

THE WATTNODE MODBUS is a multi-function networked energy meter. The WattNode MODBUS offers true RMS power, energy and demand metering, plus individual phase measurements of voltage, current, power factor, reactive power and energy, and line frequency. Typical applications include energy monitoring, sub-metering, demand management, power factor control and phase-load monitoring.

NETWORKING the WattNode MODBUS is easy. The WATTNODE communicates over a half-duplex EIA RS-485 interface. Standard baud rates are 9,600 and 19,200 baud. The WattNode uses the industry standard MODBUS RTU (binary) communication protocol, allowing up to 127 WattNodes per RS-485 subnet.

EASE OF USE and economy of installation were key design criteria. The WattNode MODBUS' compact size permits installation inside of most electrical service panels and junction boxes. Diagnostic LEDs help insure fast, easy, and correct installation. Detachable screw terminals make wiring a snap. The WattNode MODBUS is line-powered and requires no separate power source.

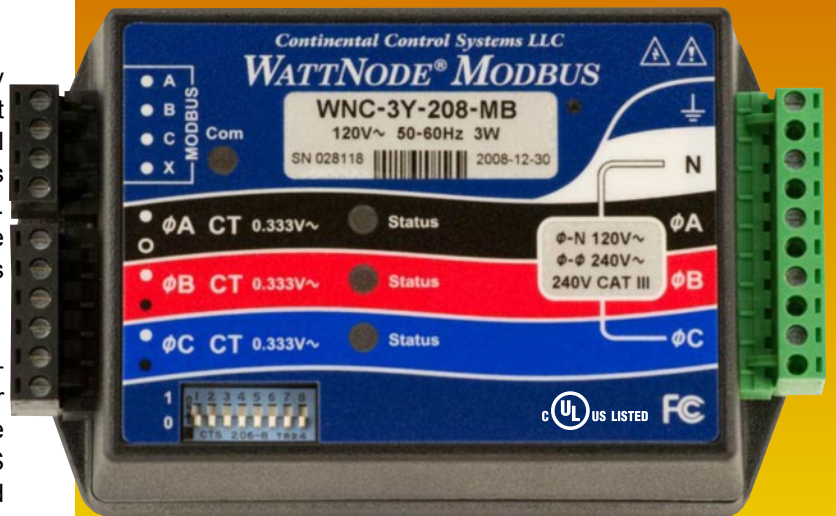
ACCURACY of the WattNode MODBUS is 0.5% nominal (see manual for details). Even with leading or lagging power factor and chopped or distorted wave forms, the WattNode MODBUS measures true RMS power. This makes it ideal for monitoring motors and pumps controlled by variable speed drives or loads with switching power supplies.

THE COMPLETE LINE of WattNode MODBUS models measures 1, 2, or 3 phases in 2, 3, or 4 wire configurations with nominal voltages from 120 to 600 VAC at 50/60 Hz. Operation from 5 to 5000 Amps is possible by selecting from our line of safe, low-voltage output, current transformers.

DEMAND

PEAK DEMAND

KW



KWH KVAR VOLTS

FREQUENCY PF AMPS



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1300 768 887

sales@onetemp.com.au www.onetemp.com.au

- **Multiple Measurements**
kW, kWh, Demand, kVAR, kVARh, PF, Amps, Volts, Frequency
- **MODBUS Network Ready**
Communicates over a half-duplex EIA RS-485 interface
- **Compact Size**
Fits inside of standard electrical panels and junction boxes
- **Auto-Correcting Polarity**
Auto-detects RS-485 A/B polarity on properly biased networks, simplifying installation.
- **Measures 1, 2, 3 Circuits**
Flexible, field configurable
- **Line Powered**
No external power supply required
- **Two Baud Rates**
9,600 and 19,200 baud
- **Full RS-485 Subnet**
127 WattNode's per RS-485 subnet.

Specifications

WATTNODE®

MODBUS

Quantities Measured

- True RMS Power - Watts (Phase A, B, C, Sum)
- Reactive Power - VARs (Phase A, B, C, Sum)
- Power Factor (Phase A, B, C, Average)
- True RMS Energy - Watthours (Phase A, B, C, Sum)
- Reactive Energy - VAR-hours (Sum)
- AC Frequency
- RMS Voltage (Phase A, Phase B, Phase C)
- RMS Current (Phase A, Phase B, Phase C)
- Demand and Peak Demand

Measurement Configuration

- Three phase: 3-wire or 4-wire
- Single phase: 2-wire or 3-wire

User Controlled Inputs

- Set CT size in amps
- Set demand window type and period
- Reset peak demand to zero

Accuracy

0.5% nominal (see manual for details).

Electrical

- Operating Voltage Range: 80% - 115% of nominal
- Power Line Frequency Range: 50 to 60 Hz

Environmental

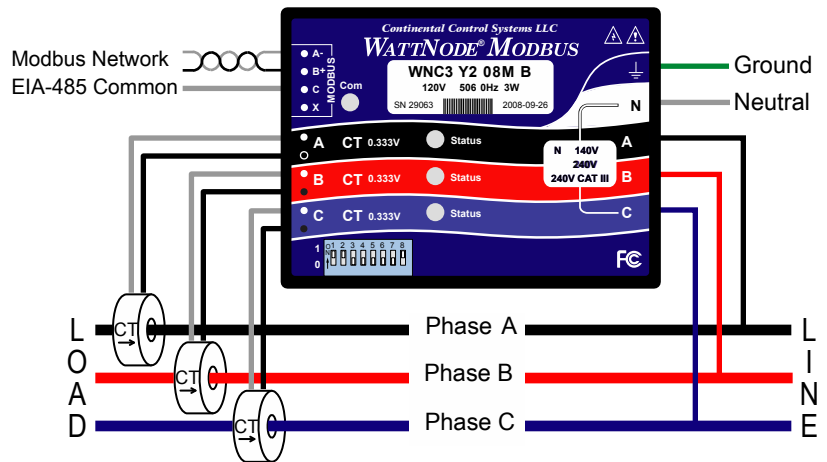
- 30°C to +55°C (-22°F to 131°F)
- Humidity: 5 to 90% RH (noncondensing)

Mechanical

- Enclosure: High impact, ABS plastic Flame Resistance Rating: 94V-0, IEC FV-0
- Size: 5.63" x 3.34" x 1.5" (143mm x 85mm x 38mm)
- Weight: 10.8 oz (305 gm)
- Connectors: Euroblock style pluggable terminal blocks

MODBUS Communication

- EIA RS-485 Interface
- Baud Rates: 9,600 and 19,200 Duplex: Half (two-wire plus common)
- Parity: N81 (no parity, eight data bits, one stop bit)
- MODBUS Buffer: 256 bytes
- Response Time: 5 - 300 milliseconds



MODELS

Model	VAC	VAC	Phases	Wires
	Line To Neutral	Line To Line		
WNC-3Y-208-MB	120	208-240	3*	4
WNC-3Y-400-MB	230	400	3*	4
WNC-3Y-480-MB	277	480	3*	4
WNC-3Y-600-MB	347	600	3*	4
WNC-3D-240-MB	N/A	208-240	3	3
WNC-3D-400-MB	N/A	400	3	3
WNC-3D-480-MB	N/A	480	3	3

*Can be used to measure 1, 2 or 3 phase circuits.

OPENING CURRENT TRANSFORMERS (SPLIT CORE)

Model	Inside	Diameter	Rated Amps
CTS-0750	0.75"	5, 15, 30, 50, 70, 100, 150, 200	
CTS-1250	1.25"	70, 100, 150, 200, 250, 300, 400, 600	
CTS-2000	2.00"	600, 800, 1000, 1200, 1500 CTB	
	Bus Bar	600, 800, 1200, 2000, 3000 (custom)	

TOROIDAL CURRENT TRANSFORMERS (SOLID CORE)

Model	Inside	Diameter	Rated Amps
CTT-0300	0.30"	5, 15, 20, 30	
CTT-0500	0.50"	15, 20, 30, 50, 60	
CTT-0750	0.75"	30, 50, 70, 100	
CTT-1000	1.00"	50, 70, 100, 150, 200	
CTT-1250	1.25"	70, 100, 150, 200, 250, 300, 400	

Current Transformer Output Voltage: 0 - 0.333 VAC @ rated current

Telephone 1300 768 887 | Facsimile 1300 786 661

ADELAIDE

136 Richmond Road Marleston SA 5033
PO Box 389 Marleston SA 5033
adelsales@onetemp.com.au

BRISBANE

10/1048 Beaudesert Road
Coopers Plain Qld 4108
brissales@onetemp.com.au

MELBOURNE

10/26-30 Howleys Road
Notting Hill Vic 3168
melbsales@onetemp.com.au

SYDNEY

3/30 Cowper Street
Parramatta NSW 2150
sydsales@onetemp.com.au