PSC SOLAR (UK)
Africa's Solar Electricity Power

SUB-D6.2K Installation Key Notes

Please be sure to read the instructions carefully during installation. This article only emphasizes key precautions.

1. Preparation before system connection

1.1 Photovoltaic panels in series and parallel:

- The open circuit voltage range is 60-500V. Exceeding 500V may cause immediate damage to the machine.
- Take a 540W-700W board as an example. Its open circuit voltage is 45-55V. It is best to connect 4-8 boards in series, and then connect them in parallel according to capacity requirements.
- Please measure the output voltage of the solar panel array before connecting to the system.
- PV line 6 square meters, PV circuit breaker 32Amp

1.2 Battery pack:

- Connect the battery pack according to the system configuration, and measure the voltage of the battery pack before connecting to the system;
- Battery cable 25sqmm Battery circuit breaker 150Amp
- Please connect the battery when the inverter is powered off (turn off mains power, turn off PV)
- Please switch the battery on and off when the inverter is powered off (turn off mains power, turn off PV)

1.3 Mains input, inverter output

- Wire: 6sqmm, interrupter 32Amp
- AC circuit breaker is not required, but it is recommended to install it for easy maintenance.
- The mains power input cannot pass through the leakage protector. Because the inverter may be mistakenly judged to be leaking when filtering noise and trip.

2. System connection

2.1 Check that the mains power, battery pack, and solar panel voltages are normal.

2.2 With the battery/solar panel/mains turned off, connect the wires to the inverter

3. Several important settings after booting:

Please be sure to study manual 5.3 in detail

Program 01 Select one of the suitable working modes

Program 02 Maximum charging current setting (solar + city power)

Lead-acid batteries should not exceed 0.2C, for example, 48V200AH battery, then the maximum is 200*0.2=50A

Lithium battery should not exceed 0.5C, for example, 51.2VDC 200AH battery 200*0.5=100A

Oversized rechargeable batteries are detrimental to battery life.

Program 16: Charging mode setting. Select as needed. If only solar energy is allowed to charge the battery, set it to OSO.

Program 05 battery type setting

- The factory default setting is AGM lead-acid battery.

  If it is a gel or lead-acid battery: There is no need to change this item.

- If it is a lithium battery

  Please select LIB, and select Pylon, Riyueyuan or Growatt (Pylon/Growatt/Victron) for the lithium battery communication protocol.

  Also check whether Lithium 5.3 Program 37 BMS communication is turned on.

  And there is no communication failure between the inverter and the battery mentioned in 5.5.3 code reference.

  Indicates that the lithium battery communication setting is successful, the communication between the inverter and the lithium battery BMS is normal, and the charging and discharging parameters of the inverter will follow the BMS.

  Program 2 is recommended to be turned on to the maximum value, and the BMS will automatically apply for the required charging current.

Program 38 low battery protection, it is recommended to keep the default value

Program 39 Battery low-voltage transfer to commercial power working settings in SBU mode, it is recommended to use the default value

Program 40 Mains to battery working settings in SBU mode, it is recommended to use the default value

● If the inverter cannot communicate with the lithium battery

Please select USE, and then set the three items for 26/27/29:

Program 26 average charging voltage: set according to the requirements of the lithium battery specification, it is recommended to set 56.8V

Program 27 float charge voltage: Set according to the lithium battery specifications, it is recommended to set 56.8V

Program 29 items of low battery protection: Set according to the lithium battery specifications, it is recommended to set 44.8V

Program 02: Set the maximum charging current. Cannot exceed BMS current limit and 0.5 times of battery capacity (0.5C charging)

Program 11, set the mains charging current. (Refer to Program 02)

Program 12: Battery low-voltage transfer to commercial power working settings in SBU mode: 46V for lead-acid batteries, 48V recommended for lithium batteries

Program 13: Mains power to battery working setting in SBU mode: Normal set to Full Charged.

Program 16, if only PV charge battery, then set to 050

Please refer to the manual for more settings