SEM3

Multi-function 3phase energy meter

- Multi-parameter measurements
- Accuracy Class B active energy
- Wi-Fi available (SEM3-WL only)
- RS485 Modbus RTU
- 2 Measurement modes
- Easy connection solution
- Compact design
- Support 1x3p or 3x1p load measurements
- Package includes 3pcs current transformers
- Phase sequence error warning

User Manual
V1.0

Content

Version History

Version	Date	Changes
1.0	2024-8-30	

1. Introduction

Eastron SEM3 is a new generation din rail mounted energy meter, equipped with Wi-Fi and RS485 connectivity. With multi parameters measurement, SEM3 can be used for energy monitoring of various applications, such as PV energy management, smart building, industrial equipment, etc. The meter can be used as 1x 3phase energy meter or 3 individual single phase energy meter. In single phase mode, 3 external CT can be set with different CT ratio for three independent loads.

Eastron SEM3 measures and displays the characteristics of 1p2w, 3p4w and 3p3w supplies, including voltage, frequency, current, power and active and reactive energy, imported or exported, Power factor, Max. Demand etc. Energy is measured in terms of kWh, kVArh and kVAh. It provides 4 quadrant measurement.

Eastron SEM3 is designed in compact size with 1 modular width. To save installation and maintenance cost, all terminals of SEM3 adopt spring terminals or RJ terminals for easy connection. Warning is also available in case the phase sequence error happens.

Eastron SEM3 provides two measurement modes: Total mode and PV mode. In total mode, import and export energy will be measured separately. In PV mode, import and export energy will be balanced first, and the balanced value will be counted in import or export energy.

2. Safety Warning

Risk of electrocution

● During normal operation, voltages hazardous to life may be present at some of the terminals of this unit. Installation and servicing should be performed only by qualified, properly trained personnel abiding by local regulations. Ensure all supplies are de-energized before attempting connection or other procedures.

● Terminals should not be user accessible after installation and external installation provisions must be sufficient to prevent hazards under fault conditions.

● This unit is not intended to function as part of a system providing the sole means of fault protection - good engineering practice dictates that any critical function be protected by at least two independent and diverse means.

● The unit does not have internal fuses therefore external fuses must be used for protection and safety under fault conditions.

● Never open-circuit the secondary winding of an energized current transformer.

● If this equipment is used in a manner not specified by the manufacturer, protection provided by the equipment may be impaired.

3. Specifications

Table 1

Electrical characteristics		
Type of measurement		RMS including harmonics on three phase AC system (3P, 3P+N)
Measurement accuracy	Power	I± 1% EC 61557-12 Class 1
	Active Energy	± 1%
	Reactive Energy	± 2%
	Frequency	± 0.2%
	Current	± 0.5% （4A~120A) ± 1% （1A~4A) ± 3% （0.06A~1A)
	Voltage	± 0.5%
	Power Factor	± 0.1
Data Update Rate		Active power：50mS（RS485）,100mS（WiFi）
Input-Voltage	Un	3*230V（L-N）/400V（L-L）
	Working Voltage Range	90 to 300 Vac L-N 156 to 520 Vac L-L
	Frequency Range	50/60Hz
Mechanical Characteristics		
Weight		≈100g (SEM3)
IP Degree of Protection (IEC 60529)		IP51 front display IP20 whole meter
Dimensions (WxHxD)		19x68.5x94.5
Mounting		DIN rail 35mm
Material of meter case		Self-extinguishing UL 94 V-0
Mechanical environment		M1
Environmental Characteristics		
Operating Temperature		-40 °C to +70°C
Storage Temperature		-40 °C to +85°C
Humidity Rating		<95% RH , non-condensing
Pollution Degree		2
Altitude		up to 2000m
Vibration		10Hz to 50Hz, IEC 60068-2-6
Electromagnetic Compatibility		
Electrostatic Discharge		IEC 61000-4-2
Immunity to Radiated Fields		IEC 61000-4-3
Immunity to Fast Transients		IEC 61000-4-4
Immunity to Impulse Waves		IEC 61000-4-5
Conducted Immunity		IEC 61000-4-6
Immunity to Magnetic Fields		IEC 61000-4-8
Immunity to Voltage Dips		IEC 61000-4-11
Radiated Emissions		EN55032 Class B
Conducted Emissions		EN55032 Class B
Safety		
Measurement Category		Per IEC61010-1 CAT III
Current Inputs		Require external Current Transformer for Insulation
Over voltage Category		CAT III
Protective Class		II
Communications		

Interfaces 1	RS485 port
Interface 1 protocol	MODBUS RTU
Communication address	1~247
Transmission mode	Half duplex
Data type	Floating point
Transmission distance	1000m Maximum
Transmission speed	2400bps~115200bps
Parity	None (default), Odd, Even
Stop bits	1 or 2
Response time	<50 mS
Interface 2	Wi-Fi
Interface 2 protocol	MODBUS TCP
Data type	Floating point
RF band	2.4 GHz- 2.5 GHz
Max. RF Power	<20 dBm
Wi-Fi protocol	802.11 b/g/n
Wi-Fi Range	Up to 30 m / 100 ft indoors and 50 m / 160 ft outdoors (Depends on local conditions)

Table 2

Note: ● = included
* = optional
— = excluded

Features	Models	
	SEM3-WL	SEM3-M
Instantaneous Measurements		
Current	●	●
Voltage L-N	●	●
L-L	●	●
Frequency	●	●
Active power	●	●
Reactive power	●	●
Apparent power	●	●
Power factor	●	●
Energy Values		
Active energy	●	●
Reactive energy	●	●
Apparent energy	●	●
Demand Values		
Current	●	●
Active, reactive, apparent power	●	●
Maximum Demand Values		
Maximum current	●	●
Maximum active power	●	●
Maximum reactive power	—	—
Maximum apparent power	—	—
Min. and Max. Value		

Active power per phase and total	—	—
Reactive power per phase and total	—	—
Apparent power per phase and total	—	—
PF per phase and total	—	—
Current per phase and average	—	—
THDi per phase	—	—
THDu L-L and L-N	—	—
Power-Quality Values		
Total harmonic distortion	●	●
Individual Harmonic distortion	—	—
Running Hour	●	●
Network		
Single phase 2 wires	●	●
Two phase 3 wires	●	●
Three phase 3 wires	●	●
Three phase 4 wires	●	●
CT programmable	●	●
PT programmable	●	●
Inputs and Outputs		
Alarms	●	●
Communications		
RS485	●	●
WIFI	●	—

Technical Standards:

[1] EN IEC61326-1: 2021 Electromagnetic Compatibility Directive - Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements

[2] EN IEC 61326-2-3: 2021 Electromagnetic Compatibility Directive

[3] EN61010-1:2010+A1:2019 Low Voltage Directive 2014/35/EU - Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements

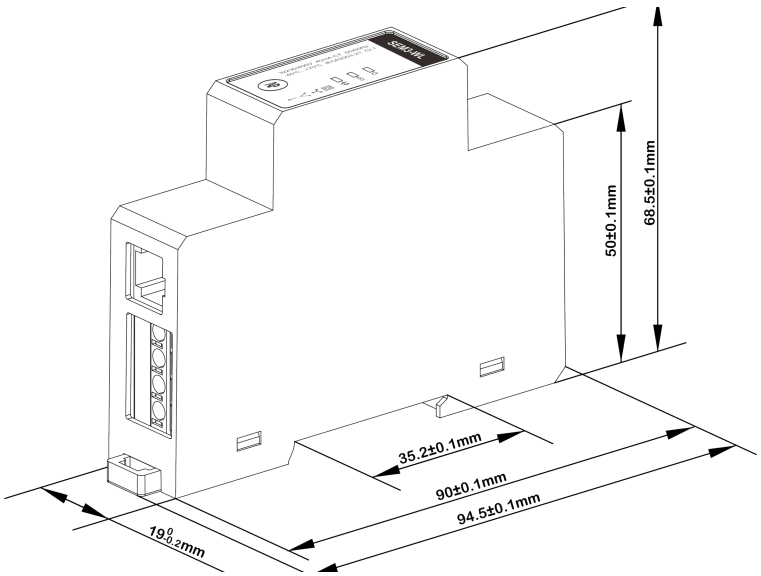
[4] EN61010-2-030:2010 Low Voltage Directive 2014/35/EU - Particular requirements for testing and measuring circuits

[5] IEC62052-11:2020 "Electricity metering equipment (d.c.) - General requirements, tests and test conditions - Part 11: Metering equipment"

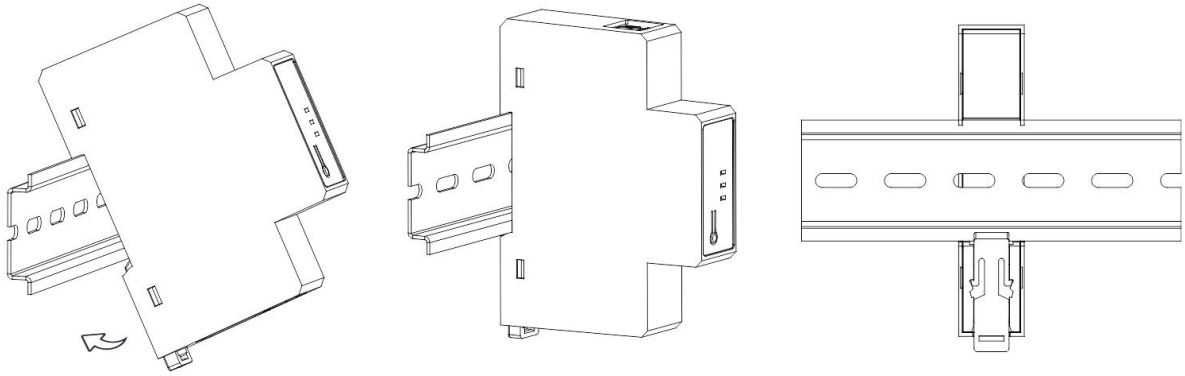
[6] EN IEC 62052-11/A11:2022 "Electricity metering equipment (d.c.) – Part 11: general requirements, tests and test conditions – Metering equipment"

[7] EN 50470-3:2022 Electricity metering equipment - Part 3: Particular requirements - Static meters for AC active energy (class indexes A, B and C)

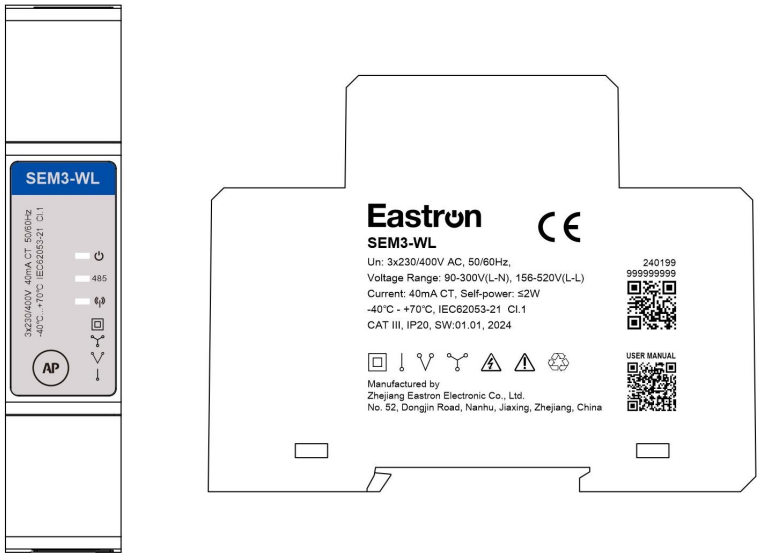
4. Dimensions



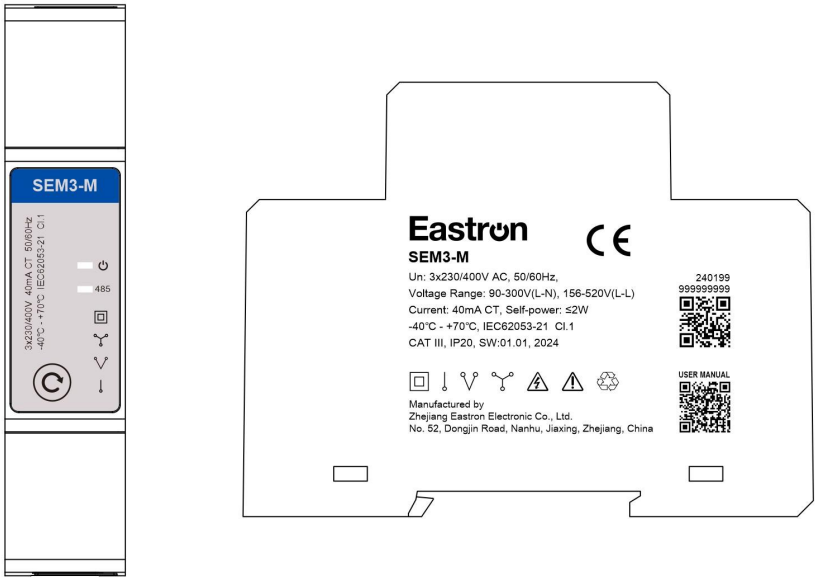
5. Mounting



6. Marking:

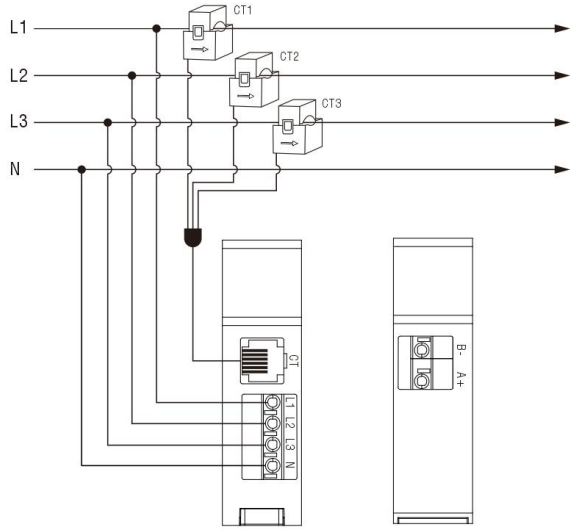


(SEM3-WL nameplate and laser printing)

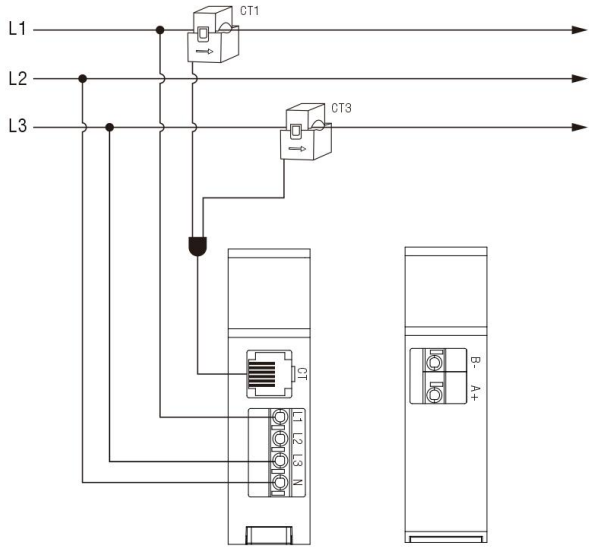


(SEM3-M nameplate and laser printing)

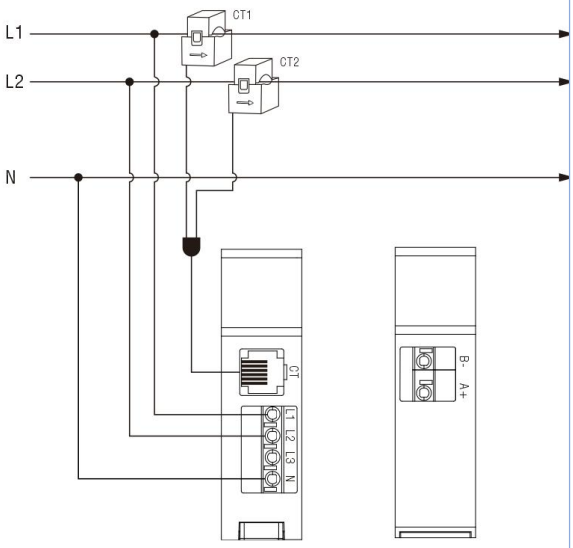
7. Wiring Diagram



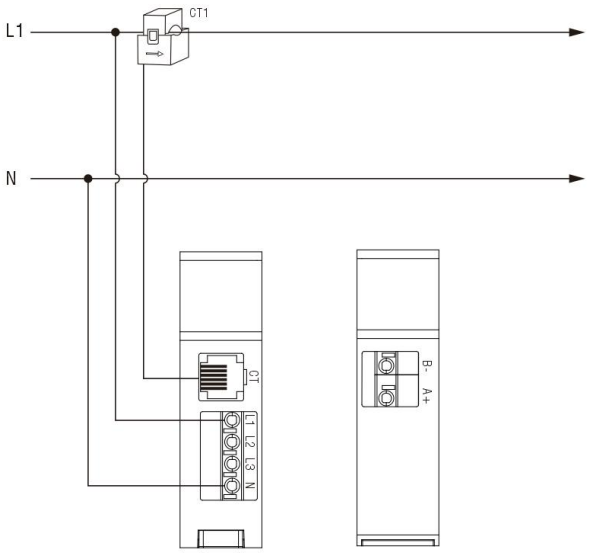
3P4W 3CTs



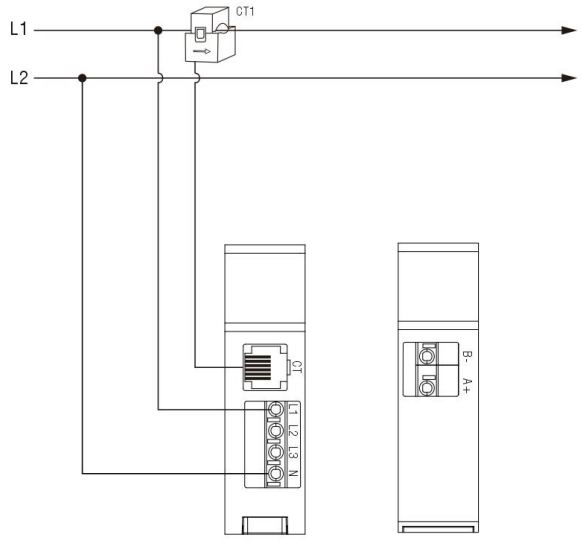
3P3W 2CTs



1P3W(L+L+N) 2CTs



1P2W(L+N) 1CT

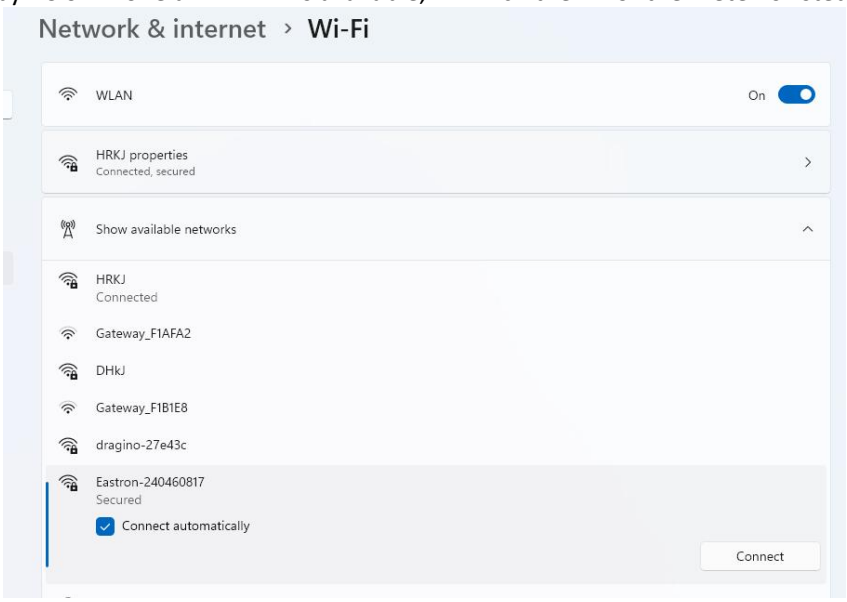


1P2W(L+L) 1CT

8. Operation Of Wi-Fi communication

The meter has build-in Wi-Fi communication. When the meter is powered on, all three LED on front flashes during the initial self-checking. After that, the LED of Wi-Fi turns on in blue color as below. The meter is under AP mode, the name of AP is in format of “Eastron-serial number”.

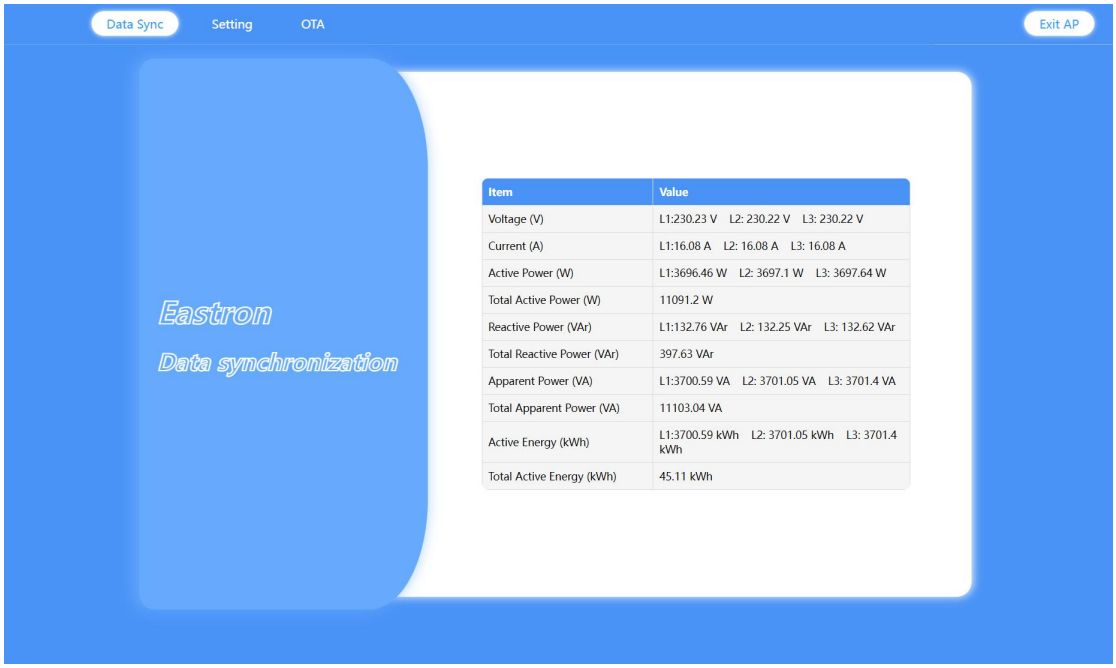
User can search by PC or Phone all Wi-Fi APs avaliable, in which the AP of the meter is listed. for example:



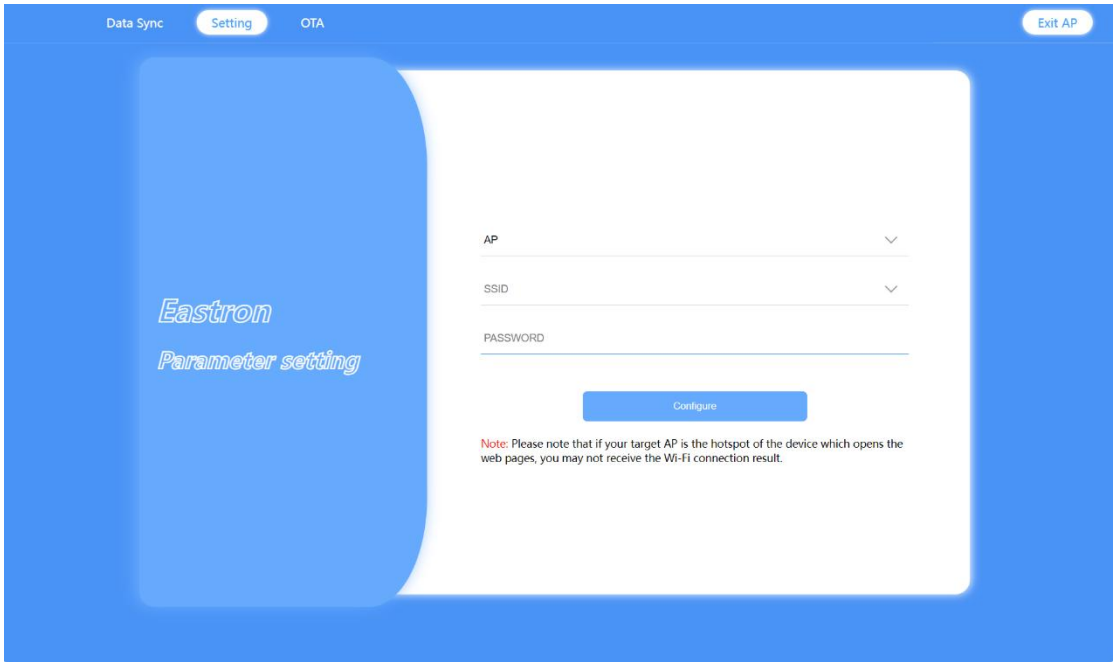
double click the AP of the meter “Eastron-240406817”, and enter the password to build the connection. The default password is same to the SN. it is 240406817 in above example.

After connection succeed, User can open a web browser and enter 192.168.4.1, he can get access to the web-server built-in the meter.

there are 3 pages available: Data Sync ; setting ; and OTA



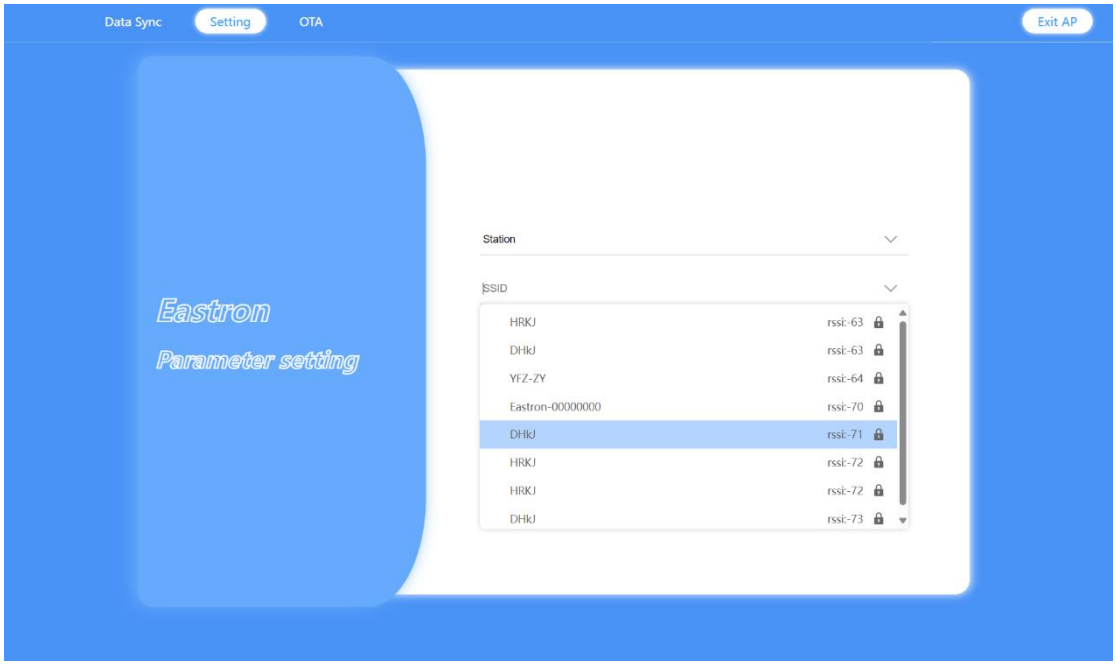
Data Sync: to read instanteneous value of the energy meter



Setting: to do the wifi setting of the energy meter in AP mode and in station mode

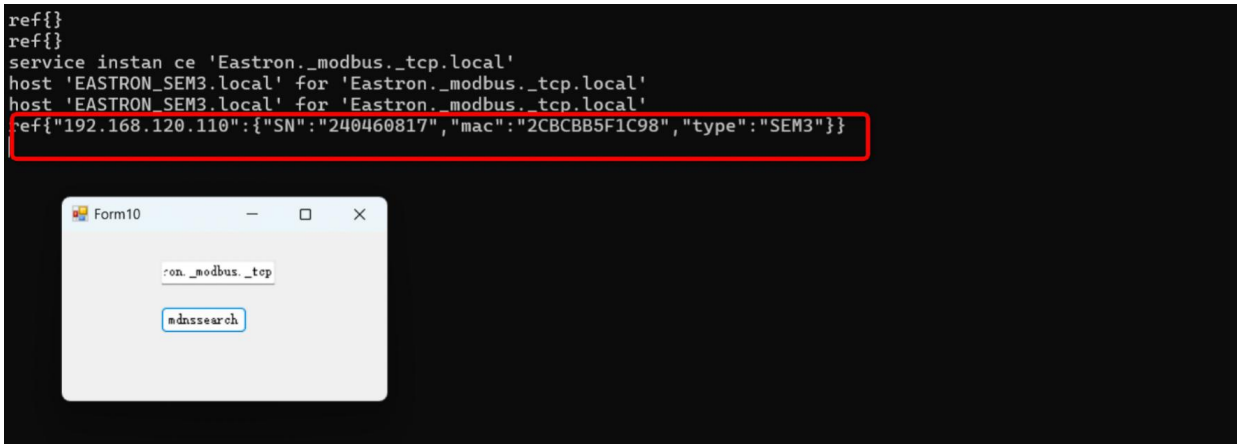
after connect the meter successfully, the user can change the meter to station mode and connect it to another wifi network available.

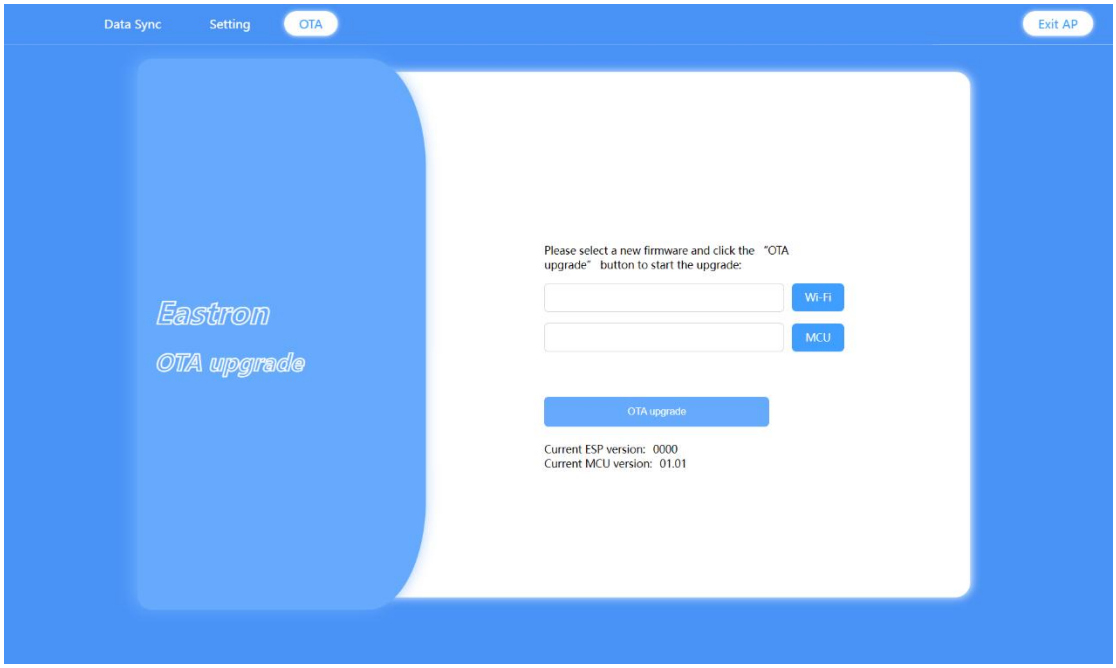
1. choose the “station” mode
2. choose the Wi-Fi network link to
3. enter the password of that Wi-Fi network



the Wi-Fi LED on the front panel of the meter keeps flashing during the connection process until the LED keep showing. after stop flashing means the connection is succeed.

The user can use MDNS to find the IP, SN, Mac address, Model of the meter. If there are more than 1 meter in same network, multi-meters information will be listed.





OTA: to update the firmware of the meter over-the air

9. Maintenance

In normal use, little maintenance is needed. As appropriate for service conditions, isolate electrical power, inspect the unit and remove any dust or other foreign material present. Periodically check all connections for freedom from corrosion, particularly if vibration is present.

The front of the case should be wiped with a dry cloth only. Use minimal pressure, especially over the viewing window area. If necessary, wipe the case with a dry cloth. Water should not be used. If the case exterior or terminals should be contaminated accidentally with water, the unit must be thoroughly dried before further use. Should it be suspected that water might have entered the unit, factory inspection and refurbishment is recommended.

In the unlikely event of a repair being necessary, it is recommended that the unit be returned to the factory or nearest Eastron distributor.

10. Communication Protocol

SEM3-WIFI / SEM3-M RS485 Modbus RTU/ WI-FI Modbus TCP Input Registers

Address (Register)	Input Register Parameter				Modbus Protocol Start Address Hex		3 Ø	1 Ø
	Description	Length (bytes)	Data Format	Units	H Byte	Lo Byte	4 W	2 W
30001	Phase 1 line to neutral volts.	4	Float	V	00	00	√	√
30003	Phase 2 line to neutral volts.	4	Float	V	00	02	√	X
30005	Phase 3 line to neutral volts.	4	Float	V	00	04	√	X
30007	Phase 1 current.	4	Float	A	00	06	√	√
30009	Phase 2 current.	4	Float	A	00	08	√	X
30011	Phase 3 current.	4	Float	A	00	0A	√	X
30013	Phase 1 active power.	4	Float	W	00	0C	√	√
30015	Phase 2 active power.	4	Float	W	00	0E	√	X
30017	Phase 3 active power.	4	Float	W	00	10	√	X
30019	Phase 1 apparent power.	4	Float	VA	00	12	√	√
30021	Phase 2 apparent power.	4	Float	VA	00	14	√	X
30023	Phase 3 apparent power.	4	Float	VA	00	16	√	X
30025	Phase 1 reactive power.	4	Float	VAr	00	18	√	√
30027	Phase 2 reactive power.	4	Float	VAr	00	1A	√	X
30029	Phase 3 reactive power.	4	Float	VAr	00	1C	√	X
30031	Phase 1 power factor (1).	4	Float	None	00	1E	√	√
30033	Phase 2 power factor (1).	4	Float	None	00	20	√	X
30035	Phase 3 power factor (1).	4	Float	None	00	22	√	X
30037	Phase 1 phase angle.	4	Float	Degrees	00	24	√	√
30039	Phase 2 phase angle.	4	Float	Degrees	00	26	√	X
30041	Phase 3 phase angle.	4	Float	Degrees	00	28	√	X
30043	Average line to neutral volts.	4	Float	V	00	2A	√	√
30047	Average line current.	4	Float	A	00	2E	√	√
30049	Sum of line currents.	4	Float	A	00	30	√	√
30053	Total system power.	4	Float	W	00	34	√	√
30057	Total system volt amps.	4	Float	VA	00	38	√	√
30061	Total system VAr.	4	Float	VAr	00	3C	√	√
30063	Total system power factor (1).	4	Float	None	00	3E	√	√

30067	Total system phase angle.	4	Float	Degrees	00	42	√	√
30071	Frequency of supply voltages.	4	Float	Hz	00	46	√	√
30073	Total Import kWh	4	Float	kWh	00	48	√	√
30075	Total Export kWh.	4	Float	kWH	00	4A	√	√
30077	Total Import kVArh .	4	Float	kVArh	00	4C	√	√
30079	Total Export kVArh .	4	Float	kVArh	00	4E	√	√
30081	Total VAh	4	Float	kVAh	00	50	√	√
30083	Ah	4	Float	Ah	00	52	√	√
30085	Total system power demand (2) .	4	Float	W	00	54	√	√
30087	Maximum total system power demand (2).	4	Float	W	00	56	√	√
30201	Line 1 to Line 2 volts.	4	Float	V	00	C8	√	X
30203	Line 2 to Line 3 volts.	4	Float	V	00	CA	√	X
30205	Line 3 to Line 1 volts.	4	Float	V	00	CC	√	X
30207	Average line to line volts.	4	Float	V	00	CE	√	X
30225	Neutral current.	4	Float	A	00	E0	√	X
30235	Phase 1 L/N volts THD	4	Float	%	00	EA	√	√
30237	Phase 2 L/N volts THD	4	Float	%	00	EC	√	X
30239	Phase 3 L/N volts THD	4	Float	%	00	EE	√	X
30241	Phase 1 Current THD	4	Float	%	00	F0	√	√
30243	Phase 2 Current THD	4	Float	%	00	F2	√	X
30245	Phase 3 Current THD	4	Float	%	00	F4	√	X
30249	Average line to neutral volts THD.	4	Float	%	00	F8	√	√
30251	Average line current THD.	4	Float	%	00	FA	√	√
30255	Total system power factor (1).	4	Float	Degrees	00	FE	√	√
30259	Phase 1 current demand.	4	Float	A	01	02	√	√
30261	Phase 2 current demand.	4	Float	A	01	04	√	X
30263	Phase 3 current demand.	4	Float	A	01	06	√	X
30265	Maximum phase 1 current demand.	4	Float	A	01	08	√	√
30267	Maximum phase 2 current demand.	4	Float	A	01	0A	√	X
30269	Maximum phase 3 current demand.	4	Float	A	01	0C	√	X
30335	Line 1 to line 2 volts THD.	4	Float	%	01	4E	√	X
30337	Line 2 to line 3 volts THD.	4	Float	%	01	50	√	X
30339	Line 3 to line 1 volts THD.	4	Float	%	01	52	√	X
30341	Average line to line volts THD.	4	Float	%	01	54	√	X
30343	Total kWh (3)	4	Float	kWh	01	56	√	√

30345	Total kVArh (3)	4	Float	kVArh	01	58	√	√
30347	L1 import kWh	4	Float	kWh	01	5A	√	√
30349	L2 import kWh	4	Float	kWh	01	5C	√	X
30351	L3 import kWh	4	Float	kWh	01	5E	√	X
30353	L1 export kWh	4	Float	kWh	01	60	√	√
30355	L2 export kWh	4	Float	kWh	01	62	√	X
30357	L3 export kWh	4	Float	kWh	01	64	√	X
30359	L1 total kWh	4	Float	kWh	01	66	√	√
30361	L2 total kWh	4	Float	kWh	01	68	√	X
30363	L3 total kWh	4	Float	kWh	01	6A	√	X
30365	L1 import kVArh	4	Float	kVArh	01	6C	√	√
30367	L2 import kVArh	4	Float	kVArh	01	6E	√	X
30369	L3 import kVArh	4	Float	kVArh	01	70	√	X
30371	L1 export kVArh	4	Float	kVArh	01	72	√	√
30373	L2 export kVArh	4	Float	kVArh	01	74	√	X
30375	L3 export kVArh	4	Float	kVArh	01	76	√	X
30377	L1 total kVArh	4	Float	kVArh	01	78	√	√
30379	L2 total kVArh	4	Float	kVArh	01	7A	√	X
30381	L3 total kVArh	4	Float	kVArh	01	7C	√	X
30385	resettable total active energy	4	Float	kWh	01	80	√	√
30387	resettable total reactive energy	4	Float	kVArh	01	82	√	√
30389	resettable import active energy	4	Float	kWh	01	84	√	√
30391	resettable export active energy	4	Float	kWh	01	86	√	√
30393	resettable import reactive energy	4	Float	kVArh	01	88	√	√
30395	resettable export reactive energy	4	Float	kVArh	01	8A	√	√
310001	Total import active energy .	8	Int64	Wh	27	10	√	√
310005	Total export active energy .	8	Int64	Wh	27	14	√	√
310009	Total import reactive energy .	8	Int64	VArh	27	18	√	√
310013	Total export reactive energy .	8	Int64	VArh	27	1C	√	√
310017	Total apparent energy.	8	Int64	VAh	27	20	√	√
310021	Total active Energy	8	Int64	Wh	27	24	√	√
310025	Total reactive Energy	8	Int64	VArh	27	28	√	√
310017	Total apparent energy.	8	Int64	VAh	27	20	√	√
310021	Total active Energy	8	Int64	Wh	27	24	√	√
310025	Total reactive Energy	8	Int64	VArh	27	28	√	√
310029	L1 import active Energy	8	Int64	Wh	27	2C	√	√

310033	L2 import active Energy	8	Int64	Wh	27	30	√	X
310037	L3 import active Energy	8	Int64	Wh	27	34	√	X
310041	L1 export active Energy	8	Int64	Wh	27	38	√	√
310045	L2 export active Energy	8	Int64	Wh	27	3C	√	X
310049	L3 export active Energy	8	Int64	Wh	27	40	√	X
310053	L1 total active Energy	8	Int64	Wh	27	44	√	√
310057	L2 total active Energy	8	Int64	Wh	27	48	√	X
310061	L3 total active Energy	8	Int64	Wh	27	4C	√	X
310065	L1 import reactive energy	8	Int64	VArh	27	50	√	√
310069	L2 import reactive energy	8	Int64	VArh	27	54	√	X
310073	L3 import reactive energy	8	Int64	VArh	27	58	√	X
310077	L1 export reactive energy	8	Int64	VArh	27	5C	√	√
310081	L2 export reactive energy	8	Int64	VArh	27	60	√	X
310085	L3 export reactive energy	8	Int64	VArh	27	64	√	X
310089	L1 total reactive energy	8	Int64	VArh	27	68	√	√
310093	L2 total reactive energy	8	Int64	VArh	27	6C	√	X
310097	L3 total reactive energy	8	Int64	VArh	27	70	√	X
310251	L1 line to neutral volts.	4	Int32	0.1V	28	0A	√	√
310253	L2 line to neutral volts.	4	Int32	0.1V	28	0C	√	X
310255	L3 line to neutral volts.	4	Int32	0.1V	28	0E	√	X
310257	L1 current.	4	Int32	0.001A	28	10	√	√
310259	L2 current.	4	Int32	0.001A	28	12	√	X
310261	L3 current.	4	Int32	0.001A	28	14	√	X
310263	L1 active power.	4	Int32	0.1W	28	16	√	√
310265	L2 active power.	4	Int32	0.1W	28	18	√	X
310267	L3 active power.	4	Int32	0.1W	28	1A	√	X
310269	L1 apparent power.	4	Int32	0.1VA	28	1C	√	√
310271	L2 apparent power.	4	Int32	0.1VA	28	1E	√	X
310273	L3 apparent power.	4	Int32	0.1VA	28	20	√	X
310275	L1 reactive power.	4	Int32	0.1VAr	28	22	√	√
310277	L2 reactive power.	4	Int32	0.1VAr	28	24	√	X
310279	L3 reactive power.	4	Int32	0.1VAr	28	26	√	X
310281	L1 power factor	4	Int32	0.01	28	28	√	√
310283	L2 power factor	4	Int32	0.01	28	2A	√	X
310285	L3 power factor	4	Int32	0.01	28	2C	√	X

310287	L1 phase angle.	4	Int32	0.01 Degrees	28	2E	√	√
310289	L2 phase angle.	4	Int32	0.01 Degrees	28	30	√	X
310291	L3 phase angle.	4	Int32	0.01 Degrees	28	32	√	X
310293	Average line to neutral volts.	4	Int32	0.1V	28	34	√	X
310295	Average line current.	4	Int32	0.1A	28	36	√	X
310297	Sum of line currents.	4	Int32	0.1A	28	38	√	X
310299	Total system power.	4	Int32	0.1W	28	3A	√	√
310301	Total system volt amps.	4	Int32	0.1VA	28	3C	√	√
310303	Total system VAr.	4	Int32	0.1VAr	28	3E	√	√
310305	Total system power factor .	4	Int32	0.01	28	40	√	√
310307	Total system phase angle.	4	Int32	0.01Degrees	28	42	√	√
310309	Frequency of supply voltages.	4	Int32	0.01Hz	28	44	√	√
315101	L1 Import inductive reactive energy in Q1	4	Float	kVarh	3A	FC	√	√
315103	L2 Import inductive reactive energy in Q1	4	Float	kVarh	3A	FE	√	X
315105	L3 Import inductive reactive energy in Q1	4	Float	kVarh	3B	0	√	X
315107	L1 Import capacitive reactive energy in Q2	4	Float	kVarh	3B	2	√	√
315109	L2 Import capacitive reactive energy in Q2	4	Float	kVarh	3B	4	√	X
315111	L3 Import capacitive reactive energy in Q2	4	Float	kVarh	3B	6	√	X
315113	L1 Export inductive reactive energy in Q3	4	Float	kVarh	3B	8	√	√
315115	L2 Export inductive reactive energy in Q3	4	Float	kVarh	3B	A	√	X
315117	L3 Export inductive reactive energy in Q3	4	Float	kVarh	3B	C	√	X
315119	L1 Export capacitive reactive energy in Q4	4	Float	kVarh	3B	E	√	√
315121	L2 Export capacitive reactive energy in Q4	4	Float	kVarh	3B	10	√	X
315123	L3 Export capacitive reactive energy in Q4	4	Float	kVarh	3B	12	√	X
315301	L1 capacitive reactive energy	4	Float	kVarh	3B	C4	√	√
315303	L2 capacitive reactive energy	4	Float	kVarh	3B	C6	√	X
315305	L3 capacitive reactive energy	4	Float	kVarh	3B	C8	√	X
315307	L1 inductive reactive energy	4	Float	kVarh	3B	CA	√	√
315309	L2 inductive reactive energy	4	Float	kVarh	3B	CC	√	X
315311	L3 inductive reactive energy	4	Float	kVarh	3B	CE	√	X

SEM3-WIFI / SEM3-M RS485 Modbus RTU
Holding Register Parameters

Address Register	Parameter	Modbus Protocol Start Address Hex		Valid range	Mode
		High Byte	Low Byte		
40001	Demand Time	00	00	Read minutes into first demand calculation. When the demand time reaches the demand Period then the demand values are valid. **Length : 4 byte** **Data Format : Float**	ro
40003	Demand Period	00	02	Write demand period: 0, 5,8, 10, 15, 20, 30 or 60 minutes, default 60. Setting the period to 0 will cause the demand to show the current parameter value, and demand max to show the maximum parameter value since last demand reset. **Length : 4 byte** **Data Format : Float**	r/w
40011	System Type	00	0A	Write system type: 3p4w = 3, 1p2w= 1 **Length : 4 byte** **Data Format : Float**	r/w
40013	Pulse output 1 Width	00	OC	Write relay on period in milliseconds: 60, 100 or 200, default 200. **Length : 4 byte** **Data Format : Float**	r/w
40019	Parity Stop	00	12	Write the parity/stop bits for MODBUS Protocol, where: 0 = One stop bit and no parity, default. 1 = One stop bit and even parity. 2 = One stop bit and odd parity.3 = Two stop bits and no parity. **Length : 4 byte** **Data Format : Float**	r/w
40021	Modbus Address	00	14	Write the Modbus Address address: 1 to 247 for MODBUS Protocol, default 1. Note, both the MODBUS node addresses can be changed via the display setup menus. **Length : 4 byte** **Data Format : Float**	r/w
40023	Pulse 1 Divisor	00	16	Write pulse divisor index: n = 1 to 6 1--0.01kwh/imp(default) 2--0.1kwh/imp 3--1kwh/imp 4-10kwh/imp 5-100kwh/imp 6-1000kwh/imp **Length : 4 byte** **Data Format : Float**	r/w
40029	Baud Rate	00	1C	Write the baud rate for MODBUS Protocol, where: 0 = 2400 baud. 1 = 4800 baud. 2 = 9600 baud, default. 3 = 19200 baud. 4 = 38400 baud. 5 = 115200 baud. **Length : 4 byte** **Data Format : Float**	r/w
40049	PT1	00	2E	PT1 range PT2-500000V, default 400V for 3P3W, default 230V for others **Length : 4 byte** **Data Format : Float**	r/w

40049	PT2	00	30	PT2 range 100-500V, default 400V for 3P3W, default 230V for others **Length : 4 byte** **Data Format : Float**	r/w
40051	CT1	00	32	CT1 range: 0005- 9999A,default5 **Length : 4 byte** **Data Format : Float**	r/w
40057	Current reverse setting (Used when the transformer is reversed)	00	38	Set current reverse 0 = A import，B import，C import 1 = A export，B import，C import 2 = A import，B export，C import "3 = A export，B export，C import "4 = A import，B import，C export "5 = A export，B import，C export "6 = A import，B export，C export "7 = A export，B export，C export default: 0 （3p3mode only 0,7） **Length : 4 byte** **Data Format :Float**	r/w
40087	Pulse 1 Energy Type	00	56	Write MODBUS Protocol input parameter for pulse out 1: 37 = total kwh or 39 = total kVarh, default 39. **Length : 4 byte** **Data Format : Float**	r/w
461457	Reset	F0	10	00 00 ： reset the Maximum demand 00 03：reset the resettable energy **Length : 2 byte** **Data Format:Hex**	wo
464513	Serial Number	FC	00	Serial Number **Length : 4 byte** **Data Format : unsigned int32** **Note: only read**	ro
464515	Meter code	FC	02	Meter code = 11 04 Length: 2 bytes **Data Format: Hex** **Note: read only**	ro
464785	Signal strength	FD	10	00 00: Zero signal 00 01：1 bar of WiFi signal 00 02：2 bar of WiFi signal 00 03：3 bar of WiFi signal 00 04：4 bar of WiFi signal 00 05：5 bar of WiFi signal 00 06：6 bar of WiFi signal 00 07：Unconnected network 00 08：Unconfigured network Length : 2 byte Data Format : Hex	r/w
464787	Time	FD	12	s-min-hour-week-Date-Month-Year-20 Length : 6 byte Data Format : Hex	r/w

IF you have any question, please feel free to contact our sales team.

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