

SOP Document

HYPONTECH Smart Meter

SDM630MCT 40mA

HPT

HYPONTECH
ENERGIZING FUTURE

HPS
Everything ⁺
Single Phase 2 MPPTs

HPT
Everything ³
Three Phase 2 MPPTs



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1. INFORMATION ON THIS DOCUMENT

The Smart Meter is a high-precision measurement tool for intelligent energy monitoring and management the solar PV system, applied in compliance with the Modbus Protocol of Hypontech inverter devices.

Implementation of the Smart Meter in PV System provide readings on grid feed-in electricity and PV yield from inverters connected to the device with a high level of precision. The interconnected communication established between the Smart Meter and the Inverters thus accomplishes a coordinated system, digitalizing feedback of grid to its owner, including the grid voltage, grid frequency, active power, reactive power, harmonic content, etc.

This document is valid for: **SDM630MCT, applied to HPT Inverter Series.**

2. PRODUCT OVERVIEW

2.1 SDM630MCT 40mA

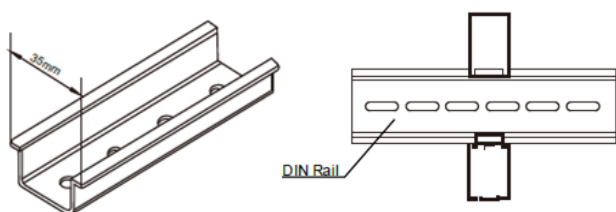
Meter Specifications

Type	Three Phase Multifunction Energy Smart Meter
Measurements	kWh, kVarh, kW, kVar, KVA, P, F, PF, Hz, Dmd, V, A, etc
Phase	Three phase and Single Phase
Modbus	RS485 Modbus RTU
Display Type	Digital / LCD + Backlit
Operating Temperature	-25~+55 °C
Mounting	Din Rail 35mm
Dimensions	90mm*67.5mm*17.5mm
Rated Current	40mA / 120A CT Connection
CT ratio	3000:1
Output Voltage	220 / 230 / 110 / 127
Accuracy	>Class 1 / >Class B
Certificate	CE ROHS
Compliance Standard	IEC 62052-11, IEC 62053-21
CT model	ESCT-TA16

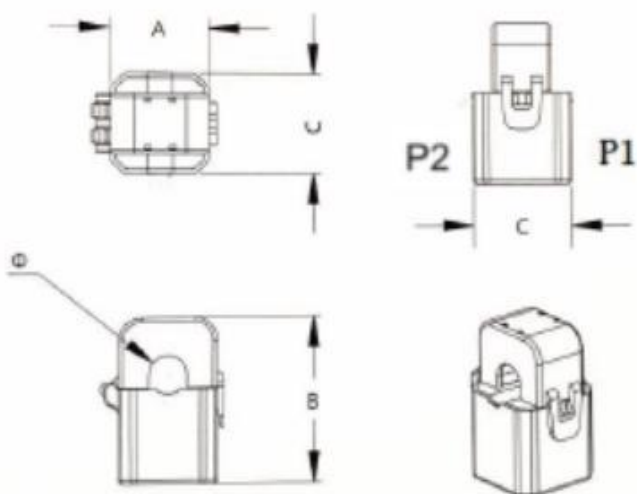
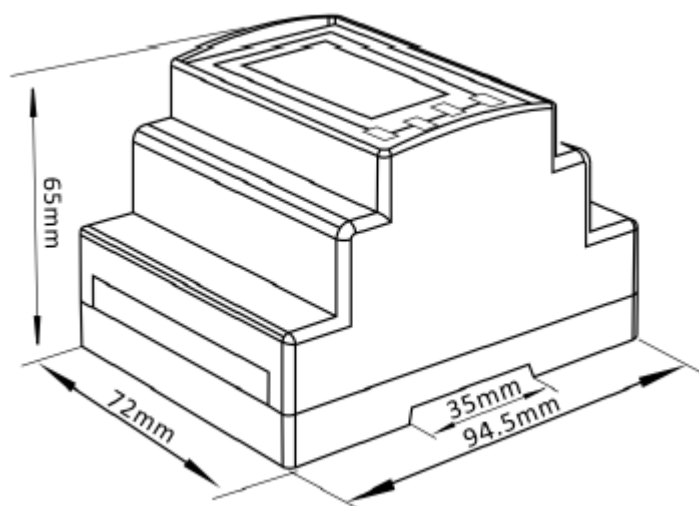
3. INSTALLATION

3.1 Meter & DIN Rail Dimensions

DIN Rail



Smart Meter



***Maximum cable diameter allowance for CT: 16mm**

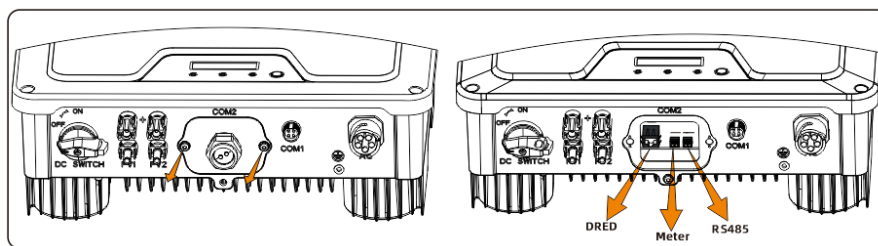
The communication between inverter and meter is established via the RS485 port on inverter, connected with double core wire.

NOTE

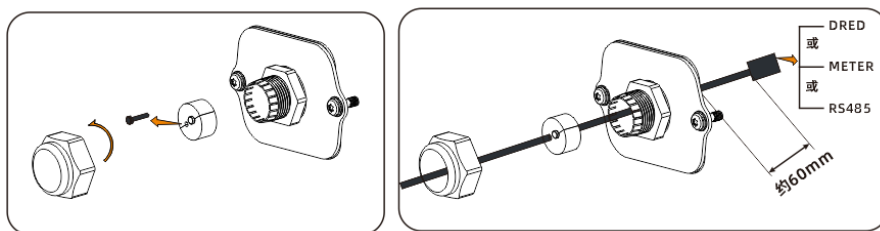
The inverter dimensions and connector types might differ due to models, design updates, replacement during maintenance, etc. Please follow the quick installation

3.2 HPT Inverter Connection (HPT-3k/4k/5k/6k/8k/10k/11k)

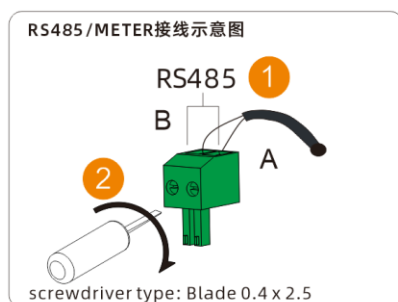
Step1:



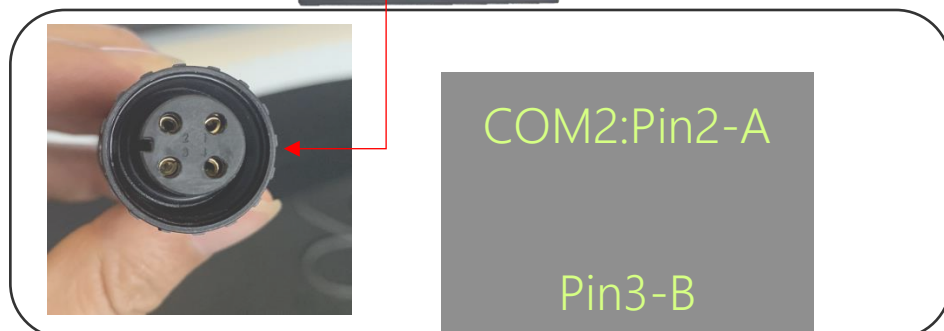
Step2:



Step3:



3.3 HPT Inverter Connection (HPT-15k/20k/25k)

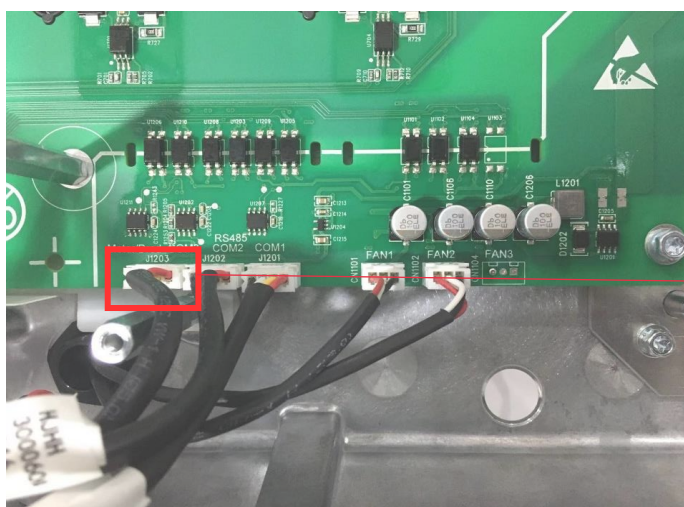


3.4 HPT Inverter Connection (HPT-30k/36k/40k/50k)



COM3/pin2-RS485/A

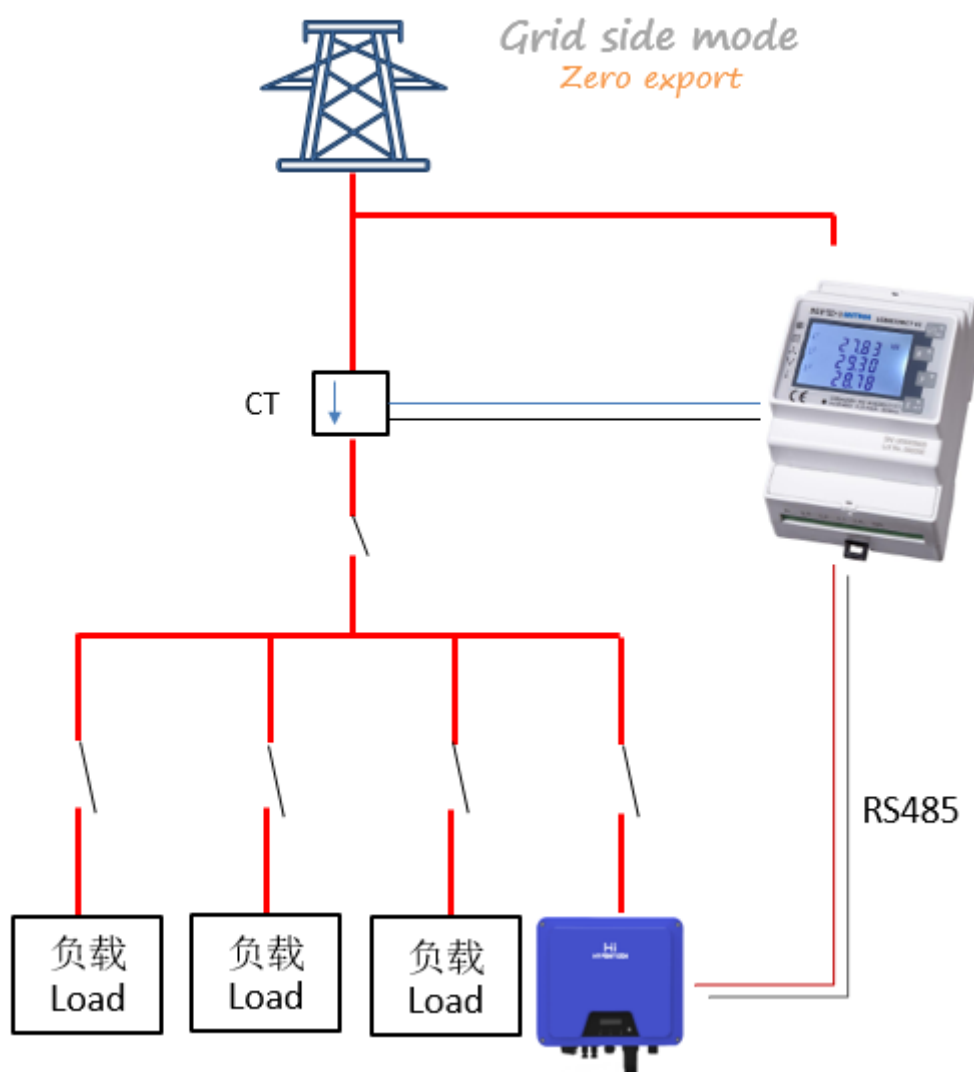
COM3/pin3-RS485/B



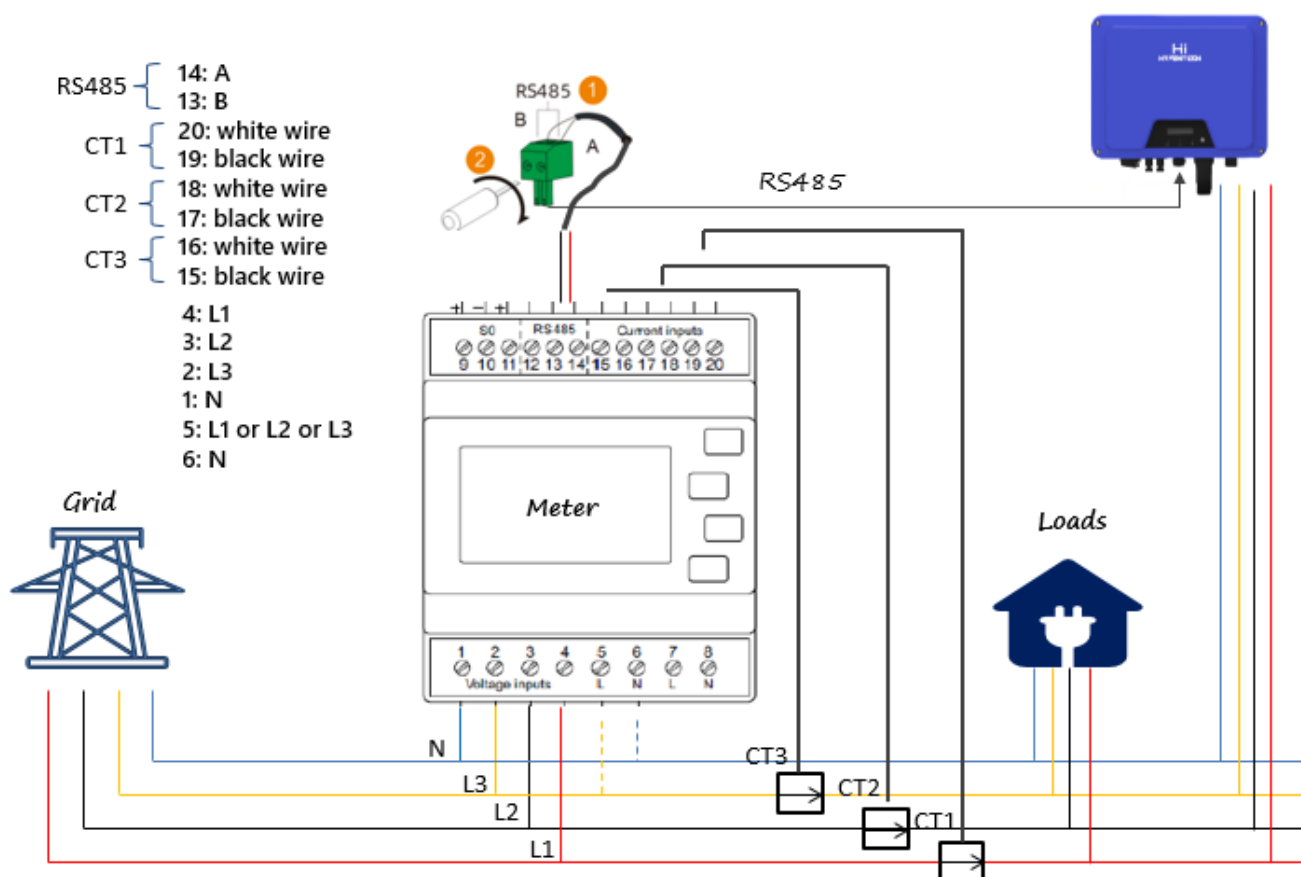
J1203: Black wire-RS485/A
 White wire-
 RS485/B

4. COMMISSIONING

4.1 System Overview



4.2 Meter Wiring



NOTE

- A. Meter CT must be directly connected to the **Grid** side.
- B. The arrow direction of CT should point to the **Load** side.

5. HIPORTAL SETTINGS (APP / WEB)

5.1 HiPortal Monitoring Platform

HiPortal is a PV monitoring platform designed by HYPONTECH. The platform digitalizes the data uploaded from inverters to power generation profiles and curves. The platform is accessible for users over the globe and available for both web browsers and smartphones.

Please scan the QR Code below for App download and website access.



For user registration and log in, visit:

www.hyponportal.com/signin

For more details about HiPortal and user guidance, visit:

www.hypontech.com

5.2 HiPortal App Settings

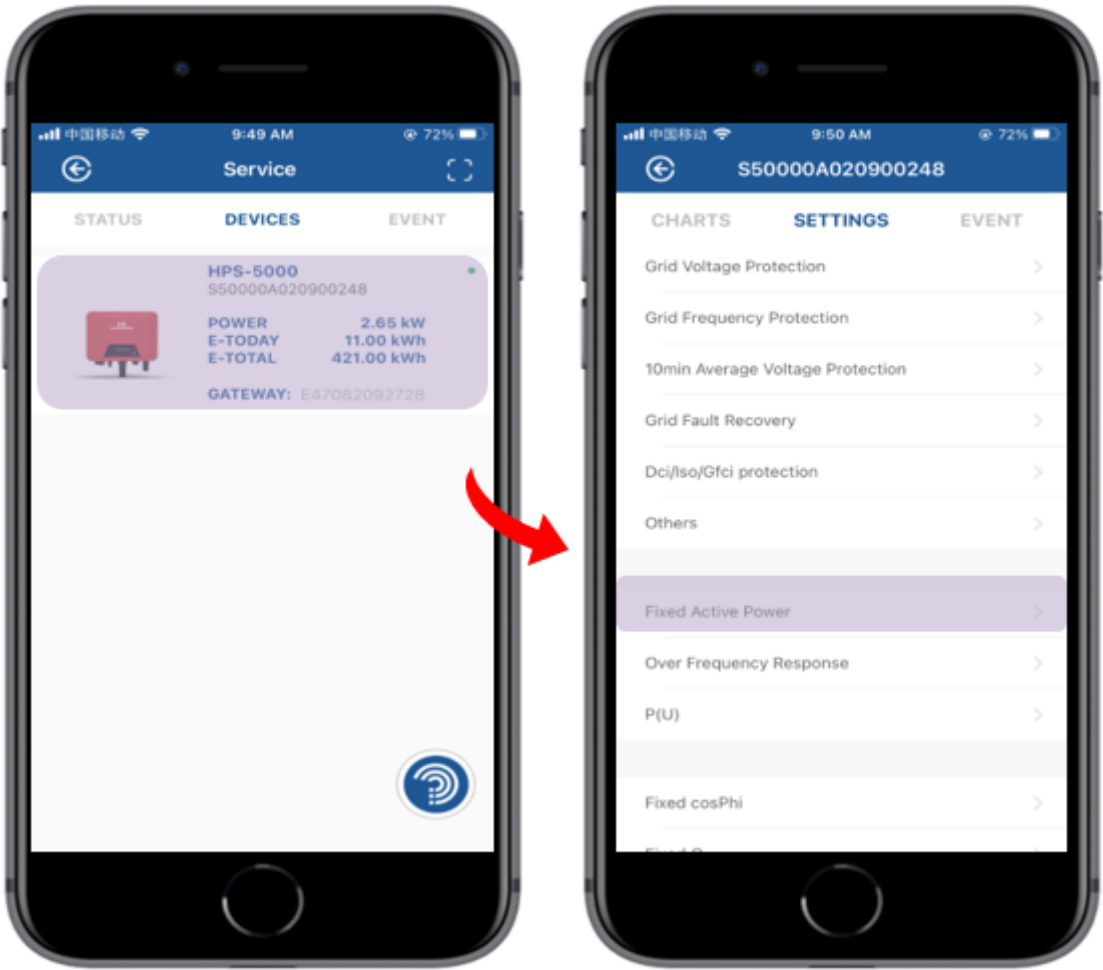
After logging into your account, please go to the Smart meter settings by the following steps:

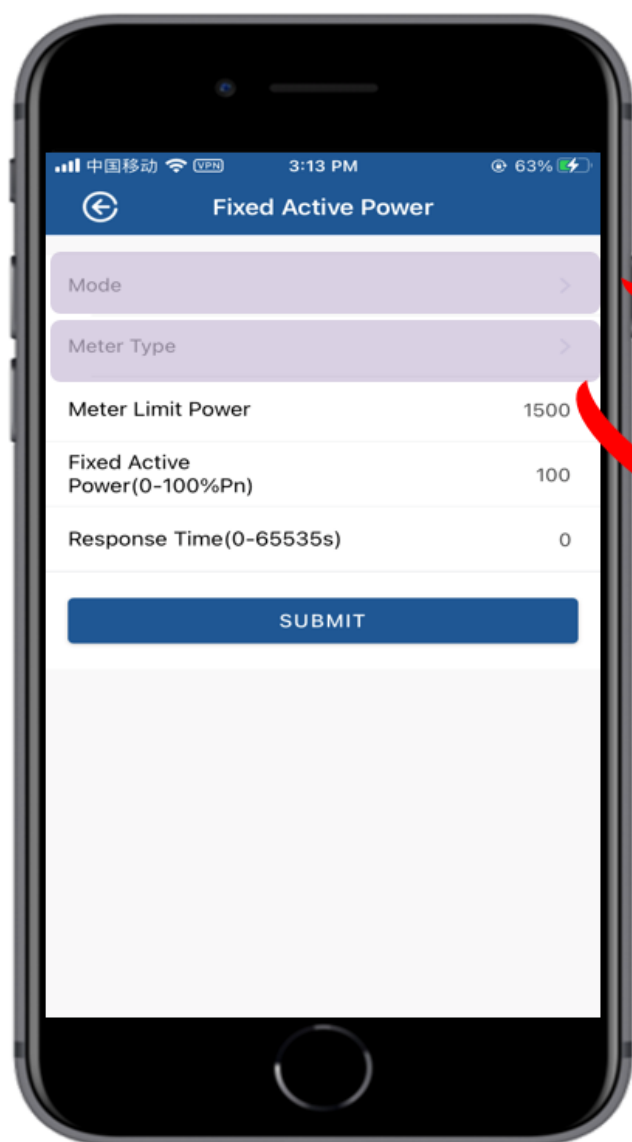
- Step 1. Click on the plant you created.
- Step 2. Click on **Devices**.
- Step 3. Find the inverter by Serial number and **long press**.
- Step 4. Click on **Settings** tab.
- Step 5. On the Settings page, scroll down and select **Fixed Active Power**.

For the purpose of Smart meter configuration, there are **ONLY 3 parameters** to set:
Mode, Meter Type, Meter Limit Power

Please change these 3 parameters to the following:

Items	How to fill in	Remarks
Mode	Choose Meter: 3	
Meter Type	Choose SDM630	Default in SDM230
Meter Limit Power	Input 0	Zero Export Mode





← Mode

No used:0

Fixed active power:1

DRED:2

Meter:3 ✓

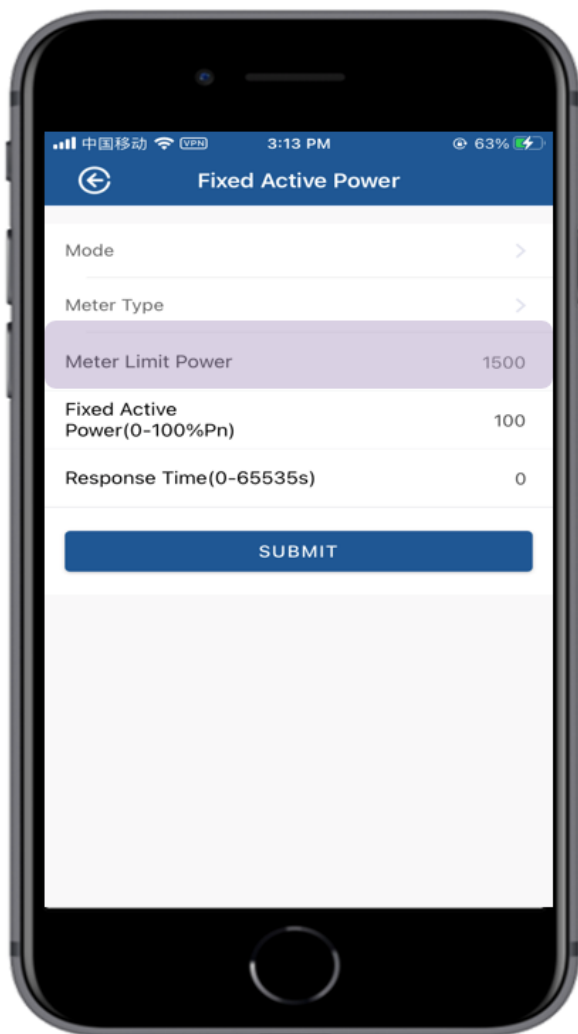
← Meter Type

SDM230:0 ✓

Mode: select 'Meter 3'

Meter Type: select 'SDM630:0'

Do not forget to click 'SUBMIT' after confirming the options



Inputting 0 means the meter will not allow any solar power feeding in to the Grid

Inputting -1500 means the maximum power which feeds in to the Grid is 1500W

5.3 HiPortal Web Settings

After logging into your account, please go to the Smart meter settings by the following steps:

- Step 1. Click on the plant overview.
- Step 2. Click on the plant you created.
- Step 3. Click on **Inverter List** and find the inverter you would like to set.
- Step 4. Click on **...**
- Step 5. Click on **Configure**.

Plant Management / Plant Chart / 123 Search Plant Name

Overview 3 **Devices - List** Event

5

Detail
 Configure
 Set Alias
 Debug
 FFR

Search Inverter S/N Number Or Inverter Alias
 Search
Add New Gateway
Split

Inverter				Gateway	
Alias/SN	Type	Power[W]	SN	Type	
S50000A120900183 S50000A120900183	HPS-5000	0 0.00%	E47082080864	Wi-Fi	

4 ...
Normal Warning Fault Off-line

Showing 1 to 10 of 1 rows 10 rows per page < 1 > Go to 1

Step 6. Click on **Active Power Control**.

Step 7. Click on **Fixed Active Power**.

Configure (S50000A120900183)

Quick Settings 7
 Fixed active power

Grid Standard
 Over frequency response

Grid Protection
 P(U)

6 **Active Power Control**

Reactive Control

Internal settings

On the dropdown parameters, please set as the following:

Quick Settings
 Fixed active power

Grid Standard
 Active power control mode

Grid Protection
 Meter limit power

Active Power Control
 Meter type

Reactive Control
 Slope Load Rate(%Pn/min)

Internal settings
 Active power Increase Rate(%Pn/min)

Active power Decrease Rate(%Pn/min)

Fixed active power(0-100%Pn)

Fixed active power response time(0-65535S)

No used:0

0

SDM230:0

600

6000

6000

100

0

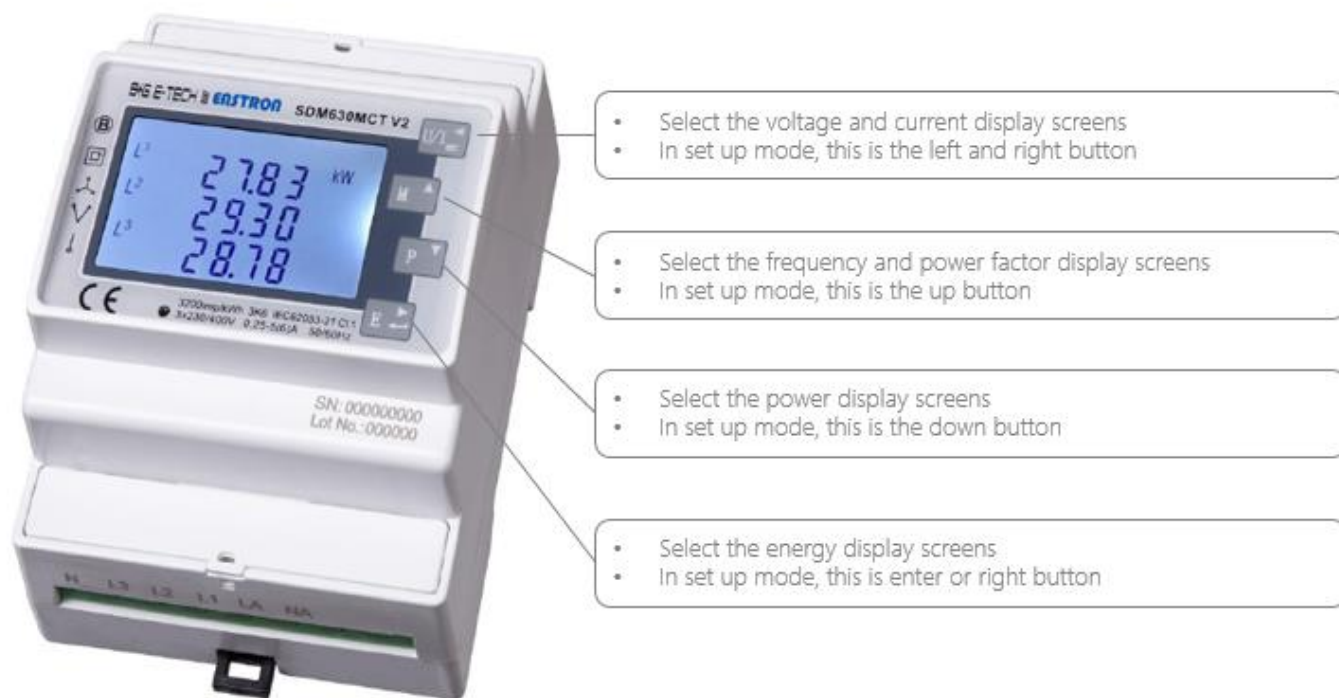
Confirm

Items	How to fill in	Remarks
Active Power Control Mode	Choose Meter	
Meter Type	Choose SDM630	Default in SDM230
Meter Limit Power	Input 0	Zero Export Mode

1. Inputting 0 means the meter will not allow any solar power feeding in to the Grid
2. Inputting other value, such as -1500 means the maximum power which feeds in to the Grid is 1500W
3. Only after the 'meter mode' be selected can the data of 'From Grid-Total' 'To Grid-Total' be shown up.

6. METER OPERATION

6.1 Control Button and Display



6.2 Screen Display

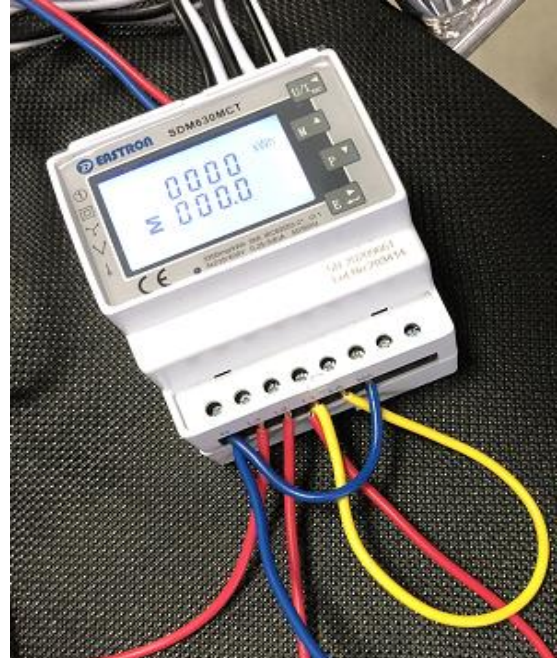
About more details of Screen display, please refer to the datasheet of the 《Eastron SDM630MCT 40mA》

7. REAL SHOT PICTURES

CT



METER



8. CONTACT

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CHINA APAC GENERAL	Suzhou Hypontech Co., Ltd.	No.1508 Xiangjiang Road, SND Suzhou 215129 +86 512 80712199 service@hypontech.com HYPONTECH Online Support www.hypontech.com/service
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