

ELECTRICAL SAFETY
POWER QUALITY
ENERGY MANAGEMENT



iBCPM - E810 Series

Intelligent Branch Circuit Power Monitoring System (iBCPM)

- Measurement accuracy according to IEC61053-22 Class 0.5s
- Measures up to 2 main circuits and 24 sub circuits
- Designed to suit with split core current transformer for easy installation and retrofit

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Intelligent Branch Circuit Power Monitoring System – IBCPM



Product Description

Eetarps E810-Series (iBCPM) is an affordable, Intelligent Branch Circuit Power Monitoring System. The design allows an easy and fast installation. Combined with the split-core CTs of the EGSCT-Series, the system is also highly suitable for retrofit applications.

Eetarp E810 series measures and displays the characteristics of sub-circuits. This includes voltage, frequency, current, power, harmonics, power factor, maximum, minimum value, and imported or exported energy. The built-in interfaces provide standard RS485 Modbus RTU outputs with password protection for configuration to transfer the collected data to any other system.

That makes the E810-Series a perfect partner for various applications like accurate data collection and timely reporting of anomalies in the power distribution unit (PDU).

Device Features

- Measurement accuracy according to IEC62053-22 Cl 0.5S
- Measure up to 2 main circuits up to 31st harmonics measurements
- Measure up to 24 single phase circuits or measure up to 8 three phase sub-circuit metering
- Able to combine either three phase or single phase according to your need
- 4 relays output
- Optional with 2nd Modbus output
- Designed to suit with split core current transformer with 333mV CT input (CT range from 100A to 3000A)

Typical Applications

- Low voltage distribution networks
- Data Center (PDUs)
- Consumer billing
- Retails shop
- Commercial/residential building
- School Hostel
- University
- Government sector
- Sub-billing application

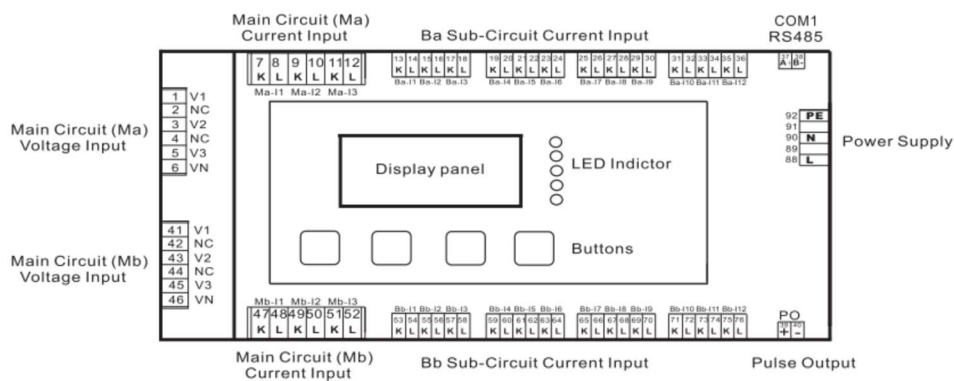
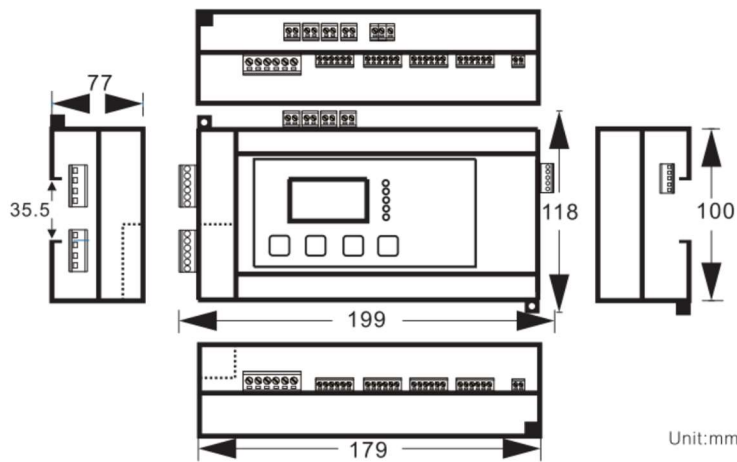
Technical Specification

Power Supply	
Rated Voltage	AC 85~264V or DC 100~300V
Power Consumption	≤15VA
Withstand voltage	AC 2KV,50/60Hz for 1 min
Communication / Interface	
RS-485: Modbus-RTU (Default) / Optional Modbus TCP	
Physical interface	RS-485
Communication speed	Up to 38.4 kbps
Communication protocol	Modbus-RTU / Optional Modbus TCP
Relay output	
Capacity	5A/250Vac ; 5A/30Vdc
Isolation voltage	Isolation 2000 VAC
Alarm setpoints	Up to 48 parameters for alarm setting
Pulse Output	
Pulse Output mode	4 x Output: 30Vdc, 30mA(max)
Energy pulse output	3200 Pulse/kWh
Measuring circuit	
Measuring voltage inputs	
Rated range	50 - 600V (L-L)
Resolution	0.1 V
Over voltage	1.2VIn continuous
Frequency	45-65 Hz
Main Circuits	1P2W/1P3W/3P3W/3P4W
Sub Circuits	1P2W/1P3W/3P3W/3P4W
Measuring current inputs	
Rated range	333mV
Resolution	1 mA
Impedance	≤20mΩ/per phase
Power consumption	≤0.1 VA/per phase
Over current	1.2X rated current of CT
Working Environment	
Working temperature	0°C to 60°C
Storage temperature	-30°C to 80°C
Relative humidity	5 ~ 95% RH, no condensation

Measurement Parameters	
Power Quality Analysis	
Wave Sampling	128 samples/cycle
Harmonic	31st Harmonic (Main Circuits)
Alarm setting	Setpoint alarm and record
Real-time Data	Voltage, Current, Active power, Reactive Power, Apparent Power, Power Factor, Frequency, THD
Measurement Channel	2 main circuits and 24 channels sub circuits
Energy	
Energy	Reactive Energy, Apparent Energy, Active Energy
History Energy	Storage to build in memory
Multi-tariff energy	8 Tariff setting
Demand / Max & Min	
Real-time Demand	fixed- and slide window record value
Max. / Min Record	Per phase and 3-phase of parameters values
Memory Record	
Memory	2MB
Setting	Load setting from previous saved file or set according to needs.
Accuracy	
Voltage/ Current	±0.2%
Re-,Active/Apparent power	±0.2%
Active Energy	±0.5%
Reactive Energy	±0.5%
Power Factor	±0.5%
Frequency	±0.1%
THD	1%
Unbalance	±0.5%
Mechanical Characteristics	
Dimension	199mm (L) x 118mm (W) x 77mm (H)
Material	ABS, Black (with fire-retardant)
Mounting	35mm DIN RAIL
Protection degree	IP20

Other	
Electrostatic discharge immunity	EC61000-4-2:2008
Radiated, radio-frequency, electromagnetic field immunity	IEC61000-4-3:2010
Electrical fast transient/burst immunity	IEC61000-4-4:2012
Surge immunity	IEC61000-4-5:2014
Immunity to conducted disturbances, induced by radio-frequency fields	IEC61000-4-6:2013
Power frequency magnetic field immunity	IEC61000-4-8:2009
Voltage dips, short interruptions and voltage variations immunity	IEC61000-4-11:2004
Low Voltage Directive	EN61010-1 2010

Dimensions & Ordering Code



Ordering Code

Order Number	Type	Features
GABXXCB5X3XXX0	E810-RTU	BCPM with 2MB memory and Modbus RTU
GABXXEB5X3XXX0	E810-TCP	BCPM with 2MB memory and Modbus TCP
GABXXCB5X32XXX0	E810-RTU-2	BCPM with 2MB memory and 2 x Modbus RTU



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