



Ener Hexon® European Standard Smart 103P PV&ESS
All-in-one Distributed ESS Spare Parts Replacement SOP

Preface

Purpose: Provide customer maintenance personnel with a reference guide for replacing spare parts.

Intended Readers: Customer maintenance personnel.

Notes:

1. For safety instructions, daily operation, and maintenance, please refer to the User Manual.
2. Due to software or hardware upgrades, or configuration differences, the equipment structure may not be exactly the same as shown in this SOP. Please adjust according to the actual situation. If in doubt, contact after-sales service personnel for confirmation.

Precondition: After troubleshooting, confirm that the fault is caused by the faulty component, and that the replacement procedure and the new component will not cause secondary damage to other parts or the equipment.

Safety Symbols:

Symbol	Description
	Indicates an imminent hazardous situation which, if not avoided, will result in death or serious personal injury.
	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious personal injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate personal injury.

NOTICE

Conveys equipment or environmental safety information. If not observed, it may result in equipment damage, data loss, reduced equipment performance, or other unforeseen consequences. "NOTICE" does not involve personal injury.

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8. Replacement of Black Start Fuse  WARNING
9. Replacement of AC Circuit Breaker
10. Replacement of 24V Intermediate Relay

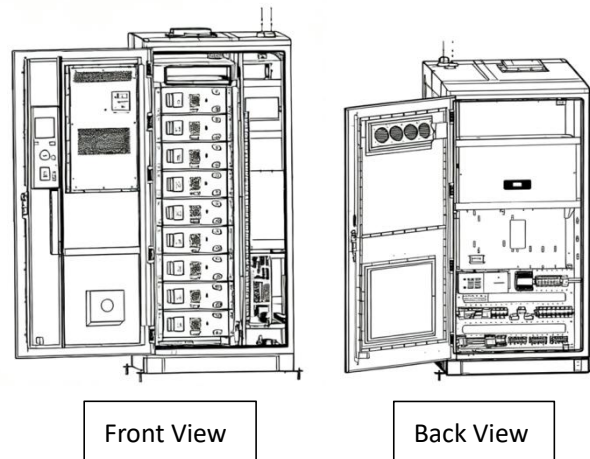
Content

1. Spare Parts List

No	Part Number	Name	Specification/Model
1	50055990000062	1500V Slave Controller / BMU	BMU-B30-24-205, label attached in reverse
2	53574100000147	Axial Fan	BCY12038B24H 0.71A 5000RPM external frame 750MM XHB2.54-4P(black, white, blue, red),RD PWM PQ 1007 24AWG
3	53574100000132	6025Fan	GS-D6025B24M, DC24V, 2.4W, 37.85CFM, two-wire, crimped with SMR-02V-B connector

4	51111990000010	Door Access Switch	KBM-123-W, one normally open (NO), one normally closed (NC)
5	50038020000013	Fuse	HC10LPV,1500V DC,6A,RoHS,UL certified, UL248-19
6	50712990000009	AC Circuit Breaker	NXB-125E 4Pc100 + AX-X3 auxiliary contact
7	50917030000009	24V Intermediate Relay	Relay: HF13F 024-2Z13D Socket: 13F-2Z-C1 Metal clip: 18FF-H2

2. Cabinet Views

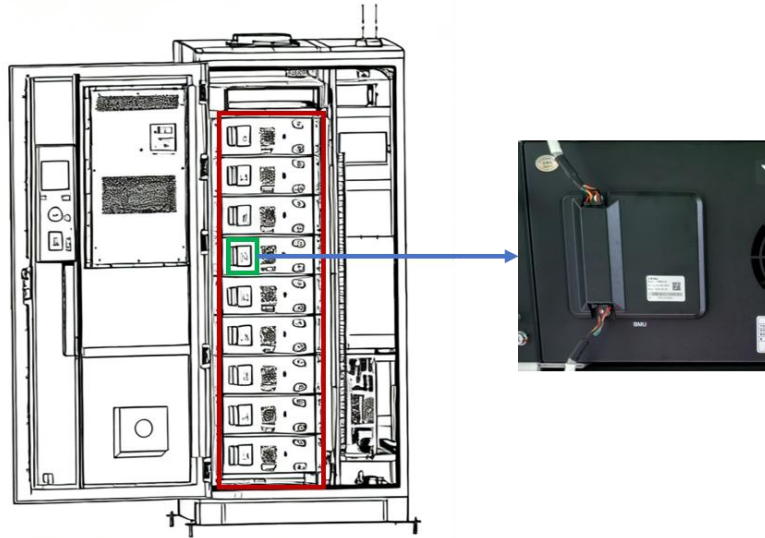


3. Power-On and Power-Off Procedures

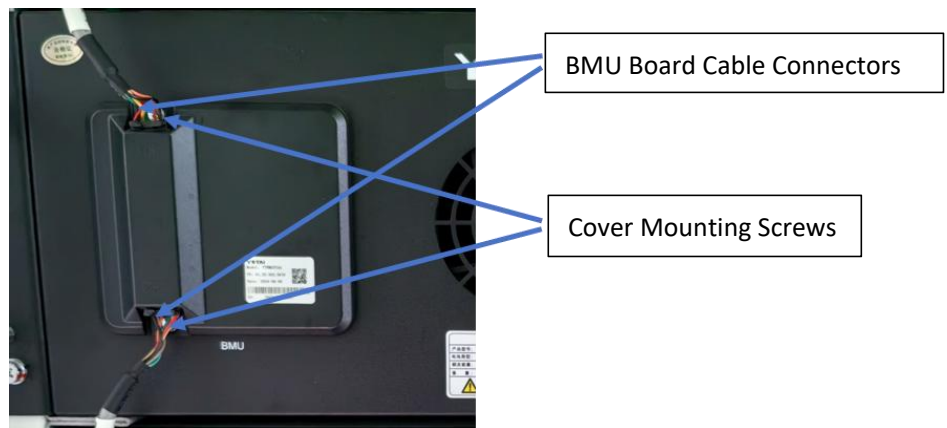
Please refer to chapter 6 of the User Manual for detailed instructions.

4. Replacement of BMU Board

4.1 This unit has a total of nine battery packs (shown in red boxes). The BMU board is located on the battery pack end face (green box shown as an example).



4.2 BMU Board Cable Connectors and Cover Mounting Screws Diagram



4.3 BMU Board Replacement Procedure

4.3.1 Power off.

4.3.2 Press the unlock point on the BMU cable connector, unlock the connector, and disconnect the cable.

4.3.3 Unscrew the cover mounting screws.

4.3.4 Open the cover and replace the BMU board.

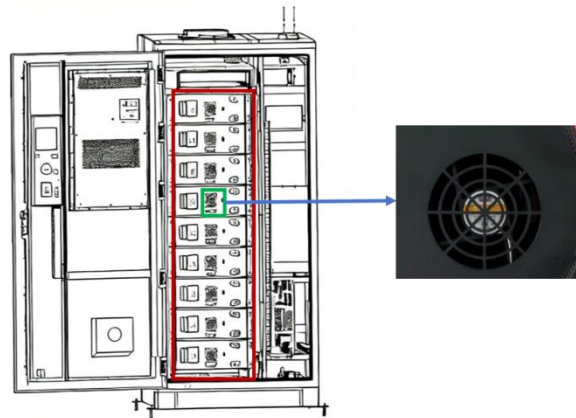
4.3.5 Close the cover, tighten the mounting screws, and reconnect the cable connector.

4.3.6 Power on and verify normal operation.

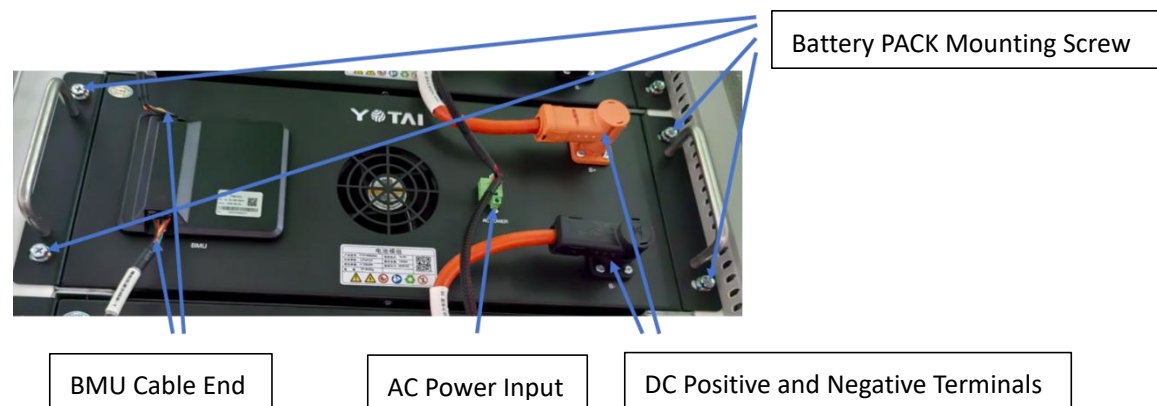
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5. Replacement of Axial Fan

5.1 This unit has a total of nine battery packs (shown in red boxes). The axial fan is located in the middle of the battery pack end face (green box shown as an example).



5.2 Battery Pack Mounting Screws and Cable Connection Points on the Battery End Face



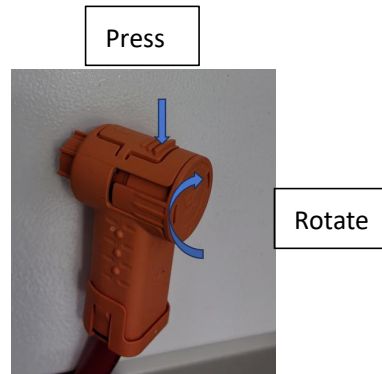
5.3 Battery Pack End-face Mounting Screw Location Diagram

End-face Mounting Screws (Upper Edge)



End-face Mounting Screws (Upper Edge)

5.4 Battery Positive and Negative Terminal Connector Unlock Diagram



5.5 Axial Fan Replacement Procedure

5.5.1 Power off.

5.5.2 Disconnect the BMU cable (Note: the connector has a self-locking mechanism; press to unlock).

5.5.3 Disconnect the AC power connector (Note: first unscrew the mounting screws at both ends of the connector).

5.5.4 Disconnect the DC positive and negative terminal connectors (Note: the connectors have self-locking mechanisms; unlock as shown in 5.4).

5.5.5 Unscrew the battery pack mounting screws.

5.5.6 Pull out the battery pack (Note: pull out distance should be less than 20cm).

5.5.7 Unscrew the upper and lower edge mounting screws on the battery

pack end face, and open the end face (Note:  **WARNING** Do not touch the battery terminals).

5.5.8 Replace the fan.

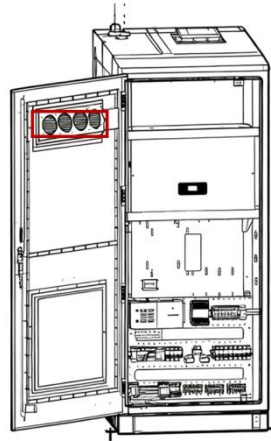
5.5.9 Perform the reverse of steps 5.5.2–5.5.7.

5.5.10 Power on and verify normal operation.

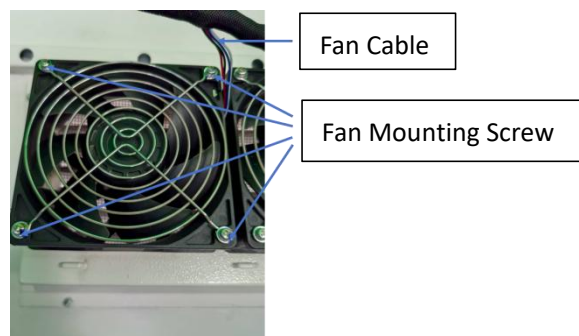
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6. 6025 Fan Replacement Procedure

6.1 6025 Fan Location Diagram



6.2 6025 Fan Cable and Mounting Screw Location Diagram (Example Shown for One Fan)



6.3 6025 Fan Replacement Procedure

6.3.1 Power off.

6.3.2 Trace the fan cables, locate the cable connector within the cable

bundle, and disconnect it.

6.3.3 Unscrew the fan mounting screws, replace with the new fan, and tighten the mounting screws.

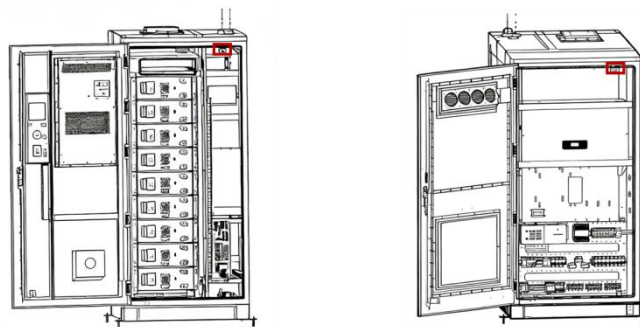
6.3.4 Reconnect the cable connector according to the corresponding positions.

6.3.5 Power on and verify normal operation.

End

7. Door Access Switch Replacement Procedure

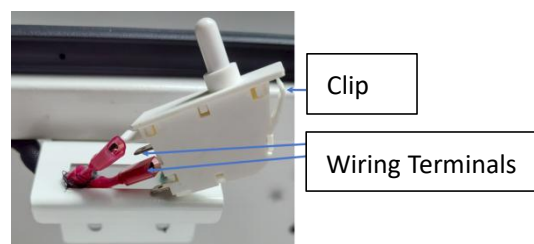
7.1 Door Access Switch Location Diagram



7.2 Door Access Switch Normal Operating Status Diagram



7.3 Door Access Switch Wiring Terminals and Clip Position Diagram



7.4 Door Access Switch Replacement Procedure

7.4.1 Power off.

7.4.2 Press the clip and remove the door access switch from the mounting hole.

7.4.3 Disconnect the wiring terminals and connect them to the new door access switch.

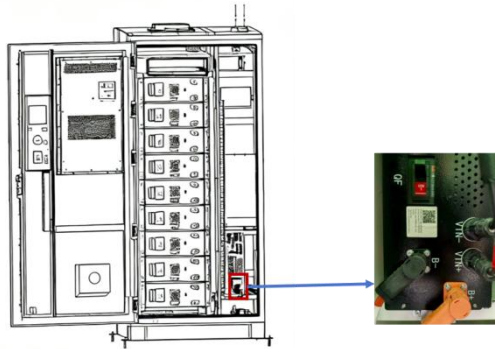
7.4.4 Press the new door access switch into the mounting hole.

7.4.5 Power on and verify normal operation.

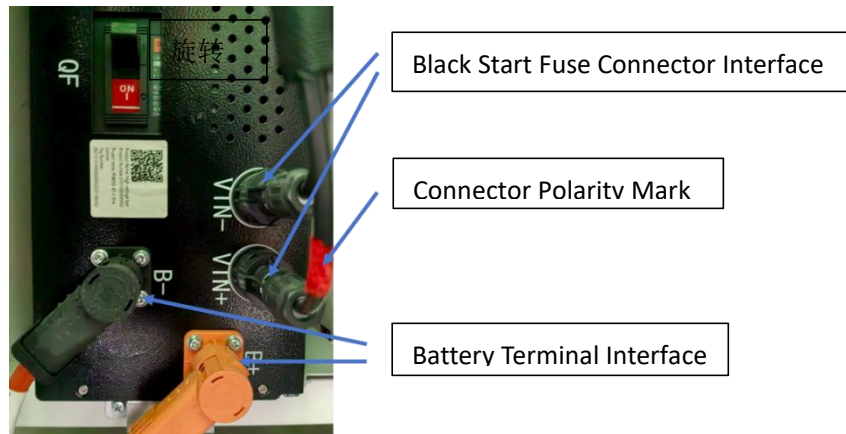
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8. Black Start Fuse Replacement Procedure

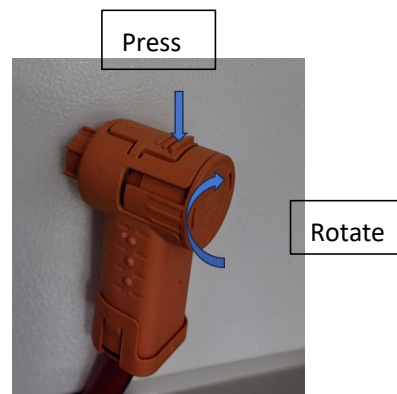
8.1 Replacement of Black Start Fuse



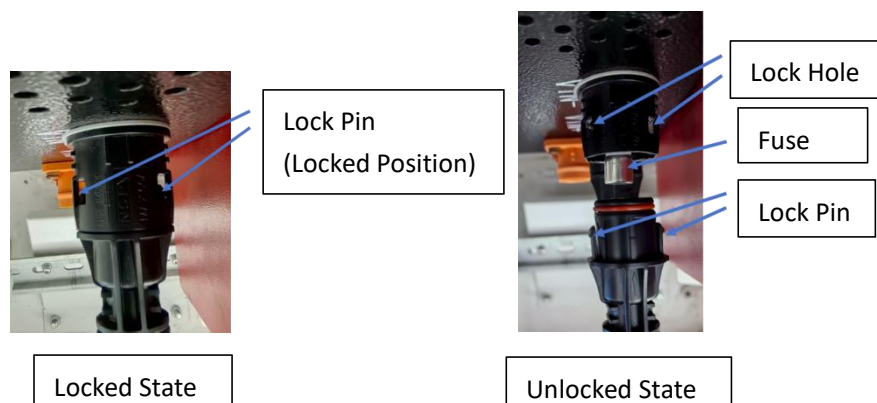
8.2 Diagram Showing Battery Positive and Negative Terminals and Black Start Fuse Socket Locations



8.3 Battery Connector Unlock Diagram



8.4 Black Start Fuse Connector Locked and Unlocked States



8.5 Unlocking Tool and Unlocking Method Diagram



Tweezers



Insert a pair of tweezers into the lock hole, depress the lock-pin head to release the lock, then pull out the connector.

8.6 Black Start Fuse Replacement Procedure

8.6.1 Power off.

8.6.2 Disconnect the battery terminal connector.

8.6.3 Unlock and open the Black Start Fuse connector.

8.6.4 Remove the damaged fuse and insert a new fuse.

8.6.5 Reconnect the fuse connector and ensure it is securely seated.

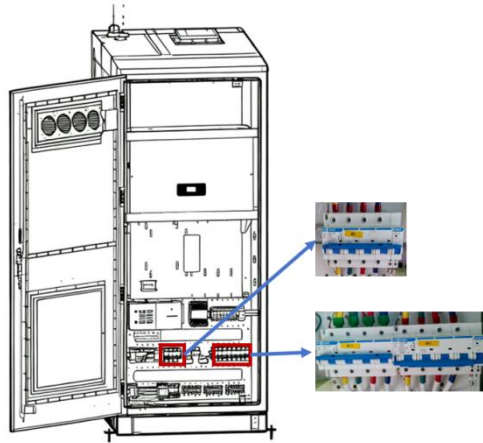
8.6.6 Reconnect the battery terminal connector.

8.6.7 Power on and verify normal operation.

End

9 Replacement of AC Circuit Breaker NSB-125E 4PC100

9.1 Circuit Breaker Location Diagram



9.2 AC Circuit Breaker Replacement Procedure

9.2.1 Power off.

9.2.2 Turn off the corresponding upstream AC power switches (utility, PV, generator, etc.).

9.2.3 Confirm that both the upper and lower terminals of the breaker are de-energized.

9.2.4 Disconnect all wires from the old breaker and accurately label or record the wiring connections.

9.2.5 Remove the faulty AC circuit breaker.

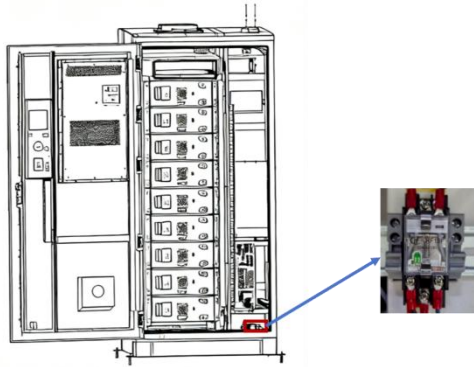
9.2.6 Install the new AC circuit breaker, reconnect the corresponding cables, and ensure correct wiring with no short circuits.

9.2.7 Power on and verify normal operation.

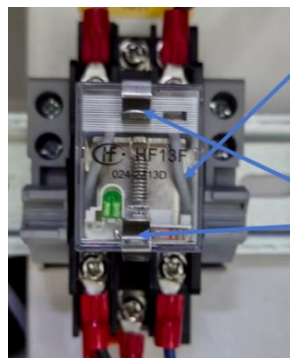
End

10 Replacement of 24V Intermediate Relay

10.1 24V Intermediate Relay Location Diagram



10.24V Intermediate Relay and Metal Clip Diagram



Intermediate Relay

Metal Clip

10.3 24V Intermediate Relay Replacement Procedure

10.3.1 Power off.

10.3.2 Open the metal clip and remove the relay from the base.

10.3.3 Install the new relay and secure it with the metal clip.

10.3.4 Power on and verify normal operation.

End