

SOP Document

**HYPONTECH**  
ENERGIZING FUTURE

**HYPONTECH Smart Meter**

**SDM630-Modbus V2**

**FOR HPT**



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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: **SDM630, applied to HPT Inverter Series.**

## 2. PRODUCT OVERVIEW

### 2.1 SDM630-Modbus V2

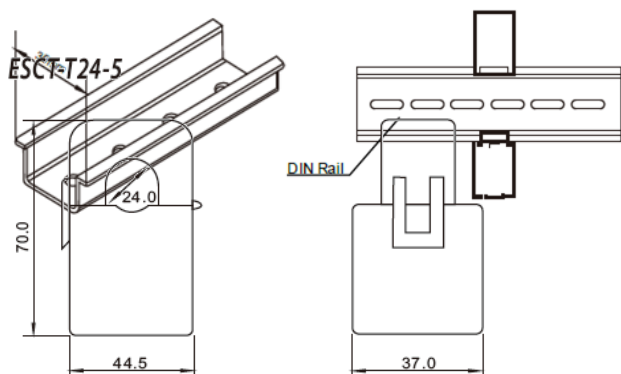
#### Meter Specifications

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	100mm*72mm*66mm
Rated Current	100A direct connection
Accuracy	>Class 1 / >Class B
Certificate	CE ROHS
Compliance Standard	IEC 62052-11, IEC 62053-21

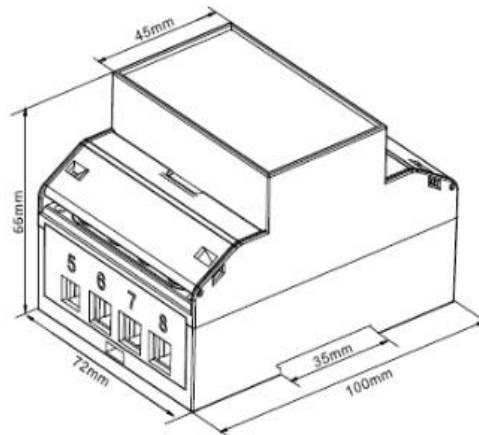
### 3. INSTALLATION

#### 3.1 Meter & DIN Rail Dimensions

DIN Rail



Smart Meter



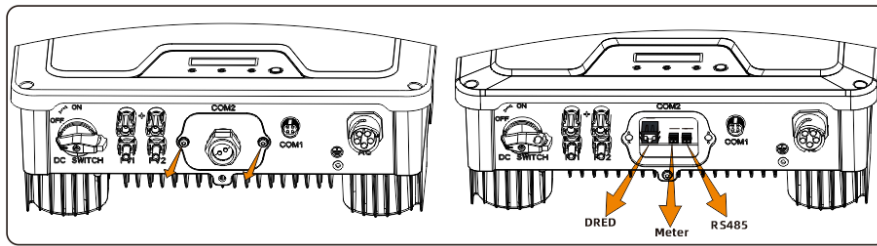
The communication between inverter and meter is established via the RS485 port on inverter, connected with double core wire.

#### NOTE

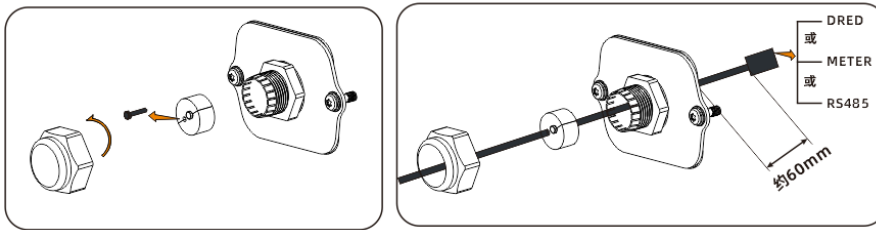
The inverter dimensions and connector types might differ due to models, design updates, replacement during maintenance, etc. Please follow the quick installation

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

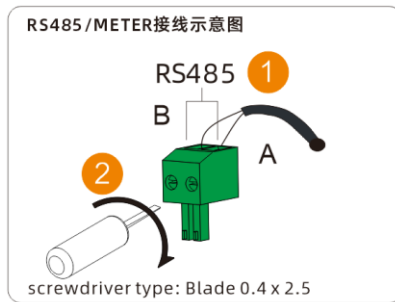
Step1:



Step2:

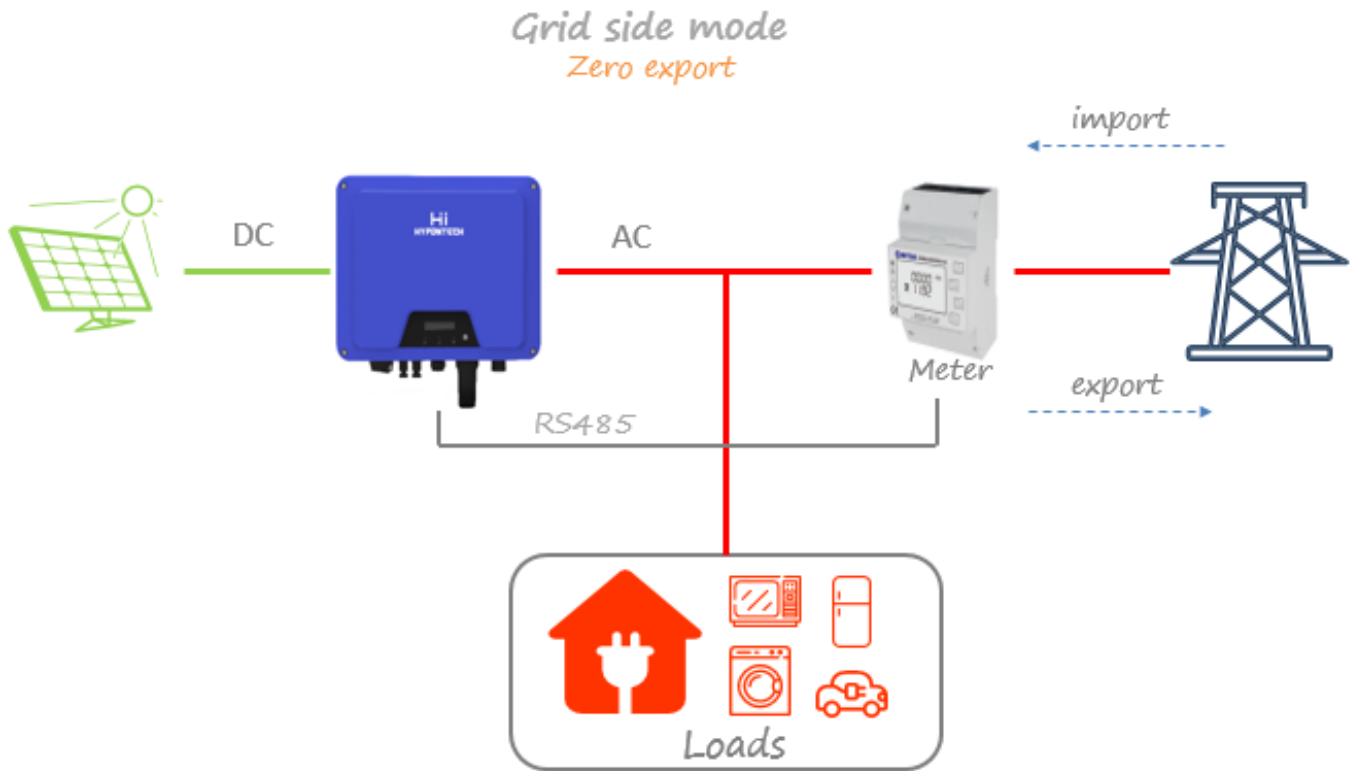


Step3:

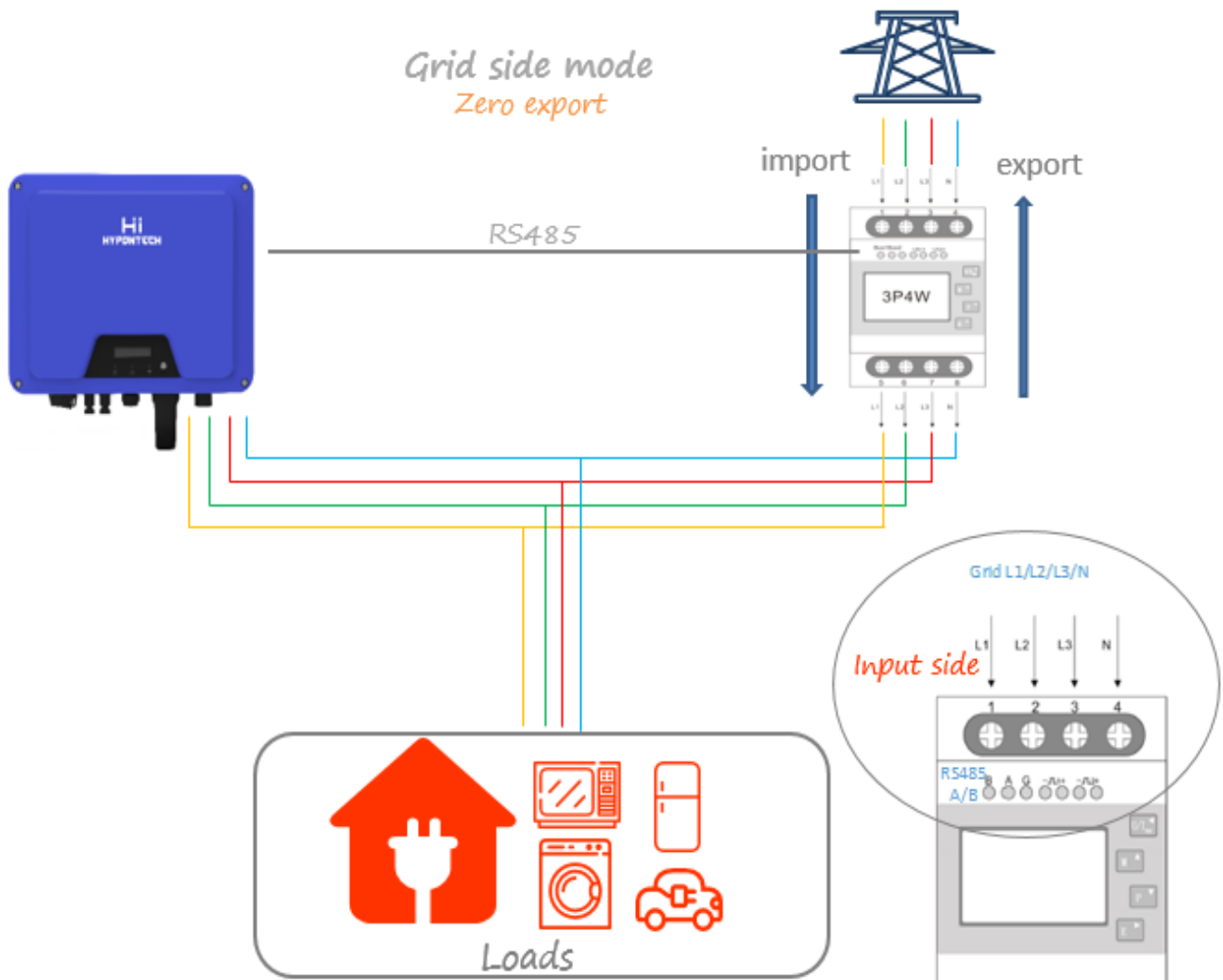


## 4. COMMISSIONING

### 4.1 System Overview



## 4.2 Meter Wiring



### NOTE

- A. Meter must be directly connected to the **Grid** side.
- B. The input side of meter must be directly connected to **Grid**.

## 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](http://www.hyponportal.com/signin)

For more details about HiPortal and user guidance, visit:

[www.hypontech.com](http://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**.

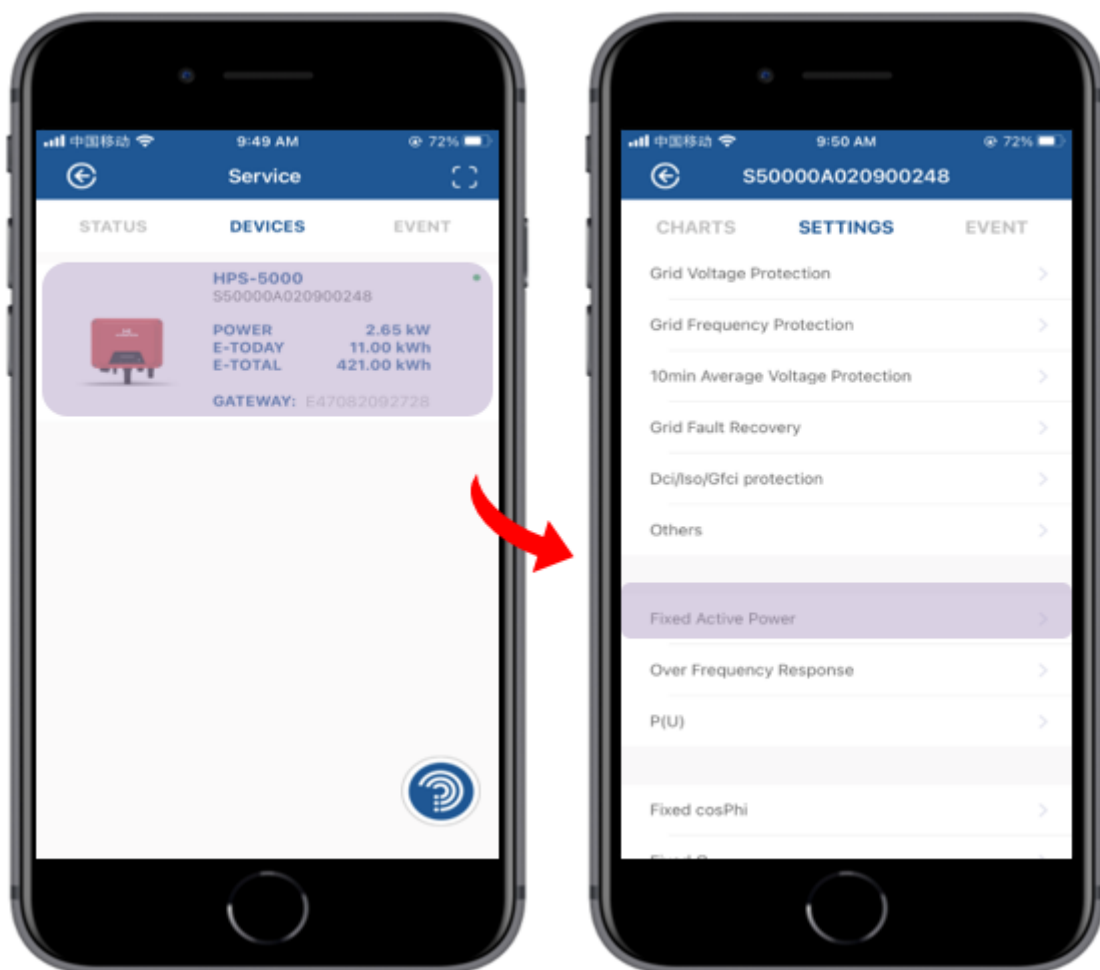


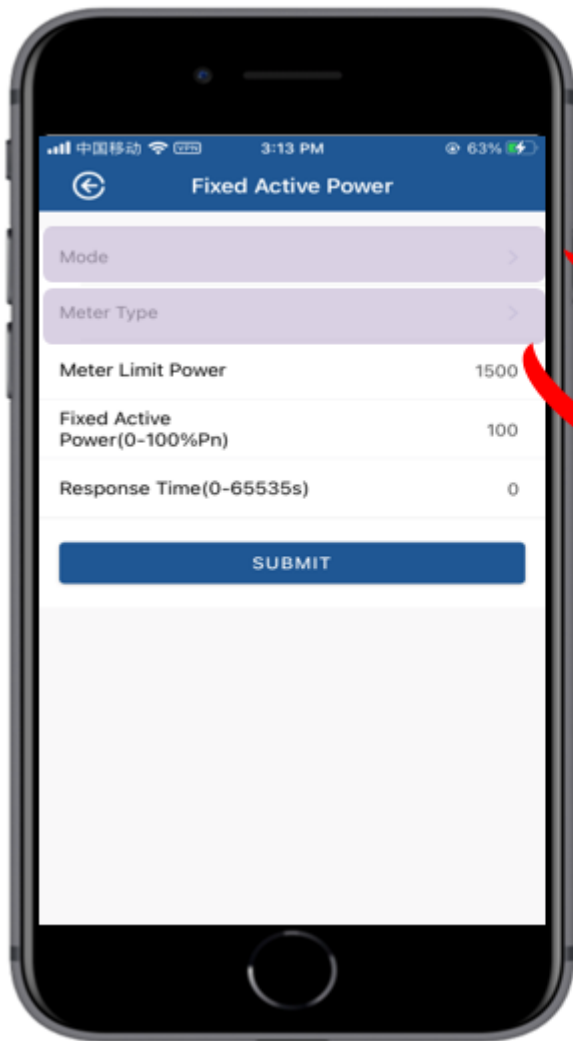
For the purpose of Smart meter configuration, there are **ONLY 3 parameters** to set:

**Mode, Meter Type, Meter Limit Power**

Please change these 3 parameters to the following:

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





Mode

No used:0

Fixed active power:1

DRED:2

Meter:3 ✓

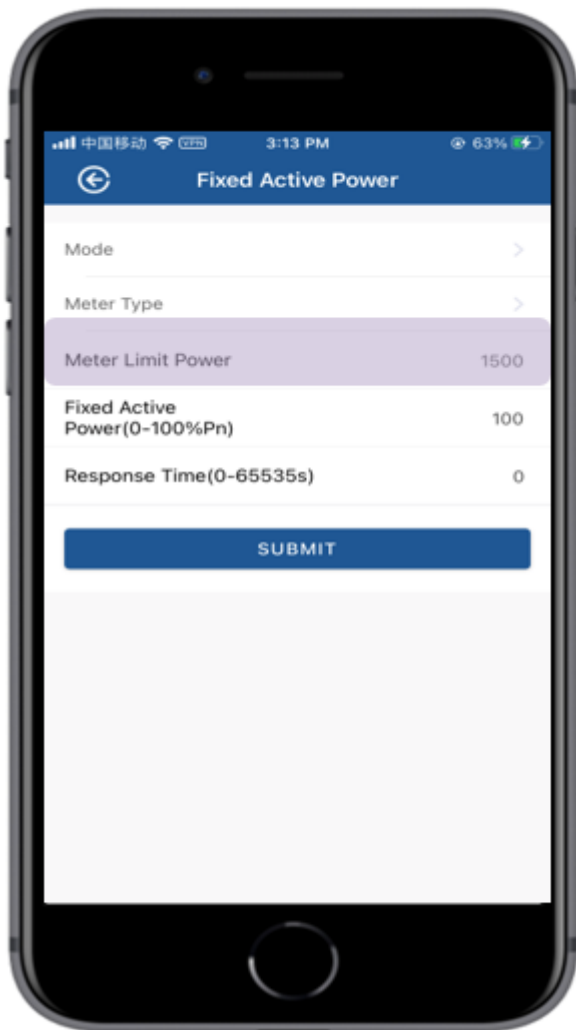
Meter Type

SDM230:0 ✓

**Mode:** select 'Meter 3'

**Meter Type:** select 'SDM230:0'

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

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

Configure  
Set Alias  
Debug  
FFR

	Inverter	Gateway
	Alias/SN	SN
4 <span style="border: 1px solid red; padding: 2px;">...</span>	S50000A120900183 S50000A120900183	E47082080864
	Type: HPS-5000 Power[W]: 0 0.00%	Type: Wi-Fi

● 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	<span style="border: 1px solid red; padding: 2px;">Fixed active power</span> >
Grid Standard		Over frequency response >
Grid Protection		P(U) >
6 <span style="border: 1px solid red; padding: 2px;">Active Power Control</span>		
Reactive Control		
Internal settings		

On the dropdown parameters, please set as the following:

Quick Settings	Fixed active power	
Grid Standard	Active power control mode	No used:0
Grid Protection	Meter limit power	0
<b>Active Power Control</b>	Meter type	SDM230:0
Reactive Control	Slope Load Rate(%Pn/min)	600
Internal settings	Active power Increase Rate(%Pn/min)	6000
	Active power Decrease Rate(%Pn/min)	6000
	Fixed active power(0-100%Pn)	100
	Fixed active power response time(0-65535S)	0
		<b>Confirm</b>

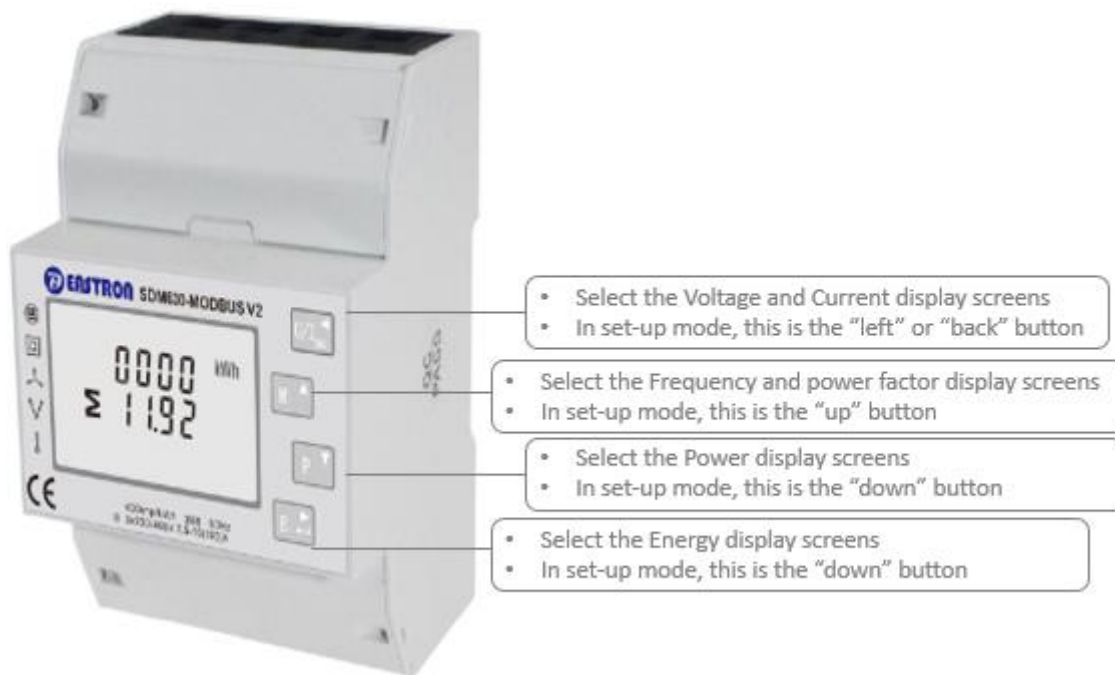
Items	How to fill in	Remarks
Active Power Control Mode	Choose <b>Meter</b>	
Meter Type	Choose <b>SDM630</b>	Default in SDM230
Meter Limit Power	Input <b>0</b>	Zero Export Mode

Inputting 0 means the meter will not allow any solar power feeding in to the Grid  
 Inputting other value, such as 1500 means the maximum power which feeds in to the Grid is 1500W

## 6. METER OPERATION

### 6.1 Control Button and Display

About more details of Screen display, please refer to the datasheet of the 《Eastron SDM630》



## 7. CONTACT

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