ENERGY AUDITING & ACCOUNTING METER AS PER CEA GUIDE LINES - PM130EH+ EAA

- Panel mounted Multi-Function Meter
- Fully compliant as per CEA guide lines for Energy Audit and Accounting Meter
- Serial RS485 for MODBUS, DNP3 and IEC– 60870-5-101
- Optional second port for communication—RS485, RS232 or ETH
- Accuracy class 0.2S and 0.5S

ENERGY AUDIT ING AND ACCOUNTING METER—CEA GUIDE LINES

As per CEA guidelines published on 17th March 2006 and its amendment dated 4th June 2010, Energy Auditing and Accounting meters are to be installed at following locations to facilitate accounting of energy :generated, transmitted, distributed and consumed.

i) Generating Stations :

a) At a point on the generator stator terminals and before tap-off to the unit auxiliary transformers.

b) On each incoming feeder of 3.3KV and above.

c) Low voltage side of each incoming transformer feeder of low voltage (415V) bus.

d) On all high tension motor feeders.

e) On feeders to various auxiliaries.

ii) Transmission Systems :

a) On all incoming and outgoing feeders (if interface meters do not exist)

iii) Distribution Systems :

a) On all incoming feeders (11KV and above).

b) On all outgoing feeders (11KV and above)

c) On sub-station transformers including distribution transformer.

These special meters allow monitoring of energy losses.

PM130EH+

Satec MFM PM130EH+ with optional Ethernet communication module

PM130EH+ EAA

Panel mounted, four quadrant Satec Smart MFM PM130EH+ EAA provides all required electrical parameters as per CEA guidelines with accuracy class 0.2S or 0.5S. The meter comes with one isolated RS485 communication port as standard. This port can be configured for MODBUS RTU, DNP3 or IEC-60870-5-101 communication protocols.

The smart meter also provides option of second communication port. The second communication port can be RS485, RS232 or ETH. The second communication port can be configured for required baud rate and protocol — (MODBUS RTU over RS485 or RS232, MODBUS TCP over ETH , DNP3 over RS485 or ETH, IEC-60870-5-104 over ETH).

PAS software is supplied with each meter. The software enables configuration and operational testing of all meter parameters.

PARAMETERS AS PER CEA GUIDELINES FOR ENERGY AUDING AND ACCOUNTING METERS

Details of parameters in PM130EH+ EAA as per CEA guidelines are provided below :

Sr. No.	Parameter as per CEA guidelines	MODBUS Register Address in PM130EH+ CEA
1	Apparent Power (KVA)	Total KVA—14340
2	Phase wise KW at peak KVA	KW L1– 29958 KW L2—29960 KW L3– 29962
3	Phase wise KVAR (reactive) at peak KVA	KVAR L1– 29964 KVAR L2—29966 KVAR L3– 29968
4	Phase wise Voltage at peak KVA	V1– 29952 V2– 29954 V3-29956
5	Power Down Time	Power off duration—44210
6	Average Power Factor	Total PF—14342
7	Line Currents	L1-13958 L2-13960 L3– 13962
8	Phase Voltages	V1-13952 V2-13954 V3– 13956
9	Date and Time	Date and Time—4352 to 4358
10	Tamper Events Counter	Tamper/ Event Counter—44218

Table-1: Parameters required as per CEA Guidelines for Energy and Audit meters.

All the above required parameters can be read via communication ports of PM130EH+ EAA. Satec power meter PM130EH+ CEA pro-vides all other electrical parameters also as per details provided in the meter communication manual.

Following tamper events are recorded and counted :

- Phase reversal
- Low voltage
- Low Current
- High Voltage Unbalance
- High Current Unbalance

Following parameters are also provided in the meter— Billing Profile log of energy registers each month, Number of MD Resets, Maxi-mum Demands, TOU Maximum Demands , four quadrant reactive energies etc.

For logging of Power Down time and proper TOU energies, it is recommended that TOU module be used along with the meter PM130EH+ CEA. This module also enables time synchronization of the meter RTC via minute pulse.

Meter is password protected. Meter panel can also be sealed if required.

PAS software (supplied with each meter) can be used for downloading parameters logged in the meter.

ADD ON MODULES AVAILABLE WITH SATEC MFM PM130EH+ (OPTIONAL)

4DI+2DO ● 12DI+4DO ● Four Analog Outputs ● TOU ● RS232/RS485 Communication Port ● Ethernet Communication Port ● Profi-bus Communication Port ● GPRS Modem

COMMUNICATION PROTOCOLS AVAILABLE WITH SATEC MFM PM130EH+ (OPTIONAL)

MODBUS RTU over serial ● MODBUS RTU over TCP ● Profibus DP ● DNP3.0 ● IEC-60870-101 ● IEC-60870-104

Innovative Electronics For You

31/1, Ahiripukur Road, Kolkata 700019, West Bengal, India
Call : +91 98313 30473, 98312 06454 | Fax : +91 033 2287 0445
Email : enquiry@mbcontrol.com, service@mbcontrol.com *(for service related quires)* | Website : www.mbcontrol.com