

Continental Control Systems

WATTNODE® PLUS

AC Power Measurement for LONWORKS®

THE WATTNODE PLUS for LonWorks is a networked, multi-function digital power meter and monitor. The WATTNODE PLUS offers true RMS power metering, PLUS demand, PLUS individual phase voltage and current, PLUS individual and average power factor, PLUS reactive power and energy metering, PLUS frequency, PLUS internal data-logging. Typical applications include energy monitoring, sub-metering, demand management, power factor control and phase-load monitoring.

NETWORKING the WATTNODE PLUS for LonWorks is easy. A simple twisted-pair connection links all devices together into a dependable LonWorks network. In addition, a LonWorks gateway provides network access via the Internet. Measurements are transmitted over the network as Standard Network Variable Types (SNVTs).

EASE OF USE and economy of installation were key design criteria. The WATTNODE PLUS' compact size permits installation inside of most electrical service panels and junction boxes. Detachable screw terminals make wiring a snap. The WATTNODE PLUS is line-powered and requires no separate power source.

ACCURACY of the WATTNODE PLUS is 0.5% of reading. With selected CTs, it meets the ANSI C12 requirements for accuracy. Even with leading or lagging power factor and chopped or distorted wave forms, the WATTNODE PLUS 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 PLUS 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. Select the current range of operation from our line of safe, low-voltage output, current transformers. Split-core or toroidal CTs measure currents up to 3000 Amps.

KVARH KWH
KVAR KW
Frequency Demand
Volts PF Amps



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- Measures KW, KWH, Demand, KVAR, KVARH, PF, Amps, Volts, Frequency
Multiple measurements in one unit
- ANSI C12 Accuracy
Essential for revenue submetering
- LonWorks Network Ready
Simple twisted-pair network installation, Internet accessible
- Internal Data Logging
Record of 38 days of 15 minute energy use for detailed profiling
- LonWorks Interoperable
Easy to integrate into network
- Measures 1, 2, 3 Phase Circuits
Flexible, field configurable
- Line Powered
No external power supply required
- Compact Size
Fits inside of standard power panels and junction boxes
- Safe CTs
Integral burden resistor limits voltage to safe level



Specifications

Quantities Measured

Energy: Real and Reactive
 Power: Real and Reactive, per phase and average
 Voltage: Per phase volts
 Current: Per phase amps
 Frequency: Phase A
 Power Factor: Per phase and average
 Demand: Block or sliding window
 Peak Demand: Value and time
 Log: Real Energy vs. Time (38 days @ 15 min.)

Quantities Retained during Loss of Power

Accumulated energy
 Peak demand
 Time of peak demand
 Logged energy use data
 Instrument configuration data

Measurement Configuration

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

LonWorks Interoperability

40 network variables using Standard
 Network Variable Types (SNVTs):
 Energy: SNVT_elec_whr_f
 Power: SNVT_power_f
 Volts: SNVT_volts_f
 Current: SNVT_amp_f
 Power Factor: SNVT_pwr_fact_f
 Frequency: SNVT_freq_f
 Time: SNVT_time_stamp

User Controlled Inputs

Set CT size in amps
 Set demand window type and period
 Request for logged data
 Reset peak demand to zero
 Set time of day

Accuracy

Meets ANSI C12 accuracy with selected CTs

Electrical

Operating Voltage Range: +20%/- 30% of nominal
 Power Line Frequency Range: 45 to 65 Hz

Environmental

Temperature: -30° C to 60° C
 Humidity: 5 to 90% RH (noncondensing)

Mechanical

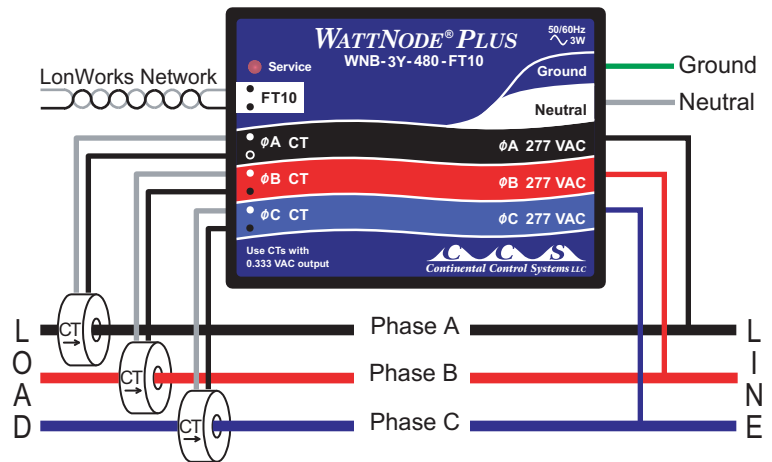
Enclosure: High impact, UL rated, ABS plastic
 Size: 3.3" x 5.6" x 1.25" (includes mounting tabs)
 Connectors: Detachable screw terminals (14AWG)

MADE IN THE USA

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MODELS

Model	VAC	VAC	Phases	Wires
	Line To Neutral	Line To Line		
WNB-3Y-208-FT10	120	208-240	3*	4
WNB-3Y-400-FT10	230	400	3*	4
WNB-3Y-480-FT10	277	480	3*	4
WNB-3Y-600-FT10	347	600	3*	4
WNB-3D-240-FT10	N/A	208-240	3	3
WNB-3D-480-FT10	N/A	480	3	3
WNB-3Y-208-PLC	120	208-240	3*	4
WNB-3Y-400-PLC	230	400	3*	4

*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
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, 30
CTT-0500	0.50"	15, 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



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