

BlueCore Series

Energy Storage System

BIS60-260E C&I Indoor Storage Battery

(BIS60E/BIS80E/BIS100E/BIS120E/BIS140E/BIS160E/
BIS180E/BIS200E/BIS220E/BIS240E/BIS260E)

Quick Installation Guide (BIS140E)

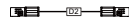
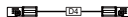
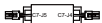
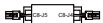
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1. Safety Instructions

- The information in this quick installation guide is subject to change due to product updates or other reasons. This guide cannot replace the product labels or the safety precautions in the user manual unless otherwise specified. All descriptions here are for guidance only.
- All operations should be performed by trained and knowledgeable technicians who are familiar with local standards and safety regulations.
- Strictly follow the installation, operation, and configuration instructions in this guide and user manual. The manufacturer shall not be liable for equipment damage or personal injury if you do not follow the instructions.

2 Installation Material Preparation

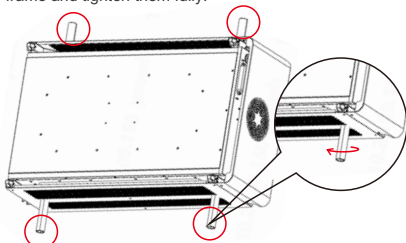
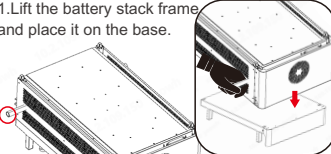
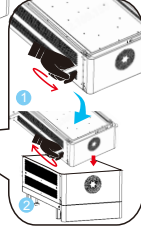
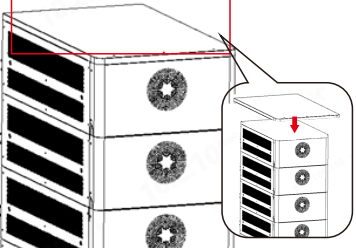
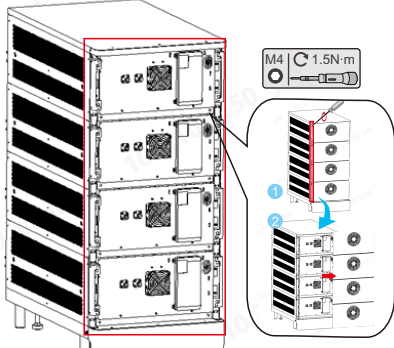
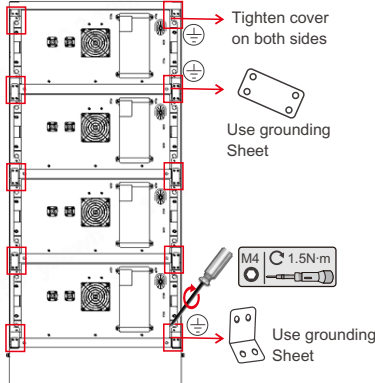
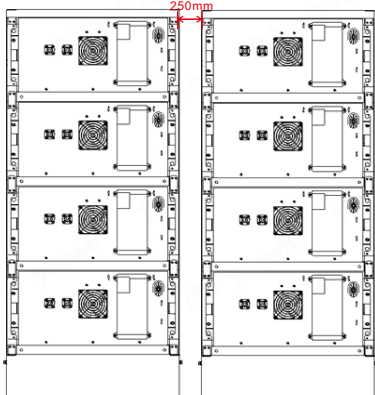
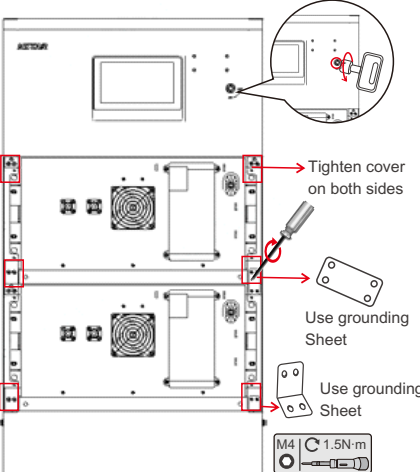
Battery System Material List

High-voltage Box		Battery Module		Roof/Base
				
Key	Handle	Grounding Sheet (2 sets)	M4 Screw (8 sets)	Grounding Sheet (2 sets)
Wire packaging				
				
Battery stack GND connect wire	120Ω Resistor	Cable corrugated conduit (1 set (5m)	Cable tie (40 sets)	D1 cable
				
D2 cable	D3 cable	D4 cable	D5 cable	C6 cable
				
C7 cable	C8 cable	C9 cable		

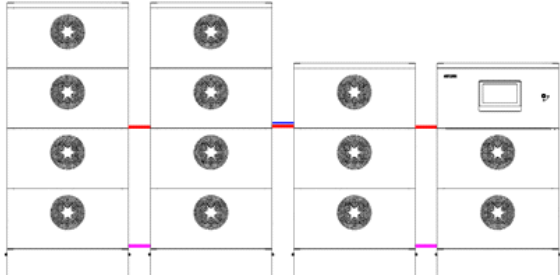
Installation Tool Preparation

					
Electric forklift	Manual forklift	Insulating tape	Wrench	Insulated Shoes	Anti-static gloves
					
Lead rubber gloves	Clamp meter	Multimeter	Cable tie	Level	Flat-head screwdriver (2 - 5 mm)
					
Torque screwdriver	Phillips screwdriver (M3 / M4 / M5 / M6 / M8)	Insulated torque wrench (M6/M8/M12/M16)			

3 Installation Steps

Battery Pack Installation Steps	
1	Place the base on the ground 
2	Install the four handles on the battery stack frame and tighten them fully. 
3	1.Lift the battery stack frame and place it on the base.  2.Remove the handle and install it on the next frame, then stack it on the battery pack frame according to the above steps. 
4	Place the cover on top of the battery stack frame. 
5	Remove the front cover of the battery stack frame 
6	Install the grounding sheet at the connection between the frames, tighten it with screws, and fix the top cover with screws. 
7	Follow the above steps to assemble the second base and battery stack frame, and place the second battery stack at a position approximately 250mm away from the first battery stack using a forklift. (Ignore for BIS60-80E) 
8	Use key to open tighen cover and grounding sheet 
	Install and position the third and fourth battery stacks in sequence, placing the high-voltage box frame on top of the fourth battery stack.

Explain Step 7 : BIS60-80E have one battery stack , BIS100-160E have two battery stacks , BIS180-240E have three battery stacks , BIS260E have four battery stacks.
Take BIS260E for instance :

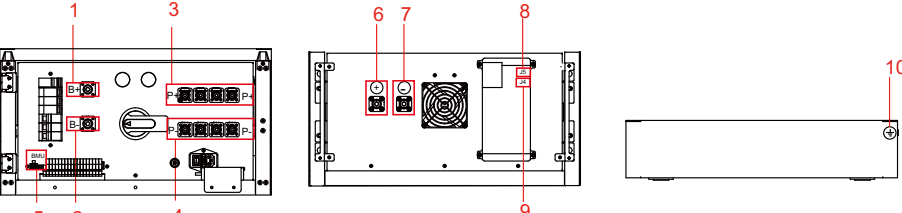


Battery stack4 Battery stack3 Battery stack2 Battery stack1
(*Advise High-voltage box at the top of battery stack1.)

Wire Packaging Connection Description

NO.	Description	Wire Packaging Function Description
1	D1	High-voltage box positive pole (B+) to Last battery pack positive pole(⊕)
2	D2	High-voltage box negative pole (B-) to First battery pack negative pole(⊖)
3	D3	Last battery pack positive pole (⊕) to next battery pack negative pole (⊖)
4	D4	Between battery stack, the battery pack positive pole(⊕)to battery pack negative pole (⊖)
5	D5	Between battery stack, the battery pack positive pole(⊕)to battery pack negative pole (⊖)
6	C6	High-voltage box communication port (BMU) to First battery pack communication port (J5)
7	C7	Last battery pack communication port (J4) to next battery pack communication port (J5)
8	C8	Between battery stack, the battery pack communication port (J4) to battery pack communication port (J5)
9	C9	Between battery stack, the battery pack communication port (J4) to battery pack communication port (J5)(only use BIS260E)
10	GND connect wire	Battery stack GND connect wire (⊕)
11	Resistor	120Ω resistor for communication to Last Pack BMU (J4)

Wiring Procedure Instructions



High-voltage Box Battery Pack Module Base

NO.	Name	Description
1	B+	High-voltage box battery B+
2	B-	High-voltage box battery B-
3	P+	High-voltage box inverter P+
4	P-	High-voltage box inverter P-
5	BMU	High-voltage box communication port
6	+	Battery battery B+
7	-	Battery battery B-
8	J5	Battery BMU communication port J5
9	J4	Battery BMU communication port J4
10	⊕	GND

Wiring Operation Steps

- 1.First, put on the insulating gloves ;
- 2.First connect the power cables, and find the corresponding cables (D1, D2, D3, D4, D5) from the wire packaging according to the wiring diagram below. Connect the cables in numerical order from D1 to D2 to D3 to D4 to D5. Insert the power plug into the power socket with color correspondence (orange plug into orange socket, black plug into black socket). The connection is considered reliable only when you hear a "click" sound after pressing the plug. Finally, connect the grounding cable between the battery stack and the base ;
- 3.Finally, connect the communication cables: According to the wiring diagram, find the corresponding cables (C6, C7, C8, C9) based on the labels. Connect the cables in numerical order from C6 to C7 to C8 to C9. Insert the communication wire plug into the communication socket with matching colors (black plug corresponds to black socket, white plug corresponds to white socket). Finally, insert the terminal resistor into the J4 communication port of Last Pack.

1. Power cable diagram
(7 PACKs + 1 high-voltage box)

2. Communication cable diagram
(7 PACKs + 1 high-voltage box)

NOTE1: Cable length from PCS to battery is 5 meters and 20 meters. The specific line length is subject to the length ordered on site. When installing the PCS please first check whether the line length meets the requirement of reaching the battery cabinet.

NOTE2: M10 is an expansion bolt, equipped by KSTAR

PCS Installation Instructions:

- Position the punch card at the installation location and mark with a pencil.
- Remove the punch card and drill a hole at the marked location using a drill.
- Secure the mounting bracket to the wall using M10 screws.
- Insert the inverter into the bracket, and tighten it on both sides using M6 screws.

Dimensions:

- Distance from PCS bottom to ground: ≥800mm
- Distance from PCS top to the roof: ≥600mm
- Reserved distance on both sides of PCS: ≥600mm

Weight: 135KG

Wiring Single Battery Cabinet to PCS:

The diagram shows a single battery cabinet connected to a PCS unit. The PCS unit has terminals for PV-SW1, PV-SW2, COM, BAT-AC, and PCS. The battery cabinet has terminals for BMS-CAN_H, BMS-CAN_L, EMS-CAN_L, RS-485A, and RS-485B. The wiring connections are as follows:

- PV-SW1 to PV-SW2
- PV-SW2 to COM
- COM to BAT-AC
- BAT-AC to PCS
- BMS-CAN_H to PIN 7
- BMS-CAN_L to PIN 8
- EMS-CAN_L to PIN 9
- RS-485A to PIN 11
- RS-485B to PIN 12

Cable Color	Terminal	Pin Number
GREEN	BMS_CAN_H	PIN 7
YELLOW	BMS_CAN_L	PIN 8
RED	EMS_CAN_L	PIN 9
ORANGE	EMS_CAN_L	PIN 10
BLACK	485A	PIN 11
BROWN	485B	PIN 12

Warning! Hazard of electric shock, disconnect power before installation or service-turn switches to off

Wiring Double Battery Cabinet to PCS:

The diagram shows two battery cabinets (BIS-Master and BIS-Slave) connected to a PCS unit. The PCS unit has terminals for PV-SW1, PV-SW2, COM, BAT-AC, and PCS. The battery cabinets have terminals for BMS-CAN_H, BMS-CAN_L, EMS-CAN_L, RS-485A, and RS-485B. The wiring connections are as follows:

- PV-SW1 to PV-SW2
- PV-SW2 to COM
- COM to BAT-AC
- BAT-AC to PCS
- BMS-CAN_H to PIN 7
- BMS-CAN_L to PIN 8
- EMS-CAN_L to PIN 9
- RS-485A to PIN 11
- RS-485B to PIN 12

Cable Color	Terminal	Pin Number
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BLACK	485A	PIN 11
BROWN	485B	PIN 12

AC Auxiliary 1: BACKUP-LOAD-L3&N

AC Auxiliary 2: BACKUP-LOAD-L2&N

Communication Cable

Can over Ethernet

Danger! Connect COM2 of the battery master cabinet to COM1 of the battery slave cabinet.