Portable Transit Time Flow Meter

with Clamp-on Ultrasonic Transducers

New!

Portable Ultrasonic Flowmeter

Model PTFM 1.0

Displays, Totalizes
Data Logs and Transmits

Backlit LCD Display
Simple 5-key Calibration
Built-in Rechargeable Battery
Built-in Data Logger
14 Digit Totalizer
4-20mA Output

Accurate Flow Measurement of Clean Liquids with Non-Contacting Transducers

Non-Contacting Flow Measurement

Recommended for fluids like water, glycol, oil and most chemicals. The PTFM 1.0 ultrasonic transducers strap-on the outside of pipes from ½" to 48" (13 to 1200 mm) diameter. The ultrasonic signal works through all common metal and plastic pipe materials. Transducers can be mounted without shutting down flow and there is no obstruction or pressure drop.

User-Friendly Operating System

Calibration is easy with the onscreen menu system. Just enter the pipe diameter, wall thickness and pipe material. The PTFM 1.0 is powered by an internal, rechargeable NiMH battery or can be operated continuously with AC power adapter. Each PTFM 1.0 includes a watertight carry case, transducer set, cables and mounting clamps.

GREYLINE instruments inc.

RELIABLE MEASUREMENT AND CONTROL

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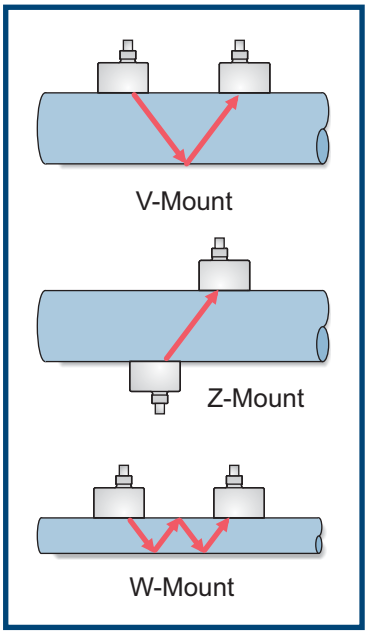
Portable Ultrasonic Flowmeter
for Troubleshooting, Calibration Checks and Balancing Flow

Measures Flow from the Outside of a Pipe

The PTFM 1.0 Portable Transit Time Flow Meter works by measuring the “transit time” or “time of flight” for ultrasonic sound pulses transmitted from one transducer to another. The transit time in the direction of flow is faster than the transit time against the flow. By comparing these differences with precision timing circuits, the PTFM 1.0 is able to accurately calculate the flow rate.

Choice of V, Z or W mounting method depends on the application and pipe diameter. V-Mount is the most common method while Z-Mount is used for larger pipes or weak signal applications and W-Mount for smaller pipes.



Works with Common Pipe Materials

Mount the ultrasonic transducers on the outside of metal or plastic pipes including carbon steel, stainless steel, ductile iron, cast iron, PVC, PVDF, fiberglass, copper, brass, aluminum and pipes with bonded liners including epoxy, rubber and Teflon. Avoid pipes made with porous materials (e.g. wood or concrete) or with loose insertion liners.

Measures Clean Liquids in Full Pipes

The PTFM 1.0 Portable Transit Time Flow Meter is designed to measure clean, non-aerated liquids like water, chemicals and oils with less than 2% solids or bubbles. The ultrasonic transducers can be mounted on vertical or horizontal pipes.

Simple Menu System for Easy Start-up and Calibration

Calibration and start-up can be done in a few minutes. Use the built-in 5-button keypad to enter the pipe material and OD, wall thickness and fluid type. The PTFM 1.0 will display the correct transducer separation distance. Secure the stainless steel pipe clamps and align the mounting brackets on the outside of the pipe. Put coupling compound (included) on the transducer faces and insert them into the mounting brackets. The PTFM 1.0 will immediately begin to display, transmit and totalize flow.

Built-in Data Logger with Windows Software Included

Set up the 300,000 point data logger to store time and date-stamped flow readings from 10 second to 5 minute intervals. View the convenient on-screen 'Flow Report' where total, minimum, maximum and average flow rates are stored in a 24 hour daily summary.

Transfer flow logs to your PC or laptop through the PTFM 1.0's USB output. Greyline Logger software (included) displays data in both graph and table formats with one-click export to Microsoft Excel®, images or CSV files for use in other programs.

PTFM 1.0 Specifications

General Specifications

Greyline PTFM 1.0 Ultrasonic Transit Time Flow Meter

Operating Parameters:	For clean liquids in full pipes with less than 2% solids or gas bubbles
Calibration:	Built-in 5-key calibrator with English, French and Spanish menu language selection
Electronics Enclosure:	Portable, ABS
Accuracy:	±1% of reading or 0.1 ft/sec (0.03 m/sec), whichever is greater Repeatability & Linearity: ±0.25%
Power Input:	Built-in NiMH battery for up to 18 hours continuous operation External charger with 100-240VAC 50/60Hz input
Display:	White, backlit matrix - displays 5-digit flow rate with floating decimal,14-digit totalizer, calibration menu and daily flow report
Outputs:	4-20mA (500 ohm) when powered by AC adapter USB for data log transfer by direct PC connection
Data Logger:	Programmable 300,000 data point capacity, time and date stamped or formatted flow reports including total, average, minimum, maximum and times of occurrence
PC Software:	'Greyline Logger' for Windows 98 or higher. Retrieves, displays and saves data log files
Operating Temp. (electronics):	-5° to 140°F (-20° to 60°C)
Carry Case:	Rated IP67 with protective molded foam inserts
Approvals:	AC Charger is CE and UL approved
Approximate Shipping Weight:	12 lbs. (5.5 kg)

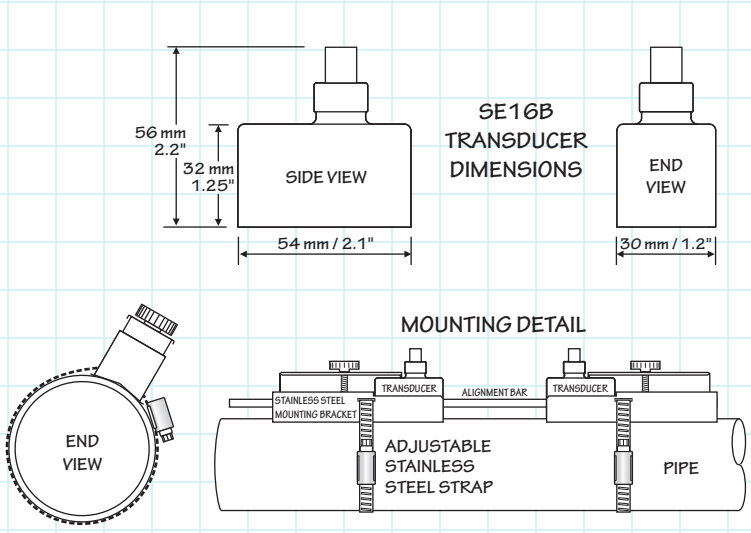
Transducer Specifications

Pipe Diameter:	½" to 48" (12 mm to 1200 mm)
Pipe Materials:	Any metal or plastic sonic conducting material including carbon steel, stainless steel, ductile iron, cast iron, PVC, PVDF, fiberglass, copper, brass, aluminum and pipes with bonded liners including epoxy, rubber and Teflon
Flow Velocity:	±0.07 to 39 ft/sec (±0.02 to 12 m/sec) typical
Operating Frequency:	1.28 MHz
Operating Temperature:	-40° to 300°F (-40° to 150°C)
Transducer Mounting Kit:	Includes set of stainless steel pipe clamps, alignment bar and coupling compound
Sensor Cable:	RG-58 coaxial, 12 ft (3.4 m) with BNC connectors and seal jackets

Options

Sensor Cable Extension:	50 ft (15 m) coaxial pair with BNC connectors and seal jackets

Dimensions



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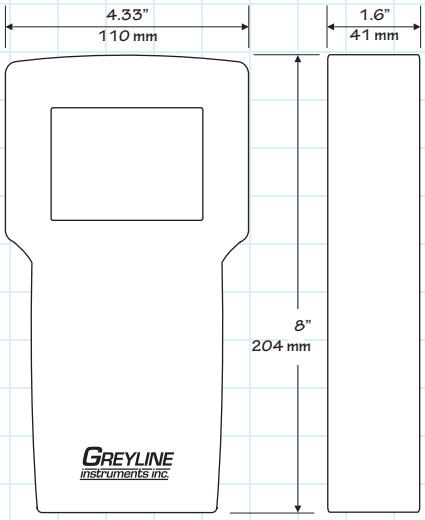

ENCLOSURE

Non-Contacting Portable Flowmeter for Clean Liquids in Metal and Plastic Pipes

Recommended For:

- potable water
- river water
- cooling water
- demineralized water
- water/glycol solutions
- hydraulic oil
- diesel and fuel oils
- chemicals

The PTFM 1.0 Portable Transit Time Flowmeter is ideal to measure flow rate of clean, non-aerated fluids in full pipes. Works best on fluids that have less than 2% particulate or gas bubbles.

Easy to Install

The PTFM 1.0 Portable Transit Time Flow Meter is designed to measure clean liquids in full pipes. It works by injecting sound through the pipe wall and into the flowing liquid.

The battery-powered flow meter, transducers, mounting clamps and accessories are supplied with a rugged watertight carrying case. Use it for troubleshooting, flow studies and for testing calibration of inline flow meters.

The PTFM 1.0 works on metal and plastic pipes and measures forward or reverse flow. A built-in data logger and Windows software is included.

Easy to Calibrate

Use the 5-button keypad and menu system to set up the flowmeter by entering the pipe material, diameter and wall thickness. The PTFM 1.0 calculates the transducer separation distance and mounting method automatically.

How to Order

Contact a Greyline sales representative in your area or phone one of our sales engineers. Describe your requirements and receive our prompt quotation.

Applications Support

Take advantage of Greyline's applications experience. Phone 1-888-473-9546 for advice and information on applications, installation or service for Greyline instruments.

No Risk Appraisal

The Greyline PTFM 1.0 Portable Flow Meter must meet your requirements. Discuss your application with a Greyline representative to arrange a performance test.

The Greyline Guarantee

Quality of Materials and Workmanship - Each instrument manufactured by Greyline is warranted against defects in materials and workmanship for a period of one year from date of purchase. Refer to our limited warranty included with each product.

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