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EAPL
Energy Meters 2018 - 19

Check on power!

EMS Series- Panel Meters/AC Energy Meters
SNM Series- DC Energy Meters

CPRI Tested


EMS-11
AMMETER


EMS-12
VOLTMETER


EMS-18
VAF METER


EMS-17
DUAL
SOURCE
ENERGY
METER

Multifunction Meter


EMS-03
kwH METER


SNM-01
DC
MULTIFUNCTION
METER 3-CH


EMS-15C
MAXIMUM
DEMAND
CONTROLLER


RR-4
REPEAT RELAY CARD

Measurements
- Measurement of Voltage, Current, Frequency, Power Factor, Phase Angle, RPM, Active Power, Reactive Power, Apparent Power, Active Energy, Reactive Energy, Apparent Energy, Import/Export & Load on hours

Accuracy
- Accuracy class 1.0(As per IEC62053-21)
- 0.5 (As per IEC62053-22)

FEATURES
- High-brightness LEDs display
- CT / PT Ratio Programmable for both primary and secondary
- RS-485 Modbus RTU protocol
- Program settings protected by 4 digits Password
- Protection from dust and water as per IP 51
- Dimension compatible for DIN standard (96x96 mm)

The Energy meter is an Electrical measuring Device, which is used to record the Electrical Energy Consumed over a specific period of time in terms of units and also detect the power factor level. Every small factory, business establishment, shop & office needs Energy Meter to monitor the power consumption. These Energy meters calculate the electrical measured value and communicate them via Modbus RTU in the local network. In this way all the measured data can be c onnected with high level of precision ,thereby improving efficiency of their facilities and enhancing product offering to customers.

EAPL as a leader in electronic instruments has introduced Energy Meters with smart Technology, Visibility, Service and Cost Effective in one.

Digital Panel Meters	
Model	**Description**
EMS-11	Ammeter
EMS-12	Voltmeter
EMS-13	Frequency Meter
EMS-14	Power Factor Meter
EMS-02	VAF / PF Meter
EMS-18	VAF Meter
DC Energy Meter	
SNM-01	3 Channel (80-220V DC)
SNM-02	3 Channel (21-50V DC)
SNM-03	1 Channel(100-1000V DC)
DCM-01	2 Channel(5-1000V DC)

Multifunctional Meters	
Model	**Description**
EMS-01	Multi Function Meter
EMS-03	KWh / PF Meter
EMS-03 a	KWh Meter
EMS-09	Basic / Energy Meter
EMS-17	Dual Source Energy Meter
EMS-15	Maximum Demand Indicator
EMS-15 C	Maximum Demand Controller
EA232/485	RS 232 / 485 Converter

20000879 QM15 ISO 9001:2015

ELECTRONIC AUTOMATION (P) LTD
20, K.H.B Industrial Area, Yelahanka, Bangalore-560 064
Tel.: +91- 80 - 4280 2345 / 2856 7561 / 2856 7562. Fax: 080 - 4280 2346. E-mail: info@eaplindiamail.com
Customer support: Tel.: +91 - 80 - 4280 2323. E-mail: customersupport@eaplindiamail.com

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Selection Chart – EMS Series

	Model	EMS-01	EMS-02	EMS-03	EMS-03a	EMS-09	EMS-11	EMS-12	EMS-13	EMS-14	EMS-15	EMS-15c	EMS-17*	EMS-18
Basic Parameters	L-N Voltage (R, Y, B)	●	●			●		●			●	●	●	●
	L-L Voltage (RY, YB, BR)	●	●			●		●			●	●	●	●
	Ampere (R, Y, B)	●	●			●	●				●	●	●	●
	Frequency	●	●			●			●		●	●	●	●
	PF (R, Y, B)	●				●				●	●	●	●	
	PF (TOTAL)	●	●	●		●				●	●	●	●	
	RPM	●											● #	
	Phase Angle (R, Y, B)	●											●	
	Active Power(R, Y, B)	●				●					●	●	●	
	Active Power(TOTAL)	●		●		●					●	●	●	
	Reactive Power (R, Y, B, TOTAL)	●									●	●		
	Apparent Power (R, Y, B, TOTAL)	●									●	●	●	
	Device ID (Communication Status)	●	●	●		●					●	●	●	
Energy Parameters	Total Active Energy (KWhT)	●		●	●	●					●	●	●	
	Total Reactive Energy Cap (KVrhCT)	●									●	●	●	
	Total Reactive Energy Ind (KVrhIT)	●									●	●		
	Total Apparent (KVAhT)	●									●	●		
	Import Active Energy (KWhI)	●												
	Import Reactive Energy Cap(KVrhCI)	●												
	Import Reactive Energy Ind (KVrhII)	●												
	Import Apparent (KVAhI)	●												
	Export Active Energy (KWhE)	●												
	Export Reactive Energy Cap(KvrhCE)	●												
	Export Reactive Energy IND(KvrhIE)	●												
	Export Apparent (KVAhE)	●												
Demand	RTC Time										●	●		
	Md (FIXED/ SLIDING)										●	●		
	Md time (FIXED/ SLIDING)										●	●		
	Wd (FIXED/ SLIDING)										●	●		
	Rd (FIXED)										●	●		
	ELAPSED TIME(FIXED/SLIDING)										●	●		
Others	Total Load hours (LT)	●												
	Load on Hours (LH)					●					●	●	●	
	Import Load hours (LI)	●												
	Export Load hours (LE)	●												
	Old Total Active Energy (KWhT)	●				●								
	Old Total Reactive Energy Cap(KVrhCT)	●												
	Old Total Reactive Energy Ind (KVrhIT)	●												
	Old Total Apparent (KVAhT)	●												
	Old Total Load hours (LT)	●				●								
	Old Import Active Energy (KWhI)	●												
	Old Import Reactive Energy Cap(KVrhCI)	●												
	Old Import Reactive Energy Ind(KVrhII)	●												
	Old Import Apparent (KVAhI)	●												
	Old Import Load hours (LI)	●												
	Old Export Reactive Energy Cap(KVrhCE)	●												
	Old Export Reactive Energy Ind(KVrhIE)	●												
	Old Export Apparent (KVAhE)	●												
	Old Export Load hours (LE)	●												
	Old Export Active Energy (KWhE)	●												

Only in Generator Mode

Specification (Multi Function Meter)

Auxiliary Supply	
Rated voltage (Aux. Supply)	85 to 270 V AC / DC**
Rated Frequency	50 / 60Hz ± 5% for AC only
Power consumption	< 6 VA / 4W

Input Supply	
Input voltage	3 Phase 4 wire (R,Y,B,N) Range - 415 VAC (-40% to +20%) 110 VAC (-40% to +20%)
Input current	Current inputs (AR, AY, AB) 1A to 5A (to 200%)
Input Frequency	50 Hz, ± 2%
Burden	< 0.2 VA per Volts/Amps input
Accuracy	Class 1 / Class 0.5
Recovery Time	2 sec minimum.

General Specifications	
Communication	RS-485 MODBUS RTU Protocol
Meter Constant	3200 Pulses / KWh 3200 pulses / KVArh
Dimension	**96 X 96 X 117/96 X 96 X 95.5mm (W X H X D)**

Field Configurable features	
CT Ratio Selectable	Primary 1 to 5000A max. Secondary 1 to 5A.
PT Ratio Selectable	Primary 110 to 999KV Secondary 110 to 500V
Device ID	1 – 247
Baud rate	2400, 4800, 9600,19200bps
Pulse Output	Active Energy / Reactive Energy
Poles	1-28
Protection of config. settings	User settable Password Ranging from 0001 to 9999

Environmental Specification:	
Ambient Temperature	Operation : -10°C to + 55°C(14°F to 131°F) Storage : -25°C to + 80°C(-13°F to 176°F)
Humidity	Up to 95% RH @ 40°C

Safety :	
Insulation resistance	>100M ohms @ 500V DC
Dielectric strength	2.5 KV AC, 50Hz for 1 minute (Between current carrying & non-current carrying parts)
Electrical connection	Screw type terminals with self lifting clamps.

Note:- **1.** Design & Specification are subject to change without notice. **2.** User is recommended to confirm the suitability of EAPL product range for intended application. **3.** Customer should take safety precaution with regards to high voltage/current etc.. (i.e , should not apply more than the specified limits) **4.**EAPL is not responsible for consequential damage out of use of its products

*Separate energy register for mains & generators **24V DC with THD parameter available on request,

EAPL/EMS/LL 07/2018 www.huework.in