

UPS2000-G-(1 kVA-3 kVA) Battery Pack

Quick Installation Guide

Issue 04
Date 2016-05-15

Copyright © Huawei Technologies Co., Ltd. 2016. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

Trademarks and Permissions



and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the contract made between Huawei and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base
Bantian, Longgang
Shenzhen 518129
People's Republic of China

Website: <http://e.huawei.com>

About This Document

Purpose

This document describes the UPS2000-G-(1 kVA-3 kVA) battery pack in terms of its appearance, features and specifications, and installation and connections. Unless otherwise specified, UPS refers to all the models discussed in this document.





Intended Audience


This document is intended for:

- Sales engineers
- Technical support engineers
- System engineers
- Hardware installation engineers
- Commissioning engineers
- Data configuration engineers
- Maintenance engineers

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
 NOTICE	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results.

Symbol	Description
	NOTICE is used to address practices not related to personal injury.
 NOTE	<p>Calls attention to important information, best practices and tips.</p> <p>NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.</p>

Change History

Changes between document issues are cumulative. The latest document issue contains all the changes made in previous issues.

Issue 04 (2016-05-15)

The output terminal of 3 kVA UPS changed to output socket (C19).

Issue 03 (2015-10-12)

Added the 2 kVA UPS battery pack.

Issue 02 (2015-08-10)

Updated the dimensions of battery pack.

Issue 01 (2015-06-25)

This issue is the first official release.

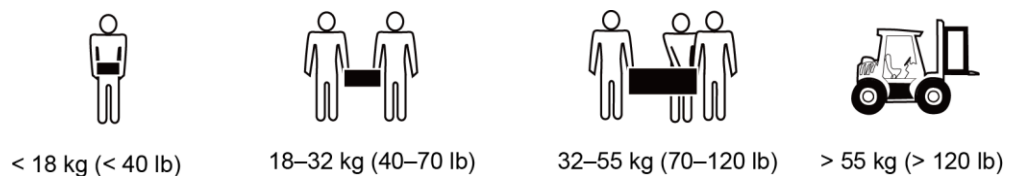
Contents

About This Document	ii
1 Precautions	1
2 Appearance and Feature	2
2.1 Exterior	2
2.2 Features.....	3
2.2.1 Battery Pack for 1 kVA UPS.....	3
2.2.2 Battery Pack for 2 kVA UPS.....	4
2.2.3 Battery Pack for 3 kVA UPS.....	5
3 Installing the Battery Pack	7
3.1 Unpacking and Checking.....	7
3.2 Preparations	7
3.3 Installation Procedure	8
3.3.1 Rack-Mounted Battery Pack.....	8
3.3.2 Tower-mounting a Battery Pack.....	9
4 Connecting a Battery Pack and a UPS	13
4.1 Connecting a Battery Pack and a 1 kVA UPS	13
4.2 Connecting a Battery Pack and a 2 kVA UPS	14
4.3 Connecting a Battery Pack and a 3 kVA UPS	16
A Acronyms and Abbreviations	17

1 Precautions

1. Only the professional technical personnel designated by Huawei are allowed to install and operate the battery pack.
2. Read this document closely before operating the battery pack. Keep this document for future use.
3. When operating Huawei equipment, you must follow the local laws and regulations.
4. You can modify default parameters only after being approved by Huawei technical support.
5. To prevent electric shocks, get the tool insulated and wear insulation gloves when connecting cables.
6. To prevent personal injury, wear protective shoes when moving the battery pack.
7. In case of fire, use a dry powder extinguisher to put out the fire. Using a fluid fire extinguisher may cause electric shocks.
8. Do not touch uninsulated battery terminals. Otherwise, electric shocks may occur.
9. Using incorrect battery models may cause explosion. Dispose of used batteries by following instructions specified.
10. Cut off power supply and remove all the metal objects such as the watch, bracelet, or ring before maintenance.
11. Do not transport the device by holding the mounting brackets, front panel, or protective cover. When moving a heavy device, follow the product movement regulations, as shown in [Figure 1-1](#).

Figure 1-1 Product movement regulations



2 Appearance and Feature

2.1 Exterior

Rack-mounted battery packs can either be rack-mounted or tower-mounted. As shown in [Figure 2-1](#) and [Figure 2-2](#).

Figure 2-1 Rack-mounted battery pack

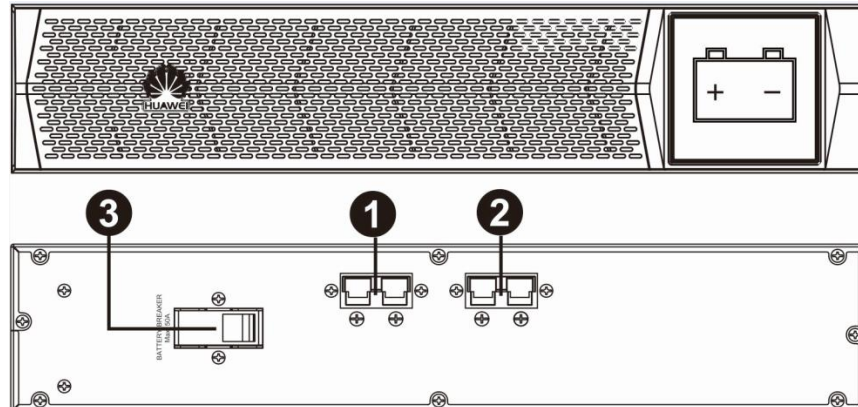


Figure 2-2 Tower-mounted battery pack



The standard battery pack for 1 kVA UPS with long backup time is ESS-36V12-9*2AHBPVBB01. The standard battery pack for 2 kVA UPS with long backup time is ESS-72V12-9AHBPVBB01. The standard battery pack for 3 kVA UPS with long backup time is ESS-96V12-9AHBPVBB02. The appearance for 1 kVA UPS, 2 kVA UPS, and 3 kVA UPS are the same. The figures below based on the 3 kVA UPS, as shown in [Figure 2-3](#).

Figure 2-3 Standard battery pack (ESS-96V12-9AHBPVBB02) for 3 kVA UPS and its external ports



(1) DC port 1

(2) DC port 2

(3) Protection switch

Table 2-1 describes the input and output ports on the battery pack.

Table 2-1 Input and output ports on the battery pack

No.	Port	Port Type
1	DC port 1	SA50 x 2
2	DC port 2	SA50 x 2

2.2 Features

2.2.1 Battery Pack for 1 kVA UPS

Model

ESS-36V12-9*2AHBPVBB01

Interior

Two group of battery strings are embedded, each group with three 9 Ah/12 V DC batteries. The output voltage of battery pack is 36 V DC.

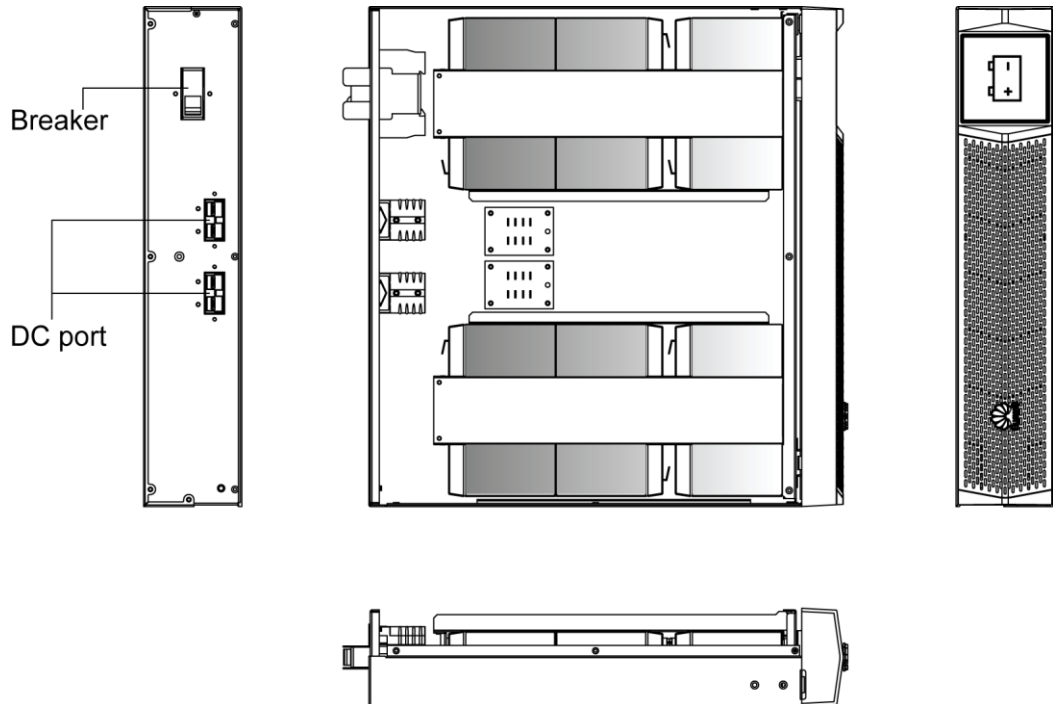
Basic Features

- Color: black
- Panel: plastic
- Backplane: grey (SECC/SGCC)

- Dimensions (H x W x D): 88 mm x 438 mm x 410 mm
- Weight: 17.3 kg

Graphics of the Interior

Figure 2-4 ESS-36V12-9*2AHBPVBB01 battery pack interior



2.2.2 Battery Pack for 2 kVA UPS

Model

ESS-72V12-9AHBPVBB01

Interior

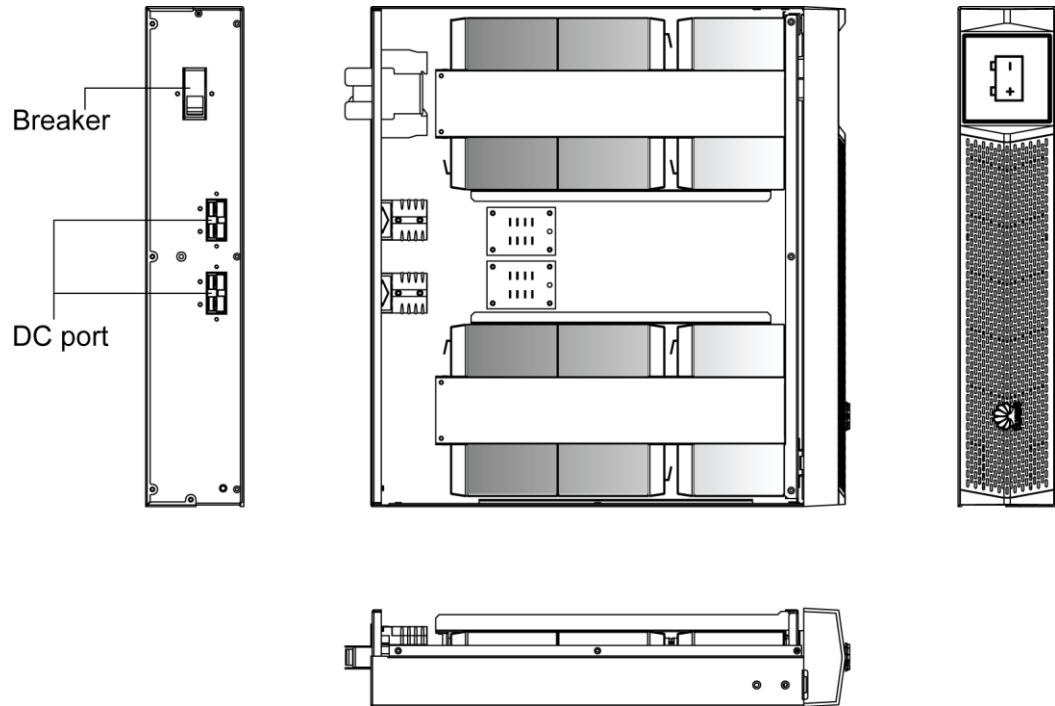
One group of battery strings are embedded, each group with six 9 Ah/12 V DC batteries. The output voltage of battery pack is 72 V DC.

Basic Features

- Color: black
- Panel: plastic
- Backplane: grey (SECC/SGCC)
- Dimensions (H x W x D): 88 mm x 438 mm x 410 mm
- Weight: 21.7 kg

Graphics of the Interior

Figure 2-5 ESS-72V12-9AHBPVBB01 battery pack interior



2.2.3 Battery Pack for 3 kVA UPS

Model

ESS-96V12-9AHBPVBB02

Interior

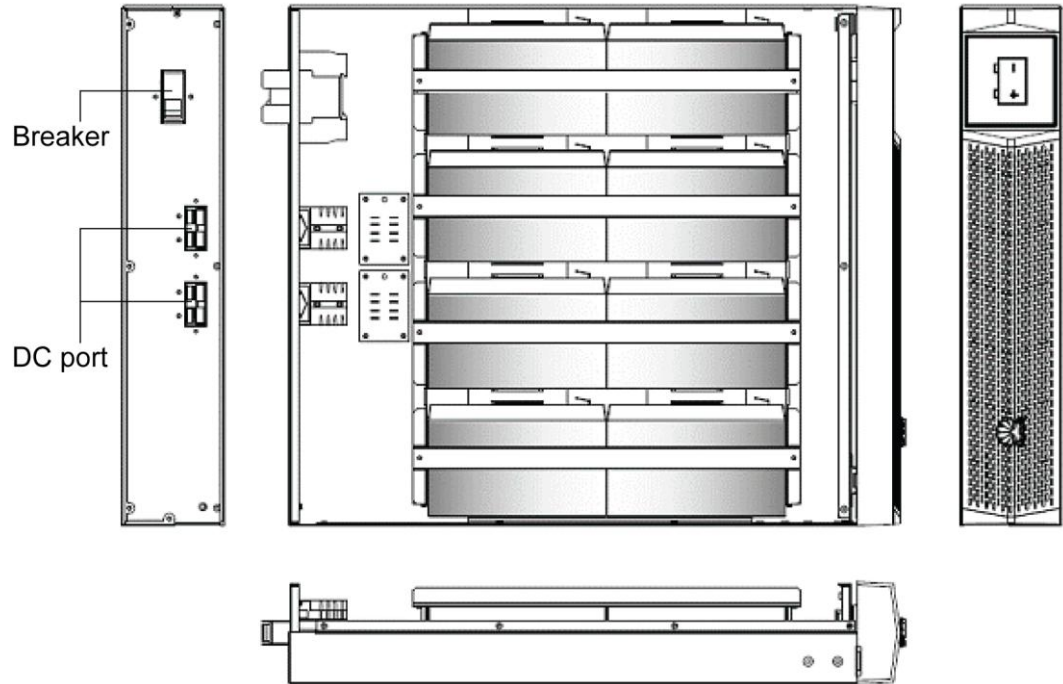
One group of battery strings are embedded, each group with eight 9 Ah/12 V DC batteries. The output voltage of battery pack is 96 V DC.

Basic Features

- Color: black
- Panel: plastic
- Backplane: grey (SECC/SGCC)
- Dimensions (H x W x D): 88 mm x 438 mm x 510 mm
- Weight: 28.9 kg

Graphics of the Interior

Figure 2-6 ESS-96V12-9AHBPVBB02 battery pack interior



3 Installing the Battery Pack

3.1 Unpacking and Checking

After a battery pack is delivered onsite, unpack it and check as follows:

- If any damage is found on the battery pack appearance, contact the carrier immediately.
- Check that battery pack bar code (on the rear of the pack, near the wiring port) is consistent with that specified in the order. If any discrepancy is found, contact local Huawei office immediately.



NOTICE

- Do not transport the battery pack by holding the mounting ears, front panel, or protective cover.
 - Remove rings, watches, and other metal objects before you move the battery pack.
-




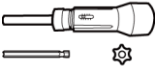
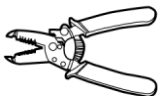


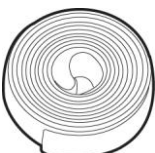







3.2 Preparations



NOTICE

Get installation tools insulated to prevent electric shocks.

Table 3-1 Tools

Appearance, Specifications, and Name			
Multimeter	Phillips screwdriver (PH2 x 150 mm, PH3 x 250 mm)	Flat-head screwdriver (2 mm x 80 mm)	Torque screwdriver
			
Wire stripper	PVC insulation tape	Cotton cloth	Heat shrink tubing
			
Heat gun	Electrician's knife	Protective gloves	Electrostatic discharge (ESD) gloves
			
Insulation gloves	Hydraulic pliers	Cable tie	N/A
			N/A

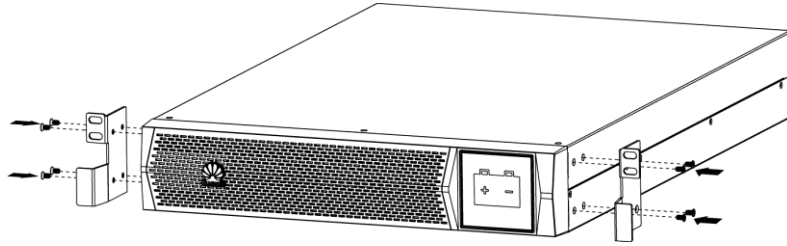
3.3 Installation Procedure

Rack-mounted battery packs can either be rack-mounted or tower-mounted.

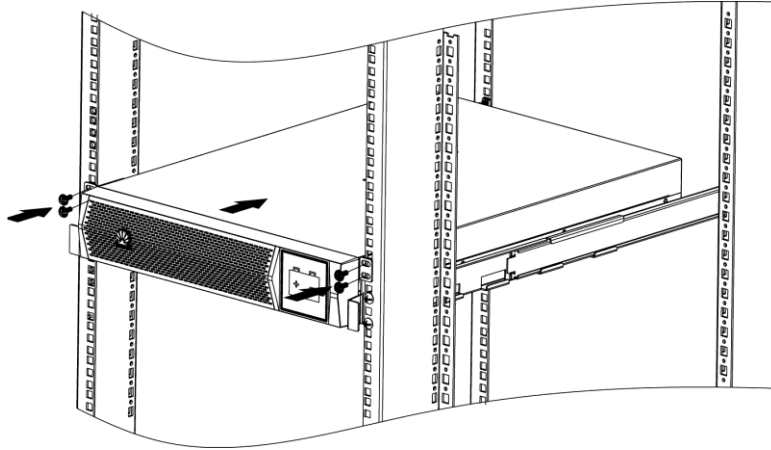
3.3.1 Rack-Mounted Battery Pack

Procedure:

Step 1 Install mounting ears.



Step 2 Install the battery pack.



 **NOTE**

The proposed torque is 3 N•m here.

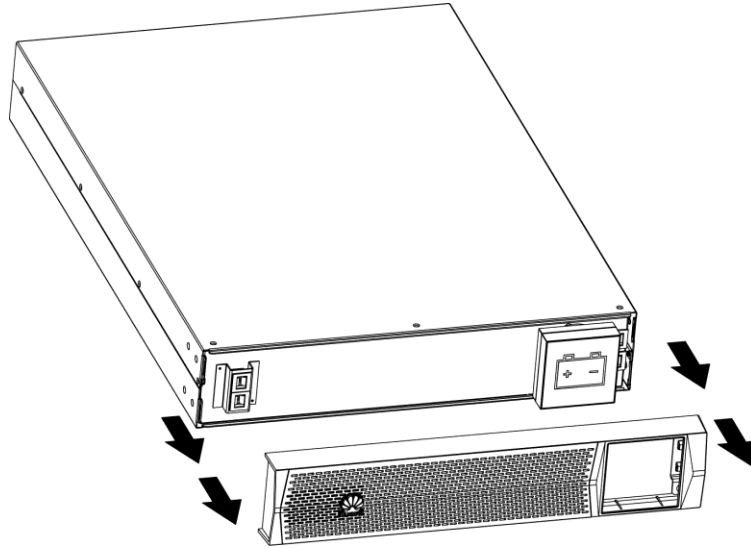
----End

3.3.2 Tower-mounting a Battery Pack

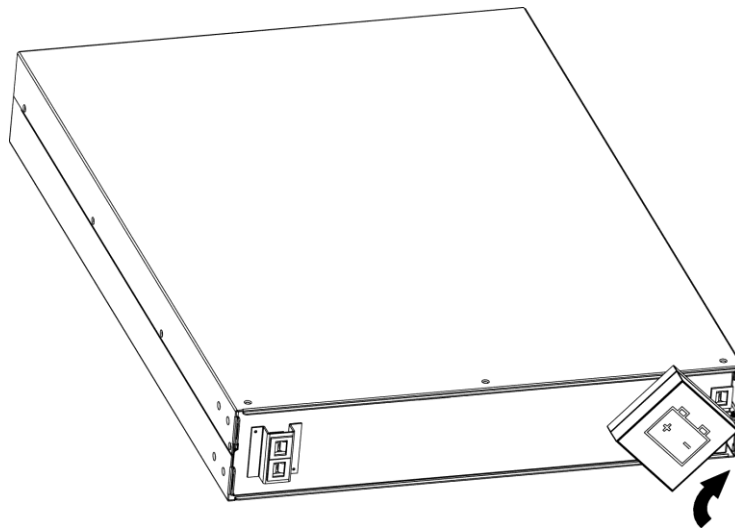
To tower-mount a battery pack, perform the following steps:

Procedure:

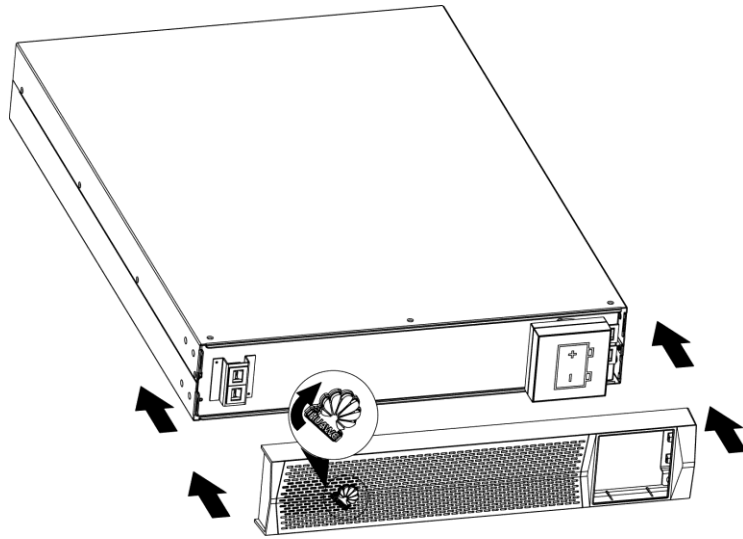
Step 1 Remove the front panel.



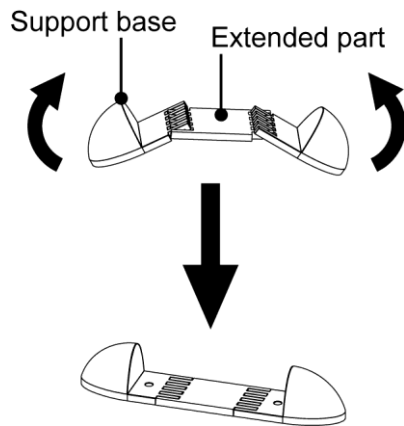
Step 2 Adjust the battery pack panel as shown in the following figure.



Step 3 Adjust Huawei logo and reinstall the front panel.



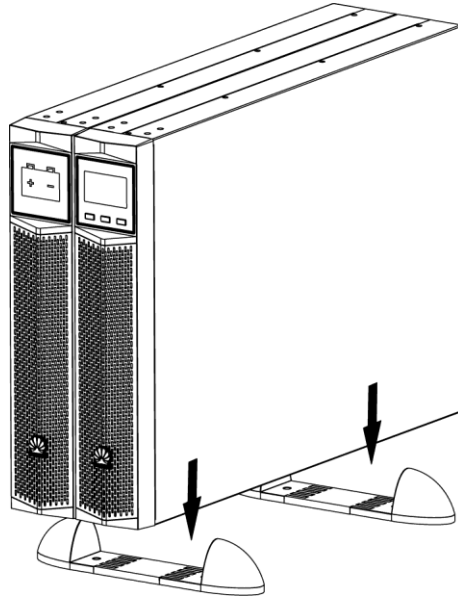
Step 4 Assemble the support base and the extended part.



 **NOTE**

The support base is the accessory of UPS, the accessory of battery pack only is the extended part.

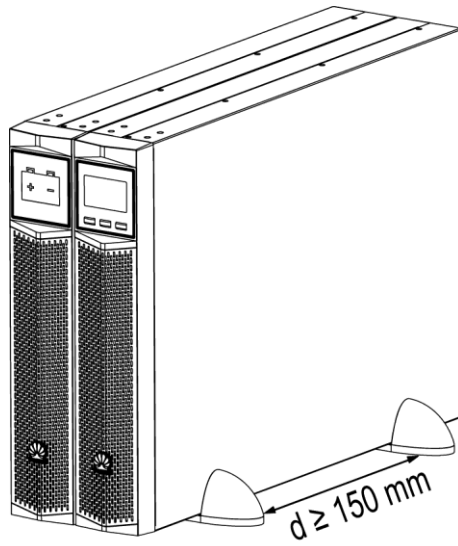
Step 5 Install the battery pack.



 **NOTE**

The lateral dimensions of UPS and battery pack installed as the above figure is about 300 mm.

Step 6 The installation is complete.



----End

4 Connecting a Battery Pack and a UPS

4.1 Connecting a Battery Pack and a 1 kVA UPS

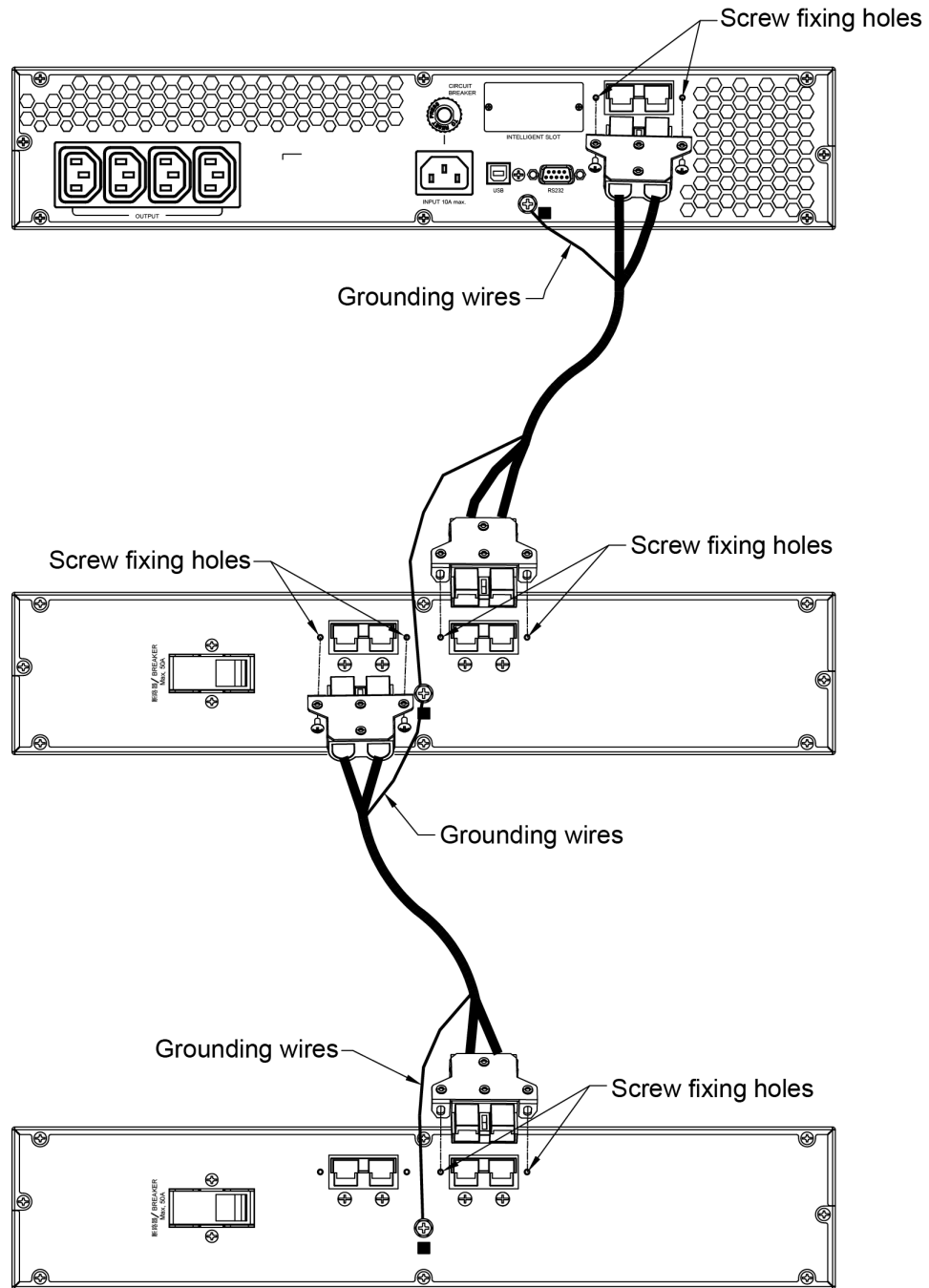
Connect the ESS-36V12-9*2AHBPVBB01 battery packs and the 1 kVA UPS using the battery cable delivered with the battery pack, as shown in [Figure 4-1](#).



NOTICE

- ESS-36V12-9*2AHBPVBB01 is allowed a maximum of two groups in parallel.
 - The battery pack has two output ports, as a parallel state, the same function. If one used to connect the UPS or battery pack, another can be used to connect an external charger. In the preceding figures, the unused port on the battery pack on the right can connect to an external charger.
 - Before connecting, please make sure that the breaker of the battery pack is in the OFF state.
-

Figure 4-1 Connection between the ESS-36V12-9*2AHBPVBB01 battery pack and a 1 kVA UPS



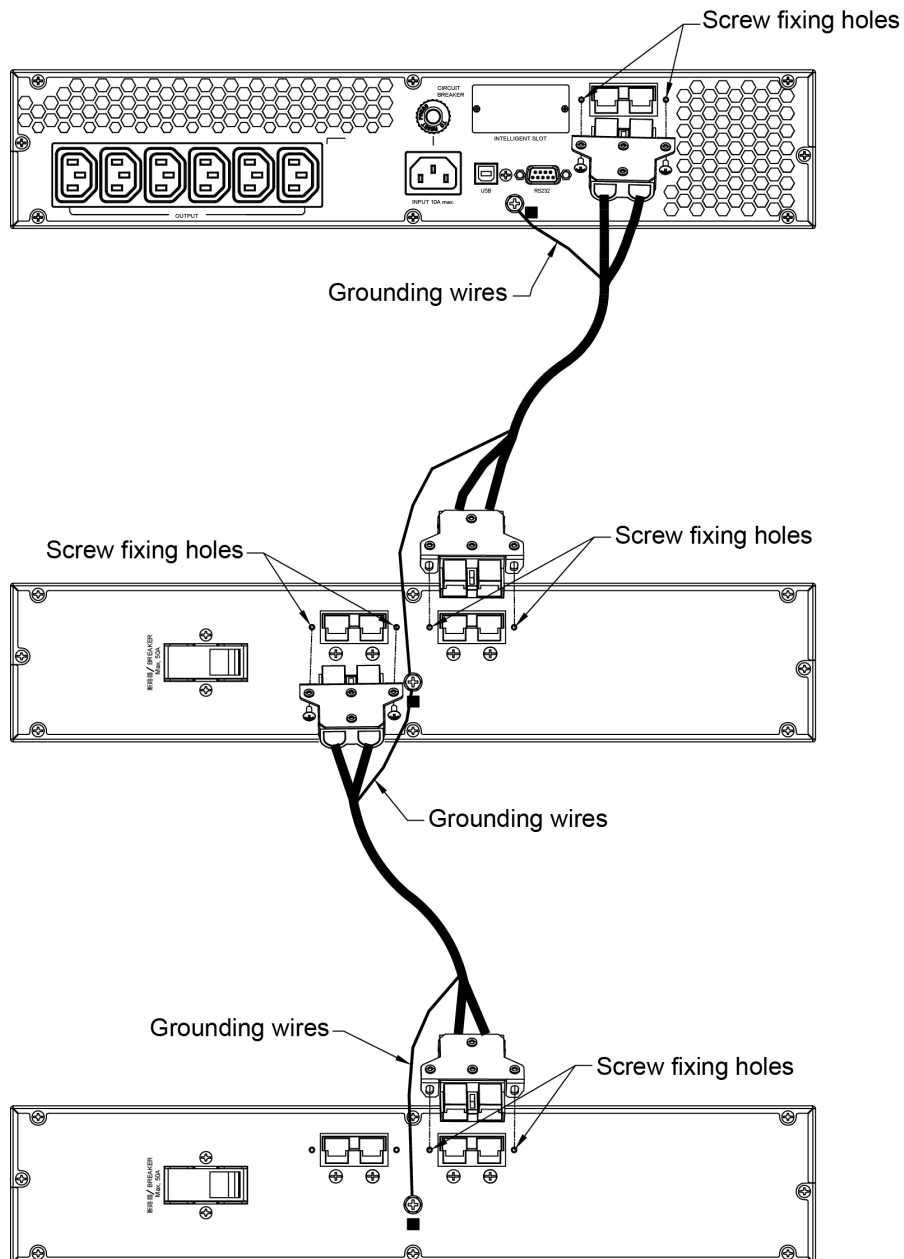
4.2 Connecting a Battery Pack and a 2 kVA UPS

Connect the ESS-72V12-9AHBPVBB01 battery packs and the 2 kVA UPS using the battery cable delivered with the battery pack, as shown in [Figure 4-2](#).

 **NOTICE**

- ESS-72V12-9AHBPVBB01 is allowed a maximum of four groups in parallel. The text uses two groups in parallel as an example. If four groups need to be connected, refer to the connection method of two groups.
- The battery pack has two output ports, as a parallel state, the same function. If one used to connect the UPS or battery pack, another can be used to connect an external charger.
- Before connecting, please make sure that the breaker of the battery pack is in the OFF state.

Figure 4-2 Connection between the ESS-72V12-9AHBPVBB01 battery pack and a 2 kVA UPS



4.3 Connecting a Battery Pack and a 3 kVA UPS

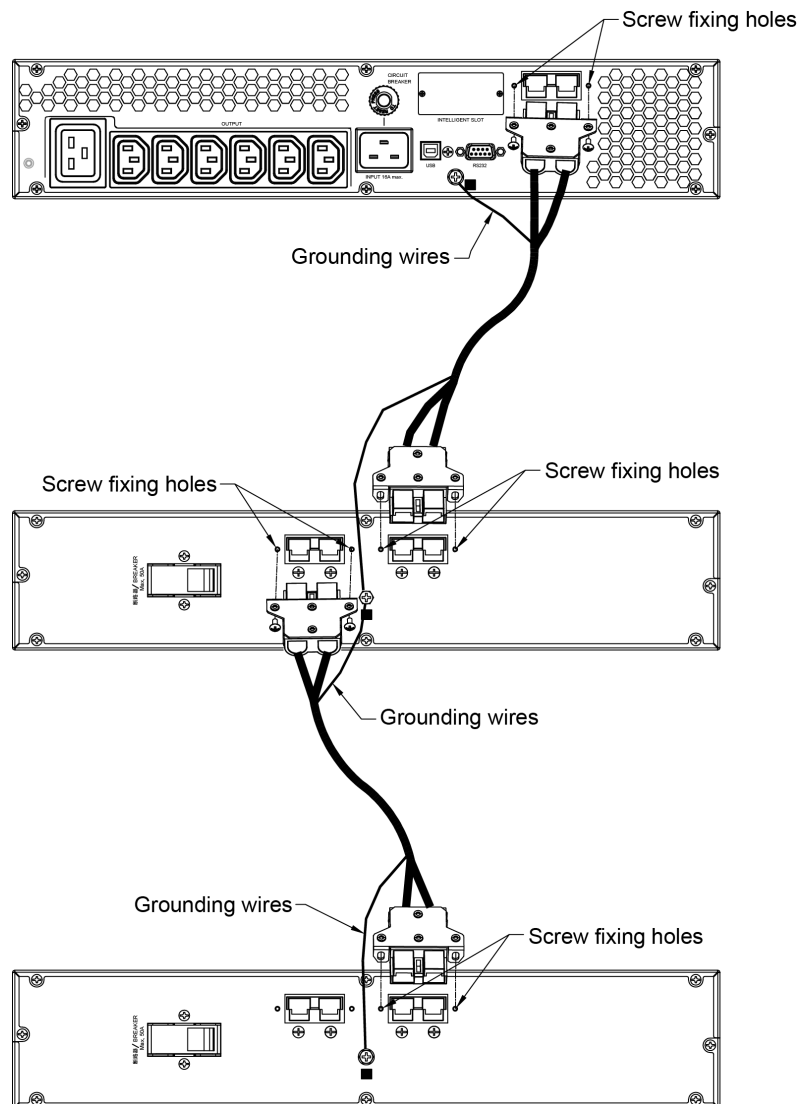
Connect the ESS-96V12-9AHBPVBB02 battery packs and the 3 kVA UPS using the battery cable delivered with the battery pack, as shown in [Figure 4-3](#).



NOTICE

- ESS-96V12-9AHBPVBB02 is allowed a maximum of four groups in parallel. The text uses two groups in parallel as an example. If four groups need to be connected, refer to the connection method of two groups.
- The battery pack has two output ports, as a parallel state, the same function. If one used to connect the UPS or battery pack, another can be used to connect an external charger.
- Before connecting, please make sure that the breaker of the battery pack is in the OFF state.

Figure 4-3 Connection between the ESS-96V12-9AHBPVBB02 battery pack and a 3 kVA UPS



A Acronyms and Abbreviations

U

UPS

uninterruptible power system