HANCHU ESS

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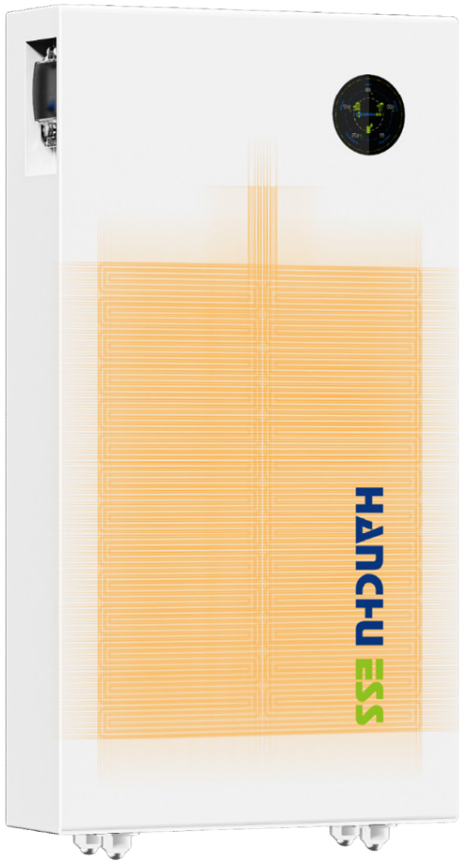
Smart Heating System

Activation and Deactivation Strategy

The Hanchu Smart Heating System will interact with any charge settings or charging requirements to predict the need for the heater to be activated, allowing your system to charge efficiently at the time you have programmed. Below are the criteria which are necessary in order for the system to activate or deactivate:



Heating Start:

Startup Prerequisites:

1. Battery heating function is enabled
2. Battery temperature is below 5°C
3. No abnormal battery faults
4. Battery charging power exceeds 300W

Heating Shutdown:

Heating will be turned off if any of the following conditions are met:

1. Temperature of any battery cell exceeds 20°C
2. Temperature of the second-highest battery cell exceeds 15°C
3. Abnormal fault occurs

Smart Activation

Below are the timing guides for the pre-heating function of the Hanchu heated batteries. The heater only uses around 200w of power. Due to the low power consumption, the heater needs longer time to preheat the batteries on colder days. However, if the battery cells reach the required temperature within the time period, the heater will simply hold the cells at the required temperature, again reducing the electrical draw.

Platform Preheating Strategy: Preheating function is enabled

- **Time-of-Use Mode**

  The Hanchu controller will recognise when you have a charge time set in Time-of-use mode, and activate preheating in advance. During preheating, the inverter will switch to time-of-use-charging mode; after preheating, the inverter will switch back to the previous working mode. The preheating duration varies according to the battery temperature, as follows:

  > Battery temperature: -10~-5°C → Preheat 120 minutes in advance
  > Battery temperature: -5~0°C → Preheat 90 minutes in advance
  > Battery temperature: 0~5°C → Preheat 60 minutes in advance

- **Self-Consumption Mode**

  If the battery system is set to Self-Consumption Mode, the Hanchu system will send a message on the monitoring platform the first time the temperature becomes very low, to ask the user if they would like to switch on the Heating Function.

  When turned ON the heating function will turn on the heater when there is 300w of power available to charge the batteries. So, when the PV load exceeds the house load by 300w the heater will be activated to allow the batteries to charge.

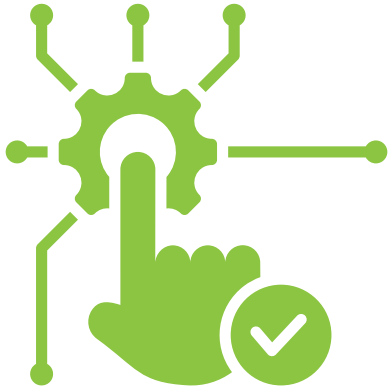
Intelligent Control

It is possible to look on the monitoring to see records of when the heater has been working.

The platform is equipped with a one-touch start/stop heating function option:

Start: The heater determines whether to start based on the underlying start logic. When conditions are met, the inverter switches to time-of-use-charging mode. The default heating duration is 1 hour; after the heating duration ends, the inverter switches back to the previous working mode.

Stop: The heater stops heating immediately.



THANK YOU

HANCHU ESS

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