# multitek



# **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 Frequency Active Power Reactive Power Apparent Power Power Factor Energy 0.5% of reading  $\pm 2$  digits 0.1Hz  $\pm 1$  digit 1% of reading  $\pm 2$  digits 1% of reading  $\pm 2$  digits 1% of reading  $\pm 2$  digits 1% of range 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**

INPUTRated Un28V to 330V L.N. 48V to 570V L.L.Overload800V continuousBurden0.5VARated In0.5 to 6 Amp via C.T.Overload10In for 1 secBurden0.5VA per phaseFrequency45/65Hz

# **Auxiliary Voltage**

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

# **Insulation**

Installation categoryIII (480 VAC ph/ph)Degree of pollution2Rated impulse withstand voltage IEC 60947-1-V imp: 4kVMeters FrontClass IIElectrical securityIEC 61010-1

# Electromagnetic compatibility

Immunity to :electrostatic discharges:IEC 61000-4-2-Level IIIradiated radio-Hz fields:IEC 61000-4-3-Level IIIelectrical fast transient/brusts:IEC 61000-4-4-Level IIIimpulse waves:IEC 61000-4-5-Level IIIconducted disturbances:IEC 61000-4-6-Level IIIvoltage dips & short interruptions:IEC 61000-4-11Emissions to:CISPR11-Class A

# **Environmental**

Working Temperature Storage Temperature Relative Humidity Shock

0 to +60 deg C -40 to +85 deg C 0-95% non condensing 30G in 2 planes

# Enclosure

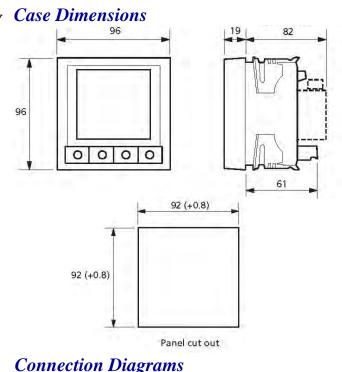
Standard DIN case Panel mount Panel cutout Material Terminals

**IP** rating front

IP rating case

Weight

DIN 96x96x80mm Via 4 retaining brackets 92 + 0.8 mm x 92 + 0.8 mm Black Polycarbonate Current 6mm<sup>2</sup> All others 2.5mm<sup>2</sup> IP52 / Nema IP30 / Nema 0.25kg / 0.66lb



# **Approvals**

**UL Pending** 

# **Display**

Digits	3 lines 9999
Size	14.2 mm 7 segment
Update time	1 second

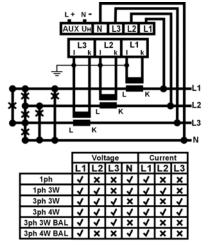
# **Options**

- I. 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



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



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