PACKETPOWER

480V WIRELESS POWER MONITOR

MP480 Model Components and *Monitoring Made to Measure* Specifications

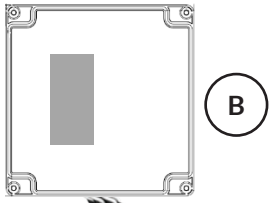
480V WIRELESS POWER MONITOR COMPONENTS

Packet Power's MP480 wireless power monitor can be ordered with just the meter ready for field configuration or fully configured and assembled with a choice of enclosures, power connections and current sensors. All components are purchased separately.

MP480

A

OPTIONAL COMPONENTS



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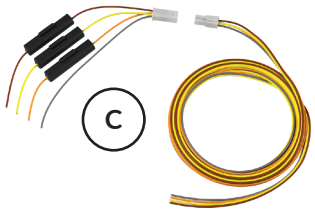


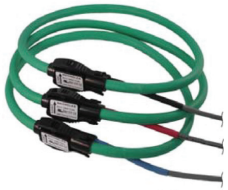
C

D

E1

E2

E3



MP480 COMPONENTS

(A)	Monitor:	480V wireless power monitor
Optional Components		
(B)	Enclosure:	A variety of enclosure options are available including DIN rail clip and NEMA 4 enclosures (see page 4 for options)
(C)	Voltage Disconnect:	18 AWG 600V colored wire connected to a 4-position quick disconnect, 4m length; Optional 500 mA 1000V ceramic inline fuse in clamshell holder on L1, L2, L3; Ground wire (E) run separately
(D)	Split Core CT Leads:	24 AWG 600V twisted pair with quick disconnects that connect to CT tail; 0.5-5m length
(E)	Current Sensors	Up to 3 current sensors of varied amperage and size (see page 5 for options);
	(E1) Solid Core CTs:	Rated amperage: 35A to 400A; mA or mV output; Dimensions vary by amperage
	(E2) Split Core CTs:	Rated amperage: 15A to 4000A, mV output; Dimensions vary by amperage
	(E3) Rogowski Coils:	Rated amperage: 250A to 3000A; Integrator required

MODELS

	Model	Maximum Full Power CTs	CT Output	Voltage Options
	MP480-3MV	3	mV	480V AC Delta (LLL) 600/347V AC Wye *Source for auxiliary power to the meter (optional):* 120-240V AC 1Φ (LN) 200-230V AC 1Φ (LL) 277V AC 1Φ (LN) 347V AC 1Φ (LN) 480V AC 1Φ (LL) 50/60 Hz Frequency

MONITORING MADE TO MEASURE

"Monitoring made to measure" means we fully configure each power monitor to meet your exact needs. If you'd like to cut your installation costs in half by having Packet Power configure and assemble your wireless power monitor, here's what we need to know.

- Voltage input service type (source power) and power source for meter (if different)
- Need for inline fuses on the voltage disconnect
- Type of enclosure
- Desired wire exit location
- Number of circuits being measured
- Type and number of current transformers (CTs) and CT amperage(s)

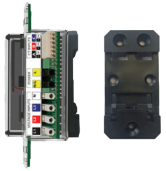
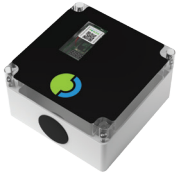
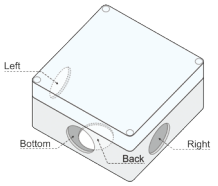
Use the Configuration worksheet on page 6 to capture your needs.

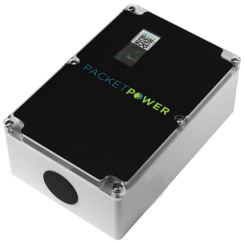
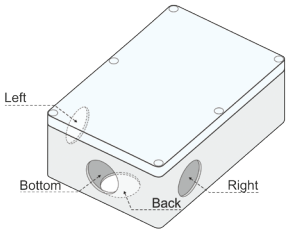
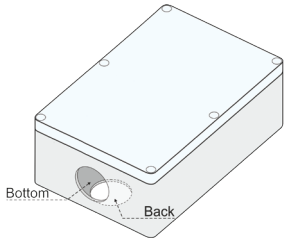
Enclosures, CTs and voltage disconnects are purchased separately from the meter. Use the Configuration worksheet on page 6 to capture your needs. Contact sales@packetpower.com with questions or if you need a different option than outlined in the rest of this document.

TECHNICAL SPECIFICATIONS

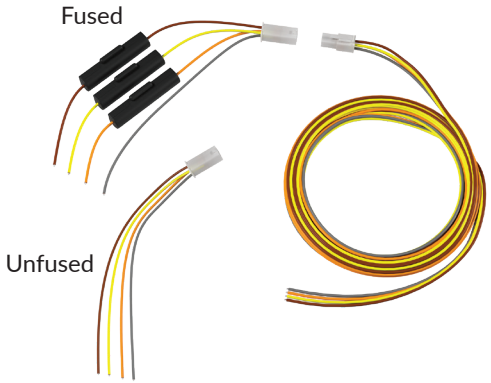
Measurements	V, A, VA, W, Wh, Power Factor, Hz, THDi, THDv, IR pulse output Accuracy: ±1.0% (CT dependent); ±0.5% available
Fusing	Optional 500 mA 1000V ceramic fuse in clamshell holder
Current Range	Up to 4000A
Frequency	50/60 Hz
Monitor Dimensions	Varies by enclosure size (see page 4 for details)
Monitor Weight	Varies by enclosure size
Mounting	Varies by enclosure
Available Wire Exits	Varies by enclosure size (see page 4 for details)
Voltage Disconnects	18 AWG 600V colored wire with 600V quick disconnects; optional inline fuses (see page 4 for details)
Split Core CT Leads	24 AWG 600V twisted pair; quick disconnect; 0.5-5m length
Operating Environment	0° to 75°C (32° to 167°F); 5% to 95% non-condensing
Water and Dust Resistance	Indoor use for most enclosures, NEMA 4 available
Power Usage	1W
Wireless Network Protocol	Frequency hopping self-configuring load-balancing mesh; Operating frequency 860 to 930 MHz and 2.4 GHz (frequencies vary by region)
Wired Network Protocols	HTTPS to Packet Power EMX running locally or as cloud service; SNMP V1/V2c/V3; Modbus 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
Monitor to Gateway Ratio	Up to 100 monitoring units per Ethernet Gateway with unlimited Gateways per site
Local Display	Volts, Amps and communication status
Made in USA	Yes
Product Warranty	1 year
Certifications	UL 508A and CE, FCC and other country communications standards

ENCLOSURE OPTIONS

Enclosure Type	None	DIN Clip	NEMA 4
			 
Dimensions	106 x 45 x 40 mm (4.2 x 1.8 x 1.6”)	Compatible with 35mm DIN rail	160 x 160 x 92 mm (6.3 x 6.3 x 3.6”)
Material	Lexan	Nylon	Polycarbonate, NEMA 4 / IP67 available
Wire Exits	NA	NA	1” NPT (1.375” / 35 mm dia) hole (bottom, top, back, left or right)

Enclosure Type	Meter + Rogowski Coils	Gateway + Meter
	 	(includes top vent)  
Dimensions	241 x 160 x 96 mm (9.5 x 6.3 x 3.8”)	241 x 160 x 96 mm (9.5 x 6.3 x 3.8”)
Material	Polycarbonate, NEMA 4 / IP67 available	Polycarbonate, NEMA 1
Wire Exits	1” NPT (1.375” / 35 mm dia) hole (bottom, back, left, or right)	Bottom or back exit One 1” NPT opening for CT and voltage leads and one 3/8” diameter opening for Ethernet Cable

VOLTAGE DISCONNECTS



Voltage disconnects (“VDC”) make it easy to stop power to the meter. The VDC consists of a 600V disconnect between two sets of 18 AWG 600V wire leads. Optional inline fuses are available on the meter (shorter) end. Can use either one or two VDCs (one for reference voltage and one for the meter’s power source).

The VDC consists of a 200mm portion that connects to the meter and a 4m portion that connects to the power source. The quick disconnects are keyed to prevent incorrect connections. The 4m side of the VDC can easily be trimmed at installation.

NEMA enclosures include a 6-position terminal block. This makes it possible to run up to 10 AWG wire from the terminal block to the voltage source. If using a gangbox, V source wires run directly to the meter and are limited to 18 AWG.

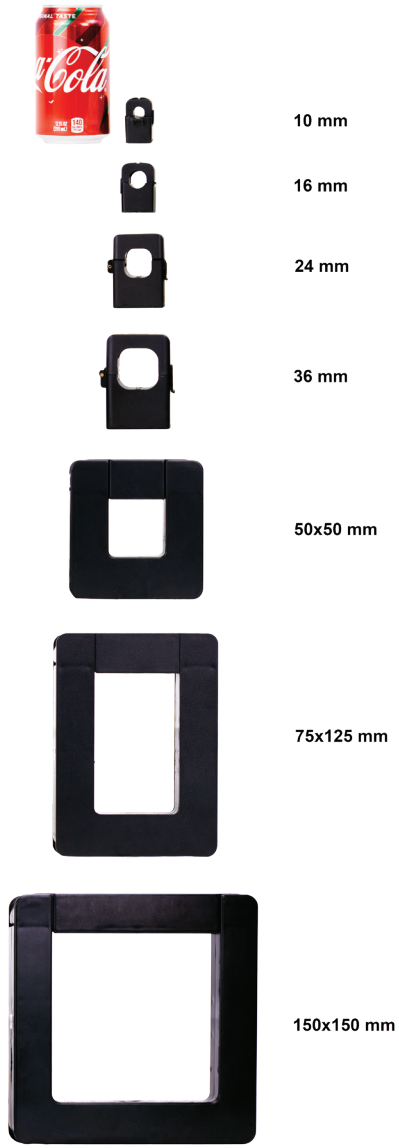
Optional Fuse	500 mA 1000V ceramic fuse in clamshell holder
Wire	18 AWG 600V colored wire
Wire Options	2-wire, 3-wire or 4-wire VDCs available in US or IEC wire colors
Meter end	200mm length that connects to the power meter; includes optional 5A fuse, ends in quick disconnect
Source end	4m length that starts with quick disconnect
Quick Disconnects	600V nylon resin male pin and female socket disconnects

SOLID & SPLIT CORE CTs

CT Type	Rated / Max Amperage	Inside Diameter	External Dimensions (H x W x D)	CT Output	CT Tail	CT Lead Length
Solid core	35A / 35A	9 mm	22 mm outside dia x 9 mm thick	mA or mV	200 mm	NA
Solid core	60A 72A	15 mm	30 mm outside dia x 9 mm thick	mA or mV	200 mm	
Solid core	200A / 240A / 400A / 480A	32 mm	69 mm outside dia x 20 mm thick	mV	2000 mm	
Split Core	15A / 18A	10 mm	39 x 23 x 26 mm	mV	100 mm	0.5 meters
Split Core	30A / 36A	10 mm	39 x 23 x 26 mm	mV	100 mm	
Split Core	50A / 63A	10 mm	39 x 23 x 26 mm	mV	100 mm	
Split Core	100A / 120A	16 mm	44 x 31 x 33 mm	mV	500 mm	
		24 mm	65 x 46 x 35 mm		500 mm	
Split Core	200A / 240A	24 mm	65 x 46 x 35 mm	mV	500 mm	
		36 mm	85 x 37 x 42 mm		500 mm	
Split Core	300A / 360A	24 mm	65 x 46 x 35 mm	mV	500 mm	1 meter
		36 mm	85 x 37 x 42 mm		500 mm	
		75 x 125 mm	201 x 146 x 16 mm		500 mm	
Split Core	400A / 480A	36 mm	85 x 37 x 42	mV	500 mm	1.5 meters
		50 x 50 mm	125 x 120 x 30 mm		500 mm	
Split Core	600A / 720A	36 mm	85 x 37 x 42 mm	mV	500 mm	2 meters
		50 x 50 mm	125 x 120 x 300 mm		500 mm	
		75 x 125 mm	201 x 146 x 16 mm		500 mm	3 meters
Split Core	800A / 960A	50 x 50 mm	125 x 120 x 30 mm	mV	500 mm	5 meters
		75 x 125 mm	201 x 146 x 16 mm		500 mm	
		150 x 150 mm	225 x 219 x 30 mm		500 mm	
Split Core	1000A / 1200A	150 x 150 mm	225 x 219 x 30 mm	mV	500 mm	
Split Core	1200A / 1440A	150 x 150 mm	225 x 219 x 30 mm	mV	500 mm	
Split Core	1600A / 1920A	150 x 150 mm	225 x 219 x 30 mm	mV	500 mm	
Split Core	2000A / 2400A	150 x 150 mm	225 x 219 x 30 mm	mV	500 mm	
Split Core	3000A / 3600A	150 x 150 mm	225 x 219 x 30 mm	mV	500 mm	
Split Core	4000A / 4800A	150 x 150 mm	225 x 219 x 30 mm	mV	500 mm	

ROGOWSKI COILS (require Integrator)

CT Type	Max Conductor Diameter	Coil Length	Amperage	Coil Lead
Flexible Coil	48 mm (1.9")	150 mm	250A to 3000A	2.4 meters
Flexible Coil	81 mm (3.2")	300 mm		
Flexible Coil	127 mm (5.2")	450 mm		
Flexible Coil	178 mm (7.5")	600 mm		
Flexible Coil	279 mm (11.5")	900 mm		



CTs sold separately

DESIGN YOUR MP480 480V WIRELESS POWER MONITOR

The MP480 wireless power monitor can be purchased by itself, with any of the available optional components, or fully configured and assembled.

☐ **Ready for Field Configuration** Contact support@acketpower.com for wiring instructions.

☐ **Monitoring Made to Measure** Meter fully configured, fully assembled in the enclosure, and tested prior to shipping.

PRIMARY VOLTAGE
☐ 480V AC Delta (3-wire LLL + E)
☐ 600/347V AC Wye (4-wire + E)
Fusing: ☐ Fused ☐ Not Fused
Length: ☐ 4m ☐ _____ m

OPTIONAL METER POWER SOURCE
(Power to the meter can optionally be provided from a separate source)
☐ None (power from reference voltage)
☐ 120-240V AC 1 Phase (2-wire LN + E)
☐ 200-230V AC 1 Phase (2-wire LL + E)
☐ 277V AC 1 Phase (2-wire LN + E)
☐ 347V AC 1 Phase (2-wire LN + E)
☐ 480V AC 1 Phase (2-wire LL + E)
Fusing: ☐ Fused ☐ Not Fused
Length: ☐ 4m ☐ _____ m

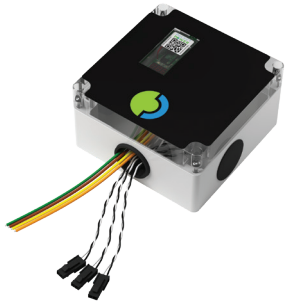
CURRENT SENSORS (see page 5 for options)			
CT Type:	☐ Solid Core	☐ Split Core	☐ Rogowski Coil
CT Amperage:			
CT Inside Diameter:			
CT Qty:			
Split Core CT Lead Length:	☐ 0.5m ☐ 1m ☐ 1.5m ☐ 2m ☐ 3m ☐ 5m ☐ _____ m		

ENCLOSURE & WIRE EXIT (see page 4 for options)				
☐ None	NA			
☐ DIN Clip	NA			
☐ NEMA 4 (6x6)	☐ Left	☐ Right	☐ Bottom	☐ Back
☐ Meter + Rogowski Coils (9x6)	☐ Left	☐ Right	☐ Bottom	☐ Back
☐ Gateway + Meter (9x6)	☐ Bottom	☐ Back		

Customer _____

Location _____

Quantity _____



Monitoring Made to Measure MP480-3MV

- NEMA 4 (6x6) enclosure with bottom wire exit
- 480V Delta fused 4m voltage disconnect
- Meter configured for 200A split CTs
- Three 1m split core CT leads with quick disconnects

COMMENTS

MP480 480V WIRELESS POWER MONITOR ORDERING INFORMATION

Packet Power's MP480 wireless 480V power monitor can be ordered fully configured to each customer's needs. The components selected in the Configuration worksheet (page 6) result in a unique product number. All components including enclosure, CTs, leads and voltage disconnects are sold separately.

Example:	Measure 3 circuits, 480V AC Delta reference power, meter powered by 120-240V Single phase, 3x3000A Rogowski coils (come with a 2.4m coil lead), Meter + Rogowski Coil (9x6) enclosure with bottom wire exit.
Product Number:	MP4803MV-D1-S0-30X3-N2B

Model	Primary Voltage	Optional Meter Power	Amperage	CT Qty	CT Lead	Enclosure	Wire Exit
MP4803MV	D1 = 480V AC Delta (3-wire LLL + E) Y3 = 600/347V AC Wye (4-wire + E)	Omit = None (power from reference voltage) S0 = 120-240V AC 1 Phase (2-wire LN + E) S1 = 200-230V AC 1 Phase (2-wire LL + E) S2 = 277V AC 1 Phase (2-wire LN + E) S3 = 347 AC 1 Phase (2-wire LN + E)	015, 030, 035, 050, 060 100, 200, 300 400, 600, 800 10X = 1000, 12X = 1200 16X = 1600, 20X = 2000 30X = 3000, 40X = 4000 C = Custom	1-3	H = 0.5M 1 = 1M B = 1.5M 2 = 2M 3 = 3M 5 = 5M C = Custom Omit = None	D0 = DIN only M3 = GW + Meter (9x6) N1 = NEMA 4 (6x6) N2 = Meter + Rogowski (9x6) Omit = None	B = Bottom L = left R = Right X = Back T = Top Omit = None

Please contact sales@packetpower.com with questions or if you have additional customization needs not shown here.