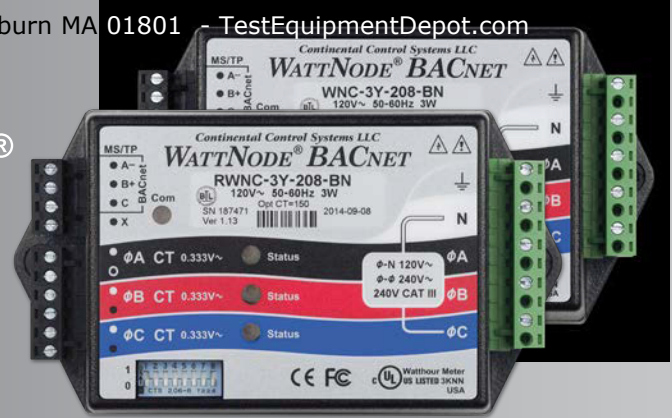


WATTNODE® BACNET®

Standard and Revenue-Grade



AC Power Measurement for BACnet Networks

The WattNode BACnet is a bidirectional networked energy meter offering energy measurement parameters such as energy (kW), power (kWh), voltage, current, demand, kVAR, kVARh, power factor, line frequency, etc. These energy values are communicated using the BACnet communication protocol over RS-485 as individual phase measurements and sum or average readings. The WattNode BACnet can be assigned MAC addresses from 0 to 63 using front panel DIP switches. Up to 64 WattNode BACnet meters can be daisy-chained on one RS-485 subnet.

The BACnet - (Building Automation Control Network) term is commonly used to refer to the ANSI/ASHRAE Standard 135, adopted and supported by the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE). The BACnet protocol provides auto-discovery which is used for device and object discovery over the network. The WattNode BACnet meter has been independently tested by the BACnet Testing Laboratories (BTL), and is BACnet certified.

The WattNode BACnet is available in standard and revenue-grade accuracy and can be used with any low voltage CT (0.333 Vac output). Revenue-grade system accuracy requires current transformers with class 0.6 or better accuracy. The ACTL series of current transformers is available with Class 0.6 or Class 0.3 accuracy; these CTs are ideal for revenue-grade use for billing purposes, SREC and state revenue-grade requirements. Certificates of calibration are available for the WattNode Revenue meters and the ACTL revenue-grade current transformers.

The WattNode BACnet's compact size permits installation inside most electrical service panels, junction boxes and OEM equipment. The WattNode BACnet is line-powered, therefore does not require a separate powersource. Diagnostic LEDs help ensure fast and correct installation as well as network communication.

The WattNode BACnet family of energy meters measure 1, 2, 3 phases in 2, 3, or 4 wire configurations, 120 to 600 Vac, 50 to 60 Hz. CCS offers a complete line of low-voltage, solid and split-core current transformers for 5 to 6000 amp loads.

Features

- Native BACnet MS/TP (RS-485)
- 50+ measurements (watts, kWh, volts, amps, PF, demand, etc.)
- Supports 64 DIP switch selectable addresses
- Safe, low voltage (0.333 Vac) current transformers
- Line powered
- Single or three phase, wye or delta configurations
- UL, cUL, CE, RoHS compliant
- Small profile, easy installation
- 5 year warranty

Models

Model Number	Model Number	VAC Line to Neutral	VAC Line to Line	Phases	Wires
WNC-3Y-208-BN	RWNC-3Y-208-BN	120	208-240	3	4
WNC-3Y-400-BN	RWNC-3Y-400-BN	230	400	3	4
WNC-3Y-480-BN	RWNC-3Y-480-BN	277	480	3	4
WNC-3Y-600-BN	RWNC-3Y-600-BN	347	600	3	4
WNC-3D-240-BN	RWNC-3D-240-BN	120	208-240	3	3-4
WNC-3D-400-BN	RWNC-3D-400-BN	230	400	3	3-4
WNC-3D-480-BN	RWNC-3D-480-BN	277	480	3	3-4

"R" Designates revenue-grade

Quantities Measured

- True RMS Power: watts, per phase and sum
- Reactive Power: VARs, per phase and sum
- Power Factor: 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

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

Environmental

- Operating Temperature: -30°C to +75°C (-22°F to 167°F)
- Humidity: 5 to 90% RH (non-condensing)

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

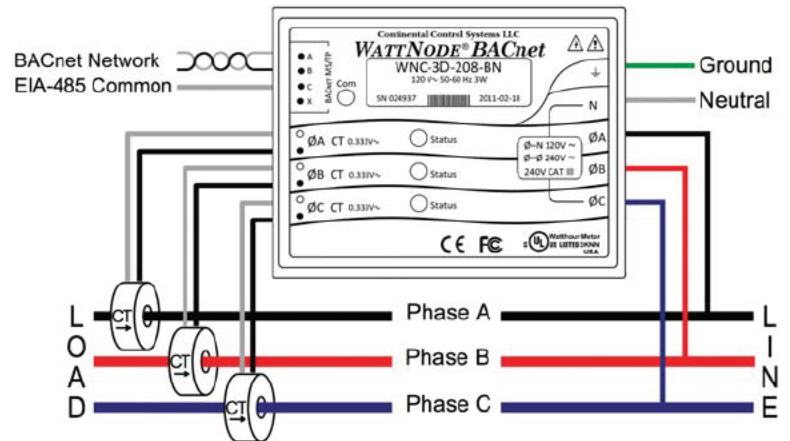
BACnet Communication

- BACnet MS/TP RS-485 interface
- Selectable serial baud rates up to 76.8K
- Duplex: half (two-wire plus common)

Regulatory

- FCC Class B, EN 55022 Class B
- UL and cUL Listed (UL 61010-1)
- CE Mark and RoHS compliant
- Immunity: EN 61326, (industrial locations)

WattNode Wiring Diagram, Three Phase Example



Accu-CT® Split-Core CTs

- Safe, low voltage output, 0.333 Vac
- Primary Ratings: 5 to 600 amps, 600 Vac, 50 or 60 Hz
- UL & cUL, CE, RoHS compliant
- 0.75" and 1.25" opening
- High accuracy options C0.6, C0.3



Standard Split-Core, Solid-Core and Bus Bar Series CTs

- Safe, low voltage output, 0.333 Vac
- Multiple Models: 5 to 6000 amps, 600 Vac, 50/60 Hz nominal
- UL & cUL, CE, RoHS compliant
- Custom sizes available



Rogowski CTs

- Safe, low voltage output, 0.333 Vac
- Multiple Diameters: 3.1", 4.5", 7.5", 12"
- Primary Ratings: 250 to 6000 amps
- UL & cUL, CE, RoHS compliant



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