



Pre-Installation Reminder for HVM BCU 2.0

Thanks for your continued support! To simplify wiring and avoid opening the cover, we've upgraded the BCU design. Please go through the following points before installing BCU 2.0.

1. Prepare Your Tools

Make sure you have a **hydraulic crimping tool** on hand. You'll need **6mm² and 10mm² hexagonal dies**. If you don't have one, we recommend getting the YQK-70, which includes both die sizes.



YQK-70 Hydraulic Crimping Tool



Hexagonal Dies Set (6mm² and 10mm²)

2. Check Die Compatibility

The YQK-240 model listed in the manual might not have standard 6mm² and 10mm² hex dies. Use YQK-70 or make sure your tool is equipped with the correct dies.

3. Crimp Terminals Cleanly

Watch the crimping instruction video first (scan the QR code in the manual). If there are burrs after crimping, trim them with diagonal pliers before inserting into the connector.



4. Follow Updated Wiring Sequence

The comms line sequence has changed from BCU 1.0. Please follow the new wiring order in the manual when connecting to the inverter.

5. Need Help?

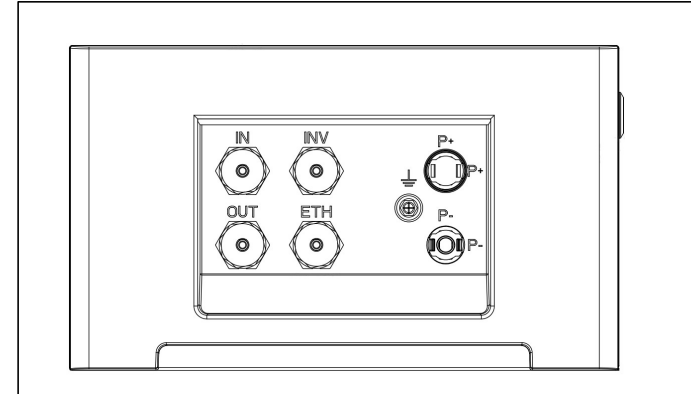
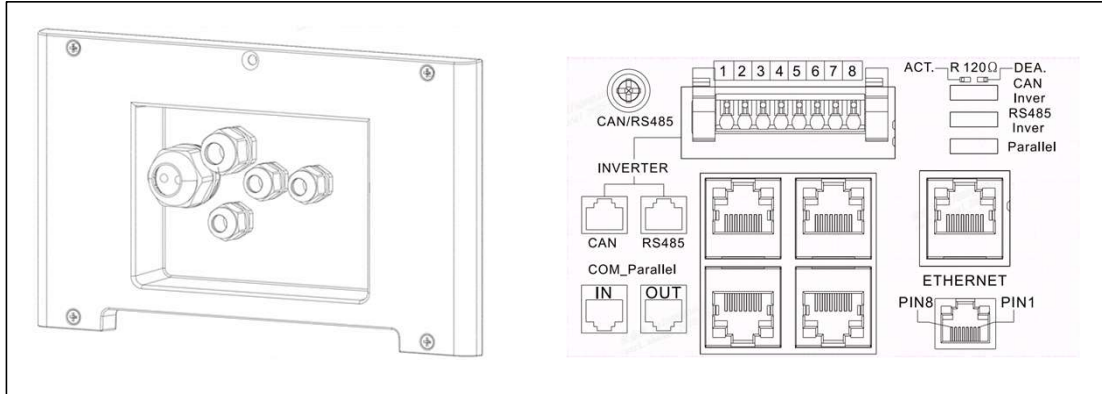
If anything goes wrong during installation, don't hesitate to contact our partner ALPS:

+61 2 8005 6688

service@alpspower.com.au

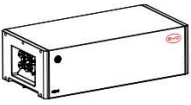
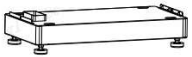
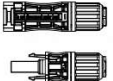
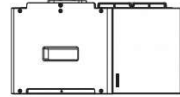
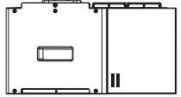
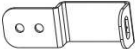
BCU-V2 Installation

Differences



BCU	BCU-V2
1. The panel must be removed before wiring, and all wiring must pass through the external waterproof connector, which is troublesome 2. Inverter communication has 3 wiring methods, which is easy to confuse	1. Wiring does not require panel removal, which is very convenient 2. Inverter communication has only one wiring method, which is simple and intuitive 3. All communication interfaces use RJ45 network ports

Scope of Delivery

x1  A BCU	x1  B Base	x3  J M4x14 Countersunk Screw	x1  R Power Cable Coupler	x1  T1 6 mm² Terminal	x1  T2 10 mm² Terminal	x4  I Communication Connector	x1  C1 HVS Module	or	x1  C2 HVM Module
x2  D Hanger (BCU Part)	x1  E Documents	x2  F Hanger (Wall Part)	x4  G M5 Screw	x2  H M6 Bolt and Nut	x1  Q Waterproof plug	x1  T Terminal Resistor	x2  J M4x14 Countersunk Screw		

Added some new components

Additionally Required Installation Materials



* Note: If the maximum current of the connected inverter is no more than 40 A, a grounding cable with a cross-sectional area of 6 mm² is also acceptable.

New power cable coupler are applicable for two different specifications DC cables.

Tools



Network Wire Clamp



Marker



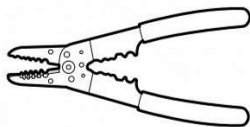
Phillips Screwdriver Bit



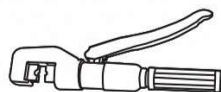
Flat-head Screwdriver



Torque Wrench



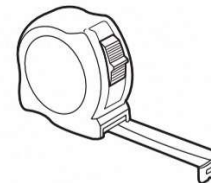
Wire Stripper



Hydraulic Plier
YQK-70



Wrench



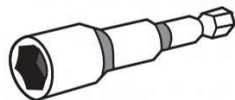
Tape Measure



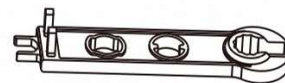
Drill



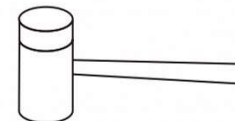
Heat Gun



Cylinder Screwdriver



Connector Wrench



Rubber Mallet



Crimping Pliers

Added new tool

Installation Location



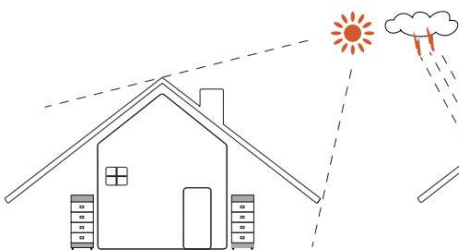
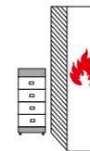
Max +50 °C



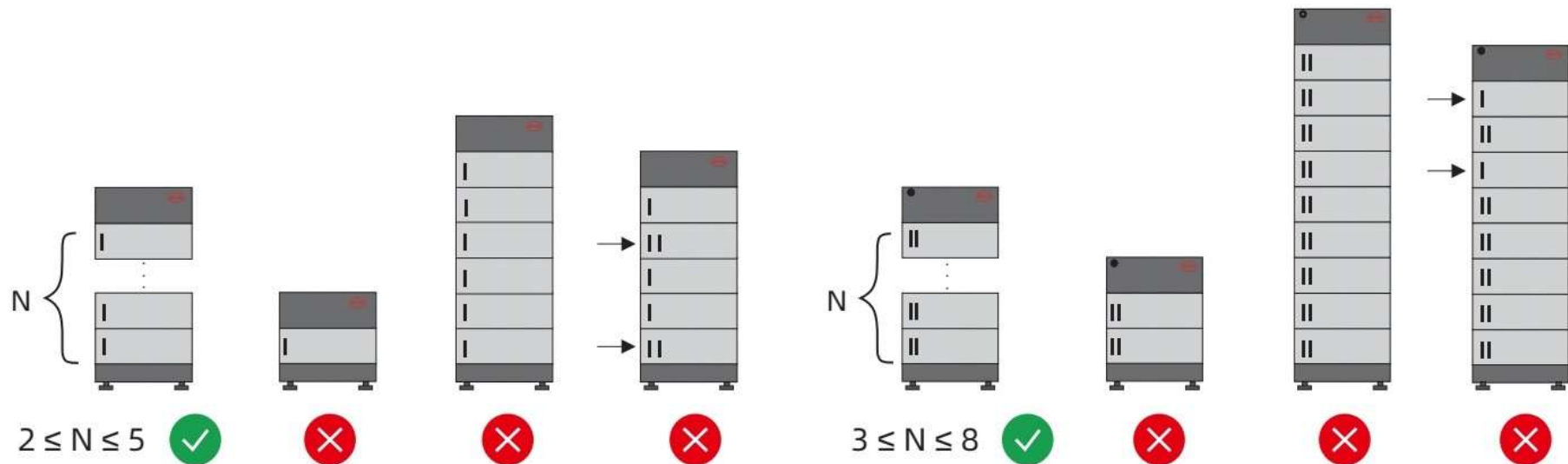
Min -10 °C



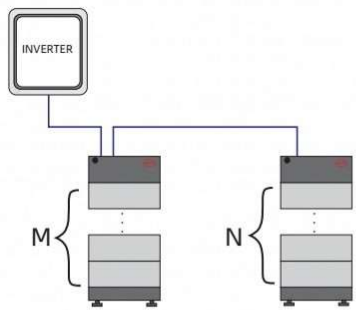
RH. +5 %~ +95 %



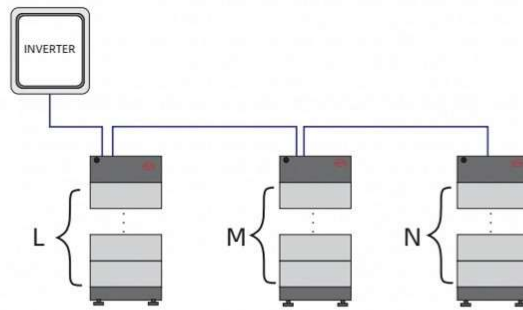
Connection Limitation



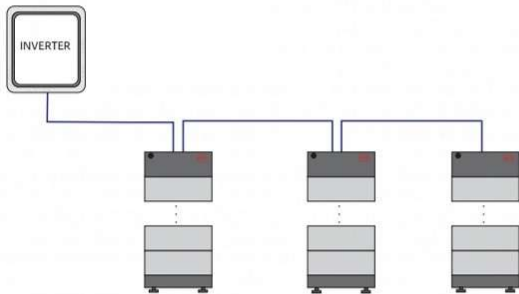
Connection Limitation



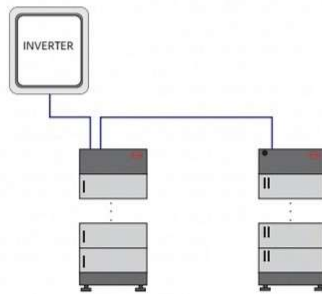
$M = N$ ✓



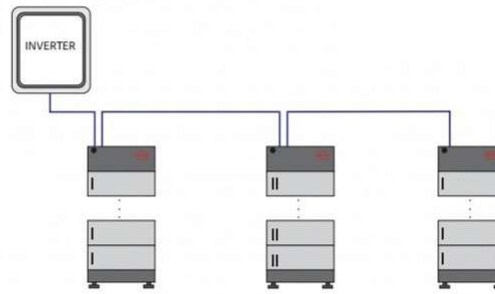
$L = M = N$ ✓ $L \neq M$ or $l \neq N$ or $M \neq N$ ✗



≤ 3 (Towers)

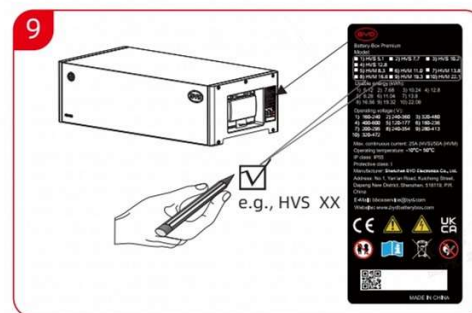
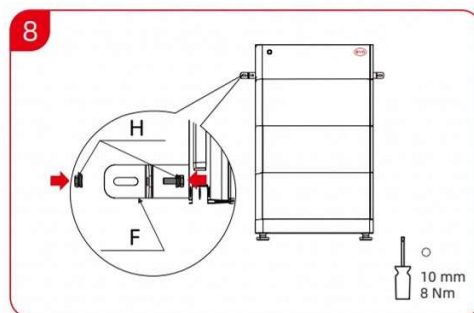
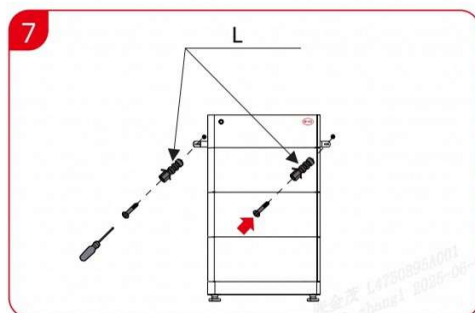
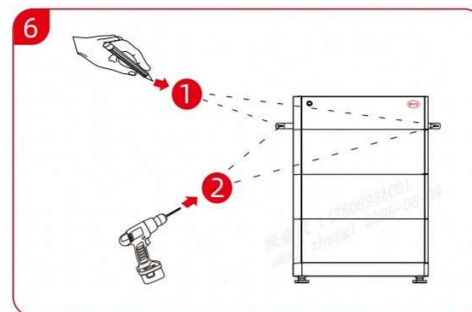
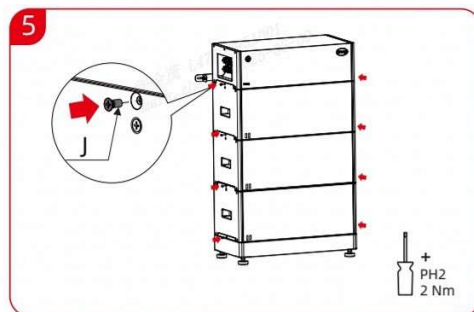
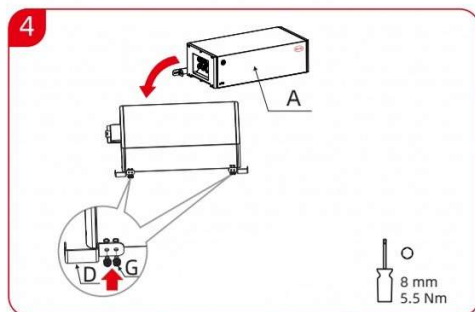
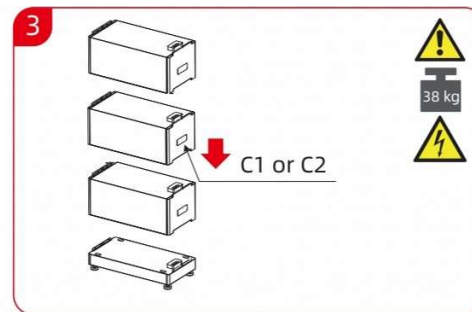
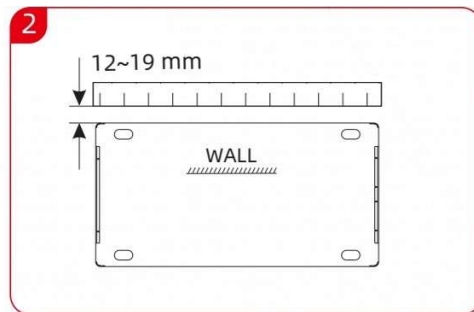
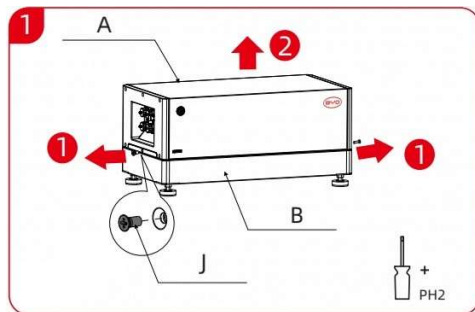


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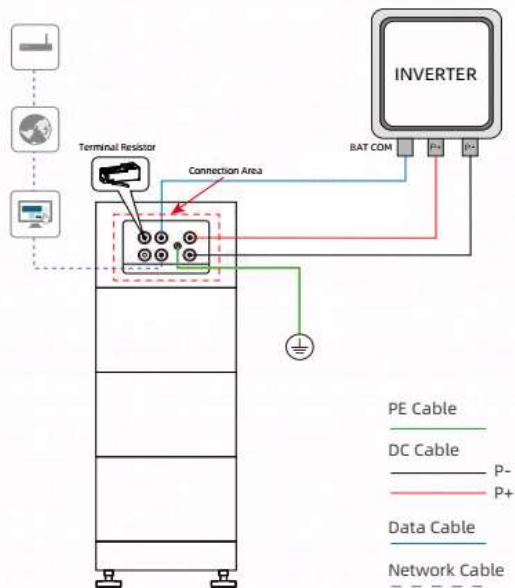
✗

Installation



Connection Diagram

Single Tower

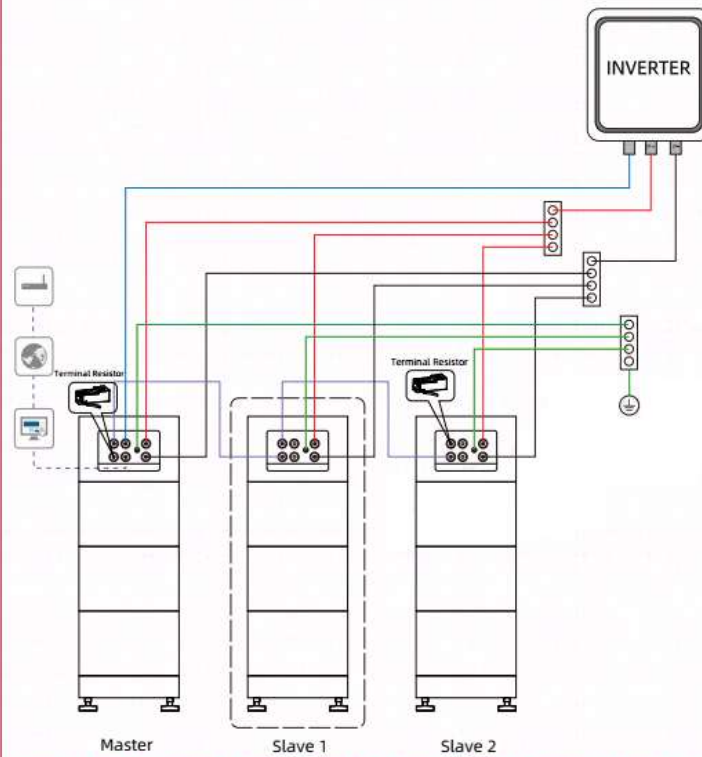


Designation of the connection Area

INV	Port for an inverter data cable
IN	IN port for parallel tower connection
OUT	OUT port for parallel tower connection
ETH	Network port for connecting a router or network switch
PE	Grounding cable connecting point
P-	DC- to inverter
P+	DC+ to inverter

Multiple Towers

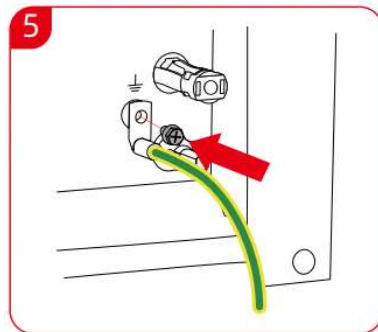
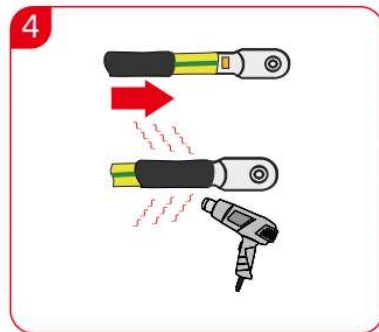
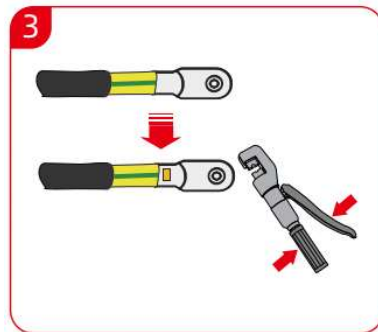
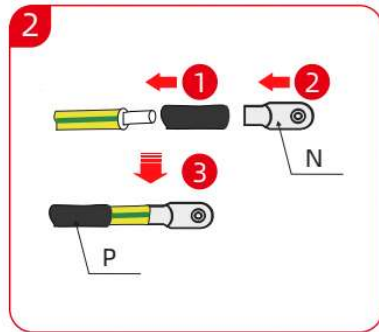
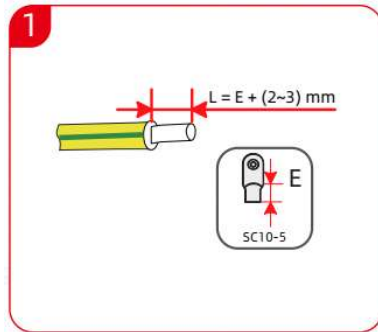
Ignore the Slave 1 in the drawing below to get the diagram of two towers



NOTICE

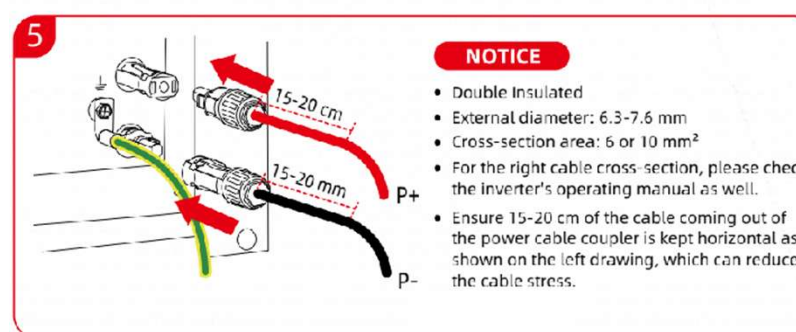
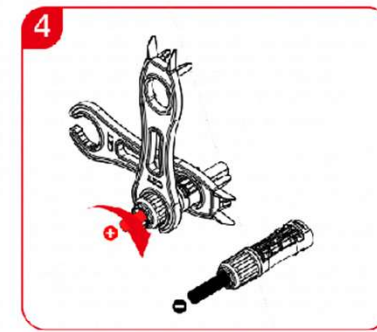
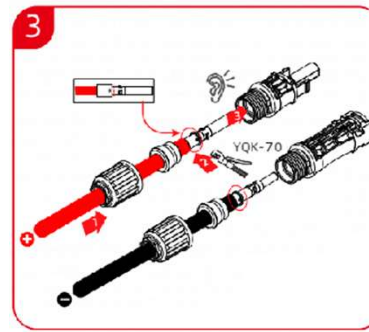
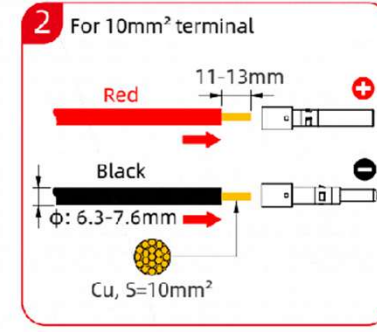
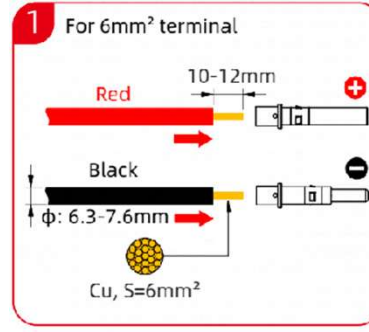
1. Parallel connection is not applicable to SMA Sunny Boy Storage 3.7-6.0. Please check the inverter's operating manual on how to connect up to three battery systems.
2. The length of the power cables from each tower to the combiner box should be the same.
3. The length of the power cable between each battery tower and the inverter should be less than 20 m.

Electrical Connections



PE Cable

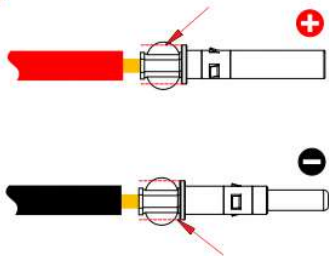
DC Cable



Electrical Connections

There are some notices for crimping DC cable.

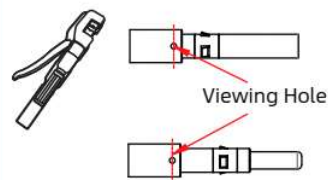
6



NOTICE

The burrs need to be trimmed. After trimming, they should not be higher than the right flange, and there should be no broken edges or wire core leakage.

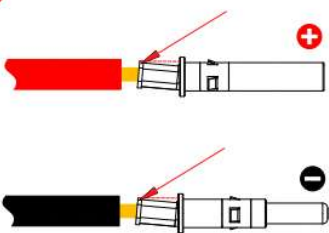
8



NOTICE

When crimping 10 mm² terminals, the crimping pliers die must not completely cover the viewing hole.

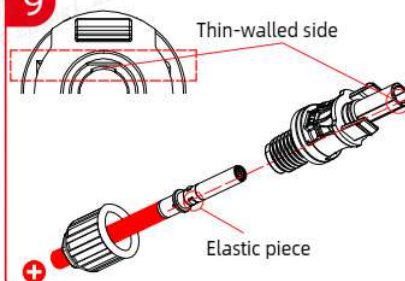
7



NOTICE

If there is any skew after pressing, it should not be higher than the right flange. And the crimping location should be no damage or cracking.

9

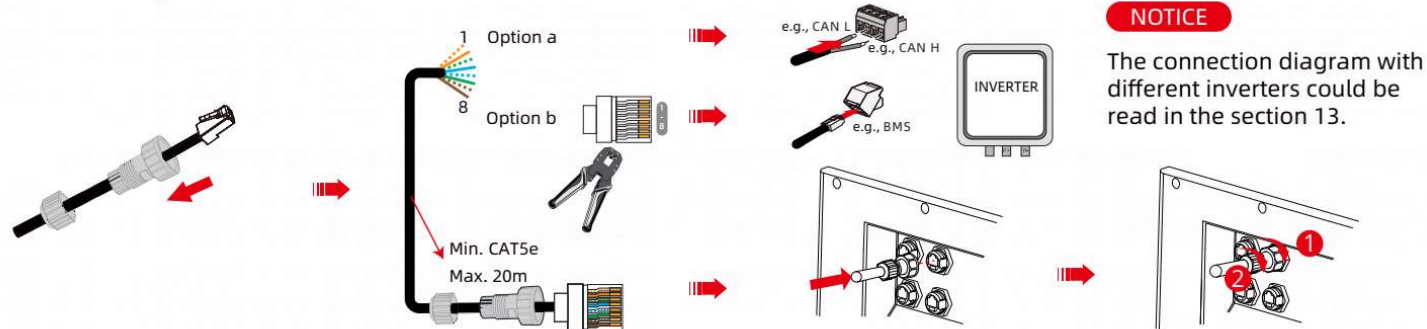


NOTICE

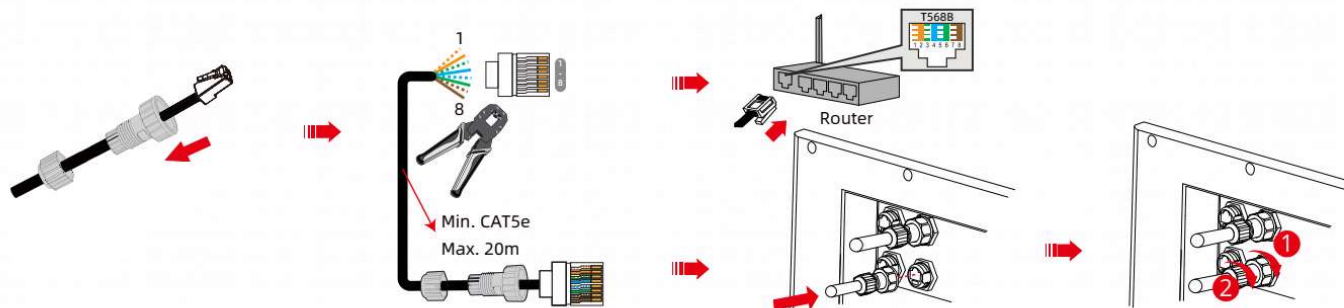
1. Any elastic piece of the terminal must be aligned with the thin-walled side of the plastic case opening before insertion.
2. After inserting, please try pulling it out to check if the terminal and the plastic case are securely connected.

Electrical Connections

8.3 Connecting the Data Cable to an Inverter

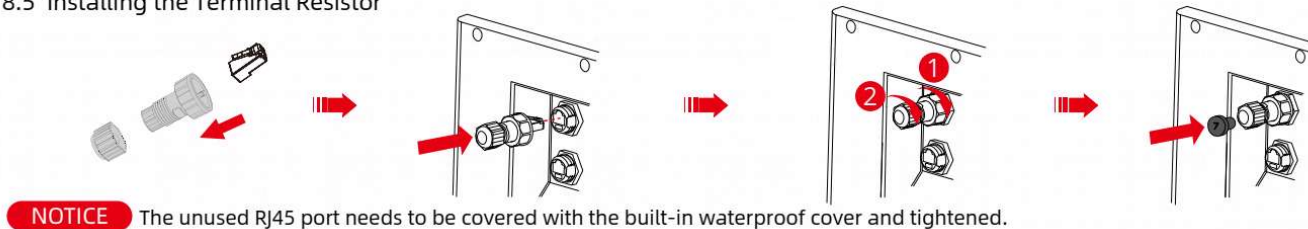


8.4 Connecting the Data Cable to a Router (It's not mandatory, but recommended)



Added the steps to install the terminal resistor

8.5 Installing the Terminal Resistor

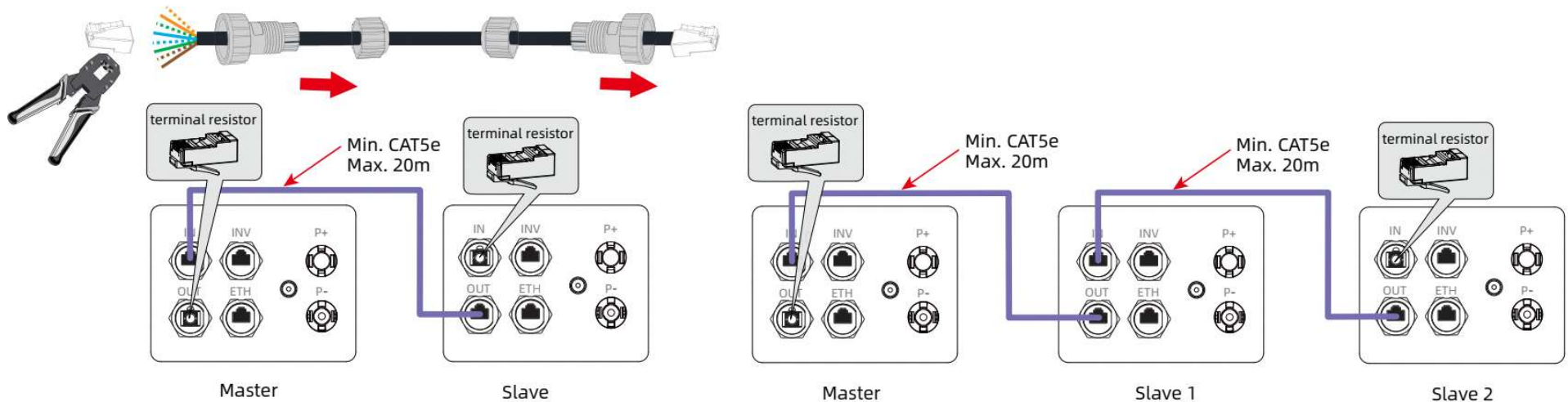


Electrical Connections

Parallel Connection - BCU-V2

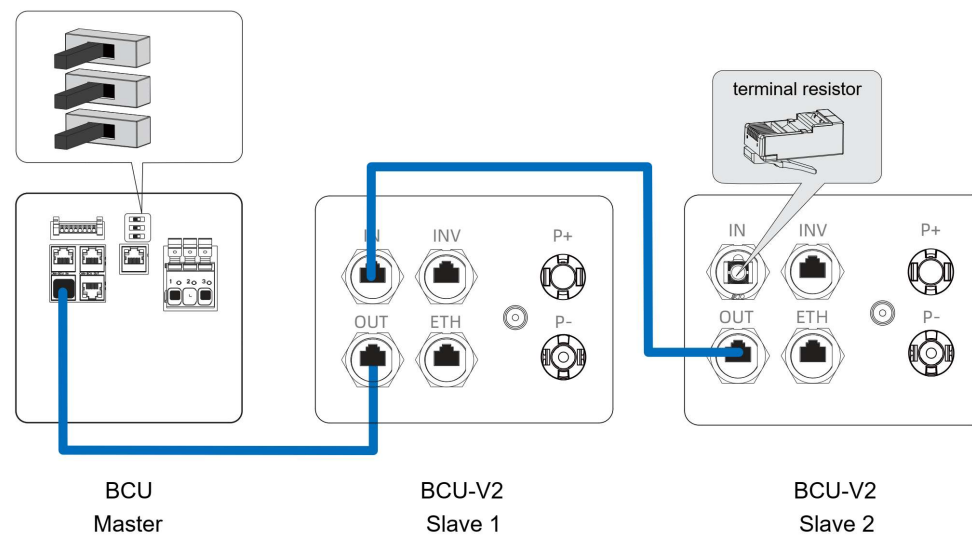
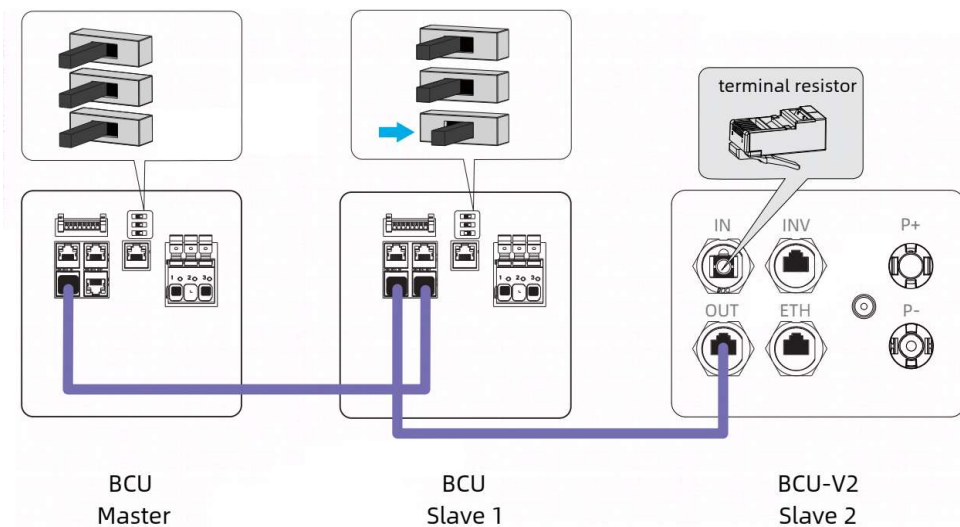
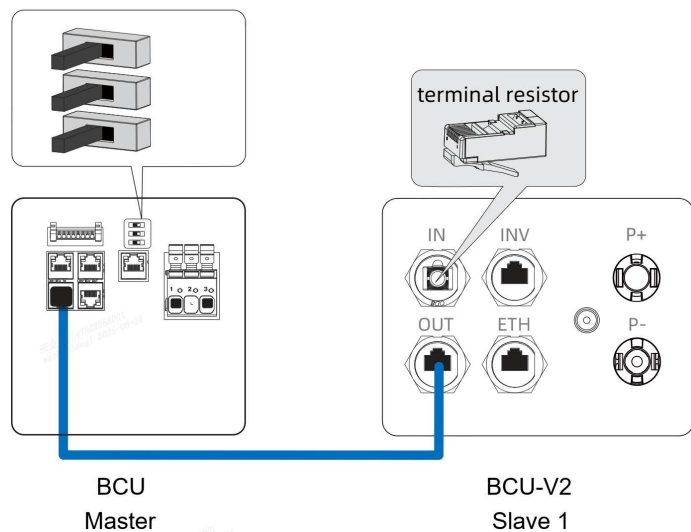
NOTICE

Parallel connection is not applicable to SMA Sunny Boy Storage 3.7-6.0.
Please check the inverter Operating Manual on how to connect up to three battery systems.



Electrical Connections

Parallel Connection - BCU&BCU-V2



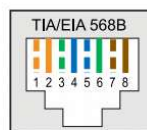
Connection Options with Inverters

NOTICE

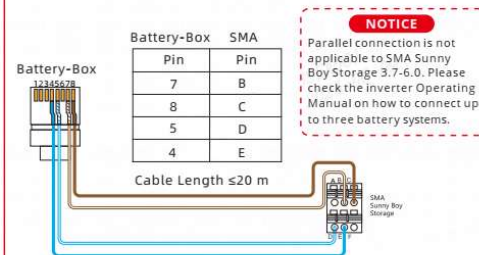
Do not crimp the unused pins when making the communication cable between the battery and the inverter.

Designation of "INV" port

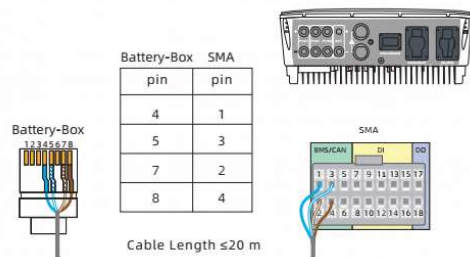
Pin	1	2	3	4
CAN/RS485	RS485A	RS485B	12V OUT	CAN H
Pin	5	6	7	8
CAN/RS485	CAN L	12V OUT_GND	EN	EN_GND



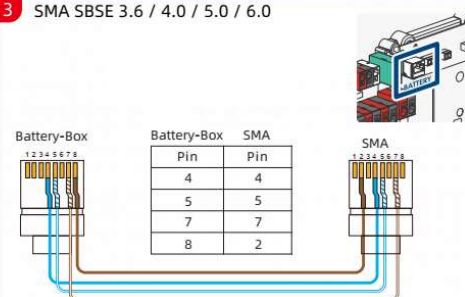
1 SMA SBS 2.5/ 3.7/ 5.0/ 6.0



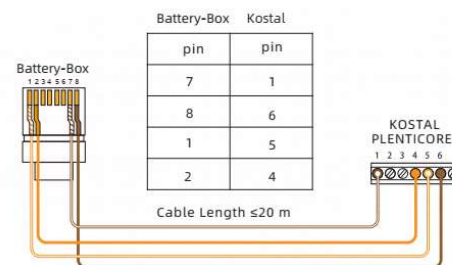
2 SMA STP 5.0-10.0 SE



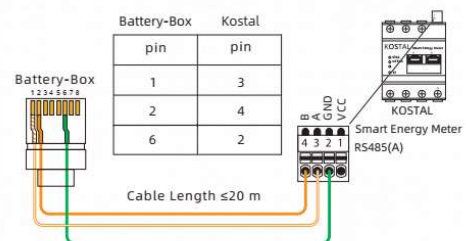
3 SMA SBSE 3.6 / 4.0 / 5.0 / 6.0



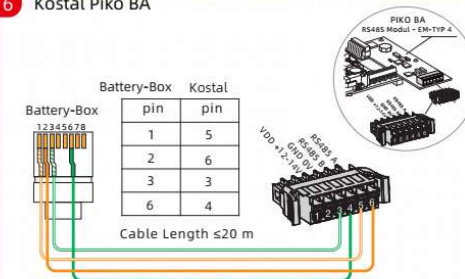
4 Kostal Plenticore Plus (G2)/ Plenticore BI (G2)/ Plenticore G3



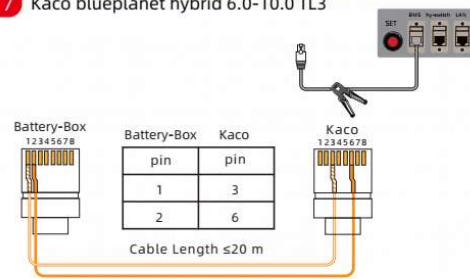
5 Kostal Piko MP Plus



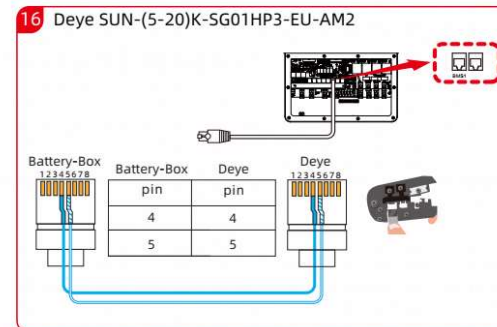
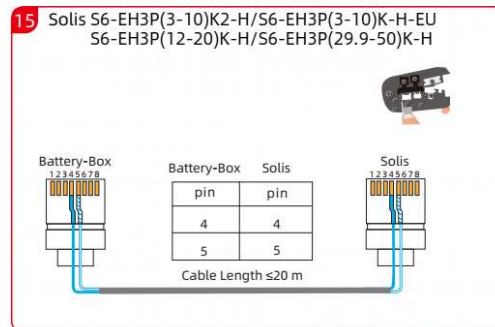
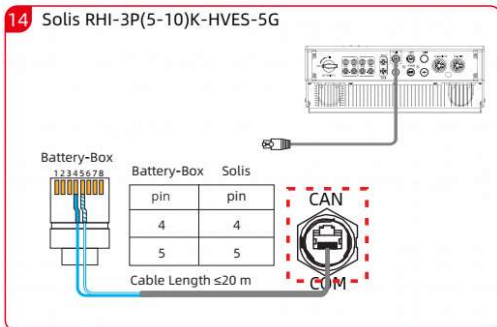
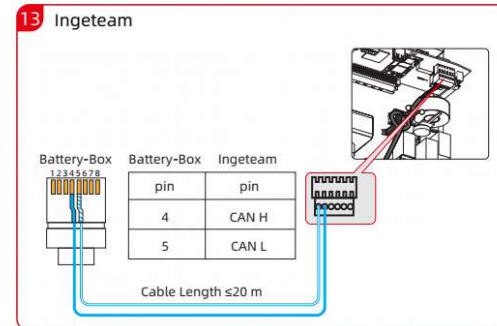
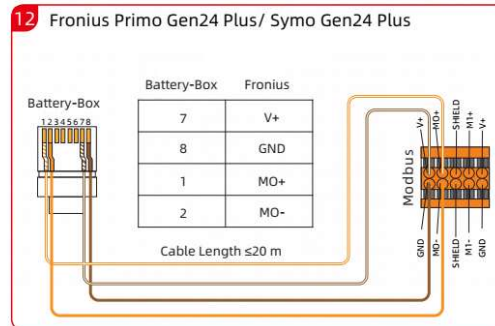
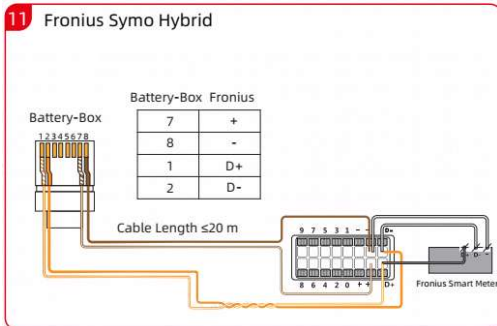
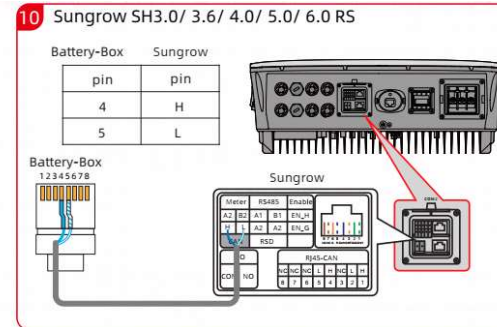
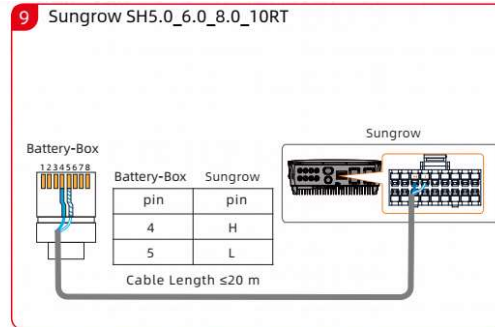
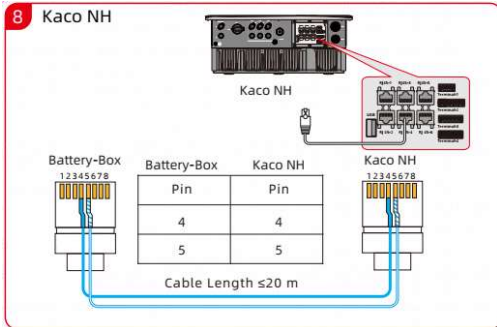
6 Kostal Piko BA



7 Kaco blueplanet hybrid 6.0-10.0 TL3

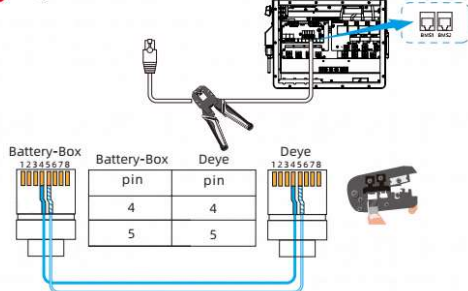


Connection Options with Inverters

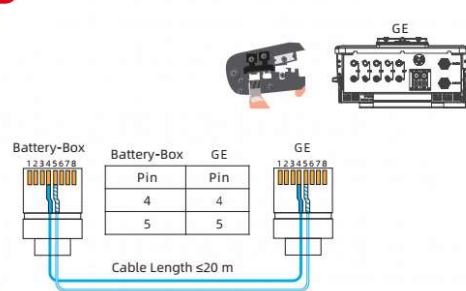


Connection Options with Inverters

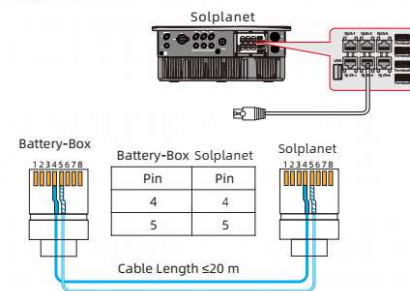
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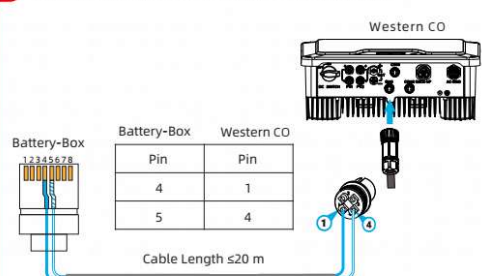
18 GE GEH 5.0/ 8.6/ 10-1U-10



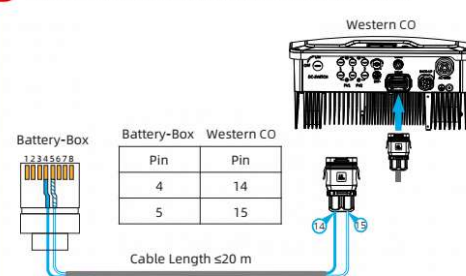
19 Solplanet



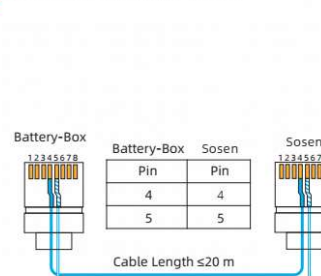
20 Western CO HHS 3000-6000/ HBS 3000-6000



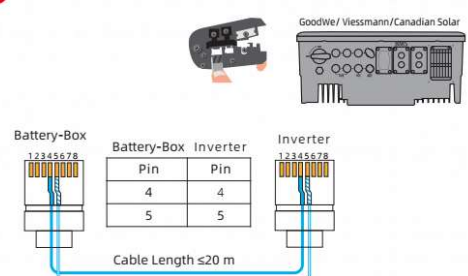
21 Western CO HHT 5000-12000/ HBT 5000-12000



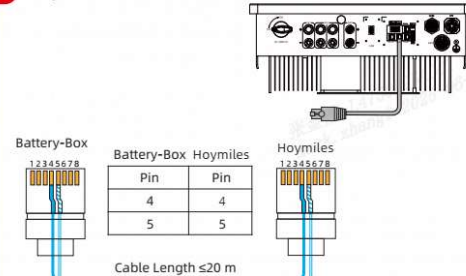
22 Sosen SSE-HH3K-6K-P1-EU



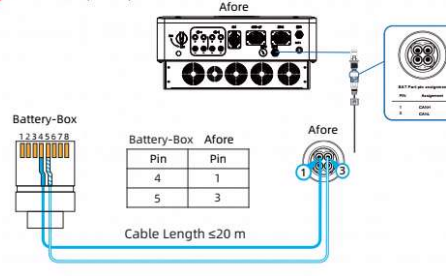
23 GoodWe/ Viessmann/ Canadian Solar



24 Hoymiles



25 Afore AF(3-30)K-TH



BCU Comparison



The installation of BCU-V1.0 first requires the removal of 5 screws, opening the end cover to install the corresponding power and communication lines, and then installing the end cover, which is quite cumbersome and carries the risk of touching the positive and negative poles of the heavy-duty connector.



BCU-V2.0 does not require opening the end cap. Simply press the corresponding wire according to the instructions and insert it into the corresponding position. Installation is simple and relatively safe.