Power Squad 24

Multi-Circuit Power Meter

setra®

POWER SQUAD 24

The **Power Squad 24** is a versatile, multi-channel (CT) instrument. The modular design allows it to be configured for monitoring multiple electrical circuits (sharing a common voltage source) or for current-only monitoring of branch circuits. It can be supplied with virtually any combination of Setra's internally-shunted split-core or Power Flex CTs and is capable of monitoring up to 8 three-phase or 24 single-phase electrical devices.

Versatility

The Power Squad 24 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. All Setra CTs are internally shunted and carry either UL or ETL certification as well as the CE Mark. Every Power Squad 24 is embedded with the necessary amplifier/integrator circuitry for Rogowski coil CTs—eliminating the need to provide external power to these flexible CTs.

Easy Installation

The Power Squad 24 series instruments are line-powered and do not require external power. Its power supply can accommodate service voltages ranging from 80-600V (phase-to-phase). The Power Squad 24's flexibility, and ease-of-use make it the ideal solution for commercial, industrial, government, and retail applications.

Field Selectable Communications

Each Power Squad 24 comes with a field selectable Modbus or BACnet communication. Communications interface to the Power Squad 24 is through either an RS-485 serial connection (BACnet MS/TP / Modbus) or over Ethernet (BACnet IP / Modbus TCP).

Power Squad 24 Features:

- Rogowski Coil and Split Core CT Compatible
- Broadband Power Supply (80-600V)
- Field Selectable BACnet/Modbus (4-in-1)
- Data Updates Occur Every 1 Second
- Bi-Directional

Applications:

- Measurement & Verification
- Energy Cost Allocation
- Equipment Efficiency Tracking
- Preventive Maintenance
- Data Center Monitoring

5 Year Warranty

Power Squad 24

Multi-Circuit Power Meter

SPECIFICATIONS

Technical		Communications	
Service Type	Single Phase, Three Phase-Four Wire (WYE), Three Phase-Three Wire (Delta)	**Direct**	BACnet IP, BACnet MS/TP, Modbus TCP, Modbus RTU
Power	From L1 Phase to L2 Phase. 80-600VAC CAT III 50/60Hz, 70 mA Max. Non-user replaceable .5 Amp internal fuse protection	**Max Distance**	1200 meters with data rate of 100K bits.second of less
Power Out	Unregulated 5VDC output, 500 mA Max	**Baud Rate**	9600 (Modbus default), 19200, 38400, 57600, 76800 (BACnet default), 11200
Voltage Channels	80-346 Volts AC Line-to-Neutral, 600V Phase-to-Phase, CAT III	**Data Bits**	8
Current Channels	3 or 24 Channels, 0.67 VAC max, 333 mV CTs, 0-5,000 Amps depending on CT	**Parity**	None, Even, Odd
Maximum Current Input	200% of current transducer rating (mV CTs) Measure up to 5000A with Patrol Flex	**Stop Bit**	2, 1
Measurement Type	True RMS using high-speed digital signal processing (DSP)	**Data Formats**	Modbus or BACnet
Line Frequency	50/60 or 400Hz	**Mechanical**	
Waveform Sampling	12 kHz	**Operating Temperature**	-7° to 60° C (-20° to 140° F)
Parameter Update Rate	1 second	**Humidity**	5% to 95% non-condensing
Measurements	Volts, Amps, kW, kWh, kVAR, kVARh, kVA, aPF, dPF.	**Enclosure**	(optional) PC UL 94 5V
Accuracy	1% (<0.5% typical) for V, A, kW, kVAR, kVA, PF.	**Weight**	without enclosure: 454g (16oz) with enclosure: 1361g (48oz)
Resolution	0.01 Amp, 0.1 Volt, 0.01 watt, 0.01 VAR, 0.01 VA, 0.01 Power Factor depending on scalar setting	**Dimensions**	without enclosure: 25.5 x 16.5 x 3.2 cm (10.0" x 6.5" x 1.3") with enclosure: 27.8 x 18.8 x 13.0 cm (10.9" x 7.4" x 5.1")
Pulse Output	Open Collector, 75mA max current, 40V max open voltage	**Safety**	
		Power Squad Serial and Ethernet	UL Listed and CE Mark, Conforms to UL Std 61010-1, Certified to CSA Std C22.2 No. 61010-1

Modbus Register/BACnet Object Descriptions (Partial List)	
System True Energy (kWh)	Individual Phase to Phase Voltages
Instantaneous Total True Power (kW)	Line Frequency (Hz)
Peak Demand (Adjustable Window) (kW)	Individual Phases True Energy (kWh)
Maximum Instantaneous Power (kW)	Individual Phases True Power (kW)
System Reactive Energy (kVARh)	Individual Phases Reactive Energy (kVARh)
System Apparent Energy (kVAh)	Individual Phases Reactive Power (kVAR)
System Apparent Power (kVA)	Individual Phases Apparent Energy (kVAh)
System Displacement Power Factor (dPF)	Individual Phases Apparent Power (kVA)
System Apparent Power Factor (aPF)	Individual Phases Apparent Power Factor (aPF)
Average Current (Amps)	Individual Phases Displacement Power Factor (dPF)
Average Line to Line Voltage (Volts)	Individual Phases Current (Amps)
Average Line to Neutral Voltage (Volts)	Individual Phases Line to Neutral Voltages (Volts)
Multiple Meters External Data Synchronization	Individual Phases Line to Line Voltages (Volts)

Ordering Information

for Setra Power Patrol

S	P	S	2	4	–	☐	–	☐

SPS24 - Setra Power Squad 24

Communication Port
E - Ethernet
S - Serial

Enclosure
E - Enclosure
N - No Enclosure

Phone: 800-257-3872 • Fax: 978-264-0292 • **www.setra.com**