

# WATTNODE<sup>®</sup> METER MODULE

**Customizable, Modular and Economical**



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

Continental Control Systems, a leader in economical and high accuracy measurement of electrical production and consumption, has designed a new meter module for mass production, customizable for OEM metering design-in. The WattNode Meter Module is a bidirectional networked energy meter offering energy measurement parameters such as energy (kW), power (kWh), voltage, current, demand, kVAR, kVARh, power factor, frequency, etc. These energy values 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 as single and three phase modules, 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.

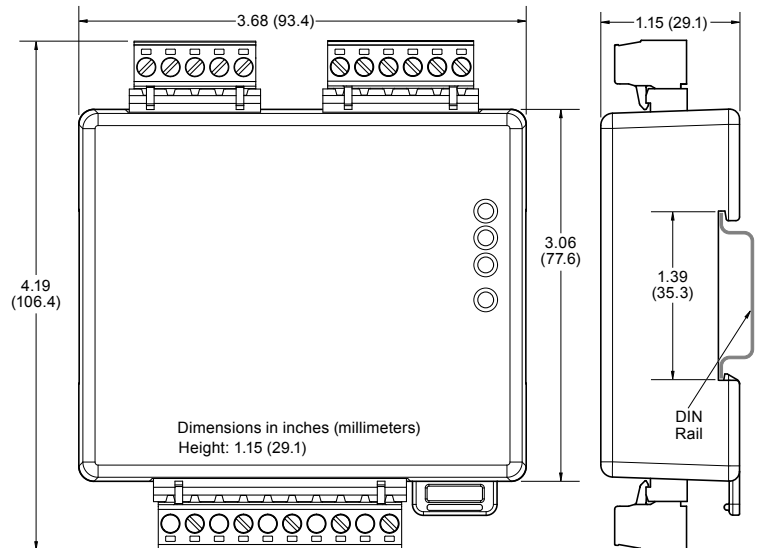
## Standard Features

- Modbus RTU, RS-485; isolated communication
- 100+ Modbus registers
- For use with safe low voltage (0.333 Vac) 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, cUL, CE, RoHS compliant
- 5 year warranty

## 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
- Baud rate options

## Dimensions, WND-M1-MB



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



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WMM-1.29.18: Specifications are subject to change

# WATTNODE® METER MODULE

## Quantities Measured

- 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
- RMS current per phase
- Demand and peak demand

## Accuracy

- ANSI C12.20 Class 0.5 or ANSI C12.1 accuracy
- C12.1 accuracy

## Electrical

- Instrument powered from 12 to 24 Vac isolated or 6 to 24 Vdc
- Line Frequency: 45 to 65 Hz
- Line Voltage: 90 to 600 Vac

## Environmental

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

## Mechanical

- Enclosure: high impact, ABS / PC plastic
- Size: 4.19" × 3.68" × 1.15" (106.4mm × 93.4mm × 29.1mm)
- Weight: 4.7 oz (134 gm)

## Modbus Communication

- Protocol: Modbus RTU (binary)
- Baud Rates: selectable from 9,600 to 115,200
- Duplex: half (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



## Dimensions, WND-M0-MB

