Export limitation configuration on Smartlogger3000

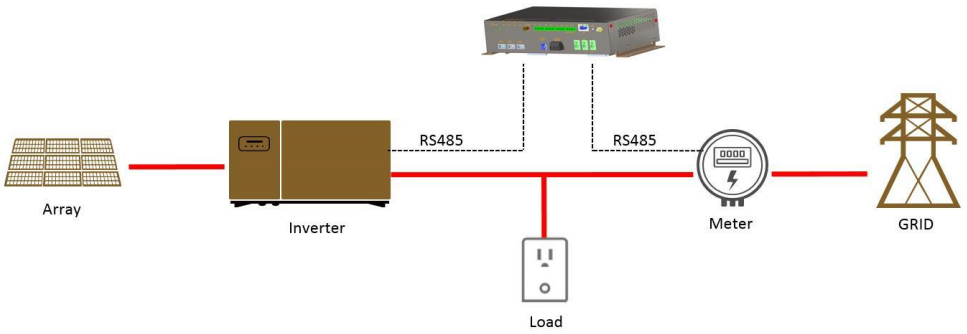
Huawei Technologies Co. Ltd.

Version	Created by	Date	Remarks
01	Huawei e84081311	02.03.2020	Smartlogger3000

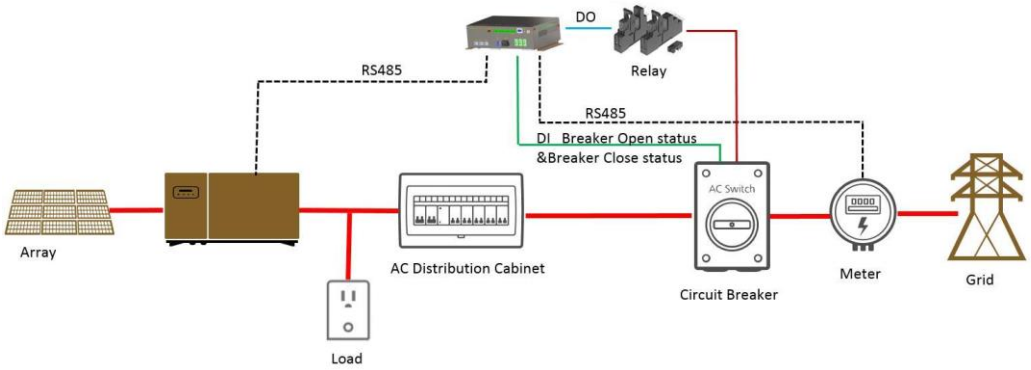
This manual describes the operation and maintenance instructions of the export limitation function. The Export Limitation feature is mainly used in the self-use scenario. The SmartLogger3000 detects the active power of the grid-tied point electric meter, controls the active output of the inverter in a closed-loop manner, prevents the inverter output power from being transmitted to the power grid, and maximizes the inverter power generation for local load consumption.

1. System Network Diagram

Without the DO control circuit breaker:



With the DO control circuit breaker:



Note:
If the connected power meter model is UMG604, PD510, PZ96L, UPM209, or COUNTIS E43, select the corresponding model in the Intelligent Power Meter Type drop-down list box.
When the UPM209 or COUNTIS E43 power meter is connected to the SmartLogger3000, a 120-ohm resistor needs to be connected to the RS485 bus of the meter. For details, see the user manual of the power meter.
COUNTIS E43: Not applicable to Single phase power

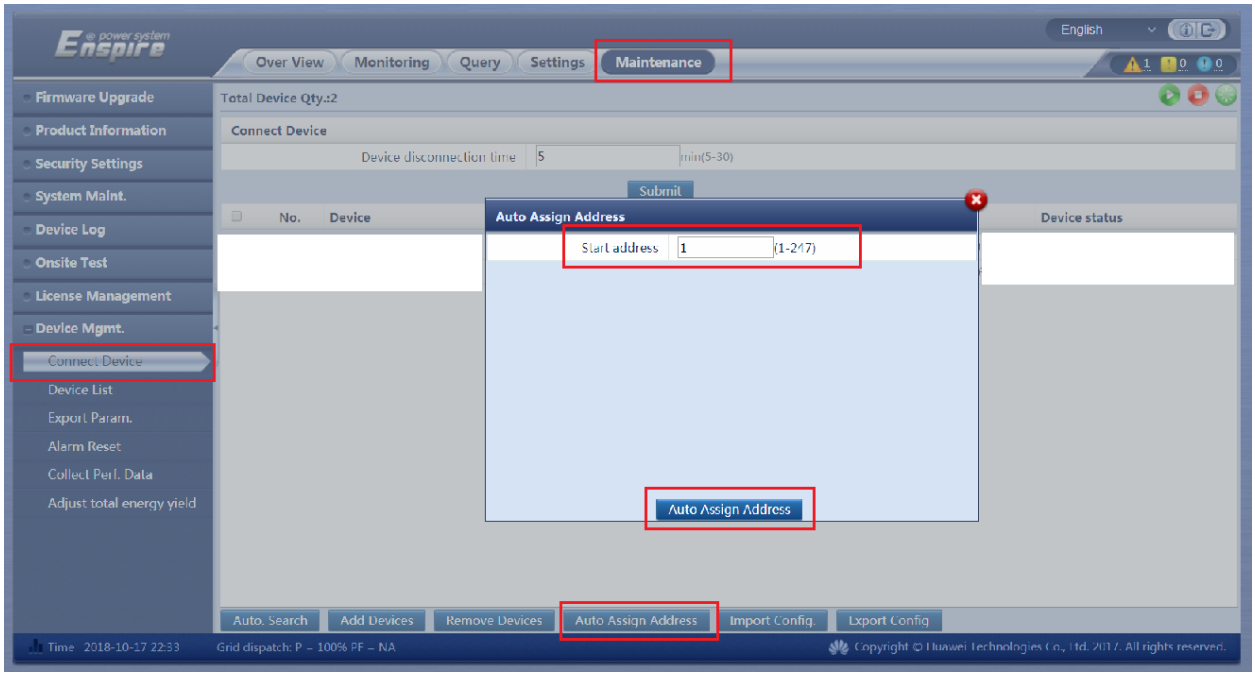
Power meters recommended:

Manufacturer	Model	Built-in	Zero Export	Remarks
ABB	A44	Yes	-	Note:"**Supported**" means that this model has been tested and verificated; while other models are not tested, can not verify whether the "Zero Export" can be achieved.
Acrel	PZ96L	Yes	Supported	
algodue	UPM209	Yes	Supported	
CHNT	DTSU666	Yes	-	
CHNT	DTSU666-H	Yes	Supported	
Elster	A1800ALPHA	Yes	-	
GIMAC-i	MODBUS ENG MAP(120613)	Only Evaluated accessible	-	
Iskra	MC320	Only Evaluated accessible	-	
Iskra	MC774	Only Evaluated accessible	-	
Janitza	UMG604/UMG103/UMG104	Yes	Supported	
Lead	LD-C83	Yes	-	
MingHua	CRDM-830	Yes	-	
Mitsubishi	LMS-0441E	Yes	-	
NARUN	PD510	Yes	-	
Netbiter	CEWE	Yes	-	
People	RM858E	Yes	-	
PowerLogic	ION6200	Only Evaluated accessible	-	
PowerLogic	ION7600ION7550/ION7600	Only Evaluated accessible	-	
SATEC	PM130 PLUS	Only Evaluated accessible	-	
Schneider	iEM3000 series	Only Evaluated accessible	-	
Schneider	PM1000	Only Evaluated accessible		
Schneider	PM1200	Yes	-	
SFERE	PD194Z	Yes	-	
Socomec	COUNTIS E43	Yes	Supported (Note: the meter cannot support the imbalance load scenario)	
Toshiba	S2MS	Yes	-	
weisheng	DSSD331	Only Evaluated accessible	-	

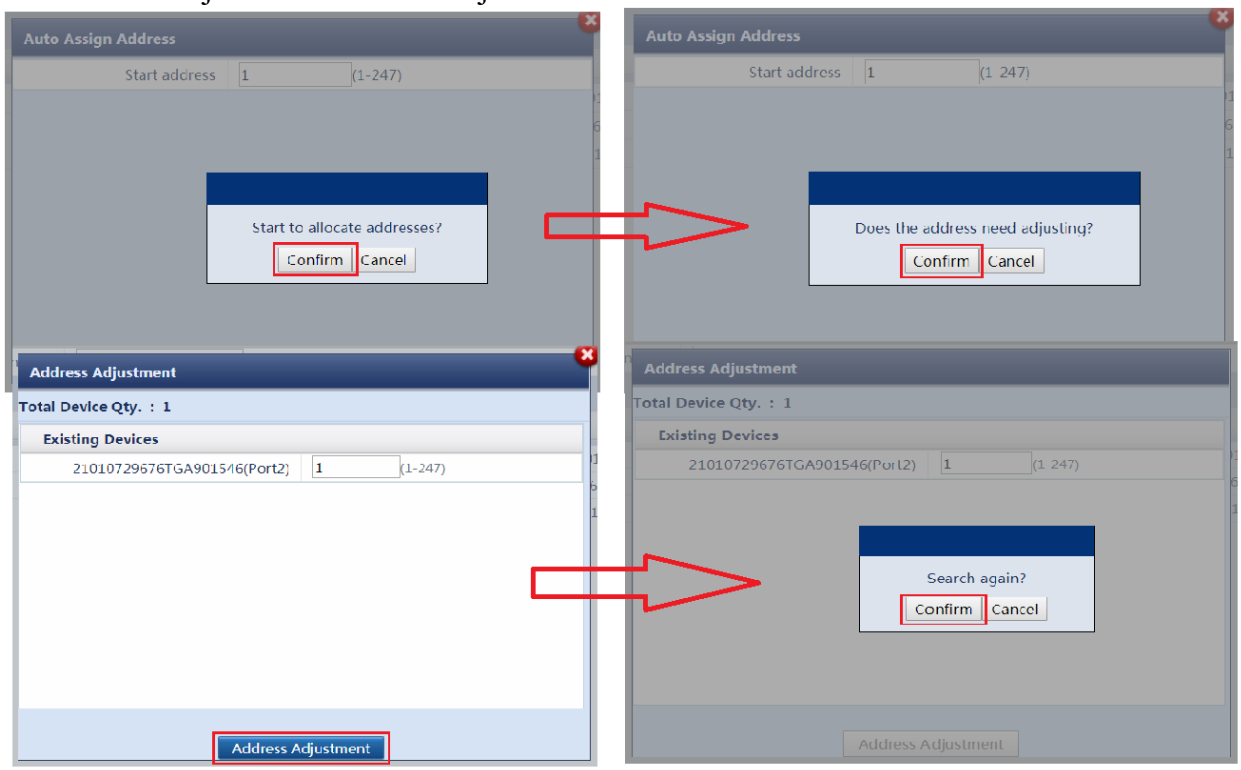
2. Connecting the inverters

Connect the Ethernet cables in WAN port and write in a browser the link https://192.168.0.10 (default password "**Changeme**") and login as Admin→Maintenance→Connect Device→Auto assign address→Set start address to 1→Auto assign address

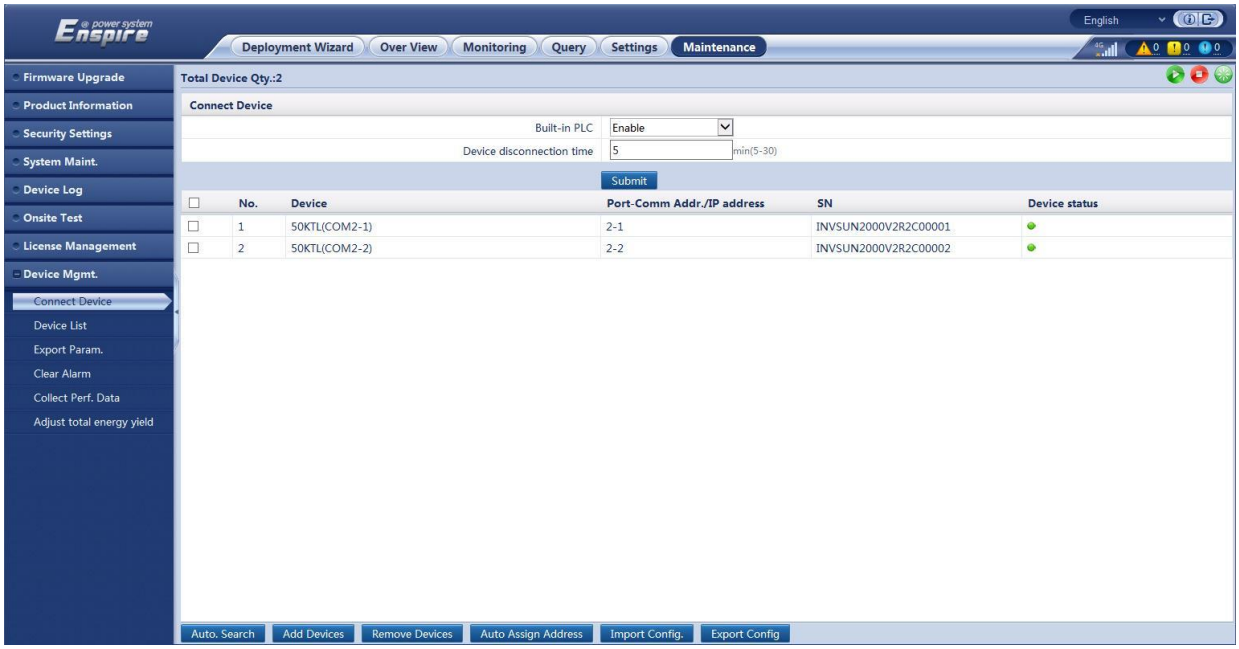
Note: after first login you need to change the password.



After select auto assign address follow the below steps: confirm start allocate address→confirm address need adjustment→address adjustment→confirm



Search result:

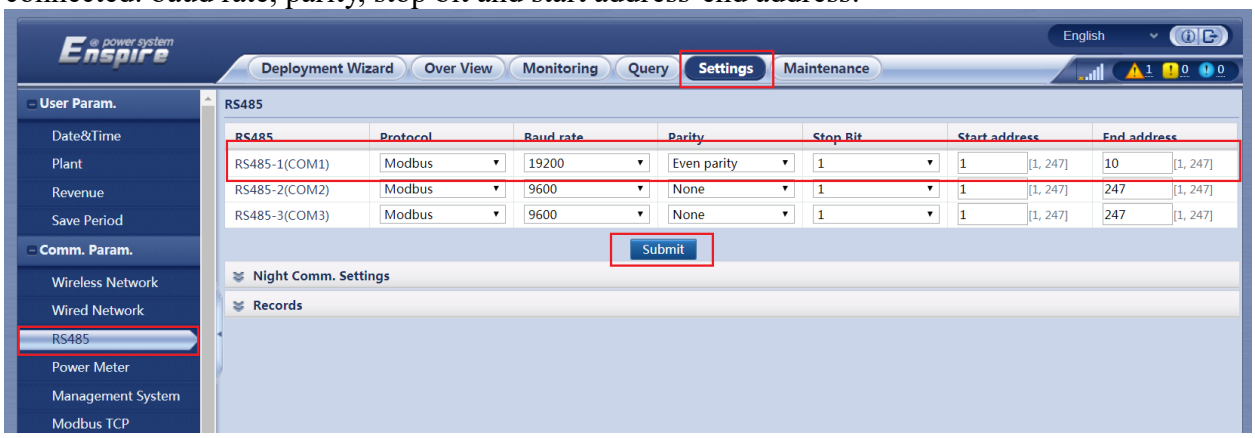


3. Connect the power meter

The power meter does not support automatic search and needs to be added manually.

3.1 Set the RS485 communication port

As Admin from **Settings→Comm. Param. →RS485** and set the ports where the power meter is connected: baud rate, parity, stop bit and start address-end address:

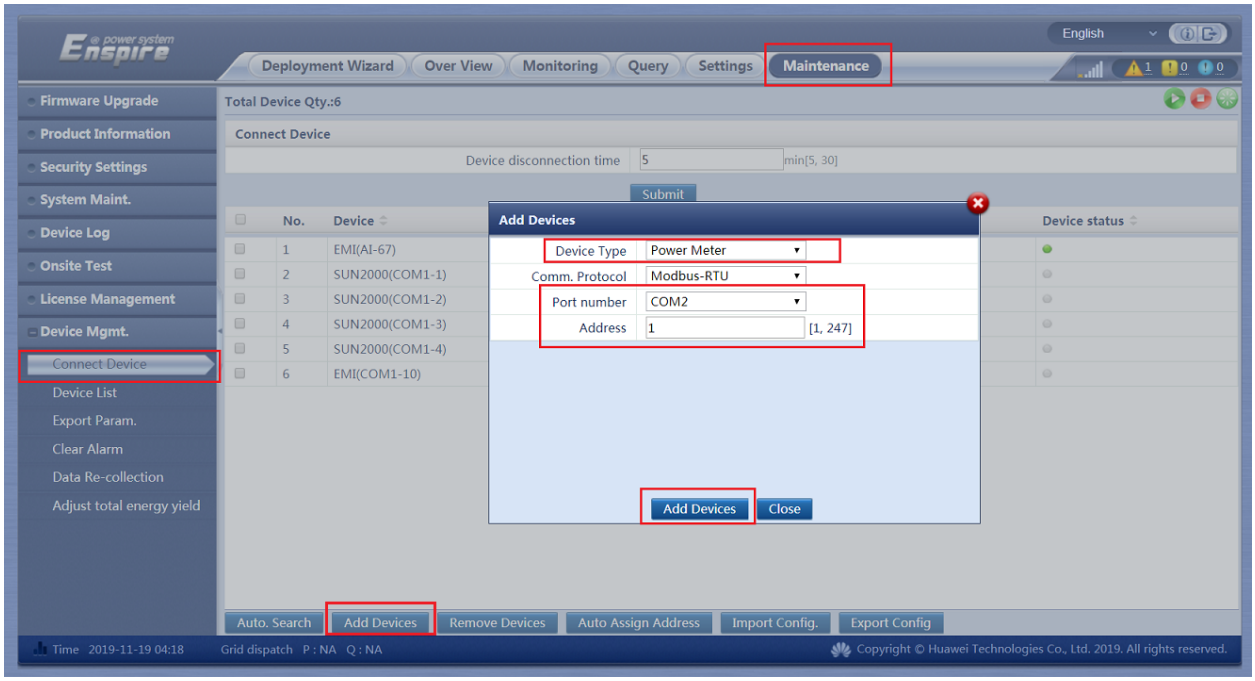


RS485-1 to **RS485-3** correspond to the communications ports **COM1** to **COM3**, and the default baud rate is 9600 bps. For the power meter connected to the corresponding RS485 port, the values

of **Protocol**, **Baud rate**, **Parity**, and **Stop bit** must be the same as those from user manual.

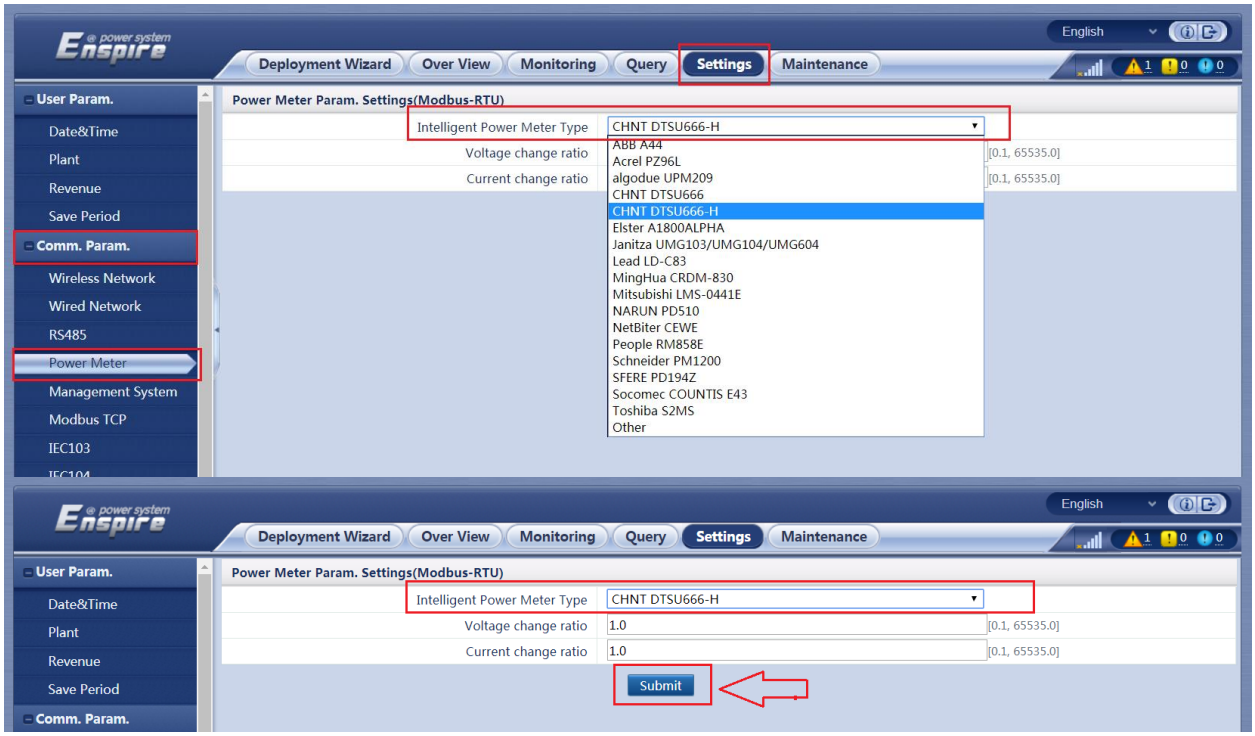
3.2 Add the power meter

Connect the power meter in one of the RS485 port of the Smartlogger3000. As Admin from Maintenance menu chose Connect Device→Add device→Choose Device Type Power Meter→Comm. Protocol Modbus-RTU→set the Port number accordingly and the RS485 communication address of the Power Meter→Add device

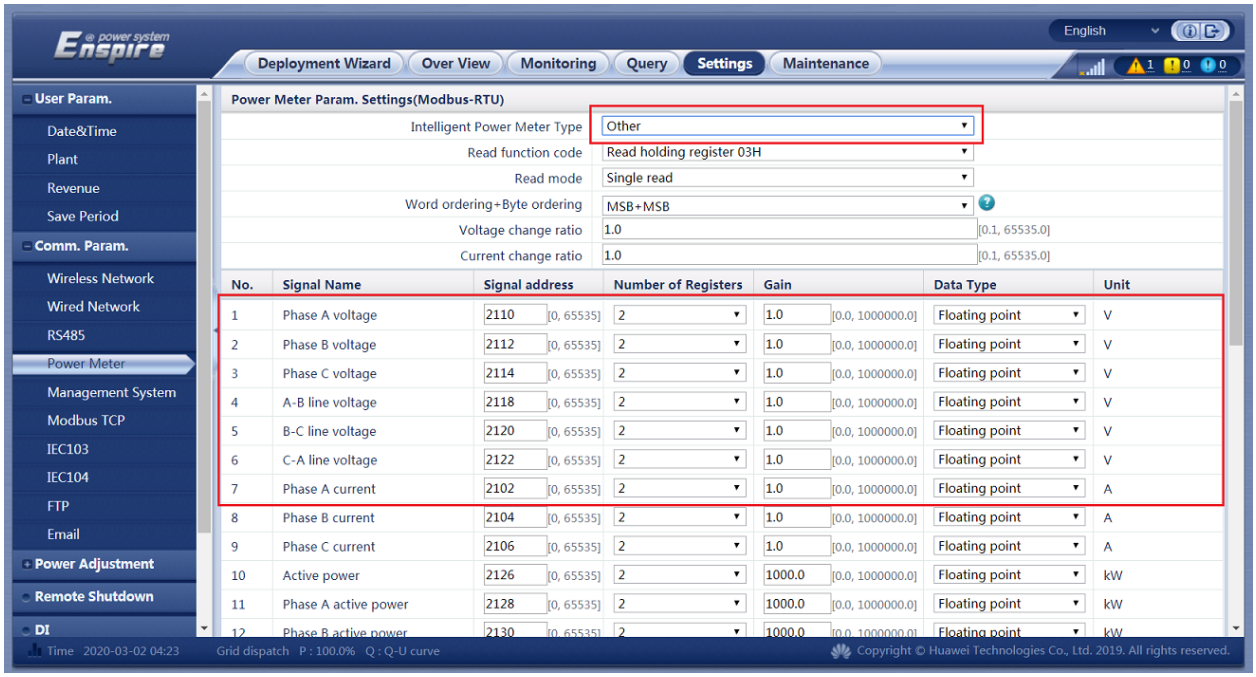


3.3 Select the power meter type

As Admin form Settings→Comm. Param. , menu choose Power meter, select the meter type and submit:

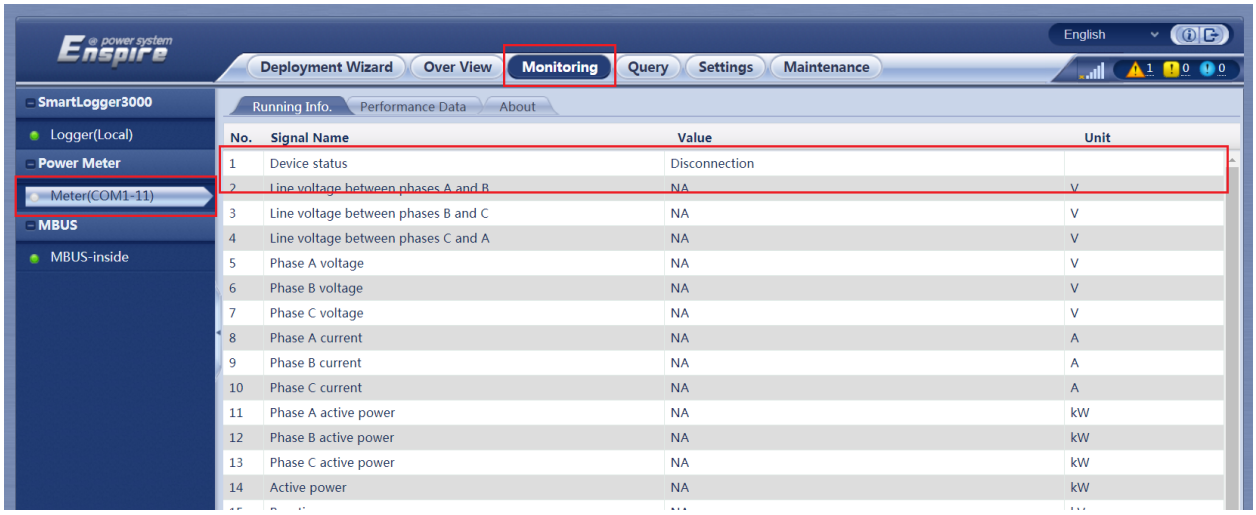


If the installed meter is not in the default list you need to choose the type other and set all the register for the meter and submit:



3.4 Check the power meter status

From Monitoring menu select the Meter and check the status:

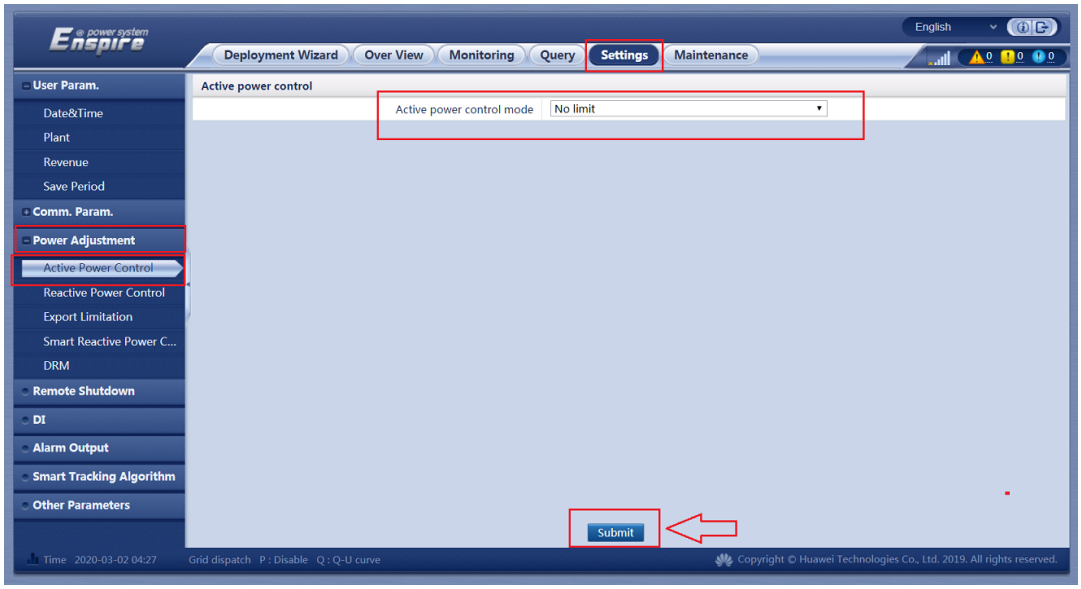


No.	Signal Name	Value	Unit
1	Device status	Disconnection	
2	Line voltage between phases A and B	NA	V
3	Line voltage between phases B and C	NA	V
4	Line voltage between phases C and A	NA	V
5	Phase A voltage	NA	V
6	Phase B voltage	NA	V
7	Phase C voltage	NA	V
8	Phase A current	NA	A
9	Phase B current	NA	A
10	Phase C current	NA	A
11	Phase A active power	NA	kW
12	Phase B active power	NA	kW
13	Phase C active power	NA	kW
14	Active power	NA	kW

If the power meter show the status disconnected you need to check the physical connection and the communication parameters. The status of the power meter should be green and connected.

4. Disable active power control

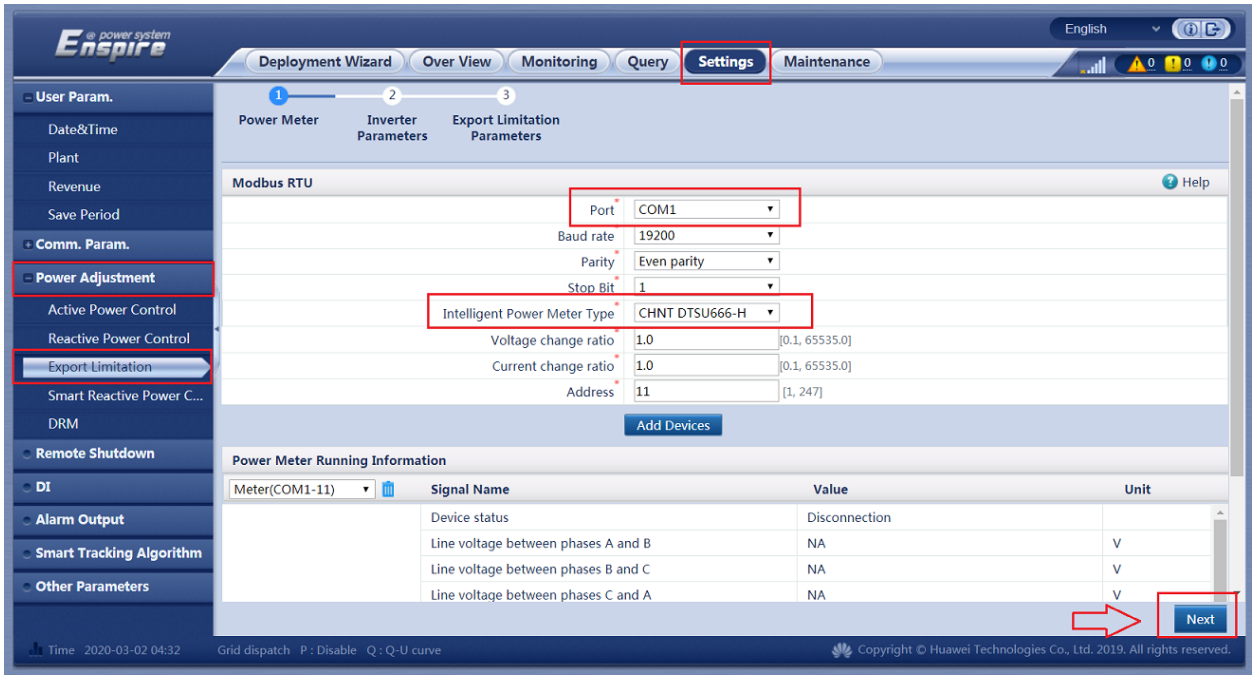
As Admin from Settings menu→Power Adjustment→Active Power Control→set active power control to No limit→Submit



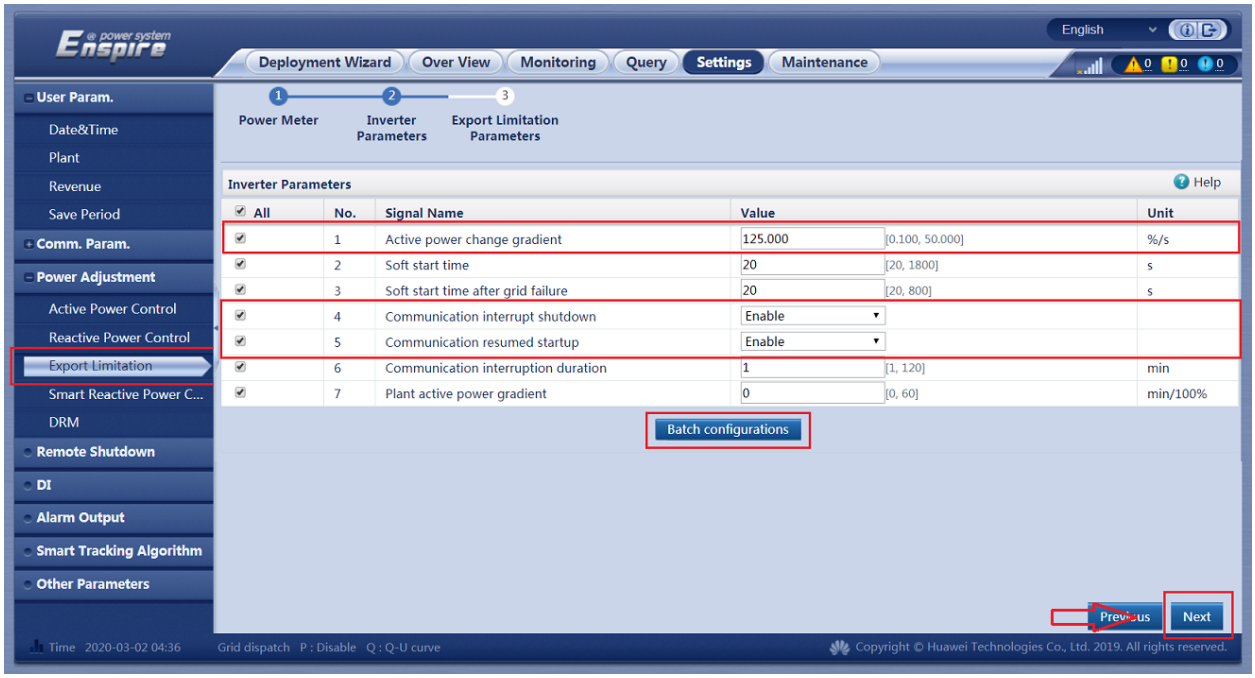
5. Export limitation configuration (Wizard configuration)

5.1 Confirm to the Power Meter

As **Admin** choose **Settings→Power Adjustment→Export Limitation** to access the target page. Check the meter port, type and the communication settings and choose **Next**:



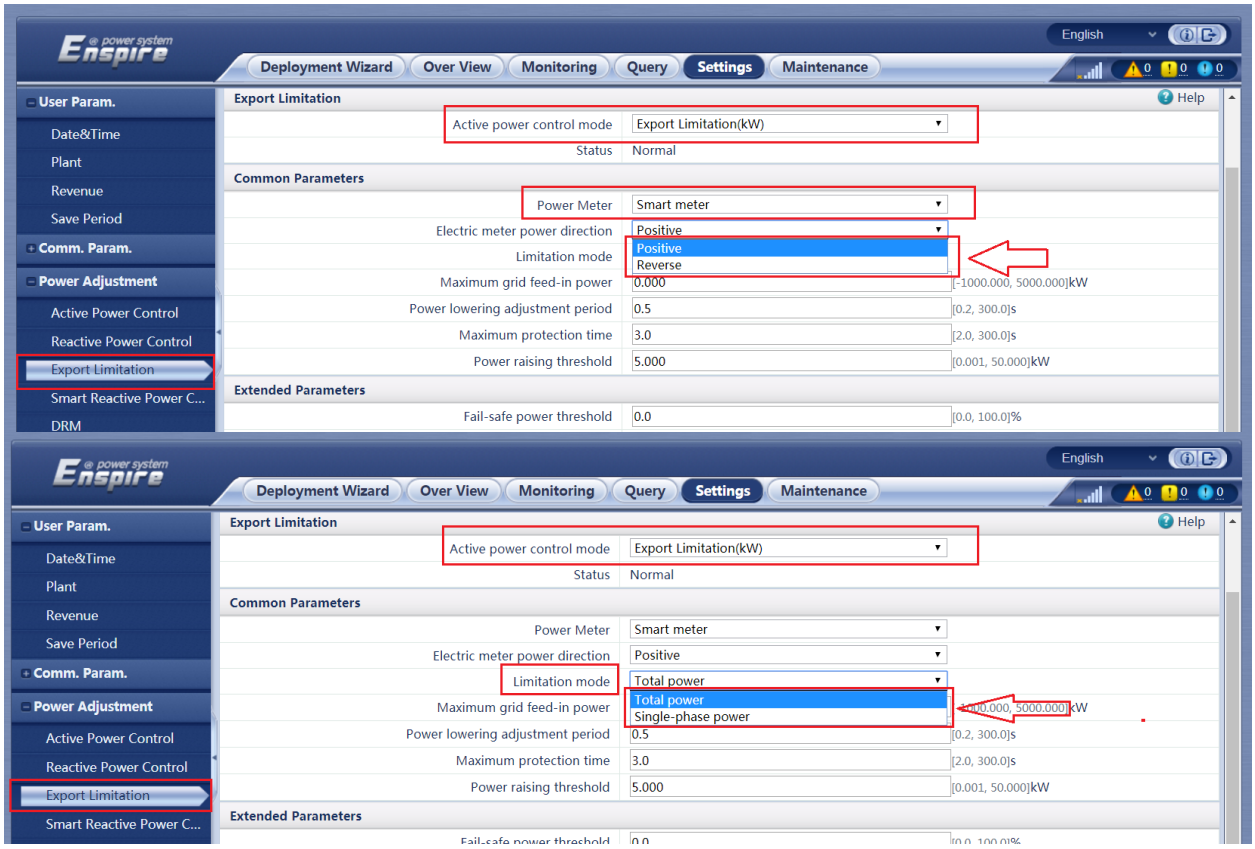
5.2 Set inverters parameters

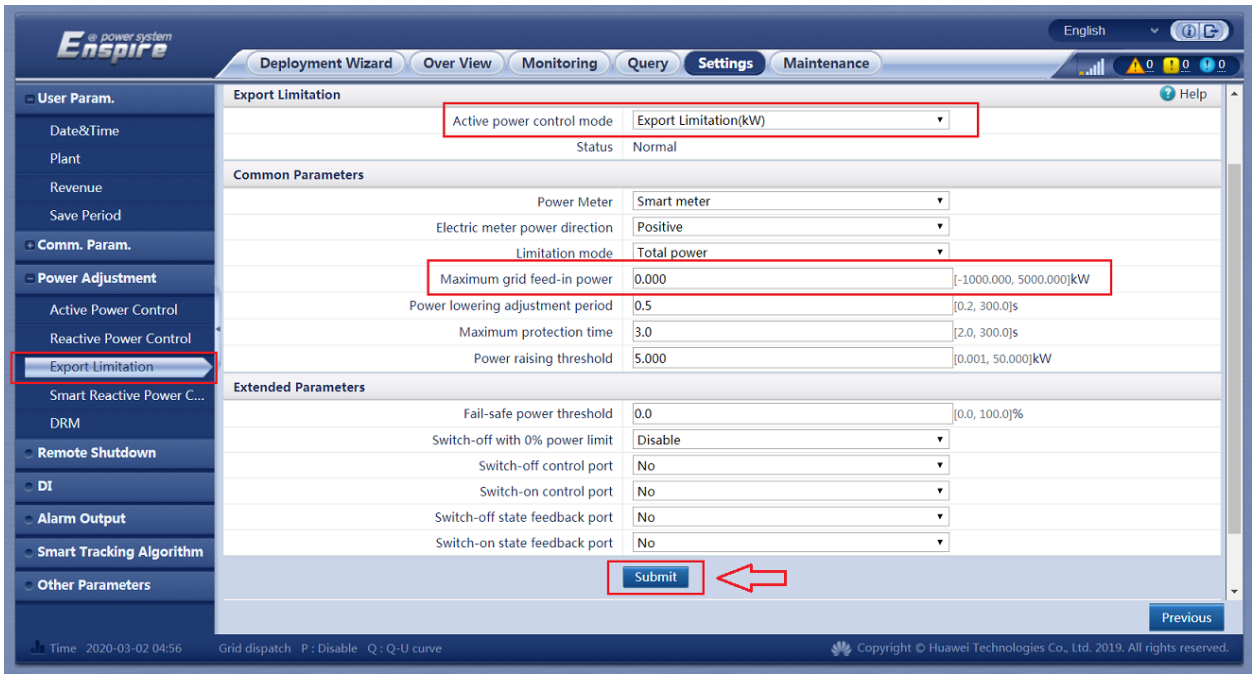


-Set active power change gradient:
-125%/s, if the maximum value range is 50%/s, set this parameter to 50%/s.
-Enable the communication interruption shut down and communication resumed startup.
-Select Batch configuration to set all the inverters and after that select **Next**

5.3 Configuring Export Limitation Parameters

Enable the function export limitation, set all the details and submit:
-Select power meter
-Select the sense of the power meter: positive or reverse
-Set the limitation mode: total power or single-phase power
-Set maximum feed-in
-Set the power raising threshold that should be always higher than maximum feed-in
-Submit


Enspire power system
English
Deployment Wizard
Over View
Monitoring
Query
Settings
Maintenance
User Param.
Date&Time
Plant
Revenue
Save Period
Comm. Param.
Power Adjustment
Active Power Control
Reactive Power Control
Export Limitation
Smart Reactive Power C...
DRM
Export Limitation
Help
Active power control mode
Export Limitation(kW)
Status
Normal
Common Parameters
Power Meter
Smart meter
Electric meter power direction
Positive
Limitation mode
Positive
Reverse
Maximum grid feed-in power
0.000
[-1000.000, 5000.000]kW
Power lowering adjustment period
0.5
[0.2, 300.0]s
Maximum protection time
3.0
[2.0, 300.0]s
Power raising threshold
5.000
[0.001, 50.000]kW
Extended Parameters
Fail-safe power threshold
0.0
[0.0, 100.0]%
Total power
Single-phase power


Enspire power system
English
Deployment Wizard
Over View
Monitoring
Query
Settings
Maintenance
User Param.
Date&Time
Plant
Revenue
Save Period
Comm. Param.
Power Adjustment
Active Power Control
Reactive Power Control
Export Limitation
Smart Reactive Power C...
DRM
Remote Shutdown
DI
Alarm Output
Smart Tracking Algorithm
Other Parameters
Export Limitation
Help
Active power control mode
Export Limitation(kW)
Status
Normal
Common Parameters
Power Meter
Smart meter
Electric meter power direction
Positive
Limitation mode
Total power
Maximum grid feed-in power
0.000
[-1000.000, 5000.000]kW
Power lowering adjustment period
0.5
[0.2, 300.0]s
Maximum protection time
3.0
[2.0, 300.0]s
Power raising threshold
5.000
[0.001, 50.000]kW
Extended Parameters
Fail-safe power threshold
0.0
[0.0, 100.0]%
Switch-off with 0% power limit
Disable
Switch-off control port
No
Switch-on control port
No
Switch-off state feedback port
No
Switch-on state feedback port
No
Submit
Previous
Time 2020-03-02 04:56
Grid dispatch P : Disable Q : Q-U curve
Copyright © Huawei Technologies Co., Ltd. 2019. All rights reserved.

Empirical Parameters

Meter Model	Power Lowering Adjustment Period	Maximum Protection Time	Description
UMG	0.5s	3s	
COUNTIS E43	0.5s	3s	
UMP209	0.5s	3s	
CHNT DTSU666-H	0.5s	3s	Under the Spanish RD1699 grid standard, please set Power Lowering Adjustment Period 0.8s, Maximum Protection Time 2s

6. Troubleshooting

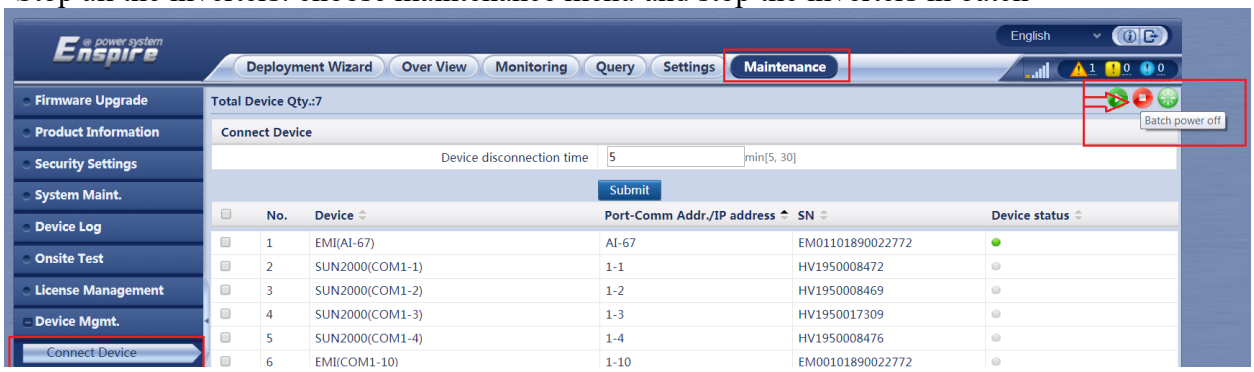
After you set export limitation and the function don't work please check the next:

6.1 The meter should be installed at the consumption main point and not on a secondary consumption point.

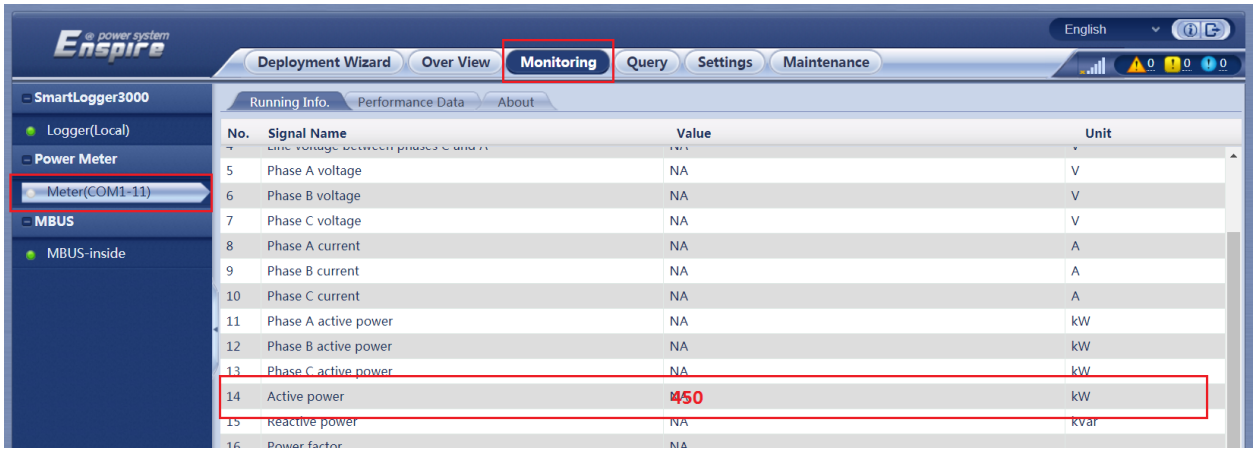
6.2 Check if the electric meter power direction is set correctly. You can check the meter sense following the next steps:

-Disable the function export limitation

-Stop all the inverters: choose maintenance menu and stop the inverters in batch



-Go to Monitoring menu, select the meter and check the value of Active power. If the value is positive that set the electric meter power direction to positive. If the value is negative set the electric meter power direction to reverse.



6.3 Check the power raising threshold

-If you set the maximum grid feed-in power to 0 than you can set the raising threshold to 0.1. After you check all of this the function should work without problem.

Contact service team at eu_inverter_support@huawei.com in order to receive help.

Europe +80 03 38 88 888 (except below countries)

Croatia/Latvia/Bulgaria +80 07 77 78 899

Iceland 800201866 Slovakia +40 31 22 61 915 Moldova 080061466

Serbia 800190899 Lithuania 880031499 Romania 0800400897

Australia 1800046639 Canada +40 31 22 61 915 New Zealand 080061466

America 1 877 9huawei