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MultiPower Multifunction power meter



MultiPower

The M850 MultiPower is a complete 3 phase digital universal metering system in a standard 96 x 96 mm DIN case. It can be used on any voltage system with wide range on inputs. The auxiliary supply is a universal supply for both AC & DC volts. The one unit covers the majority of application without any modification required, which makes M850 ideal for stocking.

Parameters Measured

- * Phase Voltage (V)
- * Phase to Neutral (V)
- * Phase Current (I)
- * Frequency (Hz)
- * Active Power (W)
- * Reactive Power (Var)
- * Apparent Power (VA)
- * Active Energy (W.h)
- * Reactive Energy (Var.h)
- * Power Factor (P.F.)
- * Instantaneous Demand Amp
- * Instantaneous Demand Active Power
- * Instantaneous Demand Apparent Power
- * Maximum Demand Amps
- * Maximum Demand Active Power
- * Maximum Demand Apparent Power
- * Neutral Current

Accuracy

Volts & Amps 0.5% of reading ± 2 digits

Frequency $0.1Hz \pm 1$ digit

Active Power 1% of reading ± 2 digits Reactive Power 1% of reading ± 2 digits Apparent Power 1 % of reading ± 2 digits

Power Factor 1% of range Energy IEC 1036 class 1

System Types

The M850-MP1 can be used on the following measuring systems without any changes apart from wiring configuration.

Single Phase,

Single Phase 3 wire

- 3 Phase 3 Wire Balanced Load
- 3 Phase 4 Wire Balanced Load
- 3 Phase 3 Wire Unbalanced Load
- 3 Phase 4 Wire Unbalanced Load

Controls & Programming

The four front control buttons are used for scrolling up or down through the parameters being measured and displayed. These buttons also allow programming of different Current and Voltage transformer ratios, Demand times, Baud rates etc.

Display

The unique blue LED display is designed to be read in a variety of conditions including bright sunlight, wide viewing angle, long distance. There are 8 levels of user adjustable brightness.

Plug in options

Both the RS485 option and pulsed output options are versatile plug in units that can be purchased with the MultiPower meter or can be retrofitted when required



Communications

The MultiPower has the plug in option of RS485 communications. The RS485 enables remote reading of up to 32 MultiPowers on a 2 wire bus using the Modbus protocol.

The Modbus protocol allows the MultiPower to be used with PC, PLC, RTU, Data loggers and Scada programs.

Pulsed Output

An option of a plug in pulsed output via a relay is offered. The pulsed output can be assigned to W.h, and VAr.h

Memory

Current ratios, demand time periods and calibration data is stored in non volatile eeprom memory. In power down (power loss) conditions this data is retained.

General Specification

INPUT

Rated Un 28V to 330V L.N. 48V to 570V L.L.

Overload 800V continuous

Burden 0.5VA

Rated In 0.5 to 6 Amp via C.T.

Overload 10In for 1 sec Burden 0.5VA per phase

Frequency 45/65Hz

Auxiliary Voltage

100 to 440V AC 100 to 420V DC 45 to 65Hz, burden < 10VA

Insulation

Installation category III (480 VAC ph/ph)

Degree of pollution 2

Rated impulse withstand voltage IEC 60947-1-V imp: 4kV

Meters Front Class II
Electrical security IEC 61010-1

Electromagnetic compatibility

Immunity to:

electrostatic discharges: IEC 61000-4-2-Level III radiated radio-Hz fields: IEC 61000-4-3-Level III electrical fast transient/brusts: IEC 61000-4-4-Level III impulse waves: IEC 61000-4-5-Level III conducted disturbances: IEC 61000-4-6-Level III

voltage dips & short interruptions: IEC 61000-4-11

Emissions to:

Conducted and radiated CISPR11-Class A

Approvals

UL Pending

Display

Digits 3 lines 9999
Size 14.2 mm 7 segment

Update time 1 second

Options

1. Plug in RS485 Modbus module

Baud Rates 38400, 19200, 9600, 4800, 2400

Parity Odd, even, No Parity

Address 1 to 247

2. Plug in Pulsed Output Relay module

W.h or VAr.h

Environmental

Working Temperature 0 to +60 deg C
Storage Temperature -40 to +85 deg C
Relative Humidity 0-95% non condensing
Shock 30G in 2 planes

Enclosure

Standard DIN case
Panel mount
Panel cutout

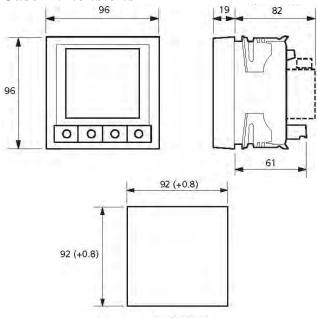
DIN 96x96x80mm
Via 4 retaining brackets
92 + 0.8 mm x 92 + 0.8 mm

Material Black Polycarbonate

Terminals Current 6mm²
All others 2.5mm²

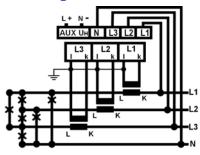
IP rating front IP52 / Nema
IP rating case IP30 / Nema
Weight 0.25kg / 0.66lb

Case Dimensions



Panel cut out

Connection Diagrams



	Voltage				Current		
	L1	L2	L3	z	L1	L2	L3
1ph	>	×	×	۶	>	×	×
1ph 3W	>	>	×	۶	>	۶	×
3ph 3W	>	>	>	×	>	×	>
3ph 4W	>	>	>	>	>	>	>
3ph 3W BAL	>	>	>	×	>	×	×
3ph 4W BAL	~	×	×	1	1	×	×

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

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