

RAYSTECH

—• 2025 •—

Raystech Battery Installation Guide

Solid Safety – Solid State

Faster, Better, Safer and More Sustainable!

R A Y S T E C H (T I A N J I N) P V E N E R G Y C O . , L T D .

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Preparation

Tools & Instruments
preparation before
installation

02

RT5427

Low voltage battery

03


RT5427 HV RT5427 SHV

High voltage battery

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Tools

To install the battery pack, those following tools are required:

			
Phillips screwdriver	Torque wrench	Cable crimper	Wire clamp
			
Voltmeter	Tape measure	Drill	Flat-head screwdriver

In order to protect operator and installer's safety, please select and use suitable tools and measuring instruments that are certified for precision and accuracy.

Safety Instruments

When dealing with the battery, following safety gears should be equipped. Installers must meet the relevant requirements or the domestic legislation and other relevant international standards.



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RT5427 low voltage battery



PART 02

RT5427 battery and accessories

Packing list

1. Battery RT5427 × 1
2. Wall mounting brackets & screws × 1
3. Battery power cable for parallel connection (*by order*)
4. Power cables from inverter to battery (*by order*)
5. Inverter & Battery Communication Cable × 1
(details see Attachment 1)
6. Communication cable between batteries × 1
7. Grounding cable between the batteries × 1



1



2



3



4



5 & 6



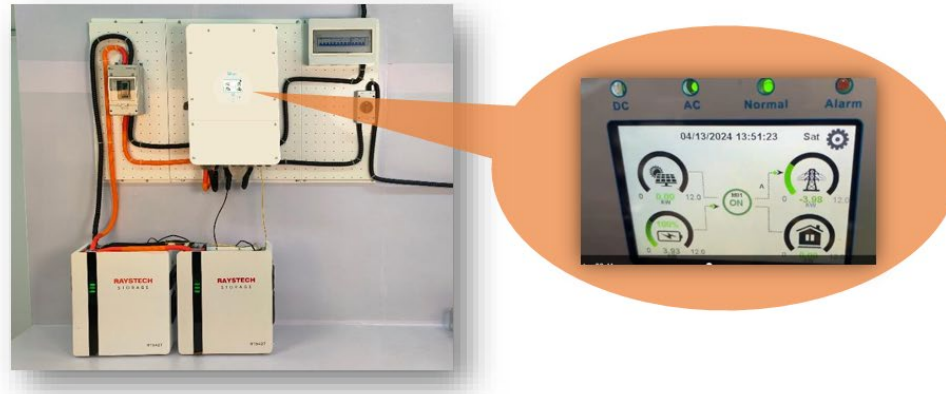
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Attachment 1: Communication cables

Items	Inverters
	SOFAR
	SOLIS
	GOODWE
	LUXPOWER(TEK)
	INVT
	MAGAREVO
	DEYE
01	Thinkpower
4H5L	TBB
	Sermatec
	Growatt
	Afore
	SMA
	Solinteg
	Sol-ark
	AISWEI



DEYE INVERTER: SUN-(7.6~8)K-SG01LP1-EU
RAYSTECH BATTERY: RT5427



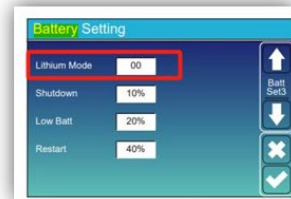
A. Installing Communication Cables: CANH: 4, CANL: 5

Three communications cables inside the box.

Select the one marked “DEYE/MAGAREVO/GROWATT/LUXPOWER(SNA)”



B. Setting “00” on LCD Display of DEYE Inverter



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Checks & Installation Attention

Step 1: Check the appearance of the battery.

Step 2: Check the battery voltage.

Methods:

- Turn on battery, press and hold the panel button for 4S. Release the button once the indicators light up.
- Measure the voltage at the terminal interface with a voltmeter. Make sure the pack voltage not lower than **49V**, and the voltage difference between packs less than **1V**.
- The voltage of the battery pack can also be read by the App.

Note:

If the voltage difference between battery packs is over **1V**, charge the lower battery until its voltage matches the higher battery.

As long as the battery can be turned on and the inverter is in automatic charging mode, with voltage and current, the battery will automatically start charging. If there's no inverter, can also use **DC charger**.



Voltmeter



DC Charger
2000W/600V

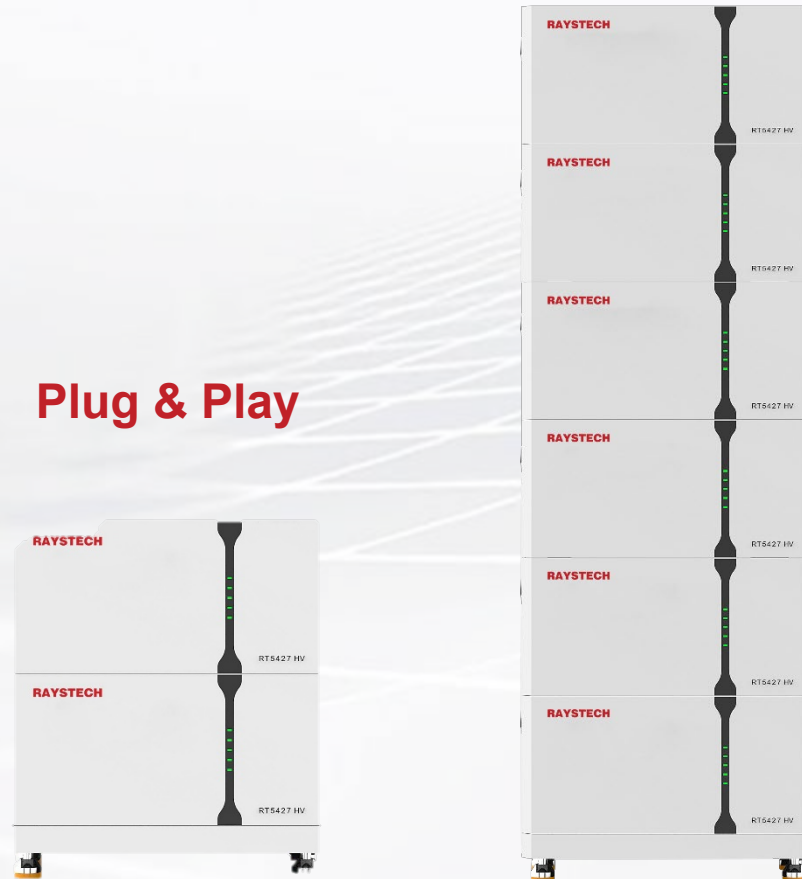
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1.Drill

Concrete wall installation

RT5427 HV / RT5427 SHV (heating) High voltage battery

Plug & Play



RT5427 HV battery and accessories

Carton 1

1. Battery RT5427 HV × 1



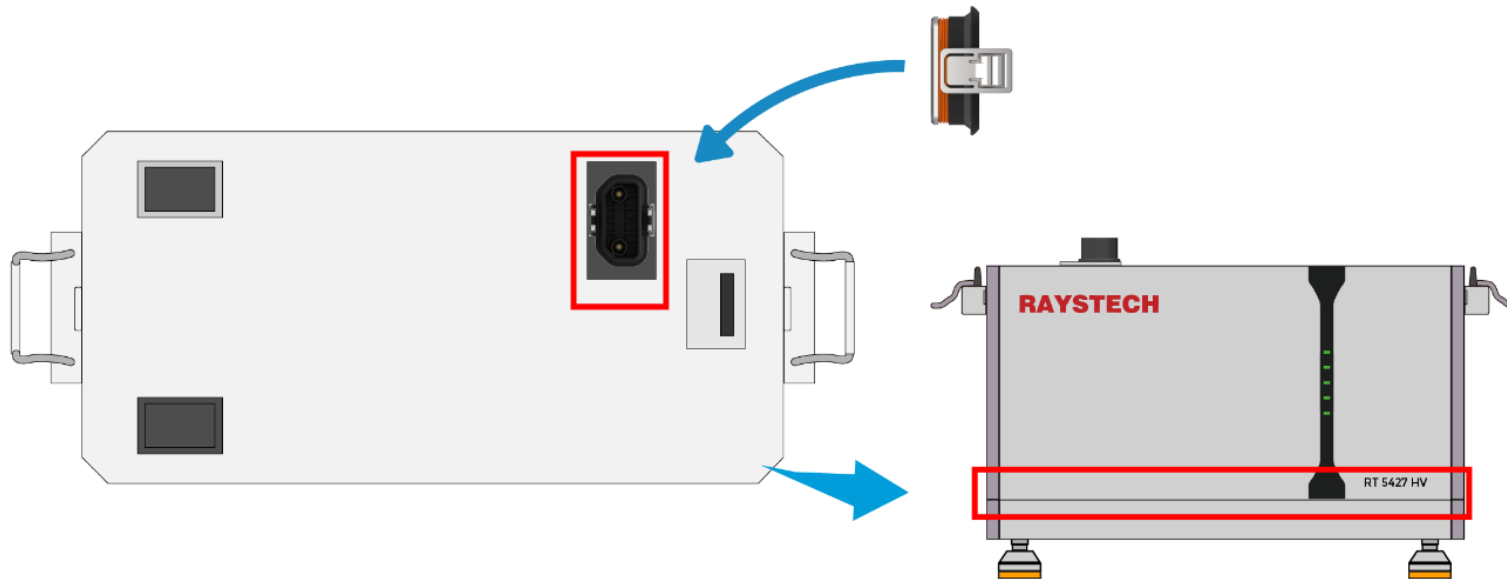
Carton 2

1. Cable kits
2. Battery tail plug
3. Battery holder



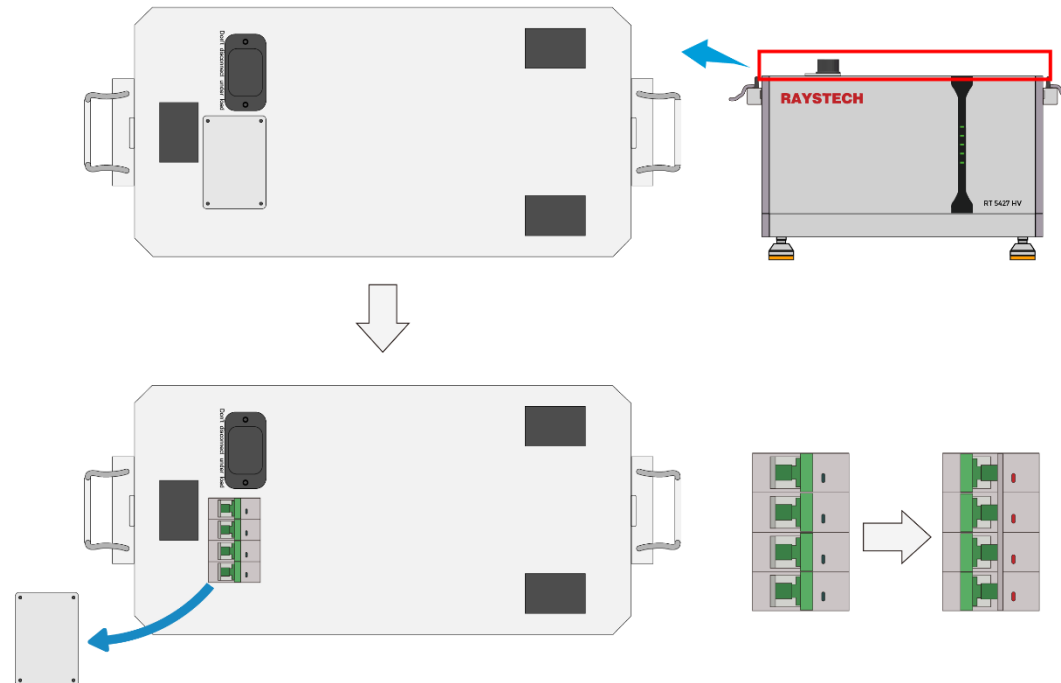
Pre-installation precautions

Attention: Install the tail plug: A tail plug should be installed to the bottom of the last battery in one cluster, so that it forms a full circuit.



Pre-installation precautions

Attention: Turn on the Breaker: Breaker is on the top of the battery covered by a panel. Unscrew the panel, turn on the Breaker and securely install the panel cover before tightening the screws.



Checks & Installation Attention

Step 1: Check the appearance of the battery.

Step 2: Check the battery voltage by Voltmeter or the App.

Insert the tail plug on the bottom of the battery. Measure the voltage at the terminal interface with a voltmeter. Make sure the pack voltage not lower than **96V**, and the voltage difference between packs less than **2V**.

Step 3: To activate each battery, start with the master battery. Press and hold the panel button for each battery until the indicators turn on, then release the button. Verify that all batteries have their running lights illuminated.

Note:

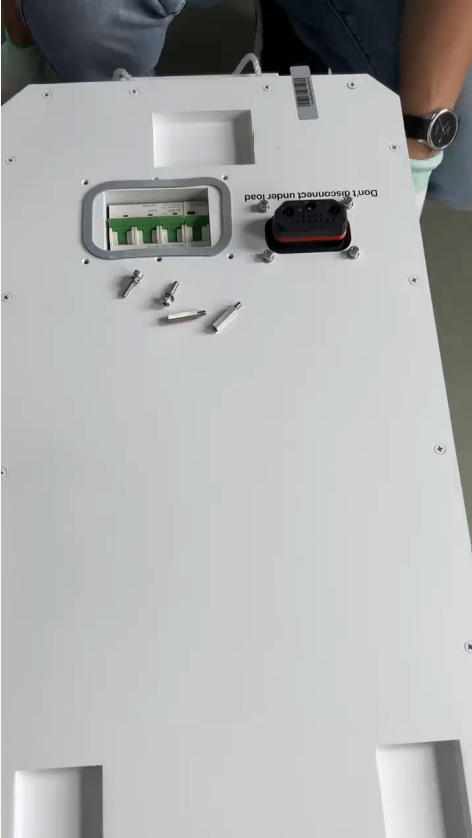
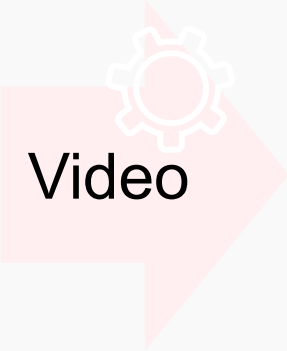
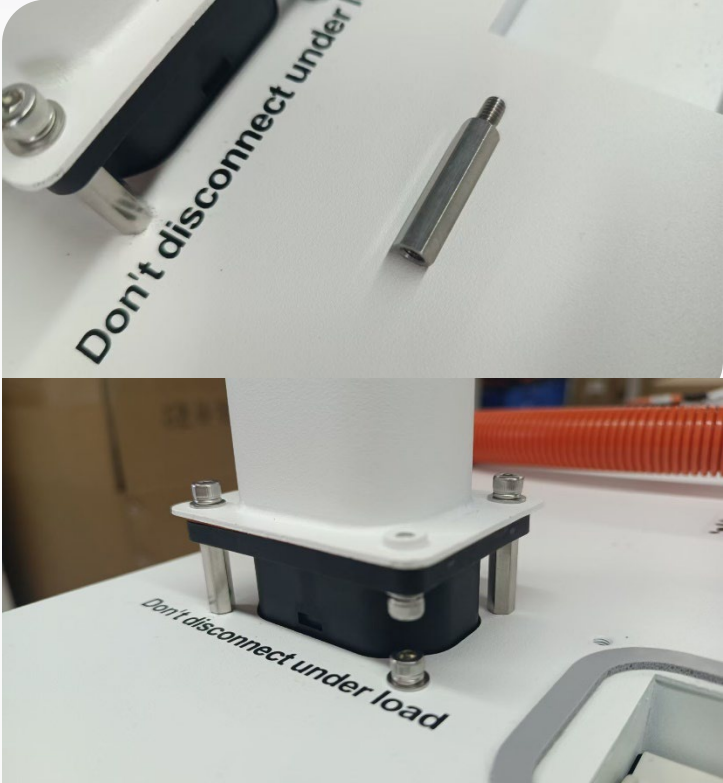
The automatic balancing function can equalize the voltage differences between the battery packs.



Tail plug



Cable Kits wire harness fixing



Battery PIN definition

Battery RJ45 CAN/RS 485		
PIN	Color	Signal Name
1	Orange & white	BAT_CANH
2	Orange	BAT_CANL
3	Green&white	NA
4	Blue	INV_CANH
5	Blue & white	INV_CANL
6	Green	NA
7	Brown & white	INV_RS485_A
8	Brown	INV_RS485_B



Guide on Specific Connection/Setting

SOLINTEG INVERTER: MHS-8K-30

RAYSTECH BATTERY: RT5427 HV

A. Installing Communication Cables: CANH:4 CANL:5

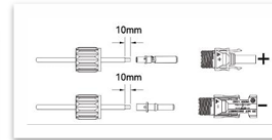
Battery PIN definition: CANH 4 Blue

CANL 5 Blue & White



B. Power Cable of the Battery Connection: to match the MC4 Connector:

- Place a DC breaker, one side with the battery power cable and another side with 10 AWG power cable; or
- Use a suitable Copper Tube and integrating an extra 10 AWG power cable by solid pressing; or
- A Terminal Block is used; or
- Any other available methods



6 AWG (13.3mm²) power cable



C. For the 1st batch of 12pcs RT5427 HV and the 2nd batch of 24pcs RT5427 HV units, select battery type "Aobo-ET" on the inverter.

D. Set battery type to "Default HV_1" or "Default_HV" on the inverter for the following goods.



E. Commissioning the system by the following switch on procedure:

- Turn off all device first and correctly connect all cables
- Turn on batteries from top to bottom one by one (Master to slave)
- Inverter will be woken up automatically, and then set the battery ID
- Turn on the PV or Grid power



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Compatible White List Inverter

Low Voltage Inverter:



High Voltage Inverter:



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Thank You

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