



M850-MP1

MultiPower AC Meter

Main Features:

The M850 MultiPower is a UL recognized, complete 3 phase digital universal metering system in a standard 96 x 96 mm DIN case. It is a cost-effective replacement for traditional panel meters. This multifunction power meter is suitable for low, medium and high voltage control panels, gensets, building management systems, and power management systems.

Now available with BACnet communications protocol

- Complete 1-phase and 3-phase digital universal metering system. Covers a majority of applications without any modifications.
- AC models measure a standard range of 17 different parameters. Easy to use and easy to program from the front panel.
- Free software for monitoring and logging.
- Four, easy to access, front control buttons allow you to scroll up or down through the parameters.
- Non-volatile eeprom memory retains all current ratios, demand time periods and calibration data in power down (power loss) conditions.
- Unique blue LED display is designed to be sunlight readable over a very wide viewing angle. There are 8 levels of user-adjustable brightness.
- Two communications protocols: RS485 (Modbus RTU) and BACnet MS/TP. Communicate with up to 31 other meters or controllers.
- Plug-in module options for RS485 (Modbus protocol) and pulsed output.
- 8 AC models and 1 DC model provide a full range of measuring capabilities.



PARAMETERS MEASURED

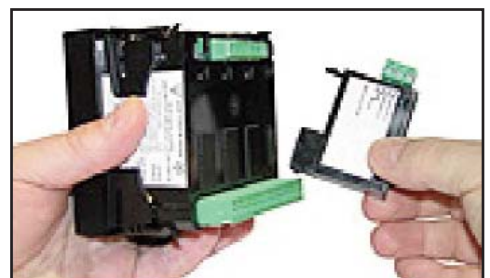
Phase Voltage (V)	Reactive Power (VAR)	Instantaneous VA Demand
Phase to Neutral Voltage (V)	Apparent Power (VA)	Maximum Amp Demand
Phase Current (I)	Reactive Energy (VARh)	Maximum Watt Demand
Frequency (Hz)	Power Factor (PF)	Maximum VA Demand
Active Power (W)	Instantaneous Amp Demand	Neutral Current
Active Energy (kWh)	Instantaneous Watt Demand	

COMMUNICATIONS VIA PLUG-IN OPTIONS

We'll give you a hand in making communications a 'snap'! Both the RS485 and pulsed output options are versatile plug-in units. They can be purchased with the M850 meter or can be retrofitted, when required. The pulsed output option can be assigned to W.h. or VAR.h.

Two communications protocols are offered: the popular Modbus RTU and BACnet MS/TP. These protocols allow the M850 to be used with PC, PLC, RTU, data loggers and Scada programs.

No one else offers a power meter with BACnet via RS485!



M850-MP1 MultiPower AC Meter



Choose from a variety of M850-MP1 meters for your specific need:

M850-BAC

a standard AC unit with BACnet protocol. The RS485 plug-in module is required for this option.

M850-MPV

measures 3 Phase AC L-L and L-N Volts only

M850-MPA

measures 3 Phase AC Current and maximum demand only

M850-MP1-FC

a standard AC unit calibrated for 400Hz

M850-THD

a standard AC unit measuring Total Harmonic Display of voltage and current inputs

M850-MPH

a standard AC unit with added Hours Run measurement

M850-MKW

a standard AC unit measuring Amps and Watt hours

M850-MVM

A standard AC unit configured with 330mV, AC inputs instead. The voltage is usually provided by clamp-on miniature current transformers which are ideal for retrofit applications.

System Types

The M850-MP1 can be used on the following measured AC systems without any changes apart from wiring and programming configuration:

Single Phase	3 Phase 3 Wire Balanced	3 Phase 4 Wire Balanced
Single Phase 3 Wire	3 Phase 3 Wire Unbalanced	3 Phase 4 Wire Unbalanced

General Specifications

Accuracy

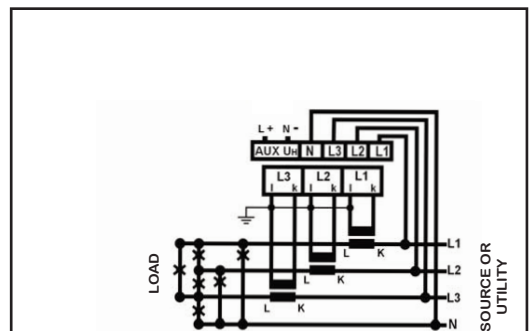
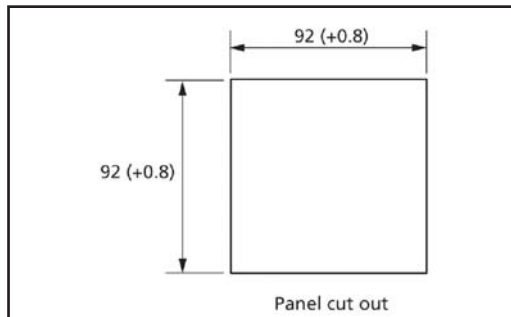
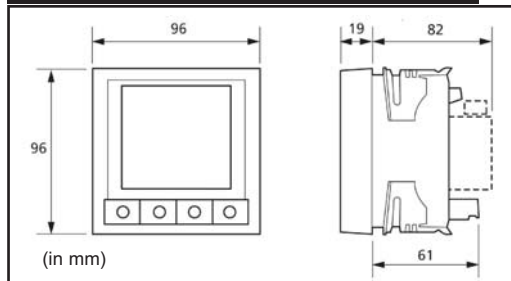
Rated Un
Un Overload
Burden
Rated In
Input Overload
Input Burden
Frequency
Auxiliary Voltage

User-Adjustable Display

Storage Temperature
Working Temperature
IP Rating
Approval

Volts/Amps: 0.5% of reading \pm 2 digits
Frequency: 0.1Hz \pm 1 digit
Active Power: 1% of reading \pm 2 digits
Reactive Power: 1% of reading \pm 2 digits
Apparent Power: 1% of reading \pm 2 digits
Power Factor: 1% of range
Energy: IEC 1036, Class I
 28V to 330V (L-N) and 48V to 600V (L-L)
 800V continuous
 0.5VA per phase
 0.5 to 6 amp via CT
 10 x In for 1 second
 0.5VA per phase
 45-65Hz; 400Hz
 100 to 440V, AC, 19 to 69V, DC, 100 to 420V, DC
 45 to 65Hz, Burden <10VA
 Digits: 3 lines 9999; Update time: 1 second
 Brightness: 8 levels of adjustment
 -40°F to +185°F (-40°C to +85°C)
 -4°F to +158°F (-20°C to +70°C)
 IP52; Optional IP65 NEMA 4
 UL (File No. E337752)

Wiring and Connection Diagrams



I = X2 (black) = Grounded
 k = X1 (white)
 L = H2
 K = H1 = faces Source

	Voltage			Current			
	L1	L2	L3	N	L1	L2	L3
1ph	✓	X	X	✓	X	X	
1ph 3W	✓	✓	X	✓	✓	X	
3ph 3W	✓	✓	✓	X	✓	✓	
3ph 4W	✓	✓	✓	✓	✓	✓	
3ph 3W BAL	✓	✓	✓	X	✓	X	
3ph 4W BAL	✓	X	X	✓	✓	X	

Unused voltage terminals are internally connected.
 Secondary of CTs must be connected to earth.



PANEL COMPONENTS & SYSTEMS, INC.
 MAIN OFFICE: Tel.: (973) 448-9400 Fax: (973) 448-1674
 149 Main Street, Stanhope, NJ 07874

Your Local PC&S Distributor:

Additional Offices:

South East:	Charlotte, NC	Phone: (704) 535-3357
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1 800 523-9194 ● www.pc-s.com