



Non-Invasive Flow and Energy Measurement



**TFX Ultra Clamp-On Ultrasonic
Flow and Energy Meter**

Non-Contact Measurement

Built for non-intrusive flow and energy measurement, the Dynasonics® TFX Ultra by Badger Meter provides accurate and repeatable flow measurement for full pipe applications ½ inch or larger. The TFX Ultra is ideal for applications such as cooling lines, raw sewage flows, water distribution, and processes where system shutdown is impossible. Without shutting down a process or breaking into piping, the TFX Ultra clamps onto the outside of the pipe and does not contact the liquid being measured; therefore, it can be installed and fully operational in minutes. The clamp-on design offers low cost installation and eliminates worries of fluid compatibility and pressure head loss. With no moving parts, there is no mechanical wear, so repair kits or replacement parts are not needed.

With accuracy at ± 1 percent and repeatability at ± 0.5 percent of reading and a large bi-directional measuring range, the TFX Ultra ensures reliable readings at low and high flow rates. The meter features a rugged, compact aluminum enclosure, easy-to-read digital display, optional keypad, and a totalizer featuring forward, reverse and net total. Data is relayed through a USB port and connectivity options include Modbus RTU, BACnet MSTP, BACnet/IP, EtherNet/IP, and Modbus TCP/IP. Users can easily configure, calibrate and troubleshoot meters on a PC with *UltraLink*, the compatible Windows®-based software utility. Windows-based *EnergyLink* software is available for monitoring networked meters.

Energy Monitoring

Available as an energy flow meter, the TFX Ultra measures energy usage in Btu, mBtu, mmBtu, Tons, KJ, kW, and mW. The TFX Ultra is ideal for energy monitoring, building automation, retrofit, chilled water, and other HVAC applications. Installation is easy – just clamp onto the pipe and connect two 3-wire Pt1000 RTDs to measure supply and return temperature.

Applications

- Water
- Wastewater
- HVAC/Energy Monitoring
- Power Generation
- Mining
- Semiconductor
- Food and Beverage
- Flow System Commissioning and Troubleshooting



*Integral mount
flow meter*



*Remote mount
energy flow meter*

Configurations

The TFX Ultra is available as a flow meter or an energy meter that includes dual clamp-on RTDs for temperature measurement. To meet application needs, remote transducers are available for all pipe sizes and integral transducers are available for pipe sizes two inches (50 mm) and smaller. Remote transducers also support a distance up to 990 feet (300 m) for pipes that are difficult to reach or are located in a vibration-prone environment. Select either PVC or CPVC transducers depending on temperature range.

Features at a Glance

Measurement

- Measures liquids with small amounts of suspended solids or aeration
- Delivers an accuracy up to ± 1 percent and a repeatability of ± 0.5 percent of reading
- Offers bi-directional flow measurement with totalizer options including forward, reverse and net total

Operation

- Clamps onto the outside of the pipe for easy, cost-effective, no-contact installation
- Provides compact enclosure with a large, easy-to-read digital display
- Ensures a long service life in harsh environments with rugged, aluminum enclosure

Connectivity

- Modbus RTU
- BACnet MSTP
- BACnet/IP
- EtherNet/IP
- Modbus TCP/IP

Trademarks appearing in this document are the property of their respective entities. Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists. © 2013 Badger Meter, Inc. All rights reserved.

www.badgermeter.com

The Americas | Badger Meter | 4545 West Brown Deer Rd | PO Box 245036 | Milwaukee, WI 53224-9536 | 800-876-3837 | 414-355-0400
México | Badger Meter de las Americas, S.A. de C.V. | Pedro Luis Ogazón N°32 | Esq. Angelina N°24 | Colonia Guadalupe Inn | CP 01050 | México, DF | México | +52-55-5662-0882
Europe, Middle East and Africa | Badger Meter Europa GmbH | Nürtinger Str 76 | 72639 Neuffen | Germany | +49-7025-9208-0
Czech Republic | Badger Meter Czech Republic s.r.o. | Maříkova 2082/26 | 621 00 Brno, Czech Republic | +420-5-41420411
Slovakia | Badger Meter Slovakia s.r.o. | Racianska 109/B | 831 02 Bratislava, Slovakia | +421-2-44 63 83 01
Asia Pacific | Badger Meter | 80 Marine Parade Rd | 21-04 Parkway Parade | Singapore 449269 | +65-63464836
China | Badger Meter | 7-1202 | 99 Hangzhong Road | Minhang District | Shanghai | China 201101 | +86-21-5763 5412
TTM-BR-00088-EN-01 (April 2013)