Innovative Electronics For You

M.B. Control & Systems Pvt. Ltd.

PM130EH+ABT

- *Panel mounted Multi-Function Meter*
- *Provides all parameters as per CEA guide lines for Interface (ABT) Meter*
- *Serial RS485 for MODBUS, DNP3 and IEC– 60870-5-101*
- *Optional second port for communication—RS485, RS232 or ETH*
- *Protocols available over ETH—MODBUS TCP, DNP 3.0 and IEC– 60870-5-104*
- *Accuracy class 0.2S and 0.5S*

As per CEA guidelines published on 17th March 2006 and its amendment dated 4th June 2010, Interface (ABT) meters are to be installed by all consumers who have been permitted open access at following locations.

i) **Generating Stations:**

    a)   On all outgoing feeders.

    b)   On each on high voltage side of generator transformers.

    c)   High voltage side of all station auxiliary transformers.

ii) **Transmission and Distribution Systems:**

    a)   At one end of line between the sub-stations of the same license.

    b)   At both ends of line between sub-stations of two different licensees.

    c)   High voltage side of interconnecting transformers.

    d)   Consumers directly connected to inter-State Transmission system who are covered under ABT.

These special meters allow monitoring of exchange of energy between two open access licensees.

Satec MFM PM130EH + ABT with TOU module

PM130EH+ ABT

Panel mounted, four quadrant Satec Smart MFM PM130EH+ ABT provides all required electrical parameters for interface meters (ABT) 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).

TOU Module enables logging and monitoring of TOU parameters. It also enables time synchronization of the meter via its Digital Input using minute pulse (if required).

PAS software is supplied with each meter. The software enables configuration and operational testing of all meter parameters.
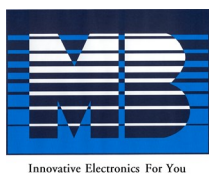
ABT PARAMETERS AS PER CEA GUIDELINES

Details of parameters in PM130EH+ ABTas per CEA guidelines are provided below.

Sr. No.	ABT Parameter as per CEA guidelines	MODBUS Register Address in PM130EH+ ABT
1	Phase wise KW at peak KVA	KW L1– 29958 KW L2—29960 KW L3– 29962
2	Phase wise KVAR (reactive) at peak KVA	KVAR L1– 29964 KVAR L2—29966 KVAR L3– 29968
3	Phase wise Voltage at peak KVA	V1– 29952 V2– 29954 V3-29956
4	KVA Block Demand	Import - 14666 Export—14668
5	KVAR Block Demand	Q1-14652 Q2-14654 Q3-14656 Q4-14658
6	Neutral Current Block Demand	14660
7	Voltage Block Demand (V-Average)	14662
8	Frequency Block Demand (Average Frequency)	14664
9	Power Down Time	Power off duration—44210
10	Cumulative Programming Counter	44216
11	Cumulative Tamper/ Event Counter (POS/NEG Phase reversal, Low Volt/ Amps RT, Low Volt/ Amps Average and HI Volt/ Amps unbalance RT)	44218
12	Cumulative MD Reset Counter (For current billing period)	44220
13	Cumulative MD Reset Counter (For previous billing period)	44222
14	Average Power Factor	Total PF—14342
15	Line Currents	L1-13958 L2-13960 L3– 13962
16	Phase Voltages	V1-13952 V2-13954 V3– 13956
17	Date and Time	Date and Time—4352 to 4358
18	Billing Summary Registers	14760—14779
19	Billing TOU Registers	20096—21519
20	Summary Accumulated Demands	20608– 20627
21	TOU Maximum Demand Registers	20992—22583
22	Summary Maximum Demand Registers	37504– 37533
23	TOU Profile—Daily Energy Register	
24	TOU Profile—Daily Maximum Demand Register	

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

All the above and all other required electrical parameters can be read via communication ports of PM130EH+ ABT.