HV48100 Instructions

HV48100 Cluster Installation Description

1. When a single battery cluster is used:

HV48100 BCU communicates with inverter via CAN or RS485

DIP Switch(Table-1) of BCU represents the protocol address with inverter

Solark		Sinexcel		Solis AUX	
Luxpower		Afore		Kehua*	
Megarevo		Solinteg		Sineng	
Hoymiles		Ingeteam*		Voltronic	
Deye					

* White column indicates the DIP bar position.

Kehua和Ingeteam待测试

Table-1

2. When N battery clusters (1<N ≤ 6) When used in parallel:

1uHub must be configured for multi-cluster management.

1uHub only contains the communication interface with the HV48100 BCU, and does not contain the power interface. Therefore, if the power supply is 220V AC, you need to prepare a 220V AC to 48V DC adapter.

HV48100 BCU communicates with 1uHUB via CAN

At this time, the DIP Switch(Table-2) of 1uHub represents the protocol address with inverter.

Name	DIP	Name	DIP	Name	DIP
Solark	(DIP switch)	Sinexcel	(DIP switch)	Solis AU X	(DIP switch)
Luxpow er	(DIP switch)	Afore	(DIP switch)	K ehua	(DIP switch)
M egarev o	(DIP switch)	Solint eg	(DIP switch)	Sineng	(DIP switch)
Hoymiles	(DIP switch)	I nget eam	(DIP switch)	Volt ronic	(DIP switch)
Deye	(DIP switch)				

Table-2

* W hit e column indicat es t he DIP bar posit ion.

K ehua和I nget eam待测试

DIP Switch(Table-3) on HV48100 BCU represents the CAN protocol address(with) hub).

Group	DIP	Group	DIP
Group 1	(DIP switch)	Group 4	(DIP switch)
Group 2	(DIP switch)	Group 5	(DIP switch)
Group 3	(DIP switch)	Group 6	(DIP switch)

Table-3

3. 1uHub Overview

3.1 interface

Power Switch   RS232   RS485   48V DC Input   Indicator Light

DIP   CAN   Link Port   Interfaces

3.2 Port Pin Definition

Pin Number	Hub RS485	Hub CAN
1	RS485B	
2		
3	RS485A	H
4		L
5		
6		
7		
8		

4. System wiring diagram

Standard Cable

for external power

Power button   RS232   RS485   Interfaces   Grand

ON POWER
OFF

DIP Switch   CAN   Link Port   DC input   Indicator light

Standard Cable

Custom-made Cable

Standard Cable

Standard Cable

Inverter   Group 1   Group 2   Group 3

Breaker

Positive Busbar

Negative Busbar
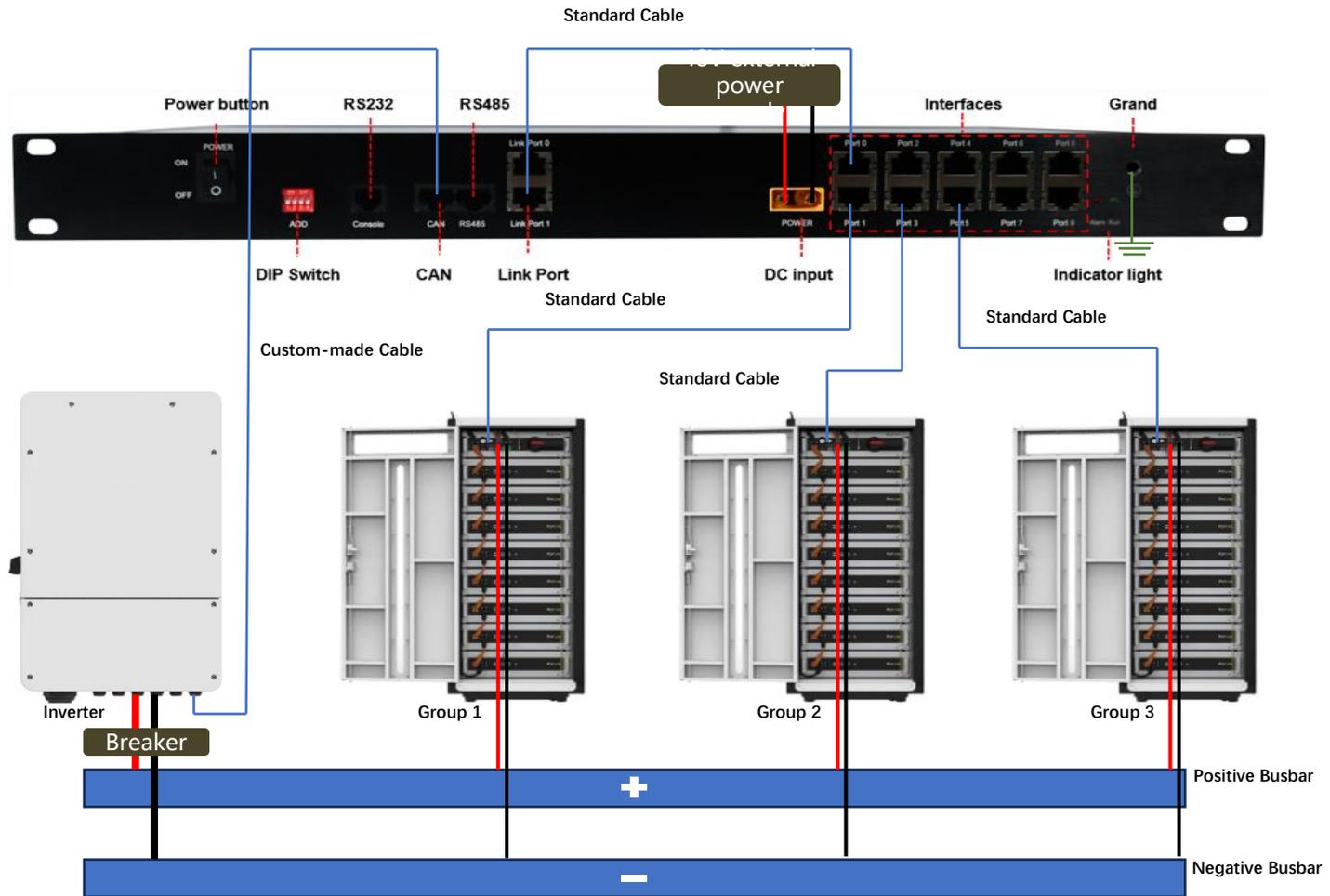
Table-4

Remarks:

1. 10V – Same BMU qty's in each group and voltage difference less than 10V among each groups is required.

2. The converging cables need to support required current limit.

5. System on / off

5.1 Power on the System
a. Cabling the system by referring to Table 4.
Serial connect Dry Contact IN 1+ to IN 1- on each HV48100 BCU. Please refer to Table 5.
Set DIP on 1uHub according to Inverter by referring to Table 2.
Set DIP on each HV48100 BCU for CAN address by referring to Table 3.
b. Turn on External Switch and inverter according to inverter guidance
c. Turn on Isolation switch on BCU
d. Turn on Power knob on BCU, indicator lights on the knob switch turn to green
e. Short press the SW button on BCU, the RUN light will flash. All battery will start up
f. Turn on 1uHub

5.2 Power off the System
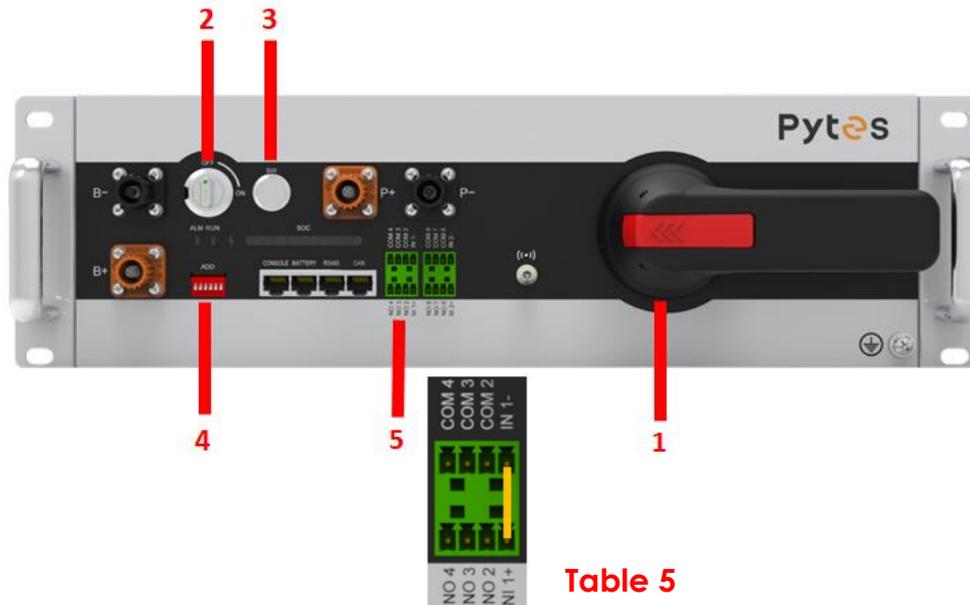**a.** Turn off the AC switch between the inverter and the power grid.
b. Turn off the DC switch between battery and inverter.
c. Turn off the DC switch between PV and inverter.
d. Press SW button on BCU for 3 seconds. And wait for 20s for all battery shutdown.
e. Turn off Power button on BCU.
f. Switch off Isolation switch.

1	Isolation Switch
2	DC Power knob
3	Soft Switch
4	DIP Switch
5	Dry Contact - 1

Table 5

HV48100 Batch Description

HV48100 has two batches of hardware: old and new

The first batch of 100 trial production are with old hardware.

❑ initial firmware version of the BCU: PSBCU-16S-400 - V1.01 .xxx.xxx

❑ initial firmware version of the BMU: PSBMU-16S-RP1- V1.01 .xxx.xxx

Also , the old hardware HV48100 cannot be used with Hoymiles inverter.

The second batch of mass production are with new hardware.

❑ initial software version of BCU: PSBCU-16S-400 - V1.02 .xxx.xx

❑ initial software version of BMU: PSBMU-16S-RP1-V1.02 .xxx.xx

The above, new/old BCU and BMU, produce 6 types of permutations and combinations, all of which can be used

old BCU+ old BMU	new BCU+ new BMU
old BCU+ new BMU	new BCU + old BMU
old BCU+ old BMU & new BMU	new BCU + new BCU & old BMU

But pay attention to the corresponding upgrade of the firmware version:

BCU: The firmware of new and old hardware cannot be mixed .

BMU: Firmware of new hardware can be used for old hardware; Firmware of old hardware cannot be used for new hardware.

When "old BCU+ old BMU & new BMU" and "new BCU+ new BMU & old BMU" are used in combination, it is recommended to upgrade all BMU to the firmware of new BMU. Do not upgrade the firmware of old BMU to the new BMU.