

EM-09 (20A)  
EM-09 (5A)  
EM-09 (1A)

EM09 is a microcontroller based Portable, Continuous Use, Single Phase Electrical Meter indicating TRMS values of various electrical parameters. It measures 10 parameters on 10 display pages on a large LCD display (20mm). It has a smart socket. It is equipped with 5 keys to view all the parameters and for programming of the meter.

**Features**

- Measures V, A, PF, Hz, KW, KVA, KVar, KWh, KVAh & KVArh
- TRMS Measurement
- Can be used for Continuous Monitoring
- Auto / Manual Scroll Display (User Selectable)
- State of Art Microcontroller Design
- Portable, Easy to Carry and Simple to Use
- LCD Display with Backlight (Green & White)
- RS 485 Port (5kV Isolated) with MODBUS RTU Protocol (Optional)
- POWER MASTER Software for MIS Reports (Optional)

**Application**

- Appliances Testing (AC, Refrigerator, Washing Machine etc.)
- LED Lights Testing
- Can be given to Field Technicians in their Tool Kit
- Can be used by R&D Dept. in Designing Energy Efficient Products
- Energy Audit and Plant Maintenance
- Studying Energy Efficiency of Electrical Equipment
- Building Management Systems
- Power Management
- Product Quality Testing

**Specification**

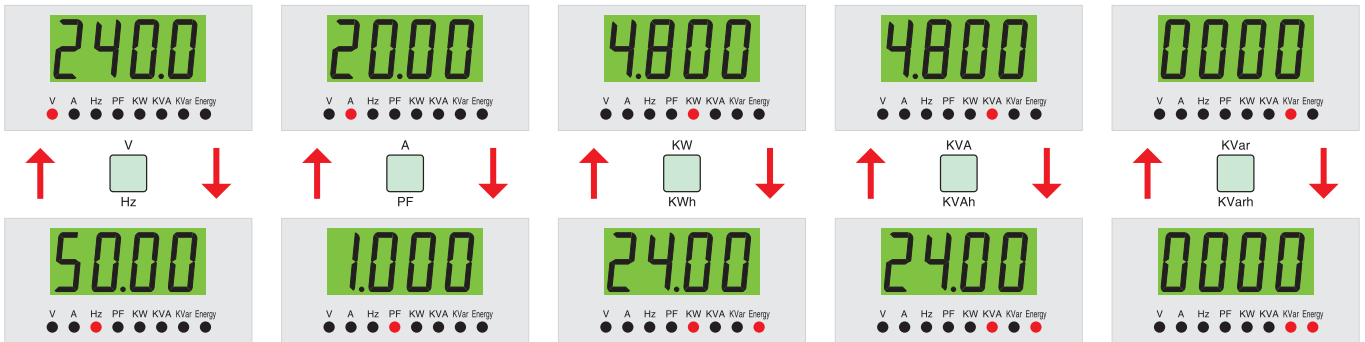
Functions	EM-09 (20A)	EM-09 (5A)	EM-09 (1A)	Accuracy
RMS Voltage	85 ~ 265Vrms			± (0.5% FS + 1 dgt.)
RMS Current	(0.900A ~ 24Arms)	(0.125A ~ 6.0Arms)	(0.025A ~ 1.2Arms)	
Active Power	0.216 ~ 5.300 KW	0.030 ~ 1.590 KW	0.006 ~ 0.318 KW	± (0.5% FS + 1 dgt.) [Cosφ = 0.3 to 1.000]
Apparent Power	0.216 ~ 5.300 KVA	0.030 ~ 1.590 KVA	0.006 ~ 0.318 KVA	± (0.5% FS + 1 dgt.)
Reactive Power	0.216 ~ 5.300 KVAr	0.030 ~ 1.590 KVAr	0.006 ~ 0.318 KVAr	± (1.0% FS + 1 dgt.) [Sinφ = 0.3 to 1.000]
Power Factor	0.3 Lag ~ 1.0 ~ 0.3 Lead			± (0.01 PF + 1 dgt.)
Line Frequency	45.00 ~ 55.00 Hz			± 0.1 Hz
Active Energy (KWh)	0000 ~ 9999 KWh			Class 1
Apparent Energy (KVAh)	0000 ~ 9999 KVAh			
Reactive Energy (KVArh)	0000 ~ 9999 KVArh			

**Note :** KW / KVA / KVAr Measurements require Vrms x Irms x Cosφ / Sinφ ≥ 0.006 (for 1A Meter), ≥ 0.030 (for 5A Meter) and ≥ 0.216 (for 20A Meter)

Model	EM-09 (20A)	EM-09 (1A/5A)
Case / Housing	ABS Case Suitable for Desktop Mounting / Portable / Wall Mounting Application	
Socket / Plug	6A - 20A Multi Socket & 20A Plug	6A
Auxiliary Power Supply	85-265V AC Supplied with 1 Phase Power Cord	
Dimensions (mm)	164 x 100 x 65mm (approx.)	

**Ordering Information :** Model, Input Current (20A or 5A or 1A any one only) & RS485 Port (Optional)

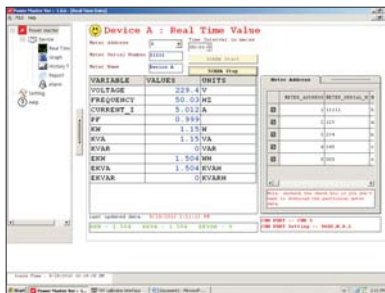
**Display Pages**



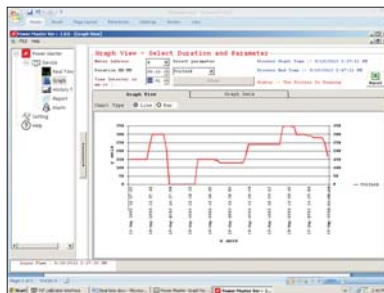
**Applications**



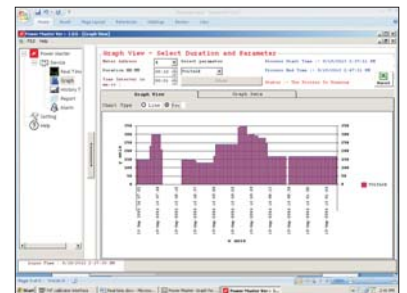
**POWER MASTER Software**



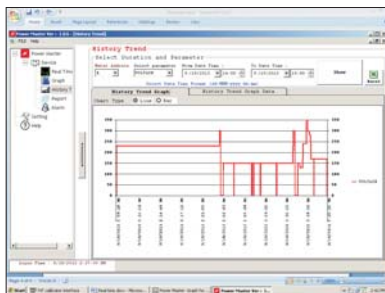
**REAL TIME DISPLAY**



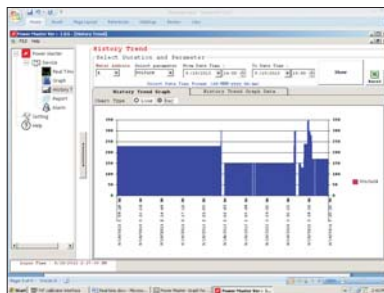
**LINE GRAPH DISPLAY**



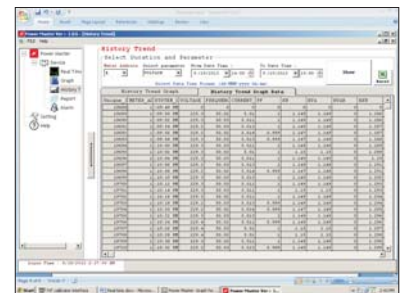
**BAR GRAPH DISPLAY**



**HISTORY TREND - LINE GRAPH DISPLAY**



**HISTORY TREND - BAR GRAPH DISPLAY**



**REPORT VIEW DISPLAY**