

Tee Meter, BTU System

Measures Temperature And Flow Rate And Calculates Energy

METER &
TEMPERATURE
SENSORS ALL
IN ONE
PIECE!



380 Series

DESCRIPTION

Series 380 BTU System provides a low-cost system for metering cold or hot systems. The 380 measures flow and temperature differential to accurately calculate energy. With BACnet, Modbus RS-485, or scaled pulse output, it can interface with many existing control systems.

The rugged design incorporates an impeller flow sensor and two temperature probes, one mounted in the flow sensor tee and the other on either the supply or return line, depending on the application.

Commissioning can be done in the field via a computer connection or set up at the factory. Setup includes energy measurement units, measurement method, communication protocol, pulse output control, fluid density, and specific heat parameters (requires re-usable programming cable and software, see Ordering Information).

APPLICATIONS

- Energy management and data systems

FEATURES

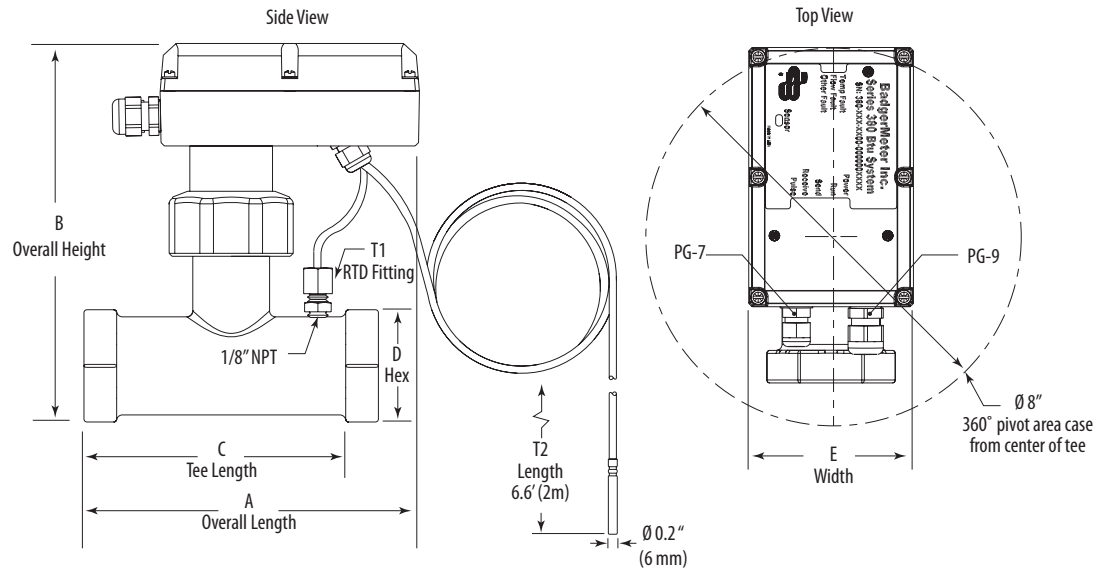
- Rugged, compact design with two temperature probes
- 316 SS impeller with tungsten carbide shaft
- PEEK housing
- Cast bronze tee
- Minimal connections...simplify installation, saving time and cost
- Integration of flow and temperature sensors with metering components...single solution for metering
- BACnet and Modbus protocols are standard features...compatibility with existing control systems
- Multiple size options...installation flexibility

SPECIFICATIONS

1 Year
Warranty

| | |
|----------------------------------|---|
| Input Power | 12-35VDC/12-28VAC, 200mA |
| Communication | Modbus RTU, BACnet MSTP |
| Output | Scaled pulse, open drain |
| Flow Calculation Accuracy | ±2% of flow rate within range; ±5% repeatability |
| Temperature Sensors | Meets IEC751 Class B |
| Flow Range | 1 to 15 FPS |
| Materials: | |
| Housing | Polycarbonate |
| Flow Sensor | PEEK |
| Potting Material | Polyurethane |
| Tee Material | Bronze |
| Environmental: | |
| Fluid Temperature | Chilled: -20° to 60°C (-4° to 140°F); Hot: 4° to 125°C (39° to 257°F) |
| Ambient Temperature | -20° to 65°C (-4° to 149°F) |

DIMENSIONAL DRAWINGS



| TEE/NPT Size | A | B | C | D | E |
|---------------|---------------|---------------|---------------|---------------|--------------|
| 2" (51 mm) | 7.9" (201 mm) | 8.5" (216 mm) | 7.8" (197 mm) | 3.3" (84 mm) | 3.5" (89 mm) |
| 1.5" (38 mm) | 7.3" (185 mm) | 8.3" (209 mm) | 6.7" (170 mm) | 2.75" (70 mm) | 3.5" (89 mm) |
| 1.25" (32 mm) | 7.1" (180 mm) | 8.1" (204 mm) | 6.2" (158 mm) | 2.4" (60 mm) | 3.5" (89 mm) |
| 1" (25.4 mm) | 6.7" (170 mm) | 7.9" (201 mm) | 5.4" (137 mm) | 2" (51 mm) | 3.5" (89 mm) |
| 0.75" (19 mm) | 6.7" (170 mm) | 7.9" (201 mm) | 5.4" (137 mm) | 2" (51 mm) | 3.5" (89 mm) |

ORDERING INFORMATION

| MODEL | MANUF. PART # | DESCRIPTION | MAX. GAL/MIN (GPM) |
|-----------|-------------------|---|--------------------|
| U001-0098 | 380007000-1200*** | BTU system, cold service, 3/4" tee NPT, with pulse, Modbus and BACNet outputs | 25 |
| U001-0099 | 380010000-1200*** | BTU system, cold service, 1" tee NPT, with pulse, Modbus and BACNet outputs | 40 |
| U001-0100 | 380012000-1200*** | BTU system, cold service, 1 1/4" tee NPT, with pulse, Modbus and BACNet outputs | 70 |
| U001-0101 | 380015000-1200*** | BTU system, cold service, 1 1/2" tee NPT, with pulse, Modbus and BACNet outputs | 95 |
| U001-0102 | 380020000-1200*** | BTU system, cold service, 2" tee NPT, with pulse, Modbus and BACNet outputs | 150 |
| U001-0103 | 380107000-2202** | BTU system, hot service, 3/4" tee NPT, with pulse, Modbus and BACNet outputs | 25 |
| U001-0104 | 380110000-2202** | BTU system, hot service, 1" tee NPT, with pulse, Modbus and BACNet outputs | 40 |
| U001-0105 | 380112000-2202** | BTU system, hot service, 1 1/4" tee NPT, with pulse, Modbus and BACNet outputs | 70 |
| U001-0106 | 380115000-2202** | BTU system, hot service, 1 1/2" tee NPT, with pulse, Modbus and BACNet outputs | 95 |
| U001-0107 | 380120000-2202** | BTU system, hot service, 2" tee NPT, with pulse, Modbus and BACNet outputs | 150 |
| U001-0114 | A304-1M*** | Programming Cable with CD for 380 Series | n/a |

* Consult factory for availability information.

** Requires programming accessory.

*** Required to program 380 Series BTU meters (reusable). Standard USB type A to mini-B cable included. Software available from manufacturer's website, www.badgermeter.com