



Greyline

# PTFM 6.1

Portable Transit Time Flow Meter

Designed for challenging flow applications in industrial environments. Easily deployed whenever you need it.

## Intuitive & Powerful

It only takes a few minutes to configure the PTFM 6.1 with your application parameters, install the transducers without interrupting your process, and begin measuring flow.

With multiple transducer sets optimized for a wide range of pipe sizes and materials, new and more powerful signal processing hardware, standard factory calibration, and intuitive on-screen diagnostics, the PTFM 6.1 provides maximum confidence in the accuracy and reliability of your measurements.

## Up to the Challenge

No two applications are the same, so you need a product that can handle them all. With the rugged IP67 design, powerful signal processing, easily interchangeable transducers, and intuitive user interface with a built-in data logger, the PTFM 6.1 is ready for the variety of challenging installation environments and applications you encounter.



## THE RIGHT METER FOR

- Treated Water
- Raw Water
- Cooling Water
- Chemicals
- Hydraulic Oil
- Demineralized Water
- Water/Glycol Solutions
- Diesel & Fuel Oils

## Ready for the Future

Designed to reduce waste and be ready for the uncertain requirements of the future, the integrated USB-C port allows the PTFM 6.1 to seamlessly expand its input and output capability without having to replace the whole meter. Whatever your future flow measurement needs are, we'll be ready to support you with the easiest upgrade path.

## Ready For Your Industrial Flow Measurement Needs, Today, & Tomorrow

Whether you need flow measurement when you didn't have it before, or you need to prove that your existing system is performing properly, the PTFM 6.1 is here to help by providing accurate, non-invasive flow measurement in the most challenging industrial environments and applications, with minimal installation complexity and cost.

With new and more powerful signal processing hardware, rugged IP67 design, and three interchangeable, non-invasive transducer sizes optimized for a wide range of pipe sizes and materials, the PTFM 6.1 is the right choice for your on-the-go or long-term flow measurement applications.



### Works From the Outside of 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.



### Easy Start-up & Validation

Configuration and start-up can be done in a few minutes. Use the built-in 5-button keypad to enter the transducer type, pipe material and OD, wall thickness, and fluid type. The PTFM 6.1 will display the correct transducer separation distance. Secure the stainless steel pipe clamps and align the mounting brackets on the outside of the pipe. Prepare the transducers with the included coupling compound, and insert them into the brackets. The PTFM 6.1 will immediately begin to display, transmit, and totalize flow. The on-screen diagnostics and signal waveforms provide instant validation that your meter is performing accurately.

### Built-in Data Logger with Windows Software Included

Set up the 12 million point data logger to store time and date-stamped flow readings from 10-second to 60-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 for the last 365 days.

Download the flow logs and 24-hour report data by inserting your USB drive into the meter. The included Greyline Logger software displays data in both graph and table formats with one-click export to Microsoft Excel, images, or CSV files for use in other programs.

# Technical Specifications

## GENERAL SPECIFICATIONS

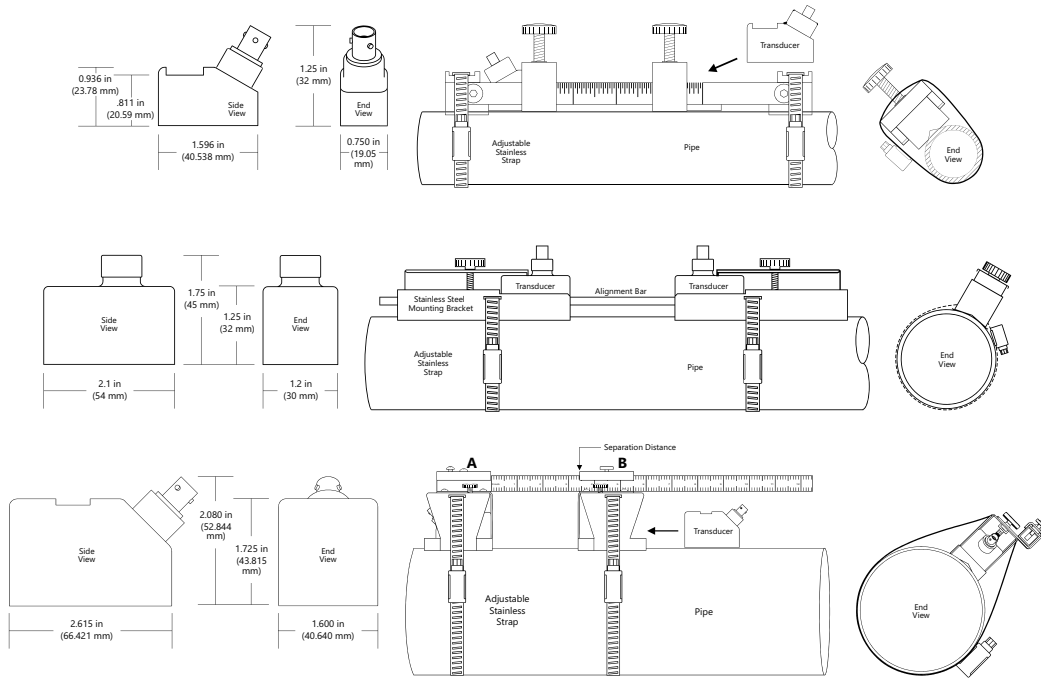
<b>Operating Parameters:</b>	For clean fluids in full pipes, with typically less than 2% by-volume concentration of solids or bubbles. Also suitable for wastewater or sludge flows with low solids concentration.
<b>Configuration:</b>	Built-in 5-button keypad interface with English, French, and Spanish menu language selection
<b>Electronics Enclosure:</b>	IP67 when transducer cables connected. IP65 when transducers cables not connected. Aluminum enclosure with silicone protective end covers.
<b>Flow Velocity Range:</b>	±0.03 m/s to 12.2 m/s (±0.1 to 40 ft/s)
<b>Accuracy:</b>	<ul style="list-style-type: none"><li>±1% of reading or ±0.0046 m/s (±1.5 ft/s), whichever is greater</li><li>Repeatability &amp; Linearity: ±0.25%</li></ul>
<b>Power Input:</b>	<ul style="list-style-type: none"><li>Built-in rechargeable lithium polymer battery for up to 15 hours continuous operation</li><li>External mains to USB-C charger with 100-240V AC, 50-60Hz, 0.6A input; and 5.0V DC, 3A, 15W output</li></ul>
<b>Display:</b>	Color TFT LCD display, IPS type, 2.8" screen size, 320 x 240 resolution, 500 NITS brightness, super wide view
<b>Outputs:</b>	Log files, daily log files, parameter settings files, and waveform capture files via USB-C flash drive (included)
<b>Data Logger:</b>	12 million point capacity, configurable for velocity or flow rate, date and time stamped, configurable format for Greyline Logger Software (LG2) or CSV, available intervals of 10 s, 30 s, 1 min, 2 min, 5 min, 10 min, 15 min, 30 min, and 1 hr
<b>PC Software:</b>	Free Greyline Logger Software for Windows. For display, manipulation, analysis, and exporting of data.
<b>Operating Temp. (Electronics):</b>	-20 °C to +60 °C (-5 °F to +140 °F)
<b>Carry Case:</b>	IP67, with protective molded foam, with room for all transducer sizes and installation hardware
<b>Language Selection:</b>	English, French, Spanish
<b>Approvals:</b>	CE
<b>Approximate Shipping Weight:</b>	5.5 kg (12 lb)

## TRANSDUCER SPECIFICATIONS

<b>Pipe Diameter, Nominal:</b>	SE16A: Recommended for 15 mm to 50 mm (0.5 in to 2 in); Suitable for 50 mm to 150 mm (2 in to 6 in) SE16B: Recommended for 50 mm to 250 mm (2 in to 10 in); Suitable for 250 mm to 1,200 mm (10 in to 48 in) SE16C: Recommended for 300 mm to 1,200 mm (12 in to 48 in); Suitable for 100 mm to 300 mm (4 in to 12 in)
<b>Pipe Materials:</b>	Any metal or plastic sonic conducting material including carbon steel, stainless steel, ductile iron, concrete-lined ductile iron, cast iron, PVC, HDPE, PVDF, fiberglass, copper, brass, aluminum, and pipes with bonded liners including epoxy, rubber, and Teflon
<b>Flow Velocity:</b>	±0.03 m/s to 12.2 m/s (±0.1 ft/s to 40 ft/s) typical
<b>Operating Frequency:</b>	SE16A: 2.56 MHz SE16B: 1.28 MHz SE16C: 640 kHz
<b>Operating Temperature:</b>	-40 °C to +150 °C (-40 °F to +300 °F)
<b>Transducer Mounting Kit:</b>	SE16A: Includes stainless steel track with pipe clamps, built-in ruler, and coupling tape. SE16B: Includes set of stainless steel transducer brackets, clamps, alignment bar, and coupling tape. SE16C: Includes set of stainless steel transducer brackets, clamps, alignment bar with built-in ruler, and coupling tape.
<b>Transducer Cable:</b>	1 pair, triaxial, 3.4 m (12 ft) with waterproof plug & socket connector for electronics, and BNC connector with seal jacket for transducers
<b>Ingress Protection:</b>	IP65 with seal jackets installed. IP67 when installed with Super Lube synthetic grease inside BNC connectors and seal jackets.

## ORDERING INFORMATION

Part No.	Sensor Configuration	Part No.	Sensor Configuration
PTFM 6.1-A	SE16A	PTFM 6.1-D	SE16A, SE16B
PTFM 6.1-B	SE16B	PTFM 6.1-E	SE16B, SE16C
PTFM 6.1-C	SE16C	PTFM 6.1-F	SE16A, SE16C
		PTFM 6.1-G	SE16A, SE16B, SE16C



SE16A, SE16B, & SE16C Transducers & Mounting

## Delivering the Measure of Possibility

Pulsar Measurement offers worldwide professional support for all of our products, and our network of global partners all offer full support and training. Our facilities in Malvern, UK and Largo, USA are home to technical support teams who are always available to answer your call or attend your site when required. Our global presence, with direct offices in the UK, USA, Canada, and Malaysia, allows us to create close relationships with our customers and provide service, support, training, and information throughout the lifetime of your product.

For more information, please visit our website:

[www.pulsarmeasurement.com](http://www.pulsarmeasurement.com)



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