

PACKETPOWER

Easily monitor high value circuits

Packet Power has revolutionized circuit monitoring by adding instant wireless connectivity to compact easy to install power monitors.



FEATURES

- ▶ Accurate real time power measurements of any three-phase or single-phase circuits up to 480V AC
- ▶ Monitor circuits from 10 to 5000A with split core or solid core CTs
- ▶ Self-configuring and self-optimizing wireless network simplifies connectivity
- ▶ The small size and lack of data networking wires makes installation easy and provides flexibility to monitor anywhere
- ▶ Purpose built wireless technology proven to work in data centers and critical facilities around the world
- ▶ Access monitoring data instantly using Packet Power EMX Energy Portal
- ▶ Easily pass data to BMS and DCIM systems that support SNMP or Modbus protocols
- ▶ Works with a full line of power and environmental monitors



EASY INSTALLATION

A compact form factor that installs using a single conduit punch hole and requires no communication wiring.



INSTANT INFORMATION

View your energy use online instantly on the EMX Energy portal or export to any BMS or DCIM.



RETROFIT OR NEW BUILD

Split core current transformers avoid disruption of circuits



SELF CONFIGURING WIRELESS NETWORK

New monitors automatically join the wireless network. No IT expertise or resources are required.



SCALABLE

Network automatically adapts to a few or few hundred devices with new monitors automatically joining the network



ECONOMICAL

Less installation time, less IT resources and affordable ready to use monitoring add up to lower total cost.

From installation to monitoring in minutes

- 1 Install power monitor on any circuit in minutes



- 2 Monitors automatically join the wireless network



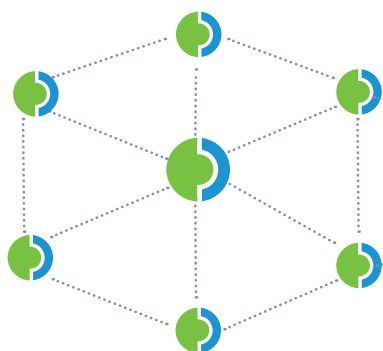
- 3 Access energy data instantly without programming



A Smarter Network Specifically for Power Monitoring

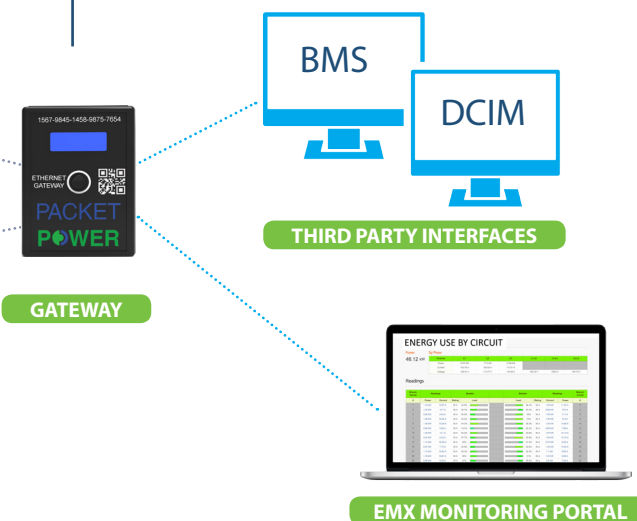
SELF CONFIGURING MESH NETWORK AUTOMATES INSTALLATION

The Gateway automatically detects and configures new monitoring devices, seamlessly adding them to the network. The monitors communicate via a mesh network allowing the signal to find the optimal path to the Gateway through any nearby monitors. This robust and resilient technology results in a wireless network that is as reliable as a wired network. Add Gateways to expand capacity or provide redundancy.



USE YOUR MONITORING SYSTEM OR OURS

Data can be viewed using the EMX portal, or sent via SNMP or Modbus TCP/IP to most Building Management Systems or DCIMs. The network is also compatible with any wireless monitoring device from the Packet Power monitoring family.



Instant Data - No Programming

All the benefits of power monitoring without the cost and complexity.

Once your monitor automatically connects to the network, you can view your energy data using the Packet Power's EMX Energy Portal. Unlike legacy monitoring systems, no programming or configuration is needed. Information automatically appears in an easy to use intuitive format.

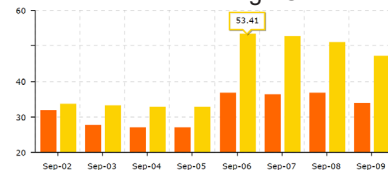
Energy Use per Circuit

Power	by phase						
46.12 kW	Channel	L1	L2	L3	L1+2	L1+3	L2+3
	Power	15.87 kW	17.5 kW	12.95 kW			
	Current	143.78 A	158.83 A	117.51 A			
	Voltage	108.44 V	113.77 V	110.38 V	192.46 V	189.5 V	194.13 V

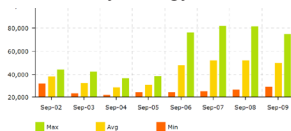
Readings

Branch Circuit	Readings				Breaker	Breaker	Readings				Branch Circuit
	#	Power	Current	Rating			Load	Load	Rating	Current	
1	1.42 kW	13.07 A	30 A	43.8%			38.4%	30 A	1.32 kW	11.52 A	2
3	1.22 kW	10.7 A	30 A	35.7%			25.4%	30 A	0.85 kW	7.61 A	4
5	0.89 kW	8.04 A	30 A	26.8%			39%	30 A	1.28 kW	11.7 A	6
7	1.08 kW	10.36 A	30 A	34.5%			43%	30 A	1.39 kW	12.9 A	8
9	1.48 kW	13.29 A	30 A	44.3%							
11	0.86 kW	5.83 A	30 A	19.4%							
13	1.36 kW	12.1 A	30 A	40.3%							

Peak and Average Current



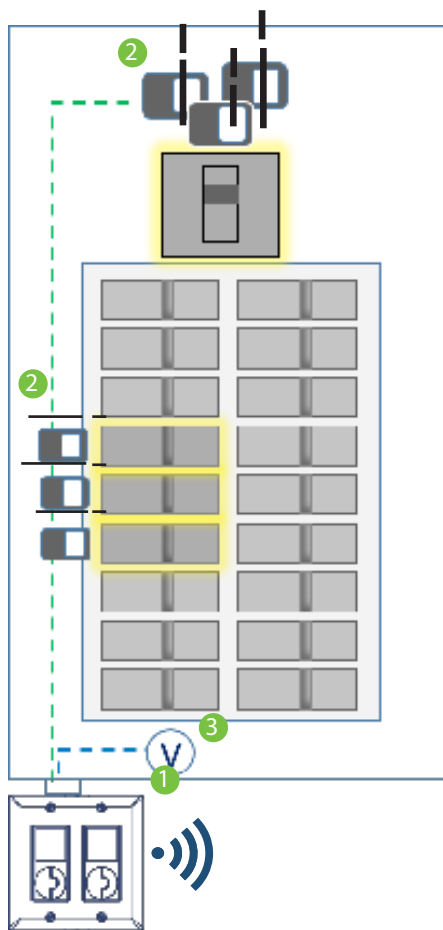
Daily Energy Use



EMX FEATURES

- ▶ Data is instantly available without programming
- ▶ Easy access to real-time and historical energy information
- ▶ Highly flexible reporting
- ▶ Easily define and manage real-time alerts even in the largest facilities
- ▶ Supports multiple facilities
- ▶ Safely and selectively share usage information with other interested parties
- ▶ Fraction of the cost of traditional systems without compromising features

Designed for Quick Installation

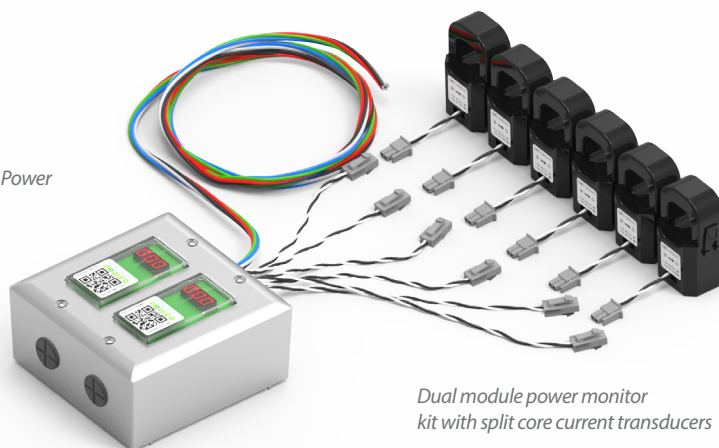


Installs in Minutes: The Packet Power wireless power monitor is designed for quick and easy installation. Systems are available for single circuits all the way up to 14 three phase or 42 single phase circuits.

INSTALLATION STEPS

- 1 Install the meter module using a single standard knock-out
- 2 Place the CTs on the relevant circuits
- 3 Connect the voltage source
- 4 Data transmission begins

Wireless Power Monitor



Dual module power monitor kit with split core current transducers

Circuit Monitor Models



One to four monitor systems

Monitors are housed in standard gang boxes allowing installation using standard 3/4" threaded conduit holes (metric conversions available). One, two, three and four monitor configurations are available. that can monitor one to 12 circuits.



Six to 14 monitor systems

Larger installations can use the six, nine or 14 monitor slim line enclosures and can monitor from six to 42 circuits.

COMMUNICATIONS

Operating frequency	860 to 930 MHz and 2.4 GHz (frequencies vary by region)
Wireless protocol	Frequency hopping self-configuring load-balancing mesh
Wired network protocol	SNMP and Modbus TCP/IP protocols
Firmware updates	Wireless
Typical transmission range	10 to 30 meters indoors between any two devices in mesh network
Antenna	Fully enclosed, fixed configuration
Monitor to Gateway ratio	Up to 150 monitors per Gateway with unlimited Gateways per site
Multi-site support	Yes
Encryption	128-bit

ENVIRONMENTAL

Operating temperature	-7° to 75°C (20° to 167°F)
Operating humidity	5% to 95% non-condensing
Water and dust resistance	Indoor applications
Maximum operating altitude	2,000 meters (6,600 feet)
Power usage	Monitor: 0.6 W

POWER MONITOR

Circuits Monitored	1 x 3 phase circuit or 3 x single phase circuits (L-L / L-N) per monitor, 1-9 monitors per enclosure
LED status indicators	Red / Orange Power / Status (Red/Orange); Communication (Green)
Local display	3 Digit LED (cycles Amps, Volts, Watts by phase) ¹
Monitored Points	Voltage (V), Current (A), Power (W), Energy (Wh), Apparent Power (VA), Power Factor (PF), Frequency (Hz), all measurements +/- 1%, Temperature (+/-2°C), THDI, THDV
Monitored Voltage / Input Voltage	100-480V AC Single Phase (L-L, L-N), Three Phase (Wye, Delta), (50/60 Hz)
Accuracy	±1.0% (0.5% available)
Current Transducers	30-5,000A; solid core and split core versions
Certifications	UL, CE, FCC and others

POWER MONITOR MODELS

Model	1 Module	2 Module	3 Module	4 Module	6 Module	9 Module	14 Module
3 Phase Circuits Monitored (max.)	1	2	3	4	6	9	14
Single Phase Circuits Monitored (max.)	3	6	9	12	18	27	42
Size (L" x W" x H")	4.5 x 2.8 x 2.7	4.5 x 4.5 x 2.7	6.4 x 4.5 x 2.7	7.2 x 4.5 x 2.7	11.0 x 10.0 x 2.0	11.0 x 14.0 x 2.0	23.0 x 9.0 x 3.0
Form Factor	Gang Box	Gang Box	Gang Box	Gang Box	Slim Line Enclosure		

Note: Each module can monitor a single three phase circuit or three single phase L-L or L-N circuits.

CURRENT TRANSDUCER MODELS

Solid Core (Amps Max) 30, 75, 100, 200, 400; standard - other current ratings available
 Split Core (Amps Max) 30, 75, 100, 200, 400, 600, 800, 1200, 1500, 2000, 2500, 3000, 4000, 5000
 Consult factory for current transducer specifications.

Circuit Monitoring Applications



HVAC



MULTI-TENANT



BRANCH CIRCUITS



SWITCHGEAR

Packet Power, 2716 Summer St. NE, Minneapolis, MN, 55413 USA
 Tel: 877-560-8770 – Fax: 866-324-2511
www.packetpower.com

