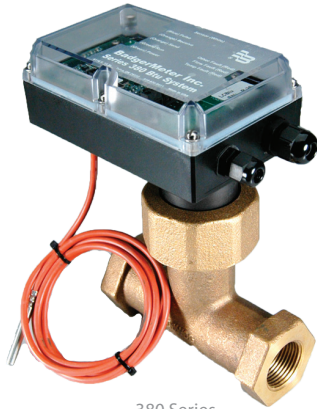


## 380 SERIES

Measures Temperature and Flow Rate and Calculates Energy



380 Series

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).

### SPECIFICATIONS

Input Power	12 to 35 Vdc/12 to 28 Vac, 200 mA
Communication	Modbus RTU, BACnet MSTP
Output	Scaled pulse, open drain
Flow Calculation Accuracy	±2% of flow rate within range; 0.5% 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	Cold Service: -20 to 60 °C (-4 to 140 °F); Hot Service: 4 to 125 °C (39 to 257 °F)
Ambient Temperature	-20 to 65 °C (-4 to 149 °F)

#### WARRANTY

Limited Warranty	1 year
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## BACnet & Modbus

BACnet and Modbus protocols are standard features...easy integration with existing control systems

## Easy installation

Minimal connections...simplify installation, saving time and cost

## Stainless steel impeller

316 stainless steel impeller with tungsten carbide shaft

### APPLICATIONS

- Energy management
- Data systems

## Integrated flow & temperature

Integration of flow and temperature sensors with metering components...single solution for BTU metering

## Two temperature probes

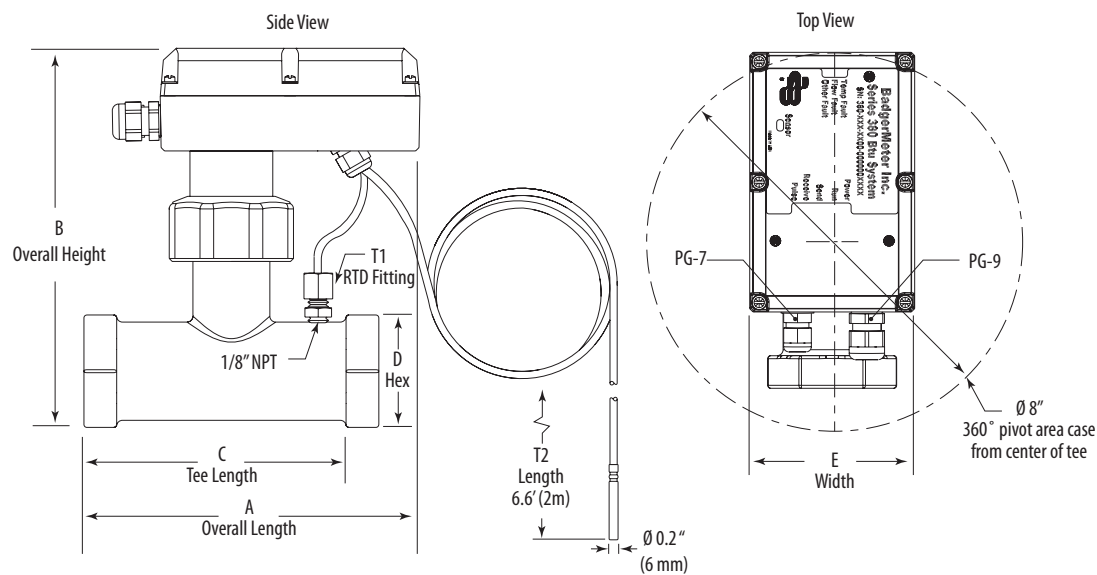
Rugged, compact design with two temperature probes

## Sensor

PEEK sensor tip



**DIMENSIONAL DRAWING**



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](http://www.badgermeter.com)

