



POWER BATTALION 48

Networked Metering System

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POWER BATTALION 48

Networked Metering System



The **Power Battalion 48** is a multi-circuit, revenue grade networked power meter designed to significantly reduce installation time and cost per metering point.



CT FLEXIBILITY

The Power Battalion 48 can be used with standard CTs, 1 Volt output or less, or with Rogowski style CTs to monitor any combination of up to 16 three-phase or 48 single-phase loads. The versatility of the device allows monitoring of two separate voltages and transformers on same meter simultaneously. The Setra power meter provides ANSI C12.20 accuracy on all circuits being metered. The Power Battalion 48 provides the option to choose between standard split core CTs, existing current transformers or the Setra Patrol Flex CTs. Power Battalion 48's interchangeable CT configuration on the browser drop down menu allows for flexibility at the job site or when making last minute changes. Setra Patrol Flex CTs are industry best 0.5% revenue grade accuracy when used in conjunction with the Battalion.

POWER BATTALION 48 FEATURES

- Dual Voltage Input References
- Phase Check Verification with Color Changing LCD
- Field Selectable BACnet/Modbus (4-in-1)
- Back-lit Push Button Display for Easy Verification & Setup
- UL 610.10 Listed
- ANSI C12.20 Revenue-grade Accuracy
- Broadband Power Supply (90-600 VAC)
- Reduced Cost Per Metering Point
- Field Selectable, Interchangeable CTs (Rogowski and Conventional)
- Easy USB or Web Browser Configuration
- 5 Year Warranty

APPLICATIONS

- High Density Electrical Distribution Panels
- Demand Side Management
- Preventative Maintenance
- Retail Store Lighting Loads
- LEED Projects
- Chiller Optimization

EASY INSTALLATION & CONFIGURATION

The Power Battalion 48 is line powered with 90-600 volts, eliminating the need to choose a separate model number for single or three phase circuits and ensuring the correct part numbers are ordered. The Power Battalion 48 can be configured with a web browser or direct USB connection prior to installation, significantly reducing labor costs, maximizing safety and eliminating the need for personal protective equipment. The initial set-up of the meter can be done from a lap top using the free Headstart software which also allows for cloning of the set-up parameters for multiple meters. The multi-colored backlit display ensure that the CTs are properly phased the first time, eliminating the hassle and expense of having to return to the job site.

Setra vs. the competition



At Setra, the performance of our product is second to none, which is why we have no reason to exaggerate our product capabilities. By reading through various competitors technical specifications, it isn't always clear which product performs the best in specific applications; this is why we tested our product against several leading competitors.

	 SetraPower Battalion 48	 Competitor #1	 Competitor #2	 Competitor #3	
Hardware	Field Selectable CTs	✓	✗	✗	✗
	Optional Display	✓	✗	✓	✗
	Dual Voltage Reference	✓	✗	✗	✗
	Broadband Power Supply (90-600 VAC)	✓	✗	✗	✗
	12V Power Output	✓	✗	✗	✗
	Phase Check	✓	✗	✗	✗
	Safety cover to install in live enclosure	✓	✗	✗	✗
	Pulsed Output	✓	✗	✗	✗
Communications Protocol	Ethernet & RS485 Standard	✓	✗	✓	✗
	Modbus & BACnet Standard	✓	✗	✗	✗
Meter Configuration	USB Power Up & Configuration	✓	✗	✗	✗
	Web Browser Configuration	✓	✗	✗	✗
Features	THD, Phasor Plot, Waveform	✓	✗	✓	✗
ANSI C12.20	ANSI C12.20	✓	✗	✓	✓

The most versatile meter on the market

4-IN-1 COMMUNICATIONS

Unlike the competition, which require costly expansion cards to carry multiple protocols, BACnet and Modbus are available with every unit giving the installer the flexibility to easily configure the unit anytime at no additional cost.

Advantages:

- Increased Flexibility
- Eliminate Ordering Mistakes
- BAS Compatible

12V OUTPUT TO POWER EXTERNAL SENSORS

The 12V output allows for peripheral sensors to be powered off of the meter. Save time and money by being able to use a single source to power multiple sensors.

Advantages:

- Provides a single source of power for multiple low voltage sensors

CONTINUOUS SAMPLING

The Power Battalion 48 uses continuous sampling, meaning more information and no "blind cycles." Continuous sampling provides 9x more data than with traditional computed results. More granular data enables end users to make real-time, well informed decisions.

Advantages:

- Allows for THD and waveform capture in real time
- Allows for more accurate frequency detection

BROADBAND LINE POWERED

Every Setra power meter is line powered and does not require external power. Its power supply can accommodate service voltages ranging from 90V-600V (phase-to-phase). This includes applications where single phase, three phase WYE or three phase DELTA service is required.

Advantages:

- Self-Powered
- Reduce SKU's
- Increased Flexibility

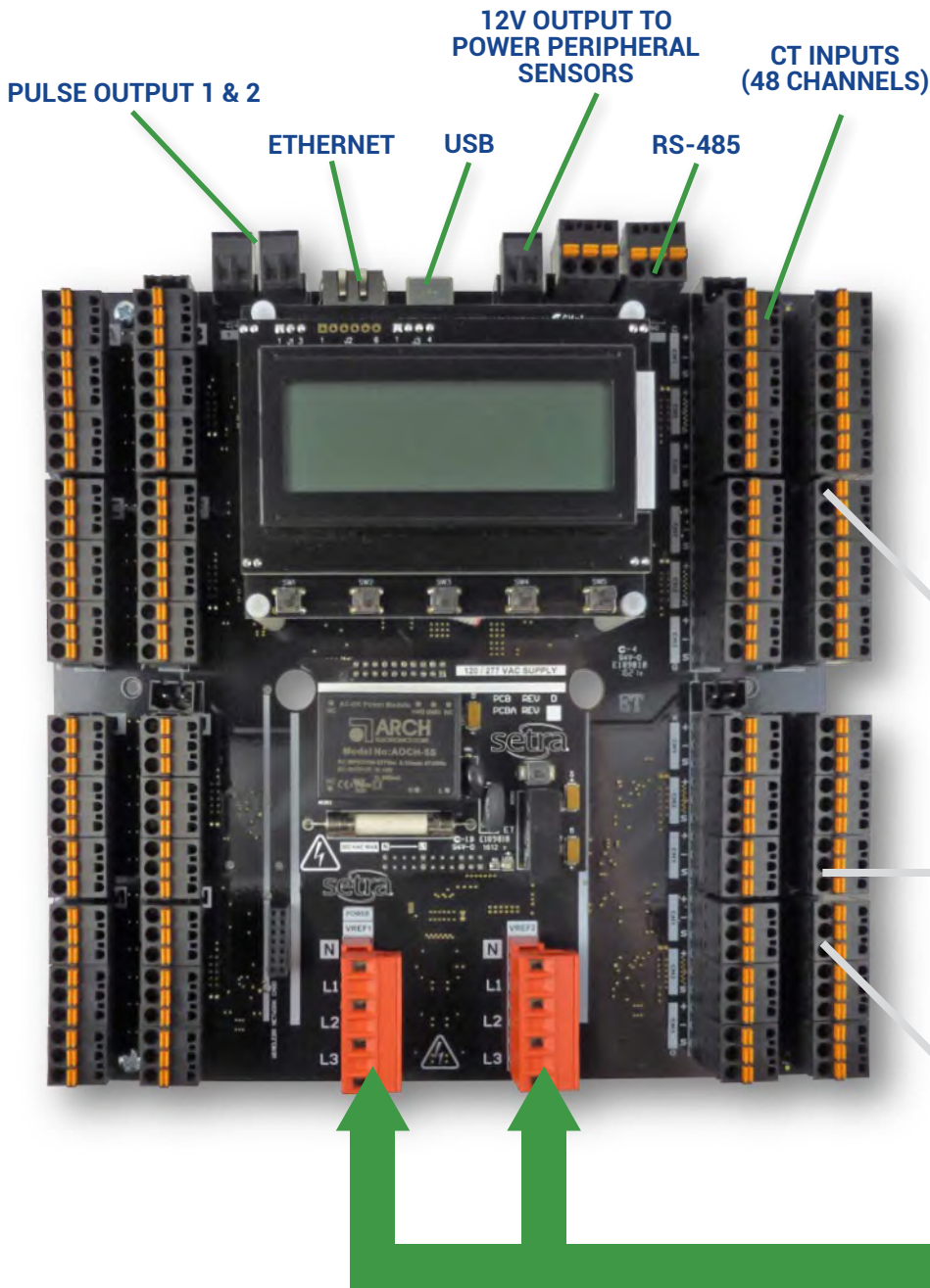
DEMAND SIDE MANAGEMENT

The Power Battalion 48 can be used with standard CTs, 1 Volt output or less, or with Rogowski style CTs to monitor any combination of up to 16 three-phase or 48 single-phase loads. The versatility of the device allows monitoring of two separate voltages and transformers on same meter simultaneously.

Advantages:

- No need to order different models for different applications.
- One meter can handle any multi-circuit job





FIELD SELECTABLE CT'S

Every Setra power meter works with either Rogowski Coil "flex" CTs or conventional split-core CTs. The ability to have interchangeable CTs gives added flexibility for last minute changes at the job site. The Power Battalion 48 is embedded with the necessary amplifier/integrator circuitry for Rogowski Coil CTs - eliminating the need to provide external power.

Advantages:

- High Accuracy: $\pm 0.5\%$ FS
- Lightweight: <0.5 lbs.
- Best in Class Position Sensitivity



Patrol Flex Rogowski Coil



Split-core Performance CT



Split-core Standard CT

REVENUE GRADE ACCURACY

When used with the Patrol Flex Rogowski coils, every Setra power meter can meet the standards required for revenue grade accuracy. The meter is ANSI C12.20 allowing it to be used for energy cost allocation for multi-tenant billing.

Advantages:

- Meets revenue-grade standards
- Can verify energy bill from the utility

WEB BROWSER ENABLED

The web-based browser makes it quick and easy to configure and set up the meter. The web server is intended for users in the field to configure the meter and also track real-time data from any web browser.

Advantages:

- Direct access to web pages via Ethernet or USB
- Instant display of real-time data
- No download or installation necessary

DUAL INPUT VOLTAGE REFERENCES

Monitoring multiple loads has never been easier. The Power Battalion 48 makes it possible to capture low voltage (120V, 208V) as well as high voltage loads (480V, 600V) from the same meter. Eliminate the need to have multiple multi-circuit meters in order to measure different load types.

Advantages:

- 2 voltage inputs in the same meter
- Capture lighting loads and optimize chillers from the same meter
- High voltage cover ensures safe operation

How to configure the **POWER BATTALION 48**

1

Download the free Headstart software from www.setra.com

2

Connect the meter to the computer with a USB cable and power up the meter.

3

When prompted, select "connect" in the Headstart software. Begin setting parameters.

4

Configuration complete! The unit is ready for electrical installation.



**SUPPORTED COMMUNICATION
PROTOCOLS:**

Easy USB Setup

The initial set-up of the Power Battalion 48 power meter can be done from a laptop using the free Headstart software, allowing for cloning of the setup parameters for multiple meters. No need to configure the unit in a live enclosure while wearing personal protection equipment like an arc flash suit.



BACnet IP • BACnet MS/TP • Modbus TCP • Modbus RTU

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Founded in 1967, Setra Systems, Inc. is a leading designer and manufacturer of pressure, acceleration, and weight sensing devices. Setra's founders, Dr. Y.T. Li and Dr. S.Y. Lee, were co-developers of the variable capacitance transduction principle, the innovative force sensing technology which is the heart of Setra's products.

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Since our founding, we have been proudly producing all of our transducers for sale in the United States at our 100,000 sq. ft. Boxborough, MA facility. Setra is an ISO 9001-2008 certified manufacturer with robust and mature processes at work to continually optimize team performance. From ideation and design, to validation and test, to volume production, quality is built in.

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