The Badger Meter 3050 Series flow and energy monitor is economical, full-featured, compact unit designed for flow and BTU measurement applications. Outputs include one mechanical relay and one solid state pulse output, featuring unit/pulse and set-point control independently based on flow or total readings.

### Optional Features
An analog 4-20 mA or 0-20 mA output is optional and USB, RS-485 Modbus, and BACnet/MSTP provide high-level communication. A two-line by 16-character, 3/8" high backlit LCD display is configured by the user to display flow rate and flow total. Custom units can be created during field setup. The flow sensor input features flexible scaling options and signal type selections that permit the use of most Data Industrial meter sensors, or other frequency (sine/pulse) or linear devices. Matched 10 kΩ thermistors (ordered separately) provide temperature differential for BTU calculations.

One mechanical relay and one solid state relay output
Optional 0/4-20 mA output
USB, RS-485, Modbus, and BACnet/MSTP all in one unit

### Features
- Menu-driven programming or Windows based programming
- NEMA 4X rated enclosure
- Two-line x 16-character display

### Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>3050-1-0 Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supply Voltage</strong></td>
<td>8 to 28 VAC, 5 VA; 8-35 VDC, 280 mA</td>
</tr>
<tr>
<td><strong>Input</strong></td>
<td>Data Industrial flow sensor or other frequency (sine/pulse) device</td>
</tr>
<tr>
<td><strong>Sensor Input</strong></td>
<td>Two 2-wire 10 kΩ type II thermistors or 100Ω 3-wire platinum RTDs or field-defined custom temperature inputs</td>
</tr>
<tr>
<td><strong>Maximum Output Impedance</strong></td>
<td>1 kΩ @ 24 VDC</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>Solid state pulse output rated at 1A @ 30 VAC or 35 VDC; closed 0.5Ω @ 1A; open &gt;10 MΩ</td>
</tr>
<tr>
<td><strong>Relay Output</strong></td>
<td>Relay and pulse output are fully functional as either totalizing or setpoint outputs</td>
</tr>
<tr>
<td><strong>Relay Output Rating</strong></td>
<td>5A @ 120 VAC or 30 VDC resistive; 1A @ 120 VAC or 30 VDC inductive</td>
</tr>
<tr>
<td><strong>Analog Output</strong></td>
<td>4-20 mA, 0-20 mA (isolated, sinking or sourcing); loop powered (sinking) 30 VDC @ 0 mA maximum, 3 VDC @ 20 mA minimum; self powered (sourcing) 600Ω maximum load</td>
</tr>
<tr>
<td><strong>Pulse Rate</strong></td>
<td>1 pulse per 1.0000000 to 99999999 units; any predefined or custom unit can be used for flow or BTU totaling; contact time 1 to 9999 milliseconds</td>
</tr>
<tr>
<td><strong>Setpoints</strong></td>
<td>Setpoint alarm for flow rate, BTU rate, Temp1, Temp2, DeltaT using</td>
</tr>
</tbody>
</table>

### Zero Adjustments
- Compensation for variances between input sensors by adjusting T2 to match T1

### Communication Interface
- USB 2.0A to mini-B 5-pin cable required, provides access to all programming and operation features

### Communication Protocol
- RS485 supports Modbus and BACnet/MSTP

### Display
- Backlit LCD, 16 characters/line, 0.31"H (0.79 cm), two lines

### Engineering Units
- Flow and Total in gal, liters, ft³, acre-ft, or bbl; Energy rate kBTU/ hr, BTU/min, KW, Tons, J/sec or field-programmed custom; energy total units can be MBTU, kBTU, kWh, MWh, kJ, or field-programmed custom

### Operating Temperature
- -4° to 158°F (-20° to 70°C)

### Enclosure Rating
- NEMA 4X

### Weight
- Panel mount: 0.8 lb (0.34 kg)
- Wall mount: 1.2 lb (0.54 kg)

### Approvals
- CE

### Warranty
- 1 year
**WIRING**

**Badger 30XX BTU Monitor**

**DIMENSIONS**

**ORDERING INFORMATION**

**MODEL**

**DESCRIPTION**

**3050**

BTU monitor with display

**ANALOG OUTPUTS**

<table>
<thead>
<tr>
<th>0</th>
<th>No analog output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Analog output, RS485 (BACnet/Modbus), and USB</td>
</tr>
</tbody>
</table>

**MOUNTING**

<table>
<thead>
<tr>
<th>0</th>
<th>Panel mount</th>
</tr>
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<td>1</td>
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</table>

**RELATED PRODUCTS**

**200 Series**

**ST-U24B-XP**

Data Industrial impeller type flow sensors with pulse output

Temperature sensors, matched ±0.1°F, brass wells

Temperature sensors, matched ±0.1°F, stainless steel wells