



## Meter / Submeter

MM1204EX

### Real-Time Data Collection

The MM1204EX collects data on power usage by monitoring 12 circuits (or 24 with optional expansion card) to report power usage in real time. Using the data it collects, you can manage energy costs, respond to issues, and reduce your energy consumption.

### Intelligent Precision

The MM1204EX identifies and adapts to your voltage service type. By accommodating main load, multiple three-phase loads, single-phase loads, or any combination, its calculations are precise in any scenario. Onboard intelligence measures the energy in any phase and then combines the phases before reporting the results to a master device. When communicating with the master device, the MM1204EX uses its RS485 or wireless bandwidth efficiently, sending monitored data immediately while storing larger trend data locally to send in a batch.

### Flexible Communication

The MM1204EX supports half-duplex RS485 or wireless connectivity. It uses the Modbus RTU protocol for efficient data transmission. A USB 2.0 maintenance port provides easy access for diagnostic and maintenance tasks such as local firmware updates.

### Feature Highlights

- Wye / Delta service monitoring
- 12 metered circuits, expandable to 24 circuits
- Compatible with multiple sizes of current transformers (CTs) with 333 mVrms or 500 mVrms
- Modbus RTU over RS485 or wireless
- Digital Signal Processor (DSP)
- Real-time clock (battery backed)
- Local storage for one month of data
- Compact metal chassis





Hardware



Software



Services

## MM1204EX Meter/Submeter - Features and Specifications

<b>General</b>	<ul style="list-style-type: none"> <li>• Microcontroller with DSP engine</li> <li>• Serial flash RAM for data logging</li> <li>• Real-time clock (battery backed)</li> </ul>
<b>Local interface</b>	<ul style="list-style-type: none"> <li>• Reset switch (inside chassis)</li> <li>• Address switch</li> <li>• 6 LEDs (inside chassis):             <ul style="list-style-type: none"> <li>- Main board power</li> <li>- Isolated power</li> <li>- Communications</li> <li>- Heartbeat</li> <li>- 2 USB (TX/RX)</li> </ul> </li> </ul>
<b>Communications</b>	<ul style="list-style-type: none"> <li>• 1 Wireless interface</li> <li>• 1 USB 2.0 device port</li> <li>• 1 RS485 port             <ul style="list-style-type: none"> <li>- Modbus RTU protocol</li> <li>- 19.2 KBps baud rate</li> <li>- Half-duplex</li> <li>- Current-limited</li> <li>- Transient protection for asymmetrical data lines to:                 <ul style="list-style-type: none"> <li>- IEC 61000-4-2 (ESD)</li> <li>- IEC 61000-4-4 (EFT)</li> <li>- IEC 61000-4-5 (lightning)</li> </ul> </li> </ul> </li> </ul>
<b>Measurement configurations</b>	<ul style="list-style-type: none"> <li>• Voltage             <ul style="list-style-type: none"> <li>- Single phase: 2 or 3 wire</li> <li>- Three phase: 4 wire, Wye</li> <li>- Three phase: 3 wire, Delta</li> <li>- Three phase: 4 wire, Delta</li> <li>- 120 to 480 Vrms, <math>\pm 20\%</math></li> <li>- 50/80 Hz</li> </ul> </li> <li>• Current             <ul style="list-style-type: none"> <li>- CT input: 333 mVrms or 500 mVrms</li> <li>- CT ratio: software-configurable</li> </ul> </li> </ul>
<b>Power supply</b>	<ul style="list-style-type: none"> <li>• Line-powered</li> <li>• Voltage: 120 or 230 VAC, 50-60 Hz (switch selected)</li> <li>• Power: 7.5 VA max</li> <li>• Over-current protection (fuse)</li> </ul>
<b>Mechanical</b>	<ul style="list-style-type: none"> <li>• Compact metal housing</li> <li>• Intended for interior wall mounting</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>• Operating temperature range: -20°C to 65°C</li> <li>• Storage temperature range: -30°C to 70°C</li> <li>• Relative humidity range (non-condensing): 5 to 95%</li> </ul>
<b>Certifications and compliance</b>	<ul style="list-style-type: none"> <li>• ETL, U.S. and Canada (UL61010)</li> <li>• FCC part 15 Class A</li> <li>• ANSI C12.1 (revenue accuracy)</li> <li>• CE</li> <li>• RoHS</li> </ul>
<b>Dimensions</b>	9.4" H x 13.0" W x 2.8" D