MARSTEK

SMARTBOX USER MANUAL

Single-phase SmartBox / Three-phase SmartBox

EN 英文 | DE 德文 | IT 意文 | FR 法文 | ES 西文 | PL 波文

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FOR READERS

- This document mainly introduces the installation, electrical connection, commissioning, maintenance and troubleshooting methods of the Smart Box. Please read this manual carefullybefore installing and using the Smart Box, understand the safety information and be familiar with the functions and features of the Smart Box.
- This manual is applicable to the Smart Box. For safety reasons, all installation operations must be and are only allowed to be completed by professional technicians. Professional technicians must have relevant qualifications, receive relevant training, master relevant skills, and strictly follow the instructions contained in this manual.

SYMBOL CONVENTION

The following symbols may appear in this document and their meanings are as follows:

	Danger	This symbol indicates a dangerous situation that could cause a fatal electrocution hazard, serious personal injury, or fire.
	Warning	This symbol indicates instructions that must be followed carefully to avoid potential safety hazards.
	Careful	This symbol indicates that the operation is prohibited. The relevant personnel should stop the operation and only proceed after being fully cautious and fully understanding the operation.

MODIFICATION RECORDS

The revision history accumulates the descriptions of each document update. The latest version of the document contains the updated contents of all previous document versions.

Document version 01 (2025.06.27) Document initial version

目 录

Chapter 1 Safety Precautions

Smartbox distribution boxes have been designed and tested in accordance with international safety requirements. However, when installing and operating this series of Smartboxes, safety regulations must still be followed. Installers must carefully read, fully understand, and strictly comply with all instructions, precautions, and warnings in this installation manual.

Reverse engineering, decompilation, disassembly, adaptation, implantation, or other derivative operations on the equipment are prohibited. It is forbidden to study the internal implementation logic of the equipment, obtain the equipment's software source code, infringe intellectual property rights in any way, or disclose the results of any equipment performance tests.

All operations such as transportation, storage, installation, operation, use, and maintenance shall comply with applicable laws, regulations, standards, and codes.

This equipment should be used in an environment that meets the design specification requirements. Otherwise, equipment failures, abnormal functions, or component damage caused thereby shall not be covered by the equipment quality guarantee; the company shall not be liable for compensation for any personal injury, death, property damage, etc., that may arise.

The company shall not be liable for any of the following situations or the results caused thereby:

(1) Equipment damage caused by earthquakes, floods, volcanic eruptions, debris flows, lightning strikes, fires, wars, armed conflicts, typhoons, hurricanes, tornadoes, extreme weather, or force majeure.

(2) The installation and use environment does not comply with relevant international, national, or regional standards; or the equipment is installed and used by unqualified personnel.

(3) Operation not in accordance with the operation instructions and safety warnings in the product and documentation.

(4) Unauthorized disassembly, modification of the product, or alteration of software code.

(5) Damage caused by transportation arranged by you or a third party entrusted by you.

(6) Damage caused by transportation arranged by you or a third party entrusted by you. (Note: This item is duplicated with item 5; the translation remains consistent with the original.)

(7) Damage caused by storage conditions not meeting the requirements of the product documentation.

(8) Materials and tools provided by you that do not meet the requirements of local laws, regulations, and relevant standards.

(9) Damage caused by negligence, intent, gross negligence, improper operation by you or a third party, or any cause not attributable to the Company.

1.1 Personal Safety

(1) Live operation is strictly prohibited during installation. Do not install or remove cables while energized. When cable cores contact conductors, arcs or sparks may occur, potentially causing fires or personal injury.

(2) When the equipment is energized, non-standard or incorrect operations may lead to fires, electric shocks, or explosions, resulting in casualties or property damage.

(3) During operation, wearing conductive objects such as watches, bracelets, bangles, rings, or necklaces is strictly prohibited to avoid electric burns.

(4) Special insulated tools must be used during operation to prevent electric shock or short-circuit faults. The insulation withstand voltage level must comply with local laws, regulations, standards, and codes.

(5) Special protective equipment must be used during operation, such as protective clothing, insulated shoes, goggles, safety helmets, insulated gloves, etc.

General Requirements

(1) Do not ignore the warnings, alerts and preventive measures in the manual or on the equipment.

(2) During equipment operation, if any fault that may cause personal injury or equipment damage is found, immediately terminate the operation, report to the person in charge, and take effective protective measures.

(3) Do not power on the equipment until installation is completed and confirmed by professional personnel.

(4) Direct contact with power supply equipment, contact via other conductors, or indirect contact through wet objects is prohibited. Before touching any conductor surface or terminal, measure the voltage at the contact point to confirm no electric shock hazard.

(5) When the equipment is running, the casing temperature is high, posing a risk of burns. Do not touch it.

(6) In case of fire, immediately evacuate the building or equipment area, press the fire alarm bell, or call the fire emergency number. Under no circumstances should you re-enter a burning building or equipment area.

Personnel Requirements

(1) Personnel who operate the equipment shall include professionals and trained personnel.

(2) Personnel responsible for installing and maintaining the equipment must first receive strict training, master correct operation methods, and understand various safety precautions and relevant standards of their country/region.

(3) Only qualified professionals or trained personnel are permitted to install, operate, and maintain the equipment.

(4) Only qualified professionals are allowed to dismantle safety facilities and repair the equipment.

(5) Personnel in special scenarios (such as electrical operations, high-altitude work, or special equipment operations) must hold the special operation qualifications required by the local country/region.

1.2 Electrical Safety

General Requirements

(1) Before installation, inspect the equipment to confirm no damage occurred during transportation. If damaged, the insulation integrity or safety of the equipment may be affected. Carefully select the installation location and comply with specified cooling requirements. Unauthorized removal of necessary protective facilities, improper use, improper installation, or improper operation may cause equipment damage or even serious safety accidents and electric shock hazards.

(2) Before connecting the Smartbox to the power grid, contact the local power grid operator for approval. All connection operations described in this manual must be performed by trained professional technicians.

(3) If the on-site installation environment does not meet standard installation conditions, inform the manufacturer in advance.

(4) For equipment maintenance, use only qualified and compliant parts. Relevant parts must be installed by authorized contractors or authorized service representatives of Hunan Chubit Technology Co., Ltd., and used solely for their intended purposes.

(5) After disconnecting the Smartbox from the public power grid, some components may still be energized. Exercise caution to avoid electric shock. Before touching the Smartbox, ensure the surface temperature is safe and the voltage potential of the entire equipment does not exceed the safe range.

(6) Electrical installation and maintenance work shall be performed by qualified electricians, and wiring shall comply with local regulations.

(7) Operating the equipment without installing a grounding conductor is prohibited.

(8) Damaging the grounding conductor is prohibited.

(9) Regularly inspect the screws of the equipment connection terminals to ensure they are tightened and not loose.

(10) The equipment grounding impedance shall meet local electrical standards.

(11) The equipment shall have permanent grounding protection. Before operating the equipment, inspect its electrical connections to ensure reliable grounding.

(12) Before installing or removing power cables, disconnect the equipment itself and its upstream/downstream switches.

(13) Before installing power cables, verify that cable labels are correct and cable terminals are insulated.

(14) If the equipment has multiple inputs, disconnect all inputs and wait until the equipment is fully powered off before operating it.

(15) When maintaining the power consumption or distribution equipment at the downstream of the power supply equipment, disconnect the corresponding output switch of the power supply equipment.

(16) Do not open the main panel of the equipment.

(17) Regularly inspect the screws of the equipment connection terminals to ensure they are tightened and not loose.

(18) It is strictly prohibited to artificially alter, damage, or obscure the markings and nameplates on the equipment. Timely replace markings that become unclear due to long-term use.

(19) Cleaning the internal and external electrical components of the equipment with solvents such as water, alcohol, or oil is prohibited.

Grounding Requirements:

(1) The grounding impedance of the equipment shall meet the requirements of local electrical standards.

(2) The equipment shall be permanently connected to a protective ground. Before operating the equipment, inspect its electrical connections to ensure reliable grounding.

(3) Operating the equipment without a properly installed grounding conductor is prohibited.

(4) Damaging the grounding conductor is strictly prohibited.

Wiring Requirements

(1) The selection, installation, and routing of cables must comply with local laws, regulations, and standards.

(2) During the laying of power cables, coiling or twisting is strictly prohibited. If the power cable is found to be insufficient in length, it must be replaced; making joints or soldering points in the power cable is forbidden.

(3) All cables must be firmly connected, well-insulated, and of appropriate specifications.

(4) Cable trays and wire holes should have no sharp edges. Cables passing through pipes or wire holes must be protected to prevent damage from sharp edges, burrs, etc.

(5) Using cables in high-temperature environments may cause aging or damage to the insulation layer. The distance between cables and heating components or the periphery of heat source areas should be at least 30mm.

1.3 Environmental Safety

(1) Store the equipment according to the requirements specified in the Storage Requirements section. Equipment damage caused by non-compliant storage conditions is not covered by the warranty.

(2) Installing and operating the equipment beyond the specified technical parameters is strictly prohibited, as this may affect performance and safety.

(3) The operating temperature range specified in the technical parameters refers to the ambient temperature of the environment where the equipment is installed.

(4) Installation, use, and operation of outdoor equipment and cables (including but not limited to equipment handling, cable operations, plugging/unplugging signal interfaces connected to outdoor devices, high-altitude work, outdoor installation, and opening doors) are prohibited during恶劣天气 conditions such as lightning, rain, snow, or strong winds (Level 6 or above).

(5) Do not install the equipment in environments with dust, smoke, volatile gases, corrosive gases, infrared radiation, organic solvents, or high salinity.

(6) Installation in environments with metallic conductive dust or magnetic dust is prohibited.

(7) Avoid installing the equipment in areas prone to fungal or mold growth.

(8) Do not install the equipment in areas with strong vibrations, noise sources, or electromagnetic interference.

(9) The installation site must comply with local laws, regulations, and relevant standards.

(10) The installation ground should be solid, free of soft or subsidence-prone soil. Avoid low-lying areas prone to water or snow accumulation. The site level should be higher than the historical maximum water level of the area.

(11) Installation in locations susceptible to flooding is strictly prohibited.

(12) Ensure the installation surface is strong enough to support the equipment's weight.

(13) After installation, remove all packaging materials (e.g., cardboard boxes, foam, plastics, cable ties) from the equipment area.

1.4 Mechanical Safety

General Requirements:

(1) Any paint scratches occurring during equipment transportation or installation must be repaired promptly; long-term exposure of scratched parts is prohibited.

(2) Arc welding, cutting, or similar operations on the equipment are forbidden without the company's prior evalua tion.

(3) Installing other equipment on the top of this equipment is prohibited without the company's evaluation.

(4) When working in the space above the equipment top, add protective measures to prevent equipment damage.

(5) Use appropriate tools and master their correct operation methods.

Chapter 2 Product Overview

2.1 Product Models

Smart - box distribution box - DB63S is a single - phase model, and DB63T is a three - phase model.

Smartbox-DB63 S

1 2 3

1	Series Name	Smartbox：Whole-House Distribution Box
2	Product Model	DB63
3	Grid Connection Type	S：Single Phase，220 V / 230 V
		T：Three-phase，380 V / 400 V

2.2 Product Introduction

1. Function Description

(1) Backup Power Function. This product needs to be used in conjunction with the grid and other backup power sources (such as Venus or other storable power sources). Take Venus as the backup power source for example: connect the output of the grid and Venus to this product, where the grid is the normal power source and Venus is the backup power source. When both power sources are available, the grid is prioritized for power supply; when the grid power is cut off, the product will immediately switch to Venus for power supply to ensure that the user's load is not powered off; when the grid power is restored, it will switch back to the grid to supply power to the load.

(2) Bypass Function. When the Venus product is abnormal or damaged, the "Bypass" function can be manually activated to allow the grid to carry the load via bypass, which will not affect the use of the user's load. When Venus returns to normal operation, reconnect it to the Smartbox distribution box to resume the whole-house backup power function.

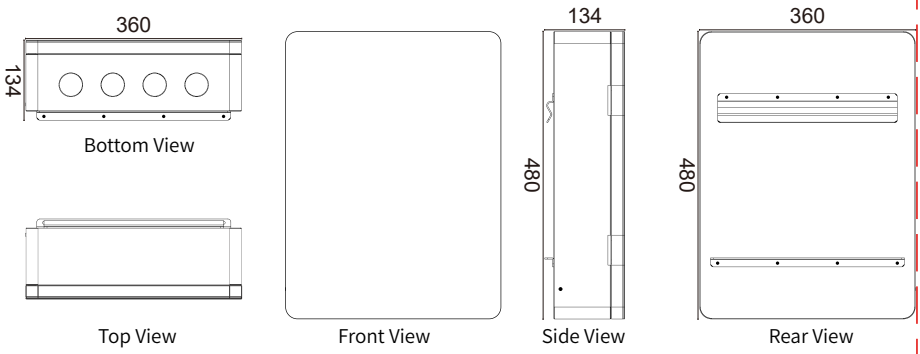
2. Product Features

Uninterrupted Load Power Supply, Compact & Lightweight for Plug-and-Play, No Need to Modify Home Wiring

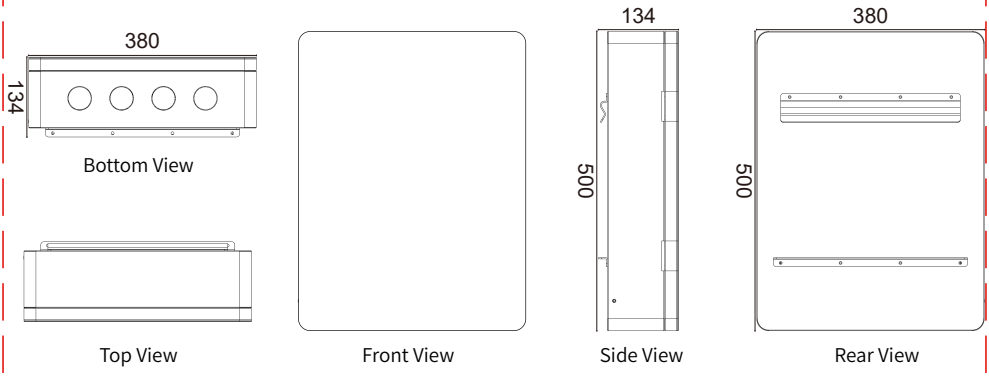
2.3 Appearance Description

(1) Product Appearance Dimension Drawing and Interfaces

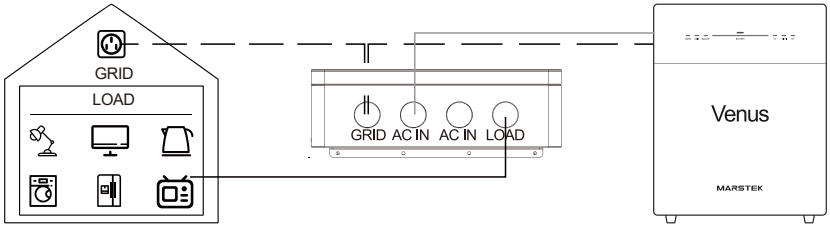
Single-phase DB63S 360x134x480mm



Three-phase DB63T 380x134x500mm



2.4 Grid - connected Applications



Dashed line, connect to GRlD
Black line, connect to Load
Gray line, connect to Venus

2.5 Working Modes

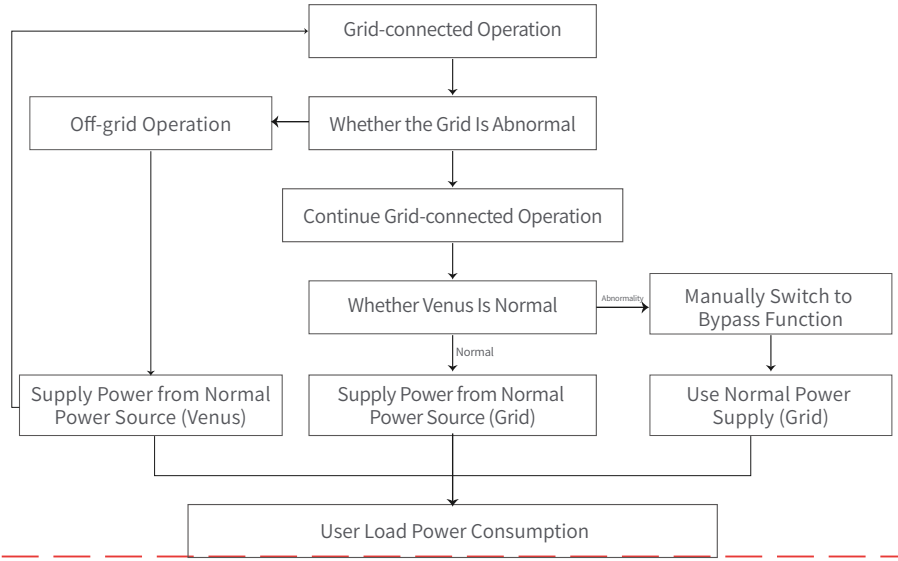
(1) Three working modes: grid-connected operation, off-grid operation, and bypass operation.

(2) Power supply priority: grid-connected operation = bypass operation > off-grid operation.

(3) Grid-connected operation: When grid power is available, the grid is prioritized for power supply; if the grid is disconnected, it automatically switches to off-grid operation.

(4) Off-grid operation: When there is no grid power, it automatically switches to backup power supply; when the grid is restored, it automatically switches to grid-connected operation with grid power supply.

(5) Bypass operation: When grid power is available and the backup power supply is abnormal or damaged, manually switch to bypass grid power supply, with the grid supplying power, cut off the backup power supply circuit for maintenance or replacement.



(6) Working Mode Switching

Switching Methods	Instructions
Automatic Switching	The distribution box will automatically switch between the normal power supply and backup power supply to supply power to the user's load according to conditions and circumstances.
Manual Switching	When the backup power supply (Venus) is abnormal or damaged, manually close the "Bypass" air switch to switch to the grid bypass for power supply to the user's load without affecting the user's daily use. At this time, the Venus wiring can be disconnected for maintenance or replacement. After connecting a normally operating Venus, manually close the "V-GRID" air switch to switch to Venus backup power for use.

2.6 Enclosure Representation

	Disposal	In order to comply with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and other electronic equipment scrapping regulations implemented as national laws, electrical equipment that has reached the end of its service life must be collected separately and sent to approved recycling plants. If the Smart Box is in a waste state, please be sure to return it to an authorized dealer or an approved recycling plant.
	Electric shock hazard	When the Smart Box is working, there is high voltage. It is strictly forbidden to touch it to prevent electric shock.
	Anti-scalding warning	The outer shell temperature of the Smart Box is very high when it is working, there is a risk of burns, so it is strictly forbidden to touch it.
	Operation Alert	There are potential dangers when the Smart Box is powered on. Please take corresponding protection when operating theinverter.
	CE Marking	The Smart Box complies with the EU low voltag directive.
	View Instructions	Please read the user manual before installation.

Chapter 3 Installation Guide

3.1 Pre-installation Inspection

(1) Before unpacking the Smartbox, inspect the outer packaging for visible damage such as holes, cracks, or other signs of potential internal damage, and verify the Smartbox model. If there is any packaging abnormality or model mismatch, do not unpack it and contact your dealer immediately.

(2) After unpacking the Smartbox, check whether the delivered items are complete and free from any obvious external damage. If any item is missing or damaged, contact your dealer.

3.2 Selecting the Installation Location

3.2.1 Site Selection Requirements

(1) Floor-mounted installation is supported. Installation angle requirements: The energy storage system must not be installed in a forward-leaning, horizontal, inverted, backward-leaning, or side-leaning position.

(2) Choose solid brick-concrete structure, concrete walls, or floors for installation. If other types of walls or floors are selected, they must be constructed from flame-retardant materials and can meet the equipment's load-bearing requirements.

(3) When installing the Smartbox, ensure there are no other devices (except Venus-related equipment and sunshades) or flammable/explosive items around. Sufficient space must be reserved to meet installation, heat dissipation, and safety isolation requirements.

(4) The distribution box has a protection class of IP20 and is only suitable for indoor installation.

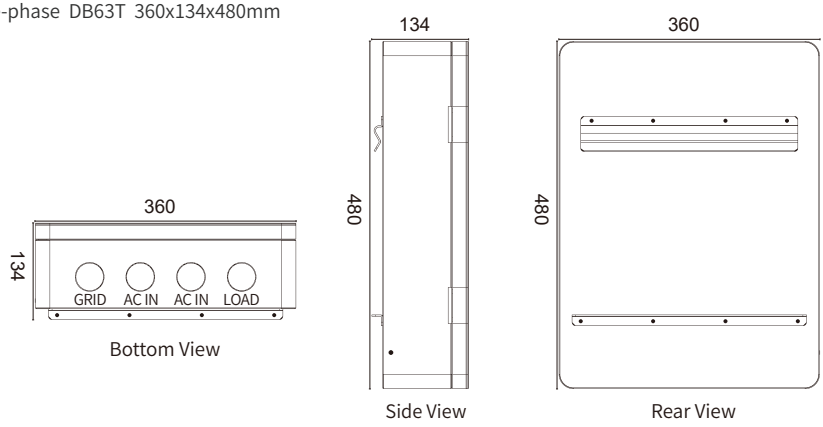
(5) Do not install the distribution box where children can touch it.

(6) The distribution box should be installed in a well-ventilated environment to ensure good heat dissipation.

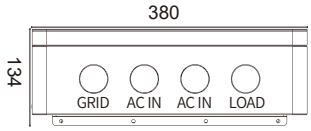
3.2.2 Space Requirements

(1) Mounting hole dimensions of the distribution box.

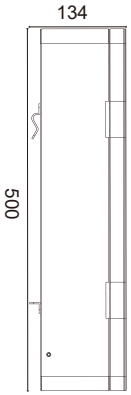
Single-phase DB63T 360x134x480mm



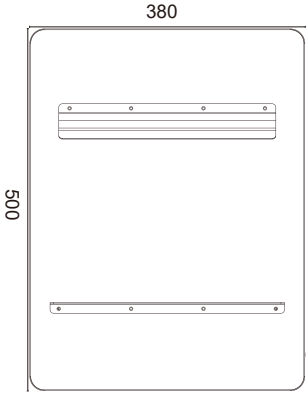
Three-phaseDB63T 380x134x500mm



Bottom View



Side View



Rear View

3.3 Installing Tools

Installation tools include but are not limited to the recommended tools listed in the table below. Other auxiliary tools may be used as appropriate during on-site installation.

Screwdrivers		Multimeter	
Wrench		Measuring tape	
Diagonal pliers		Cable ties	
Insulating gloves		Insulated shoes	
Tool knife		Protective glasses	
Wire strippers		Marker pen	

3.4 Wall-mounted Installation of Distribution Box

(1) Before drilling, ensure to avoid embedded water and electrical lines in the wall to prevent potential hazards.

(2) Use a marking template to determine the drilling positions, level the holes with a spirit level, and mark them with a marker pen.

(3) Drill holes for expansion bolts and install the fixing parts.

(4) Mount the distribution box onto the fixing parts and tighten the nuts.

Chapter 4 Electrical Connections

4.1 Prepare Cables

According to the instructions in the figure, carry out cable connection. Connect the grid GRID to the terminal block of "GRID", connect the "BACKUP" of Venus to the terminal block of "AC IN", and connect the user's main distribution box to the terminal block of "LOAD". The recommended cable diameter is: LOAD is above 10awg (⩾6mm²), and other cables are 12awg~10awg (4mm²~6mm²).

(1) Single-phase model. The schematic diagram is shown in Figure 4-1, and the wiring diagram is shown in Figure 4-2.

Figure 4-1 Single-phase schematic diagram

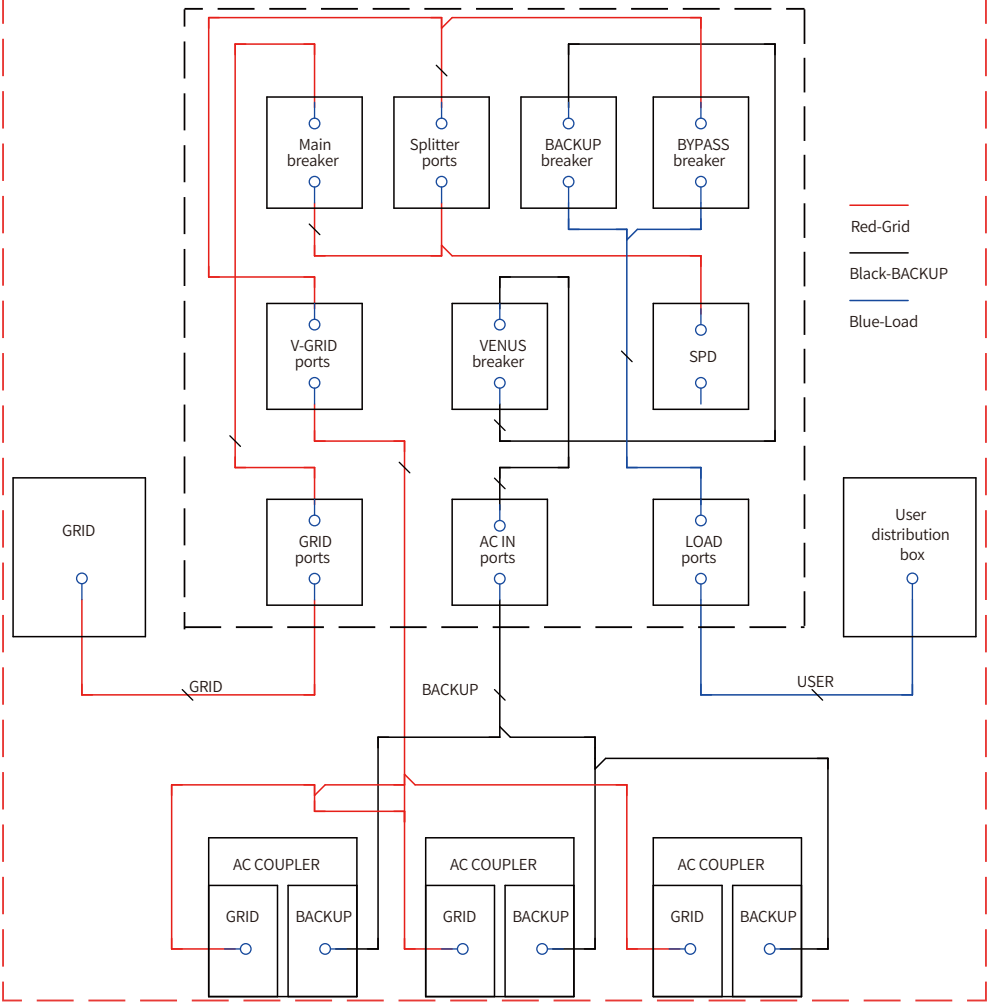
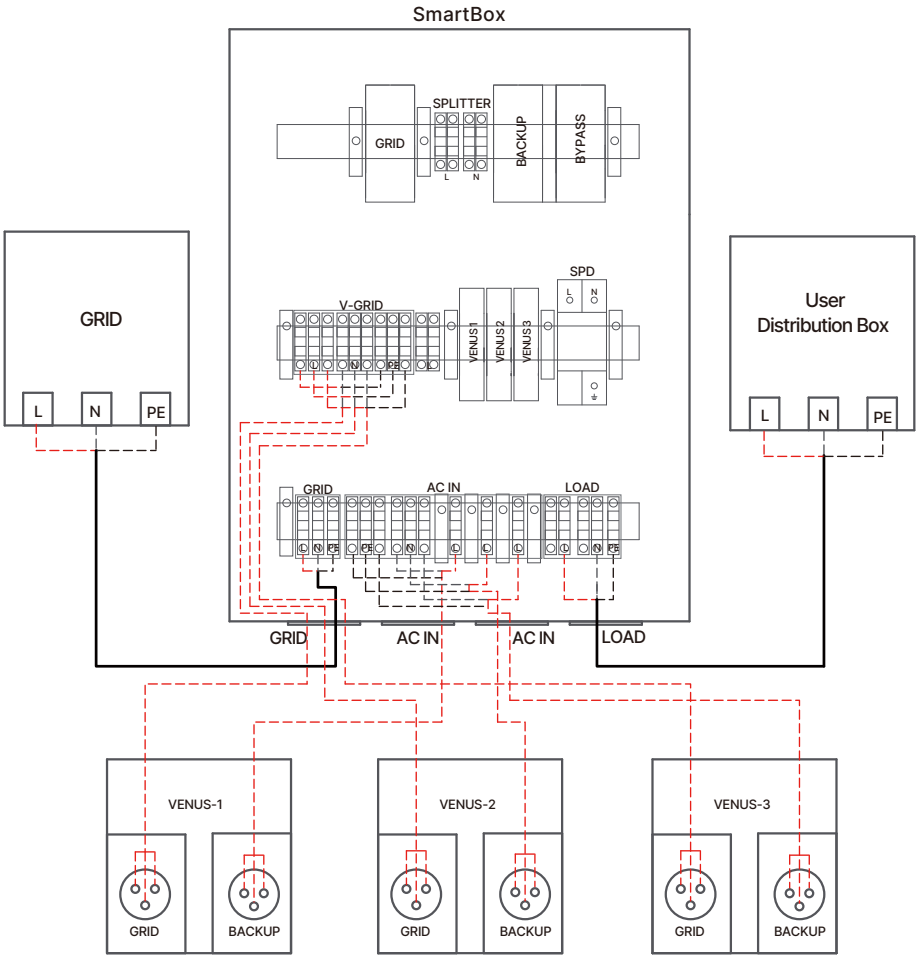


Figure 4-2 Smartbox Single phase



(2) Three-phase model. The schematic diagram is shown in Figure 4-3, and the wiring diagram is shown in Figure 4-4.

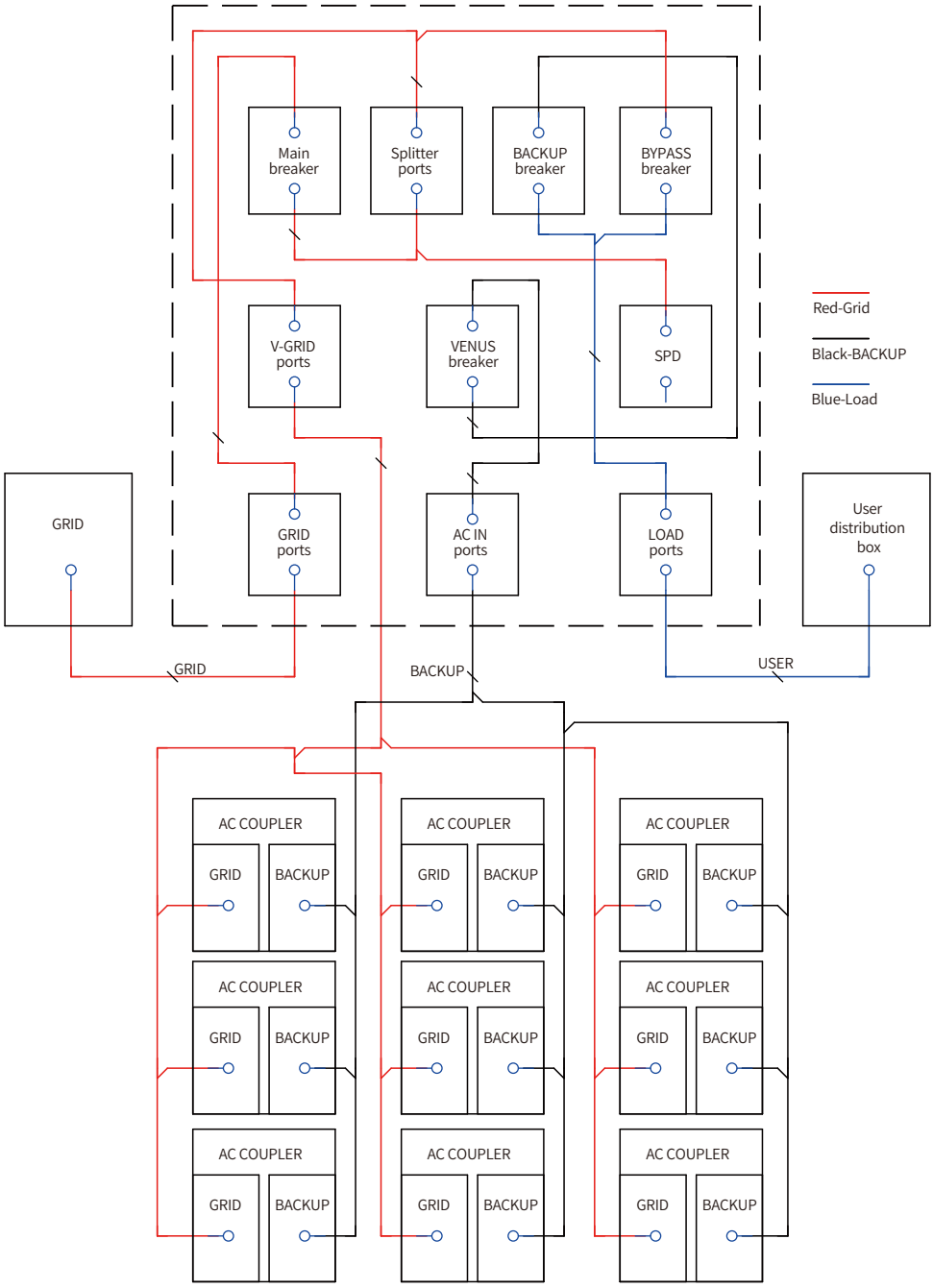
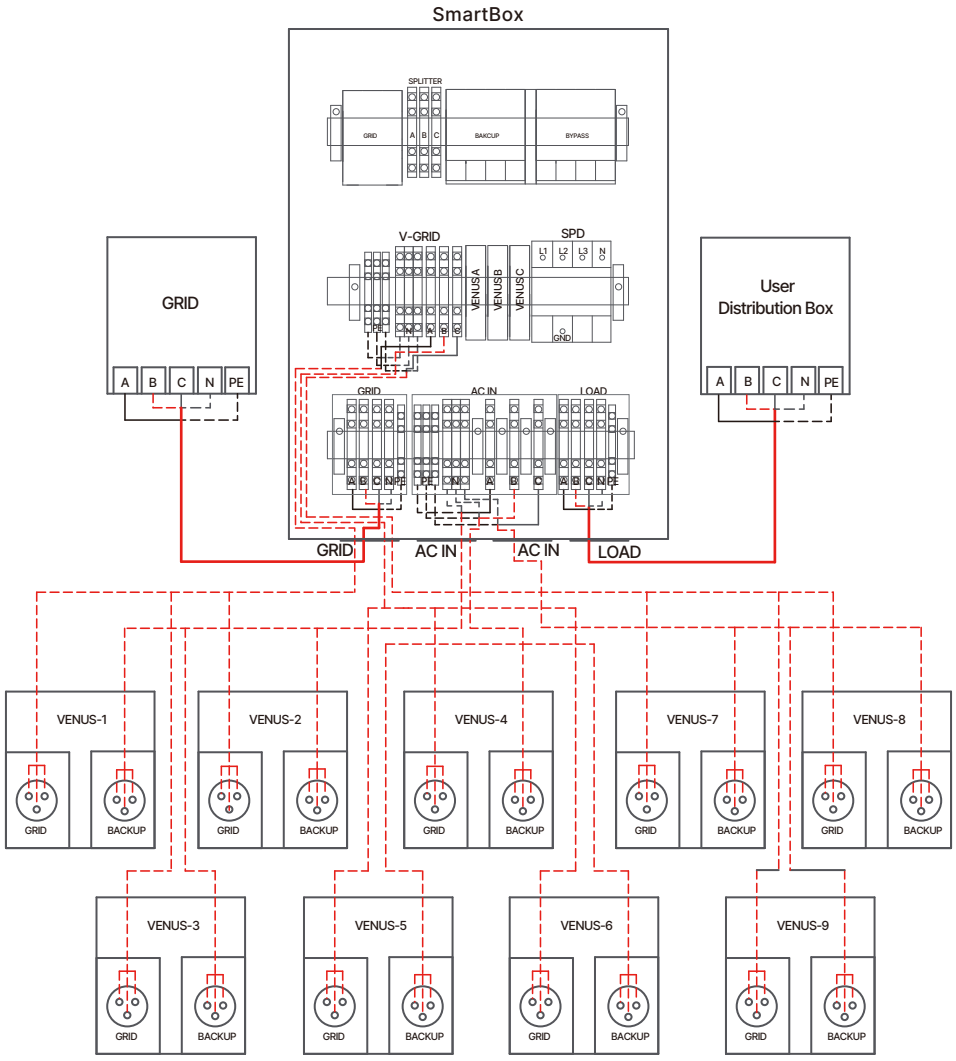


Figure 4-4 - Three-Phase Schematic Diagram Smartbox Three phase



4.2 Open the protection chamber.

(1) Disconnect the main household switch, the power supply of the backup power source, the load air switch, and the power supply to the household loads.

(2) Use a screwdriver or other tools to unscrew the screws fixing the protection chamber, and carefully put away the screws to prevent them from being left inside the distribution box.

4.3 Connect the protective ground wire.

(1) Use a crimping tool to crimp the pin-type cold-pressed terminals.

(2) Connect the cable with the crimped terminal to the yellow-green terminal block PE, and tighten the crimping screws on the terminal block.

(3) Gently pull the cable to ensure it does not loosen or detach, confirming the connection is secure.

4.4 Install the GRID input cable.

(1) Use a crimping tool to crimp the pin-type cold-pressed terminals.

(2) Connect the cable with the crimped terminal to the gray terminal block GRID, and tighten the crimping screws on the terminal block.

(3) Gently pull the cable to ensure it does not loosen or detach, confirming the connection is secure.

4.5 Install the AC IN input cable.

(1) Use a crimping tool to crimp the pin-type cold-pressed terminals.

(2) Connect the cable with the crimped terminal to the gray terminal block AC IN, and tighten the crimping screws on the terminal block.

(3) Gently pull the cable to ensure it does not loosen or detach, confirming the connection is secure.

4.6 Install the load output cable.

(1) Use a crimping tool to crimp the pin-type cold-pressed terminals.

(2) Connect the cable with the crimped terminal to the gray terminal block LOAD, and tighten the crimping screws on the terminal block.

(3) Gently pull the cable to ensure it does not loosen or detach, confirming the connection is secure.

Notes:

(1) The wiring method for two-core and three-core cables is the same; PE is not connected for two-core cables.

(2) The cable protective layer should be located inside the connector.

(3) The wire core must fully enter the wiring hole without any exposure.

(4) The AC output cable must be firmly connected; otherwise, it may cause the equipment to fail to operate normally or damage the AC connector after operation.

(5) Pay attention to the cable direction to ensure no twisting.

Chapter 5 Technical Parameters

Product Name	MARSTEK Single-phase SmartBox	MARSTEK Three-phase SmartBox
Product Model	DB63S	DB63T
	Grid Connetion	
Grid Type	Single-phase	Three-phase
Rated Voltage	220 V / 230 V	380 V / 400 V
AC Frequency	50Hz/ 60Hz	
Max. Pass Through Current	40A	
	Inverter Connetion	
Rated Voltage	220 V / 230 V	
AC Frequency	50Hz / 60Hz	
Compatible Inverter	MARSTEK Venus Series	
Max. Connected Inverters	3 Units	9 Units
	Backup	
Load Type	Single-phase Load	
Rated Voltage	220 V / 230 V	
AC Frequency	50Hz/ 60Hz	
Max. Output Current	40A	
Switchover Time	<1s	
	Bypass	
Bypass Type	Single-phase	Three-phase
Rated Voltage	220 V / 230 V	380 V / 400 V
AC Frequency	50Hz/ 60Hz	
Max. Output Current	40A	
	Basic Parameters	
Operating Temperature Range	-5°C~ +70°C	
Relative Humidity Range	<95%RH	
Dimensions	480*360*118.4mm	500*380*118.4mm
Weight	8KG	9KG
Degree of protection	IP20	
Cooling Method	Natural Cooling	
Working Mode	Off-Grid&On-Grid	

Chapter 6 System Debugging

6.1 Pre-power-on Inspection

(1) The backup power box is installed in place, correctly and firmly.

(2) It is reliably grounded, with the ground wire connected correctly and firmly.

(3) The switches are turned off, and the equipment switch as well as all switches connected to it are in the "OFF" state.

(4) The cables are connected in place, correctly and firmly.

(5) The installation environment meets the requirements, with reasonable installation space, a clean and tidy environment, and no construction leftovers.

6.2 Close the Protection Chamber

(1) Install the maintenance chamber cover and tighten the fixing screws of the maintenance chamber cover.

(2) Before closing the protection chamber door, close the air switch of the household load LOAD. Do not operate the switch during initial deployment and normal use.

(3) Close the protection chamber door.

6.3 System Power-on

6.3.1 Power-on of Backup Power System

(1) Start the backup power supply (e.g., Venus) system and activate its load output mode.

(2) Use a multimeter on the AC voltage range to measure whether the AC voltages of "GRID", "AC IN", and "LOAD" in the Smartbox distribution box fall within the allowable range, and check if the wiring is correct.

(3) When the Smartbox distribution box is operating in grid-connected mode, observe the indicator lights on Venus to check its operating status.

6.3.2 Load Power-on

1. Grid-connected Operation Power-on
(1) Confirm that the Smartbox distribution box is operating normally in grid-connected mode.
(2) Close the main GRID air switch.
(3) After checking that the user load circuit has no short circuit, close the main switch of the household load.

2. Off-grid Operation Power-on
(1) Confirm that the Smartbox distribution box is operating normally in grid-connected mode.
(2) Close the V-GRID air switch.
(3) After checking that the user load circuit has no short circuit, close the main switch of the household load.

3. Pypass Operation Power-on
(1) Confirm that the Smartbox distribution box is operating normally in grid-connected mode.
(2) Close the Bypass air switch.
(3) After checking that the user load circuit has no short circuit, close the main switch of the household load.

Chapter 7 System Maintenance

7.1 System Power-off

(1) Disconnect the main switch of the incoming power grid.

(2) Disconnect the main GRID air switch, power off Venus in shutdown mode, turn off the load output mode, and disconnect the cables.

(3) Disconnect the main switch of the household load.

7.2 On-site Inspection

In case of failure, please troubleshoot according to the following steps (for professional technicians only):

1	In case of failure, please troubleshoot according to the following steps (exclusive to professional technicians)
2	Check whether the grid connection and Venus input line connection are normal, confirm that the Venus voltage is within the range specified in the "Technical Specifications" of this manual, and verify whether the equipment is properly connected to the grid.
3	If the problem persists, please call technical support.
4	Do not repair the Smartbox without authorization. If the fault cannot be eliminated, please contact the local distributor.

7.3例行维护

(1) Maintenance work must be carried out by authorized personnel, who are also responsible for reporting abnormalities.

(2) When performing maintenance, always wear personal protective equipment.

(3) During the normal operation of the Smartbox, regularly inspect the environmental conditions to ensure they comply with all requirements specified in "Technical Specifications," and ensure the equipment is not exposed to severe weather.

(4) If any issues are found, do not use the equipment. Resume normal use only after the fault is resolved.

(5) Regularly inspect all components of the Smartbox annually to ensure they are in good condition and that the cooling components are not blocked. For equipment cleaning, use a vacuum cleaner or a dedicated brush.

Danger	Do not disassemble or repair the Smartbox without authorization! To ensure safety and insulation performance, users are prohibited from repairing internal components.
Warning	Do not replace the AC output wiring harness (the AC tap cable on the Smartbox). If the wire is damaged, the equipment should be scrapped.device is not required.

Warning	Unless otherwise specified, when performing maintenance, the equipment must be disconnected from the power grid (disconnect the socket) and the backup power input.
Warning	Do not clean the equipment with rags made of filamentous materials or corrosive materials, as this may generate static electricity or cause corrosion.
Warning	Do not repair the product without authorization. Qualified parts must be used during maintenance.
Tip	Each branch circuit should be equipped with a circuit breaker, but a central protection device is not required.

7.4 Equipment Replacement

1. Replacement of internal parts of Smartbox products.

(1) Disconnect the "LOAD" household load air switch and remove the corresponding cables.

(2) Turn off the main incoming power switch, turn off the main GRID switch, disconnect the normal power supply of "GRID", and remove the corresponding cables.

(3) Shut down the backup system (e.g., Venus), disconnect the backup power supply of "AC IN", and remove the corresponding cables.

(4) Unscrew the wiring screws and remove the grounding cable, then the automatic transfer switch, surge protector, and household load air switch can be replaced.

2. Replacement of Venus equipment.

(1) Manually close the "Bypass" air switch to switch to grid bypass power supply, ensuring normal power supply to user loads.

(2) Turn off the power of Venus to shut it down, unplug the GRID connector and Backup plug on Venus, and remove the cables connecting Venus to the Smartbox.

(3) Replace with another Venus device.

Chapter 8 Storage Requirements

8.1 Decommissioning

Disconnect the Smartbox from all AC grid connections, AC IN connections, and load connections. Remove all cables from the Smartbox and place the unit back into its original packaging.

8.2 Storage and Transportation

(1) The storage temperature range for Smartbox is -20°C to 70°C.

(2) To facilitate transportation and subsequent handling, MARSTEK packaging features a special design to protect all components. When transporting the equipment, especially via road transport, proper methods must be employed to safeguard the parts (particularly electronic components) from severe impacts, moisture, vibration, and other potential hazards.

(3) Inspect the condition of the components before shipping. Upon receiving the Smartbox, check the packaging for any external damage and verify that all items have been received. If there is visible damage or missing parts, contact the carrier immediately. If any Smartbox components are damaged, reach out to the supplier or an authorized dealer to request repair/replacement and inquire about the necessary procedures.

(4) Dispose of packaging materials properly to avoid accidental personal injury. Let me know if you'd like any refinements to match a specific technical documentation style.

8.3 Decommissioning and Disposal

(1) If the equipment will not be put into use immediately or requires long-term storage, ensure the packaging remains intact.

(2) When storing Smartbox for an extended period, it must be kept in a well-ventilated indoor area where its components will not be damaged. Before restarting a long-dormant device, a comprehensive inspection must be performed.

(3) Discarding scrapped Smartbox units indiscriminately may harm the environment. Dispose of decommissioned Smartbox products in accordance with local regulations.