded or lined pipes)

Pipe Sizes

Outside diameter (OD) 1 to 200 inches (25 mm to 5 m)

Pipe Wall Thickness

Up to 3 inches (75 mm)

Wetted Transducers:

Materials

All metals and most plastics (consult the factory for concrete, glass, and cement)

Pipe Sizes

Inside diameter (ID) 0.04 to 200 inches (1 mm to 5 m)

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