

# WATTNODE<sup>®</sup> METER MODULE

**Customizable, Modular and Economical**

**New Features**



## AC Power Measurement, Instrument Powered, for OEM Applications

Continental Control Systems, a leader in accurate, reliable, and economical measurement power and energy, has designed a new meter module for that is easy to customize for high-volume OEM applications. The WattNode Meter Module is a bidirectional (production and consumption) networked energy meter offering energy measurement parameters such as energy (kW), power (kWh), voltage, current, demand, kVAR, kVARh, power factor, frequency, etc. These electrical measurements are communicated using the Modbus RTU communication protocol over RS-485. Revenue-grade accuracy is obtainable using the CCS Accu-CT<sup>®</sup> family of current transformers, (Class 0.6 or Class 0.3 accuracy), otherwise the meter module utilizes any externally mounted or PCB mounted 0.333 Vac current transformers. Available factory configured for single or three phase application, the meter is externally (instrument) powered from 12 to 24 Vac or 6 to 24 Vdc.

## Customizable, Modular and Economical

Consult our factory for your specific OEM requirements. It is our goal to design the energy and power measurement device with the features required for your specific application and price point. Our design engineers can consider options such as accuracy, installation and mounting, diagnostics, certifications and regulatory requirements in order to provide affordable energy and power measurement capabilities into your device or equipment.

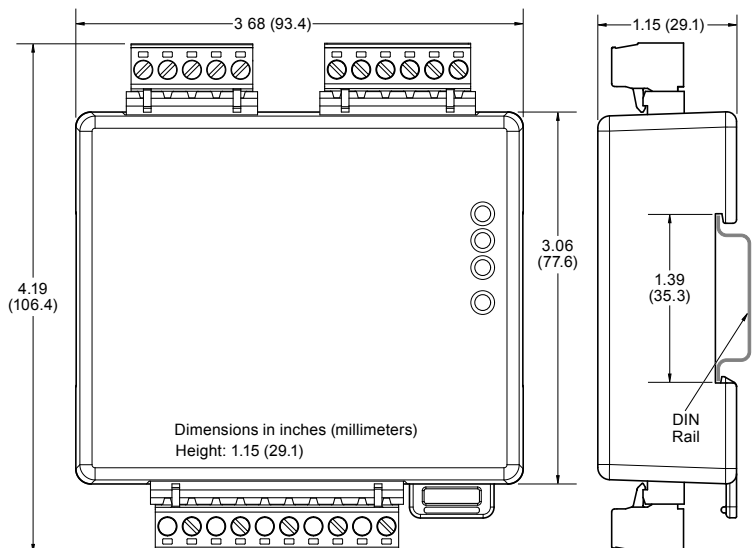
## New Features

- Correction of CT polarity remotely
- Correction of line voltage connection remotely
- PT ratio register for use with potential transformers
- Current transformer disconnect detection
- SunSpec compliant register list

## Standard Features

- Modbus RTU, RS-485; isolated communication
- 100+ Modbus registers
- For use with safe low voltage (0.333 Vac) or 40mA CTs
- Fast power feature for rapid demand response
- Current Measurement: 5 to 6000 amps
- ANSI C12.20 with Class 0.2 current transformers
- External Power Supply: 12 to 24 Vac isolated or 6 to 24 Vdc
- Single or three phase, wye or delta configuration
- UL and cUL Listed, CE, RoHS compliant
- 5 year warranty

## Dimensions, WND-M1-MB



WattNode and Accu-CT are registered trademarks of Continental Control Systems, LLC.

# WATTNODE® METER MODULE

## Electrical Measurements

- True RMS Power: watts, per phase and sum
- Reactive Power: VARs, per phase and sum
- Power Factor: Phase, per phase and average
- True RMS Energy: kWh per phase and sum
- Reactive Energy: VAR hours, sum
- Frequency
- RMS voltage per phase and average
- RMS current per phase and average
- Demand and peak demand

## Revenue-Grade Accuracy

- Meets ANSI C12.1 – 2014 and ANSI C12.20 – 2015
- Class 0.5 when used with Class 0.2 CTs

## Electrical

- Instrument powered from 12 to 24 Vac isolated or 6 to 24 Vdc
- Line Frequency: 45 to 65 Hz
- Line Voltage: min. 85 Vac, max. 690 Vac

## Environmental

- Operating Temperature: -40°F to 176°F (-40°C to +80°C)

## Mechanical

- Enclosure: high impact, ABS / PC plastic
- Size: 4.2 × 3.7 × 1.2 in. (106 × 93 × 29 mm)
- Weight: 4.7 oz (134 gm)

## Modbus Communication

- Protocol: Modbus RTU (binary)
- Baud Rates: selectable from 9,600 to 115,200
- Half Duplex: (two-wire plus common)

## Regulatory / Safety

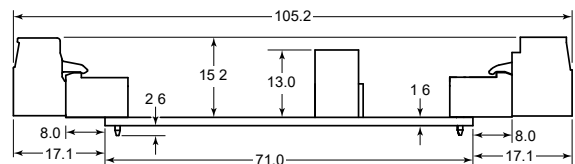
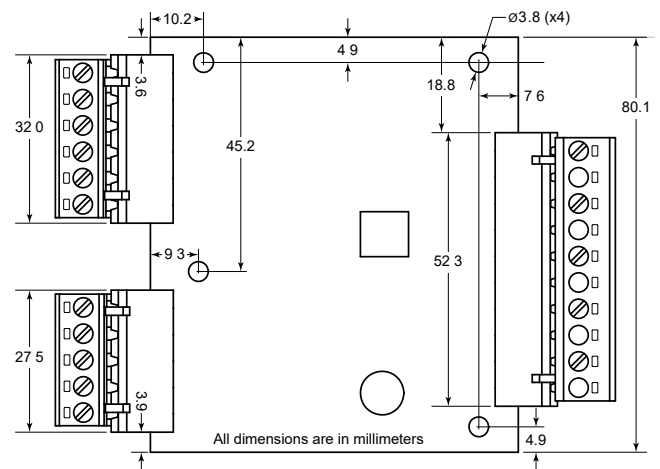
- UL Listed under UL / IEC 61010-1 (with enclosure)
- FCC Class B, EN 55022 Class B
- cUL, CE, RoHS compliant

## Customizable Features

- Available without enclosure, standoffs optional
- For use with 0.333 Vac or 40mA current transformers
- Available with or without diagnostic LEDs
- Board can be populated for one, two or three phase measurement
- Communications: baud rate, parity, stop bits, floating point, and integer registers



## Dimensions, WND-MO-MB



## ⚠ WARNING

This product can expose you to chemicals including Formaldehyde, which is known to the State of California to cause cancer. For more information go to: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)