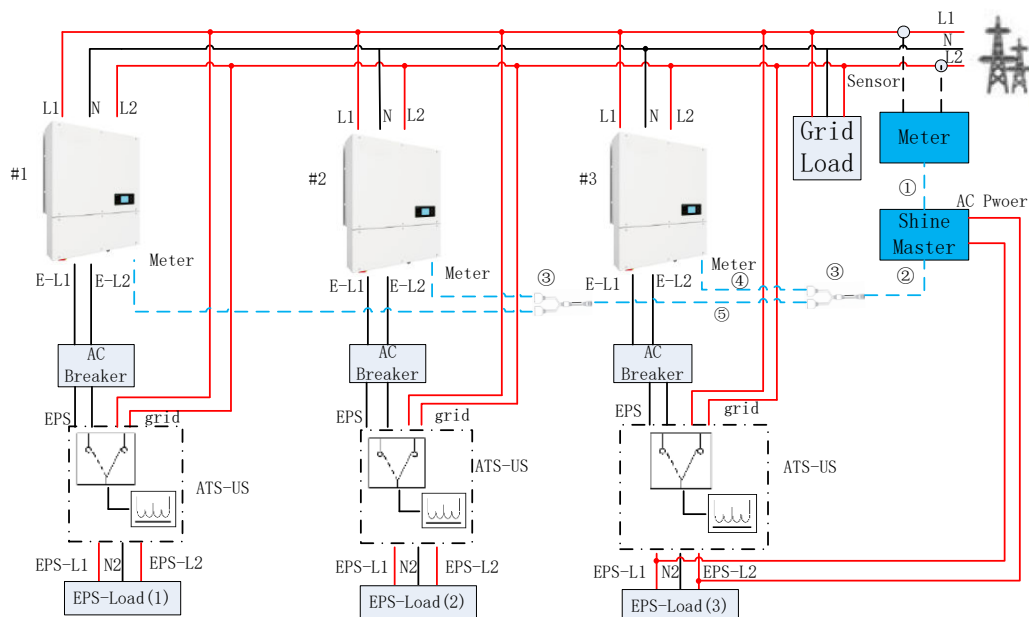# Operation Guidance for Multiple SPH in Parallel Application

1. System Diagram
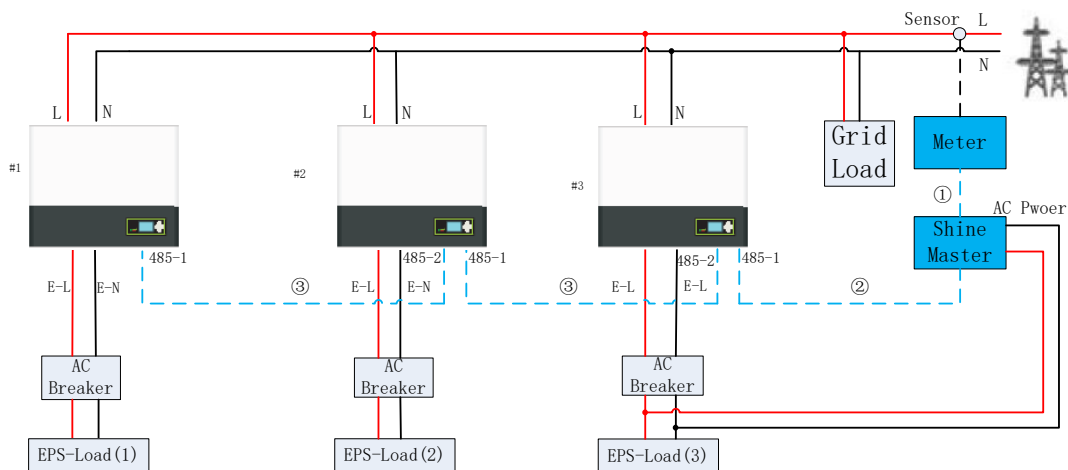
SPH 3000-6000TL BL-US model in parallel diagram

Wiring Instructions:

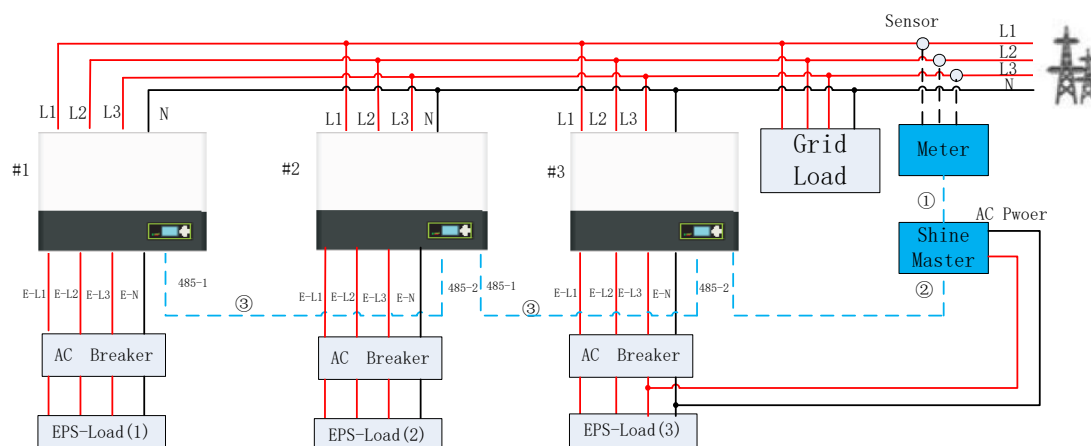| No.	Corresponding Terminal position	Description
①	Meter: A+ to ShineMaster: A2 Meter: B- to ShineMaster: B2	Use ordinary Network cables
②	ShineMaster: A1 to RJ45:Pin1 ShineMaster: B1 to RJ45:Pin2	Use ordinary Network cables
③	One - to - two communication line between ShineMaster and SPH is used to solve the problem of insufficient communication port	
④	RJ45:Pin1～The Meter interface of the SPH-US is A+ RJ45:Pin2～The Meter interface of the SPH-US is B+	
⑤	RS485 cable	

SPH 3000-6000TL-UP models in parallel diagram

Wiring Instructions:

No.	Corresponding Terminal Position	Description
①	Meter: A+ to ShineMaster: A2	Use ordinary Network cables
	Meter: B- to ShineMaster: B2	
②	ShineMaster: A1 to 485-1: Pin4	Use ordinary Network cables
	ShineMaster: B1 to 485-1: Pin5	
③	Ordinary cable	

SPH 4000-10000TL3 BH-UP models in parallel diagram

Wiring Instructions:

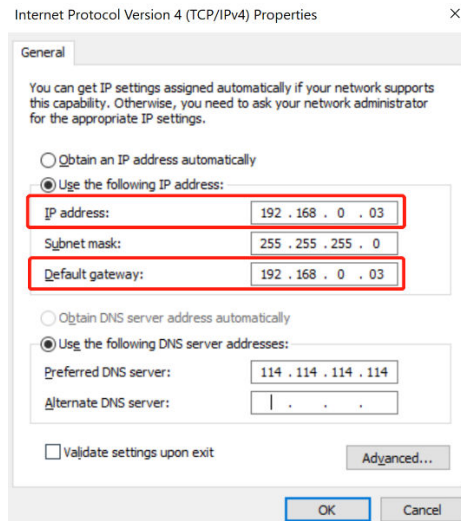| No.	Terminal Position	Description
①	Meter: A+ to ShineMaster: A2	Use ordinary Network cables
	Meter: B- to ShineMaster: B2	
②	ShineMaster: A1 to 485-1: Pin4	Use ordinary Network cables
	ShineMaster: B1 to 485-1: Pin5	
③	Ordinary cable	

Notice:

The SEM-E device has built-in ShineMaster and smart meter together, and the installer can ignore the wiring connection between them if the installer uses the SEM-E device for a parallel extension.
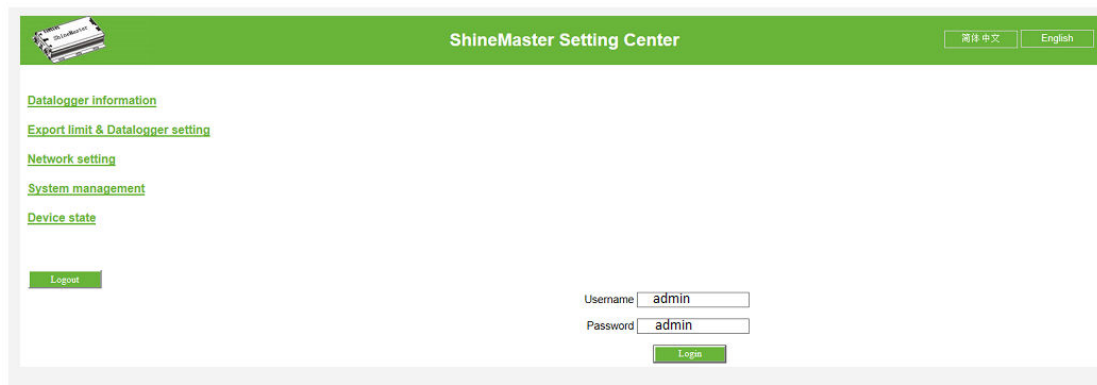
2. ShineMaster Setting

2.1 Enter ShineMaster's built-in web page through a PC to make relevant settings. The PC is directly connected to the RJ45 port of the ShineMaster through a network cable. The computer IP address and default gateway are changed to 192.168.0. XXX (XXX ranges from 2 to 253).

Note: The default internal access IP address of the ShinMaster is 192.168.0.254. Enter 192.168.0.254 on the web UI to go to the built-in page. Computer IP Settings are shown in the figure below:
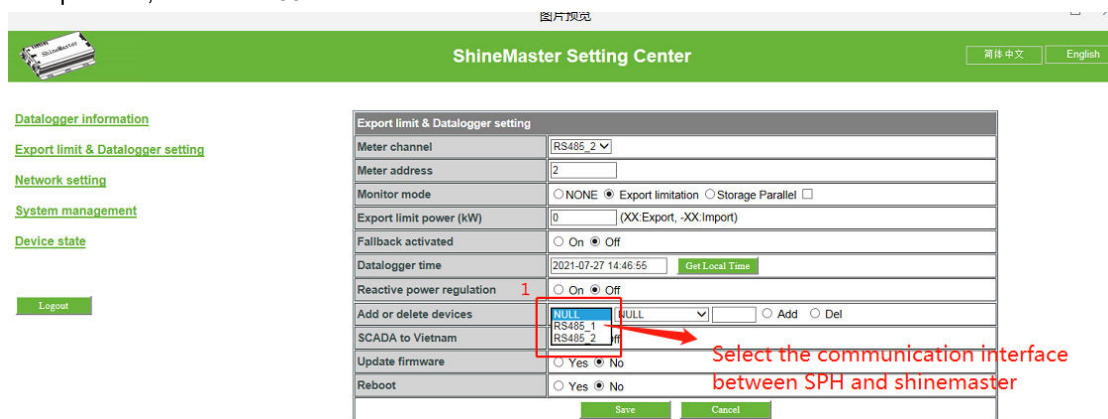
2.2 The built-in web page of ShineMaster is as follows. The login account is admin, and the password is the same as the account. It is used to add and delete devices, select operation mode, modify the baud rate of the RS485 channel, etc. If you want to modify or select "meter channel" and "meter address", you need to use the admin000 test account, and the password is the same as the account

2.3 After logging in, click to enter the Export limit & Datalogger setting interface. Please set the communication address between SPH and ShineMaster in the following order.

Step1. First, select RS485-1 and add the communication interface between SPH and ShineMaster

2.4 Select inverter

2.5 Red box 1 is used to assign a communication address to the devices. For example, there are three SPH in parallel; Write the number "1" in red box 1, and then click red box 2 and red box 3; When you want to assign an address to the second SPH, write the number "2" in red box 1, and then click red box 2 and red box 3; When you want to assign an address to the third SPH, write the number "3" in red box 1, and then click red box 2 and red box 3;

2.6 After logging in, click to enter the Export limit & Datalogger setting interface again. Please set the communication address between Smartmeter and ShineMaster in the following order.
Select RS485-2 and add the communication interface between the meter and ShineMaster

2.7 Then select the corresponding meter model according to the meter used; SDM120 single phase electricity meter; SDM630 three-phase electricity meter; Acrel Meter is a split-phase meter (special

for SPH-US)

There are three kinds of meters used by SPH series models, sdm120 (single-phase meter); Sdm630 (three-phase electricity meter); Acrel meter (split phase meter, special for sph-us)
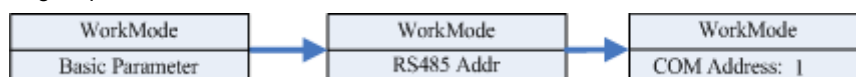
2.8 Different smart meters have corresponding communication addresses (SDM 120 communication address is "1"，SDM630 communication address is "2", and the ACREL meter communication address is "2". CHNT DDSU communication address is "3"; The CHNT DTSU communication address is "4". After filling in the address, please add and save it according to the red numbers 2 and 3 in the figure

Please fill in the corresponding address according to the model of the meter
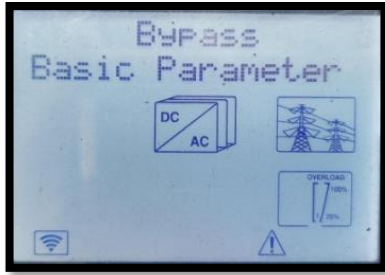
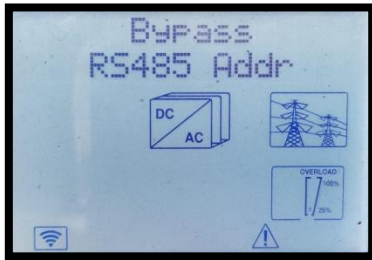| Meter	The corresponding address in ShineMaster
SDM 120/SPM-E/SPM-CT-E	1
SDM 630/TPM-E/TPM-CT-E	2
Acrel Meter	2
CHNT DDSU series	3
CHNT DTSU series	4

3. SPH Address Setting

3.1 Please operate at the LCD interface of SPH and set the communication address according to the following steps

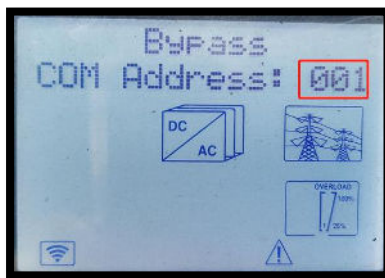| WorkMode	WorkMode	WorkMode
Basic Parameter	RS485 Addr	COM Address: 1

3.2 Press and hold the "OK" key for more than 3S to enter the following menu

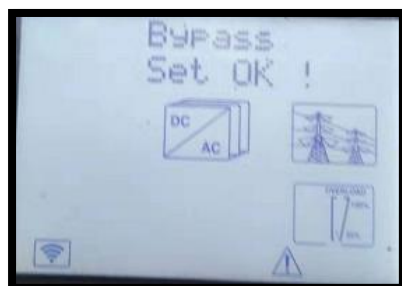3.3 Press "OK" and use the scroll down key to select the following page

3.4 Press "OK" to select the following page, and use the scroll down key or scroll up key to select the address to set.
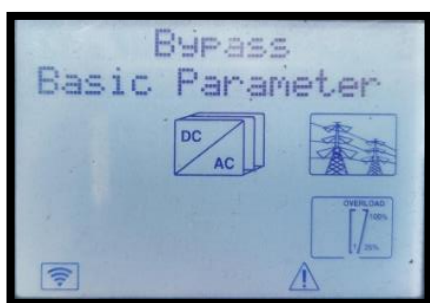

Note: Please set the corresponding addresses according to the communication address between SPH and ShineMaster set in **step 2.5**. For example, if there are three SPH in the system, set SPH to "001", SPH2 to "002", and SPH3 to "003"

3.5 After setting the corresponding address, press OK to confirm, and the setting is completed.

4. SPH RS485 Function Setting

4.1 Press Enter for more than 3 seconds to "OK" the parameter setting screen

4.2 Press up or down to enter RS485Setting interface

4.3. Press the OK key to enter the ShineMaster port selection screen. Select a port for SPH to communicate with ShineMaster.
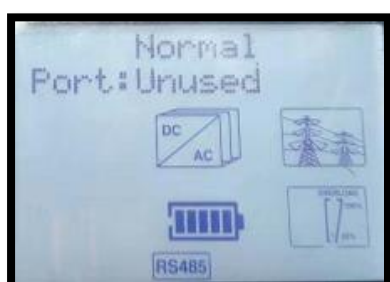
Note: The operation interface of different models is different. The operation interface of each model will be listed in detail below.

4.3.1 SPH 3000-6000TL BL-US operations are as follows:

After pressing the "OK" key, the characters on the LCD begin to blink. Then use the down key or up key to select the Port: ShineMaster, and press OK to complete the setting

4.3.2 SPH 3000-6000TL BL-UP and SPH 4000-10000TL3 BH-UP operations are as follows:

After pressing the "OK" key, the characters on the LCD begin to blink. Then use the down key or up key to select the Port: ShineMaster, and press OK to complete the setting