# PACKETPOWER

## Cost effectively monitor any critical device or system

Packet Power offers a range of meters that support from 1 to 8 current sensors and are linepowered on circuits up to 600V. Choose from solid core, split core or coil sensors from 15 to 10,000 amps. Systems can be shipped fully configured and ready to install to greatly reduce installation time and cost.

## Monitoring Made to Measure

Match a metering solution exactly to your needs



### Comes pre-configured for:

- Line-powered single / three-phase submeter
- Ships fully assembled and ready to install
- Wide range of current sensor types and sizes
- Multiple enclosure types
- Automatic topology detection and instant wireless communications
- Designed and built in the USA

## Monitoring applications

Panelboard input feeds

Select panelboard circuits

HVAC, Generators and high energy loads

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Existing switchgear

Tenant submetering

Data Center PUE

# Packet Power's Wireless Power Monitor



MP480 in NEMA 4 6x6 enclosure

- Full power or current-only monitoring
- Fully configured and assembled or just the monitor ready for field configuration
- Select the exact components you need
- Enclosure
- CT type, size and amperage
- Fusing
- Highly compact
- Wireless firmware updates
- Net metering capable

Access data instantly from the EMX Energy Monitor cloud service or from existing monitoring applications using SNMP, Modbus TCP/IP, Ethernet/IP, Ethernet/IP, BACnet/IP, MTConnect, or MQTT.



## **Current Transformers**

### Split Core CTs

Inside Diameter	Rated Amperage
10 mm	15, 30, 50
16 mm	100
24 mm	100, 200, 300
36 mm	200, 300, 400, 600
50 x 50 mm	400, 600, 800
75x125 mm	300, 600, 800
150x150 mm	800, 1000, 1200, 1600, 2000, 3000, 4000

Additional current ratings available

#### **Rogowski Coils**

Inside Diameter	Coil Length	Typical Amperage
68 mm	250 mm	100A to 1000A
147 mm	500 mm	400A to 3000A
211 mm	700 mm	1000A to 5000A
306 mm	1000 mm	2000A to 10,000A

### Solid Core CTs

Inside Diameter	Rated Amperage
9 mm	35
15 mm	60
32 mm	200, 400

## Why Packet Power



### Installs easily

- Full configuration and assembly option cuts installation time in half
- No communication cables
- Access date remotely with no programming



## Open

- Compatible with any existing hardware
- Send data to any DCIM or BMS using Modbus TCP/IP, SNMP, Ethernet/IP, BACnet/IP, MTConnect, or MQTT



### **Cost effective**

- Match type and amount of metering exactly to your needs
- Lower installation costs with fully assembled devices
- Fully self-optimizing wireless network lowers ongoing support costs



### Secure

- Unique purpose-built wireless protocol can only be used for monitoring
- Full separation of wireless monitoring and wired data network
- Proven in critical facilities worldwide

## Packet Power Compact Wireless Power Monitor Model

	Input Voltage	Model	Max Full Power CTs	Max Current Only CTs	CT Output	Enclosure Options
MP277					·	
277V power meter						
	100 to 480/277V AC	MP277-3MV MP277-8MV MP277-8RO MP277-3MA MP277-6MA	3 8 8 3 6	- - -	mV mV Rogowski coil mA mA	None DIN Clip Double Deep Gangbox NEMA 4 (6x6 in) Gateway + Meter (9x6 in)
106 x 45 x 40 mm (4.2 x 1.8 x 1.6 in)						
MP480 480V power meter $\mathbf{i}$	480V or 600/347V AC	MP480-3MV	3	-	mV	None DIN Clip NEMA 4 (6x6 in) NEMA 4 (9x6 in) Gateway + Meter (9x6 in)
MC240						
Current meter, powe	er source and CT Interconne	ct Board				
	100 to 240V AC	MC240-6MV MC240-6MA	- -	6 6	mV mA	None NEMA 4 (6x6 in) Gateway + Meter (9x6 in)

71 x 40 x 36 mm (2.8 x 1.6 x 1.4 in)

> For monitoring needs that require more than 8 CTs go to www.packetpower.com/multi-circuit-monitoring

## **Technical Specifications**

### Measurement

Measurements	Full Power: V, A, Ah VA, W Wh, Power Factor, Hz, THDi, THDv, IR pulse output Current Only: A, Ah
Accuracy	± 1.0% (CT dependent); ± 0.5% available
Input voltage	MP277: 100 - 480/277V AC; MP480: 480V or 600/347V AC; MC240: 100-240 AC
Input voltage configuration	LLLN+E, LLL+E, LLN+E, LN+E, LL+E
Current range	15A to 10,000A
Frequency	50/60 Hz

### **Communications**

Operating frequency	860 to 930 MHz and 2.4 GHz (frequencies vary by region)
Wireless network protocol	Frequency hopping self-configuring load-balancing mesh
Wired network protocols	HTTPS to Packet Power EMX running locally or as cloud service; SNMP V1/V2c/V3; TCP/IP; Ethernet/IP; MTConnect; BACnet/IP; MQTT
Firmware updates	Wireless
Typical transmission range	10 to 30 meters indoors between any two devices in mesh network
Antenna	Fully enclosed, fixed configuration
Monitoring unit to gateway ratio	100 devices per gateway with unlimited gateways per site
Multi-site support	Yes
Encryption	HTTPS; optional 128-bit wireless AES
Local display	Volts, Amps, Wh and communications status (varies by model)

### Environmental & Mechanical

Operating environment	0° to 75°C (32° to 167°F); 5% to 95% non-condensing
Water and dust resistance	NEMA 1/IP20 (indoor use); NEMA 4 enclosure available
Power usage	Less than 1W
Certifications	UL listed, CE, FCC Part 15 and other standards

For detailed product specifications, go to: www.packetpower.com/submeter

## Secure Wireless Technology

## Proven in critical facilities worldwide

Packet Power's wireless protocol was designed specifically for critical facilities. The unique protocol is different than WiFi or Zigbee and can only be used for monitoring. It allows for a complete separation of the wireless monitoring network from the wired data network. It is proven to work in data centers and other critical facilities run by major financial services firms, government agencies, educational institutions, telcos and colos worldwide.

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