EPM31 Multi-Channel AC Energy Meter

Feature

- **Application** - Telecoms site energy management, data center
- **Small size** - Can be installed at the closest point, integrate in existing space-constrained installations
- **Ultra-compact design** - Consists of control unit and current sensors (with RJ12 port, split core)
- **Wide measurement range** - Max. support 60A
- **Multi circuit** - Support 45 single phase circuit or 15 three phase circuit AC measuring
- **High accuracy** - Voltage & current class 0.5s, kWh class 1.0
- **Multi network type** - 1P2W or 3P4W

Function

Real-time measurement

- Voltage, current, active power, reactive power, power factor, frequency

Energy consumption

- Active energy, reactive energy

Alarm function

- Overload, under load, over current, sensor fault

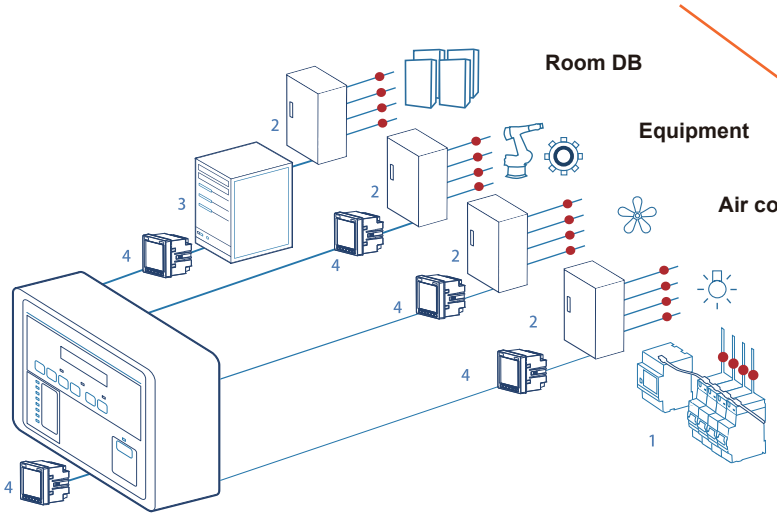
Communication

- 1RS485 port, MODBUS-RTU protocol

Optional function

- Temperature measur (4 channels)
- Leakage current measure (1 channel)

Typical Connection



Compare with traditional Din rail energy meter

- Saving 50% installation space
- Saving 50% installation hour
- Saving 50% system debug time

Description

- EPM31 (● measurement point)
- Branching cabinet
- UPS
- DFUN energy meter

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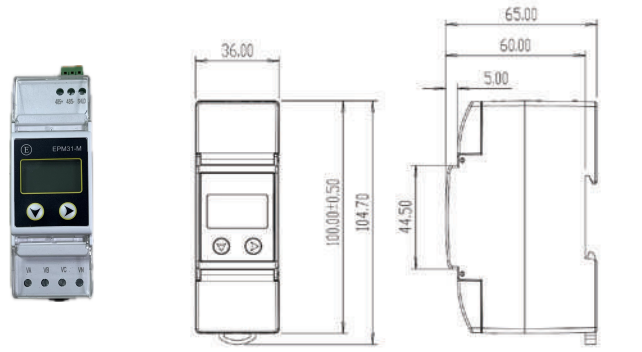
EPM31 & Accessories

EPM31-M: Main Module

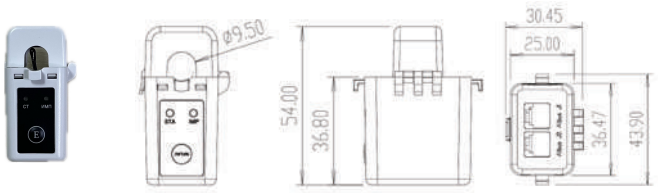
Connection mode	1P2W or 3P4W	
Power supply	Self-supply, by A phase	
Voltage input	1P2W	220V Range: 85%-120%
	3P4W	3x220/380V Range: 85%-120%
Frequency	45 ~ 65Hz	
Power consumption	≤5W	
Communication	RS485 serial, support Modbus-RTU Baud rate: 4800, 9600, 19200, 38400bps Address: 1 ~ 247	

Unit: mm



CTO: Split Core Sensor

Connection mode	Bus connection (2 x RJ12 port)
Rated current input	10(60)A
Installtion	Split core
Open hole	Φ 9.5mm
Sampling rate	28k Hz



Parameter	Accuracy	Measuring range
Voltage	0.5%	85% ~ 120%
Current	0.5%	0-60A, 1% ~ 120%
Power factor	1.0%	-1 ~ 1
Active power	0.5%	Single phase: 0 ~ ±16kW/kvar Total:0 ~ ±48kW/kvar
Reactive power	2.0%	
Apparent power	2.0%	
Active energy	1.0%	0 ~ 9999999.9 kWh
Reactive energy	2.0%	0 ~ 9999999.9 kVarh
Frequency	0.01	45 ~ 65Hz

Environment & Standard

Power frequency withstand voltage	2000VAC
Insulation resistance	≥100MΩ
Impulse withstand voltage	6kV(peak)
IP index	IP20

Environment	Normal operating temperature: -25℃~ 55℃ Limit temperature: -25℃~ 70℃ Storage temperature: -30℃~ 80℃ Humidity: <95%, non-condensing

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Standard (EMC)	
• Electrostatic discharge immunity test IEC61000-4-2, Level 4 • Radiated radio-frequency electromagnetic field immunity (RFEMS) IEC61000-4-3, Level4 • Electrical fast transient test IEC61000-4-4, Level4 • Surge immunity test (1,2/50μs ~ 8/20μ) IEC61000-4-5, Level4	• Conduction disturbance rejection of radio frequency field induction IEC61000-4-6, Level3 • Electromagnetic emission limits CISPR22: 2006, Pass • Voltage sag and short time interrup timmunity IEC61000-4-11, Pass • Power frequency withstand voltage IEC 62052-11 2003

Solution

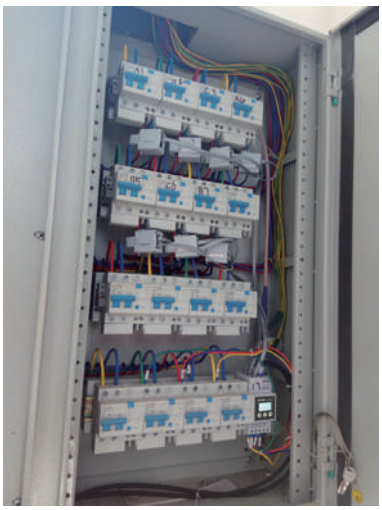
EPM31 Measure Sensor

CTO
Split Core Sensor

+

EPM31 Controller

E P M 3 1 - M
Main Module



Order Information

Module	Order code	Description
Main module	**EPM31- M**	Suitable for 1P/2W & 3P/4W
Measure module	**CTO**	Split core sensor: 10(60)A, Φ9.5mm, class 1.0
Optional module	**T**	Temperature measur (4 channels)
	LC	Leakage current measure (1 channel)

For example: EPM31-M + 20pcs CTO indicates 1pcs EPM31 main module and 20pcs CTO split core sensor.

Note:

1. Standard 30cm RJ12 line (from main module to measure module) and 6cm RJ12 line (for connect each measure module), please mention for special requirement.