

# FAN KIT

(950-0064)

## SLIMLINE ENCLOSURE FAN KIT MANUAL

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READ AND SAVE THESE INSTRUCTIONS

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# INTRODUCTION

The fan kit, available as an optional accessory for the AES RACKMOUNT Slimline Enclosure, is designed to circulate the air in the Enclosure, providing passive cooling to the batteries.

## 1. AUDIENCE, WARNINGS, MESSAGES, GENERAL SAFETY, PERSONAL PROTECTIVE EQUIPMENT

### 1.1 Audience

Configuration, installations, service, and operating tasks should only be performed by qualified personnel in consultation with local authorities having jurisdiction and authorized dealers. Qualified personnel should have training, knowledge, and experience in the:

- Installation of electrical equipment
- Application of electrical codes, safety, and installation standards
- Analysis and reduction of hazards involved in performing electrical work
- Installation and configuration of batteries

### 1.2 Warning, Caution, Notice, and Note Messages

Messages in this manual are formatted according to this structure.



Additional information concerning important procedures and features of the product. Read all the instructions before installation, operation, and maintenance.



Important information regarding hazardous conditions.

#### **⚠ WARNING**

Important information regarding hazardous conditions that may result in personal injury or death.

#### **⚠ CAUTION**

Important information regarding hazardous conditions that may result in personal injury.

#### **NOTICE**

Important information regarding conditions that may damage the equipment but not result in personal injury.

#### **NOTE**

Ad hoc information concerning important procedures and features unrelated to personal injury or equipment damage.

### 1.3 General Warnings

#### WARNING

##### ARC FLASH HAZARD

Before installation, service, or routine inspections, review the Arc Flash Warning label on the Slimline Enclosure.

**Failure to follow these instructions may result in death or serious injury.**

#### WARNING

##### ELECTRIC SHOCK AND FIRE HAZARD

Do not lay tools or other metal parts on the battery or across the terminals.

**Failure to follow these instructions may result in death or serious injury.**

#### CAUTION

##### ELECTRIC SHOCK

- Do not touch the energized surfaces of any electrical component in the Enclosure.
- Before servicing the Enclosure, follow all procedures to fully de-energize the battery energy storage system. Refer to the AES RACKMOUNT Slimline Enclosure Manual (805-0068)
- Follow the "[Safe Handling Procedures](#)" below when working with the battery.

**Failure to follow these instructions may result in injury.**

### 1.4 Safe Handling Procedures

Before using the Enclosure, read all instructions and cautionary markings on the unit, and all appropriate sections of this manuals.

- Use personal protective equipment when working with the fan kit.
- Dispose of or recycle a used fan kit following local regulations.
- Do not modify the fan kit except as specified by Discover Energy Systems.
- Do not immerse the fan kit in water or other liquids.
- Do not expose the fan kit to chemicals, fire, explosion, or other hazards.
- Use the fan kit only with the AES RACKMOUNT Slimline Enclosure.
- Do not move the Enclosure (fan kit) while it is in operation.
- Mount the fan kit following local regulations.
- Do not short-circuit the fan kit or allow metallic conductive objects to contact cable ends and terminals.
- Do not drop or damage the fan kit.

### 1.5 Personal Protective Equipment

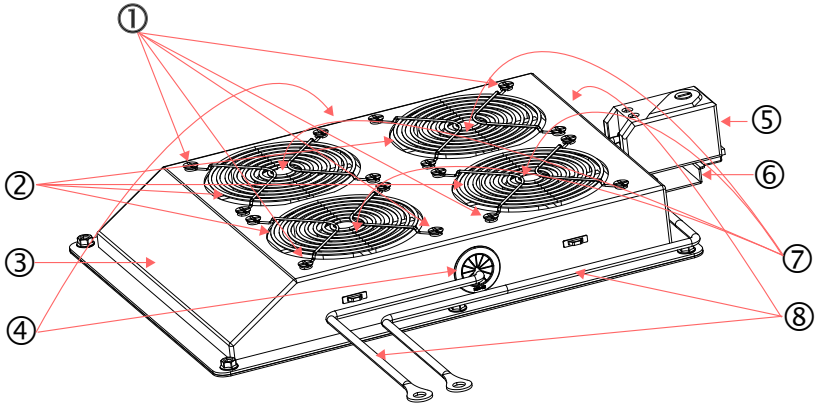
When handling or working near a battery:

- Use Personal Protective Equipment, including clothing, glasses, insulated gloves, and boots.
- Do not wear rings, watches, bracelets, or necklaces.

## 2. ITEMS SHIPPED IN THE BOX

Items	Description
1	Fan Module
8	M5x5 hexagon flange nut
1	Silicone pad, 310 x 240 x 1 mm (12.2 x 9.45 x 0.04 in), white, adhesive on one side, fire rating UL94-V0
6	Cable tie, 2 x 200 mm (0.08 x 7.87 in)

### 2.1 Fan Module Components



**Figure 1. Fan Module Components**

**Table 2-1, Fan Module Components**

Callout	Items	Description
1	16	ST5x10 CSK screw
2	4	Metal mesh fan protector. Parallel mounting holes, spacing 82.5 mm (3.25 in). Suitable for 9225 fan.
3	1	Formed outer box, 397 x 272 x 108 mm (15.6 x 10.71 x 4.25 in)
4	2	Black protective wire sleeve. PA66, model RSB-25, fire rating: UL94-V2.
5	1	Temperature switch, rated power 30 W, rated voltage 24 to 72 Vdc
6	1	Temperature control bracket. SGCC. 70 x 54.6 x 10 mm (2.76 x 2.15 x 0.39 in)
7	4	Fan 48 Vdc, 0.25 A. 92 x 92 x 25 mm (3.6 x 3.6 x 1 in)
8	3	Power cables (UL1015/18 AWG) <ul style="list-style-type: none"> <li>• 1 positive cable, red, 200 mm (7.87 in)</li> <li>• 1 positive cable, red, 1600 mm (63 in)</li> <li>• 1 negative cable, black, 1600 mm (63 in)</li> </ul>

### 3. SPECIFICATIONS

#### 3.1 Electrical Specifications

Specification	Description
Fan voltage	48 Vdc, 0.25 A per fan (total 4 fans)
Temperature switch	24 to 72 Vdc, rated power 30 W

### 4. INSTALLATION AND WIRING

#### ⚠ CAUTION

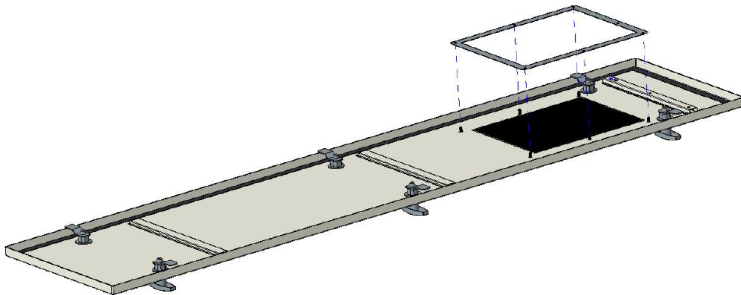
##### ELECTRIC SHOCK

- Do not touch the energized surfaces of any electrical component in the Enclosure.
- Before installing the fan, follow all procedures to fully de-energize the battery energy storage system. Refer to the AES RACKMOUNT Slimline Enclosure Manual (805-0068)

**Failure to follow these instructions may result in injury.**

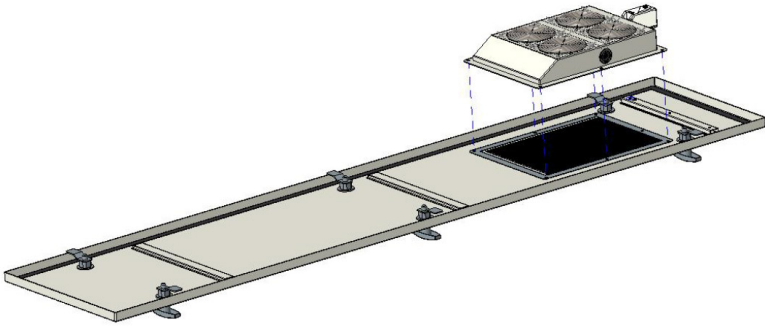
#### 4.1 Installation

1. Open the box of the fan kit and confirm its contents match the items listed in [2. ITEMS SHIPPED IN THE BOX.](#)
2. Open the door of the Enclosure, remove the bonding wire between the door and the Enclosure body, and place the front side of the door on a blanket or other surface that will not scratch the finish.
3. With the adhesive side of the silicone pad pointed away from the Enclosure door, align the holes in the pad with the rivets, and remove the non-adhesive tape from the silicone pad.



**Figure 2. Attach Silicone Pad to Door**

4. Align the holes in the fan module with the rivets and gently place the module on top of the silicone pad.

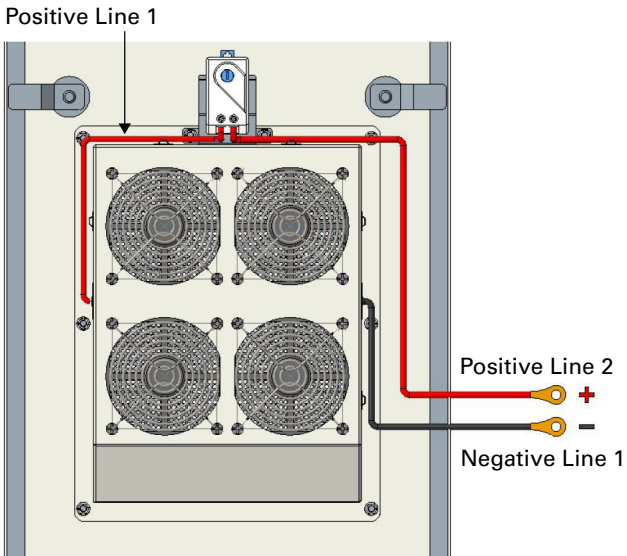


**Figure 3. Attach Fan Module to Door**

5. Screw the six M5 hexagon flange nuts onto the rivets with a torque of 5 to 6 Nm (3.7 to 4.43 lb-ft).

## 4.2 Wiring

1. Attach Positive Line 2 to a terminal on the positive busbar in the Enclosure.

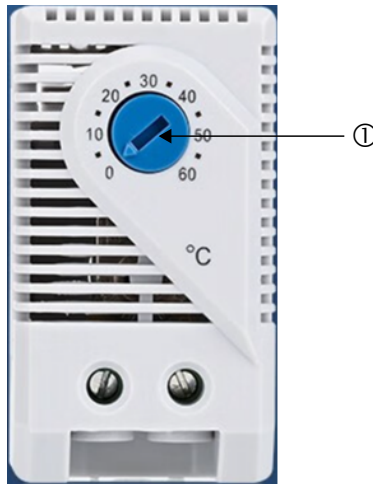


**Figure 4. Fan Control Switch wires**

2. Attach Negative Line 1 to a terminal on the negative busbar in the Enclosure.

### 4.3 Setting the Temperature for the Fan Switch

At the top of the fan module is the switch that turns the fans on and off. When the ambient temperature is greater than the setting on the temperature control switch (default 0 °C), the switch is turned ON and the fans begin spinning. When the ambient temperature is less than the setting on the temperature control switch, the switch is turned OFF and the fans stop spinning.



**Figure 5. Temperature Control Switch**

1. Insert a flat-head screwdriver (or similar tool) into the rectangular hole of the temperature setting knob.
2. Rotate the setting knob to the temperature when the fans should turn on.
3. Adjust the setting as required by the application.

#### **Enclosure Door**

4. Re-attach the bonding wire between the door and the Enclosure body.
5. Close the Enclosure door.

#### **NOTE**

Be careful the next time you open the Enclosure door. In addition to the bonding wire from the door to the Enclosure body, the fan is wired to the busbars in the Enclosure.