


REV.	ECN NO.	DESCRIPTION	DATE	SIGNATURE
00	/	Release spec.	2022/08/03	ZHANGDAOWEI
01	/	快装内容更新	2022/12/19	FANBAOTONG

技术要求:

1. 成品页面尺寸: A4;
2. 105g双铜纸双面彩色打印;
3. 未注尺寸按±1.5mm;
4. 图面、字体印刷清晰, 无乱码、无偏移、无毛边、不起边、油墨不脱落;
5. 符合RoHS;

	GENERAL TOLERANCES			DESIGNED BY	DESCRIPTION
	FOR HOLES : ±0.05	FOR ANGLES : ±0.5°	FOR CABLES	樊宝朝	HHT5-12K Quick Installation Guide
FOR LINEAR DIMENSION ( ) DECIMALS	( ) RANGE	0-200 ±0.1 >200-500 ±0.2 >500-1000 ±0.3 >1000 ±0.4	FOR PACKING MATL.	CHECKED BY	USED ON
X ±0.3	0-50 ±0.1	0-30 ±1	0-30 ±1	徐承宏	HHT5-12K
X.X ±0.2	>50-200 ±0.2	>30-100 ±2	>100-300 ±3	APPROVED BY	DRAWING NO./FILE NO.
X.XX ±0.1	>200-400 ±0.3	>300-500 ±3.5	>500-1000 ±4	张进伟	
X.XXX ±0.05	>400-600 ±0.4	>1000 ±5		SCALE	SHEET
GB/T1804(ISO2768-1):	>600-800 ±0.5			1:1	1 OF 1
( ) f ( ) m ( ) c	>800-1000 ±0.6			PART NO.	REV.
	>1000 ±1.0			H838-00078-01	01

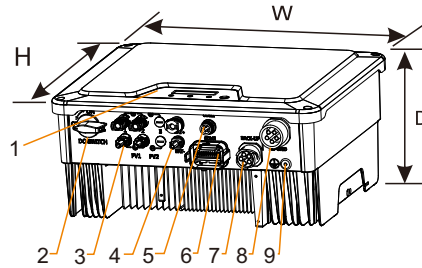
# Quick Installation Guide EN

HHT-5K/ HHT-6K/ HHT-8K/ HHT-10K/ HHT-12K



## 1. Product Overview

- LED&LCD or LED
- DC Switch
- PV Terminal (s)
- Battery Terminal
- COM1: Wi-Fi/GPRS/4G
- COM2: BMS/CT/Meter/DRED/RS485
- Back-up Terminal
- AC Terminal
- Secondary PE Terminal



Dimension: W×H×D=425×351×200mm

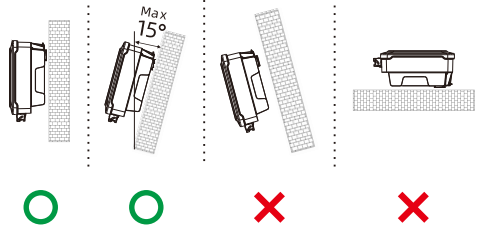
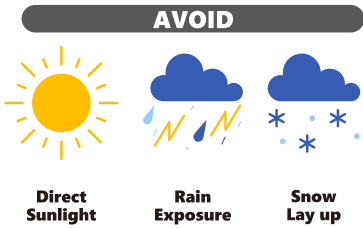
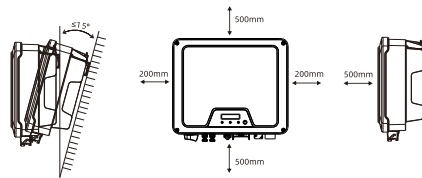
## 2. Packing List

Inverter	Mounting Bracket	Mounting Accessories	Devalan DC Plugs (Sealed)	Bat+/- Connector	BACK-UP Connector	AC-GRID Connector	Meter/Dred Connector	Communication Datalogger (optional)	CT	RJ45 Adaptor	Documents
1	1	1	2	1	1	1	1	1	3	1	1

## 3. Installing

### Installation Requirements

- Please install the inverter(s) in places that can avoid inadvertent contact.
- Please install the inverter on solid/smooth surfaces.
- The inverter(s) should not be installed near inflammable or explosive objects.

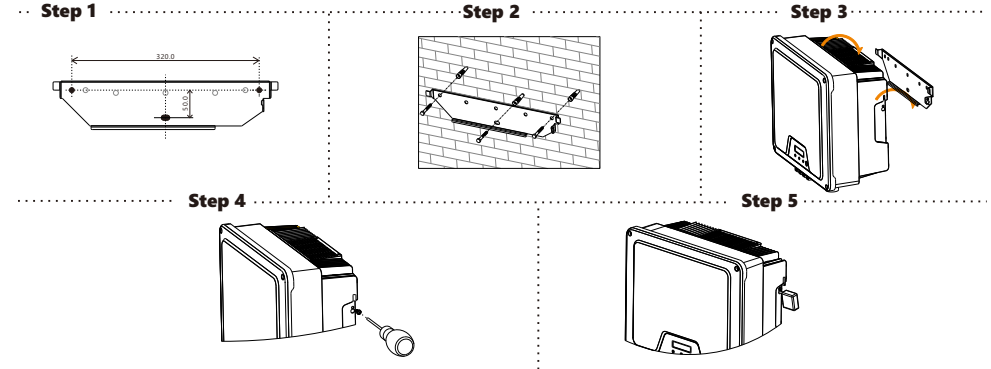


### Cable Specifications

No	Item	Type	Specifications
1	PE cable	Outdoor copper cable	Conductor cross-section: 10mm <sup>2</sup>
2	AC Output cable	Outdoor copper cable	Conductor cross-section: 5K:4~6 mm <sup>2</sup> ; 6~8K:6~8 mm <sup>2</sup> ; 10~12K:8~10 mm <sup>2</sup>
3	DC Input cable	Standard outdoor PV cable, PV1-F Model recommended	Conductor cross-section: 2.5~6 mm <sup>2</sup>
4	AC Backup cable	Outdoor copper cable	Conductor cross-section: 5K:4~6 mm <sup>2</sup> ; 6~8K:6~8 mm <sup>2</sup> ; 10~12K:8~10 mm <sup>2</sup>
5	Battery cable	Outdoor copper cable	Conductor cross-section: 6mm <sup>2</sup>
6	Meter/RS485/DRED	Outdoor shielded twisted pair cable	Conductor cross-section: 0.14~1.0mm <sup>2</sup>

## 3.1 Mounting

- Use the wall bracket as a template mark the holes on the wall, Drill three holes in the marked position of 10mm diameter and 70mm depth
- Fix the expansion bolts and mounting the main bracket with the screws in mounting accessories
- Attach the inverter to the mounting bracket, mounting the support bracket on the bottom of the inverter
- Check both sides of heat sink and ensure the inverter is stably attached
- Use M5 screws (torque: 2.5Nm) to attach the heat sink fins to the mounting bracket
- It is recommended to attach an anti-theft lock to the inverter

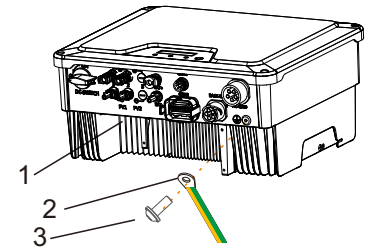


## 3.2 Installing the PE Cable

A second PE terminal is equipped at the bottom of the inverter. Ensure the PE terminal is reliably grounded

Object	Description
1	Housing
2	M6 terminal lug with protective conductor
3	M6×16 screw

Tighten it firmly into the housing (Torque: 3.5-5N.m)



**NOTICE**

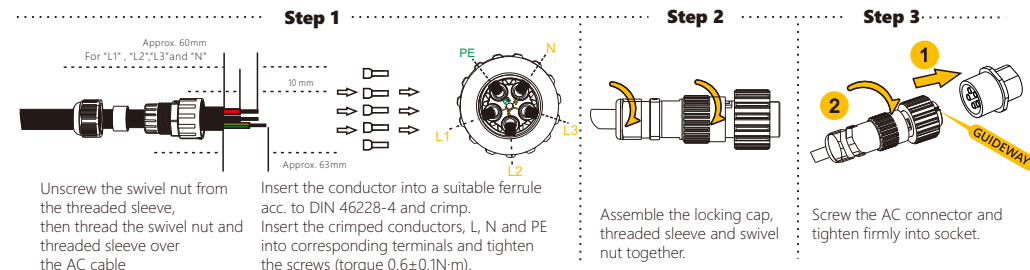
Proper grounding connection of the second PE terminal and the AC terminal is mandatory. NOT properly connecting both PE will void all product warranty.

## 3.3 AC Wire Assembly and Connection

**DANGER**

Danger to Life due to High Voltages in the Inverter

Before connecting any electrical wires and components, please ensure the DC switch & AC circuit breaker are switched OFF and cannot be reactivated.



**Note: Please ensure that the connector has been correctly installed!**

### 3.4 DC Wire Assembly and Connection

Meeting the following requirements is mandatory. All warranty rights will otherwise be invalid.

- 3.4.1 Maximum open circuit voltage of each string is less than 1000V<sup>1)</sup>.
- 3.4.2 Maximum short circuit current of each PV input is less than inverter allowable limit.
- 3.4.3 The string is well insulated to ground in all cases.
- 3.4.4 Make sure that the DC connectors have the correct polarity.
- 3.4.5 If the PV connectors are not assembled properly and locked into place, arc or overheat may be induced.

<sup>1)</sup>Note: According to AS/NZS 5033, PV arrays for installation on domestic dwellings shall not have PV array maximum voltages greater than 600V.

**Step 1**

Strip off the insulation

**Step 2**

Assemble the cable ends

Positive terminal

Negative terminal

Note: Don't crimp this part!

Crimp pliers to cable ends

**Step 3**

Assemble the connectors

2.6-2.9 N·m

Positive

Negative

Please check if the cables are securely installed by pulling outwards

**Step 4**

Check the polarities of the PV strings

Check the open-circuit voltage is less than inverter input limit 1000V

**Step 5**

Remove the waterproof caps from PV terminals

If there is an unused terminal, please seal it with the cap

**Step 6**

Insert the connectors into the terminal till you hear an audible click.

### 3.5 Battery Wire Assembly and Connection

Meeting the following requirements is mandatory. All warranty rights will otherwise be invalid.

- 3.5.1 Make sure there is an external DC breaker (=40A) connected for battery without built-in DC breaker.
- 3.5.2 Please ensure the battery model is enlisted in the suggested list in the user manual. Provent reverse polarity connection!
- 3.5.3 If the Battery connectors are not assembled properly and locked into place, arc or overheat may be induced.

**Step 1**

Open the spring using a blade screwdriver

**Step 2**

Insert the stripped wire with twisted wires. The wire ends have to be visible in the spring. Make sure the spring is closed firmly.

**Step 3**

Use a suitable and calibrated torque wrench, size 15. Use an open-jaw wrench, size 16, to hold the connector in place.

**Step 4**

Remove the waterproof caps from battery terminals

If there is an unused terminal, please seal it with the cap

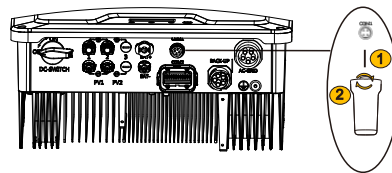
**Step 5**

Insert the connectors into the terminal till you hear an audible click.

### 3.6 Wi-Fi/GPRS/4G Connection (Optional)

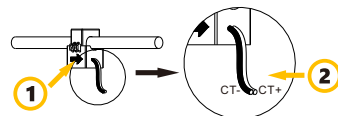
The stick is included in the scope of delivery as an option.

- 3.6.1 Tighten the stick into the COM1 port. Make sure the stick is securely connected.
- 3.6.2 For the connection and configuration of the stick please refer to <Wi-Fi stick User manual>.



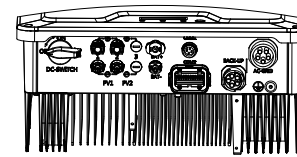
### 3.7 CT Connection

- 3.7.1 The arrow on the CT points to the inverter during installation.
- 3.7.2 The white line on the CT is connected to "CT+", and the black line is connected to "CT-".



### 3.8 RS485/Smart Meter/DRED Connection

Position



**Step 1**

Insert the wires into suitable ferrules (DIN 46228) and crimp.

**Step 2**

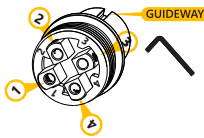
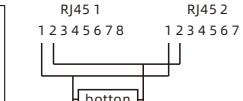
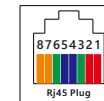
Insert the crimped conductors accordingly into their corresponding terminals and tighten the screws use the screwdriver in the attached bag.

- **CAN FOR COM2**
  - BMSCANH ▶ 14(CAN2H)
  - BMSCANL ▶ 15(CAN2L)
- **CT FOR COM2**
  - U\_CT+ ▶ 2(CT1+)
  - U\_CT- ▶ 3(CT1-)
  - V\_CT+ ▶ 4(CT2+)
  - V\_CT- ▶ 5(CT2-)
  - W\_CT+ ▶ 6(CT3+)
  - W\_CT- ▶ 7(CT3-)
- **METER FOR COM2**
  - MATERA ▶ 16(META)
  - MATERB ▶ 17(METB)
- **DRED FOR COM2**
  - COM LOAD/0 ▶ RJ451-7
  - REF GEN/0 ▶ RJ451-8

► **RS485 FOR COM2**

- RS485A ▶ 9
- RS485 ▶ 8

For parallel connections of multiple inverters via RJ45, use RJ45 port 1 and RJ45 port 2 on the COM2 connector. **NOTICE** For the furthest inverter of such connection, only 1 port is occupied. The button on the side of the occupied port must be pushed to "ON" for matched resistance.

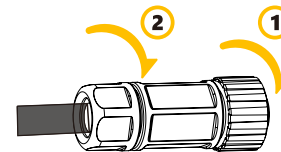


► **RS485 FOR COM1**

- Power + ▶ PIN 1
- Power - ▶ PIN 2
- RS485 A ▶ PIN 3
- RS485 B ▶ PIN 4

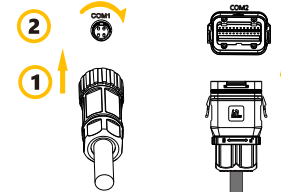
**Step 3**

Assemble the locking cap, threaded sleeve and swivel nut together.



**Step 4**

Screw the connector into the socket and tighten firmly.



**NOTICE** For AS/NZS 4777, DRM0, DRM5, DRM6, DRM7, DRM8 are supported. Make sure the cover and the communication cable gland has been mounted properly and adequately

### 4. Commissioning

Please check if

- The inverter and mounting bracket have been correctly installed.
- The inverter's exposed metal surface has a ground connection.
- The resistance between PV arrays and ground is greater than 1Mohm.
- For any unused DC terminals, there are DC connectors inserted to the terminal and sealed with waterproof caps.
- The grid voltage at the point of connection of the inverter is within the permitted range.
- The AC circuit breaker must be correctly rated and wired.
- The cable communication connectors have been correctly wired and tightened.

**Startup**

Switch on the DC switch after finishing the above checks, then switch on the AC circuit breaker. When there is sufficient DC power applied and the grid conditions are met, the inverter will start to operate automatically.

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For more information, please download the user manual and other technical documents at www.hypontech.com