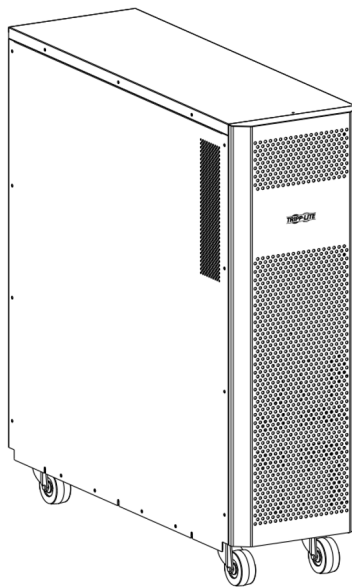


# Owner's Manual

## External Battery Pack for Use with 3-Phase Online S3MX Series (S3M30KX/40KX)

Models: BP480V09, BP480V10, BP480V10-NIB



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Este manual esta disponible en español en la página de Tripp Lite: [www.tripplite.com](http://www.tripplite.com)

Ce manuel est disponible en français sur le site Web de Tripp Lite : [www.tripplite.com](http://www.tripplite.com)

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# 1. Important Safety Warnings



## SAVE THESE INSTRUCTIONS

All sections of this manual contain instructions and warnings that must be followed during the installation and operation of the battery cabinet described in this manual. Read ALL instructions thoroughly before attempting to move, install or connect your battery cabinet. Failure to heed these warnings may affect your warranty and cause serious property damage and/or personal injury.



## DANGER! LETHAL HIGH VOLTAGE HAZARD!

All wiring should be performed by a qualified electrician, in accordance with the warnings in this manual and all applicable electrical and safety codes. Incorrect wiring may cause serious personal injury and property damage.

## Installation and Location Warnings

- Install the battery cabinet in a controlled indoor environment, away from moisture, temperature extremes, flammable liquids and gasses, conductive contaminants, dust and direct sunlight.
- Install the battery cabinet in a level, structurally sound location.
- The battery cabinet is very heavy; use extreme caution when moving or lifting the unit.
- Operate the battery cabinet at indoor temperatures between 0° C and 40° C (32° F and 104° F) and 30-90% non-condensing humidity only. For optimum battery performance, maintain an ambient indoor temperature of 25° C (77° F).
- Leave adequate space around the front and rear of the battery cabinet for proper ventilation. Do not block, cover or insert objects into the external ventilation openings of the battery cabinet.
- Do not place any object on the battery cabinet, especially containers of liquid.
- Do not attempt to stack the battery cabinet. Attempting to stack the battery cabinet may cause permanent damage and create a potential for serious personal injury.
- Do not attempt to unpack or move the battery cabinet without assistance. Use appropriate handling equipment rated to bear the weight and bulk of the battery cabinet, such as freight elevators, pallet jacks and forklifts. (Fully extend forks under load. Spread forks to maximum possible width under load. Lift cabinet from bottom only. Wear safety shoes.)
- For emergency use, install a fire extinguisher rated for energized electrical equipment fires (Class C rating or exact equivalent, with a non-conductive extinguishing agent) near the battery cabinet.

## Connection Warnings

- The battery cabinet contains hazardous high voltages that have the potential to cause personal injury or death from electric shock.
- The battery cabinet has its own energy source. The output terminals may be live even when the battery cabinet is not connected to a UPS system.
- The battery cabinet must be suitably grounded according to all applicable electrical wiring regulations.
- Use of this equipment in life support applications where failure of this equipment can reasonably be expected to cause the failure of the life support equipment or to significantly affect its safety or effectiveness is not recommended.
- De-energize all input and output power sources before installing cables or making electrical connections.
- Use flexible cable of sufficient length to permit battery cabinet servicing.
- Use ferrule caps to cover termination cables and prevent frayed ends from shorting on terminal blocks. Use cabling rated VW-1, FT-1 or better. Use cable sleeves and connector clamps.
- Confirm that all cables are marked correctly according to their purpose, polarity and diameter.
- Observe proper polarity by connecting negative to negative and positive to positive (and center string to center string, where applicable). Failure to observe proper polarity may damage the batteries and create a serious risk of personal injury and property damage.
- Wiring should be performed by trained, qualified electricians only. Refer to the UPS unit's Owner's Manual for wire sizing.

## Battery Warnings

- The battery cabinet does not require routine maintenance by the user. There are no user-serviceable parts inside. Only qualified, knowledgeable service personnel familiar with all required precautions should open the access panels for any reason. Keep unauthorized personnel away from batteries.
- The battery cabinet contains valve-regulated recombinant lead-acid (VRLA) batteries. Do not attempt to add water to these batteries or sample the electrolyte specific gravity.
- Valve-regulated recombinant lead-acid (VRLA) batteries can contain an explosive mixture of hydrogen gas. DO NOT SMOKE when near batteries. DO NOT cause flames or sparks near batteries. Discharge static electricity from body before touching batteries. DO NOT open or mutilate batteries—released electrolyte is harmful to the skin and eyes and may be toxic. DO NOT dispose of batteries in a fire—they may explode.

# 1. Important Safety Warnings



- Batteries present a risk of electrical shock and burns from high short-circuit current. Battery connection or replacement should be performed only by qualified service personnel, observing proper precautions. Use tools with insulated handles. Remove watches, rings or other metal objects. Wear rubber gloves and boots. Do not short or bridge the battery terminals with any object. Do not lay tools or metal parts on top of batteries. Use tools with insulated handles. There are no user-serviceable parts inside the battery cabinet. Battery replacement should be performed only by authorized service personnel using the same number and type of batteries (Sealed Lead-Acid). The batteries are recyclable. Refer to your local codes for disposal requirements or visit <http://www.tripplite.com/support/recycling-program> for recycling information. Tripp Lite offers a complete line of UPS System Replacement Battery Cartridges (R.B.C.). Visit Tripp Lite on the Web at <http://www.tripplite.com/products/battery-finder/> to locate the specific replacement battery for your UPS.
- Replace batteries with equivalent batteries (same number and type) available from Tripp Lite.
- Fuse replacement should only be performed by qualified service personnel. Replace with only the same type and rating: 30A, 600V.
- The batteries are recyclable. Refer to local codes for disposal requirements. Do not dispose of batteries except through approved channels in accordance with all applicable local, state and national regulations.
- Do not connect or disconnect batteries when the UPS system is operating from the battery supply or when the unit is not in bypass mode. Disconnect the charging source prior to connection or disconnecting battery terminals.
- If the charging source remains off for an extended period of time, it should be turned on periodically to allow the batteries to recharge. The charging source should be turned on and the batteries should be recharged at least one uninterrupted 24-hour period every 3 months. Failure to recharge the batteries periodically may cause permanent battery damage.
- Allow batteries to charge uninterrupted for 24 hours after installation.

## 2. Installation and Setup

### 2.1 Rear Panel View

**Note:** Inspect the unit before performing installation. Make sure nothing inside the package is damaged. Keep the original packaging for future use.

- ❶ **DC Connector:** Connects to UPS or a second battery pack.
- ❷ **Fuse Holder:** Battery over-current protection fuse holder.

### 2.2 Battery Pack Installation and Setup

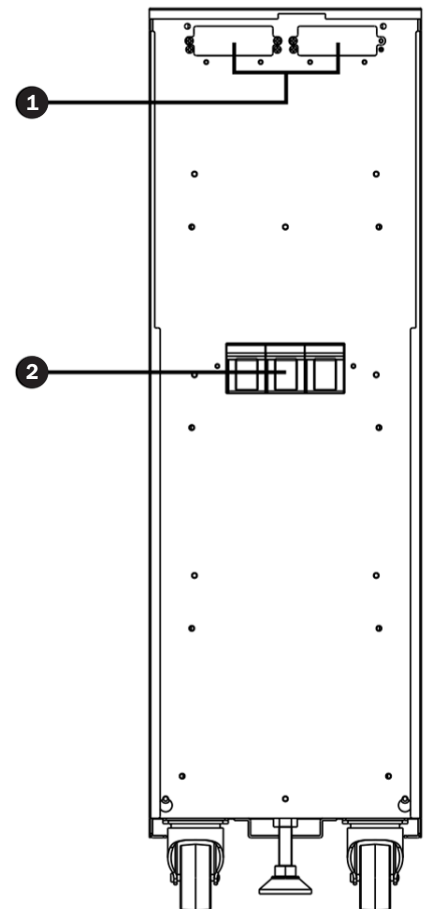
#### Unpacking and Inspection

1. Remove the battery pack from the packaging.

**Note:** The battery pack is very heavy. Be cautious when unpacking and lifting the unit to avoid injury.

2. Inspect the package contents for impact or other damage:

- Battery Pack Unit
- Owner's Manual
- Battery Connection Cable



80-pc. Battery Pack

## 2. Installation and Setup

### Selecting Installation Site

To minimize the possibility of damage to the battery bank and extend the life of the batteries, follow the instructions below:

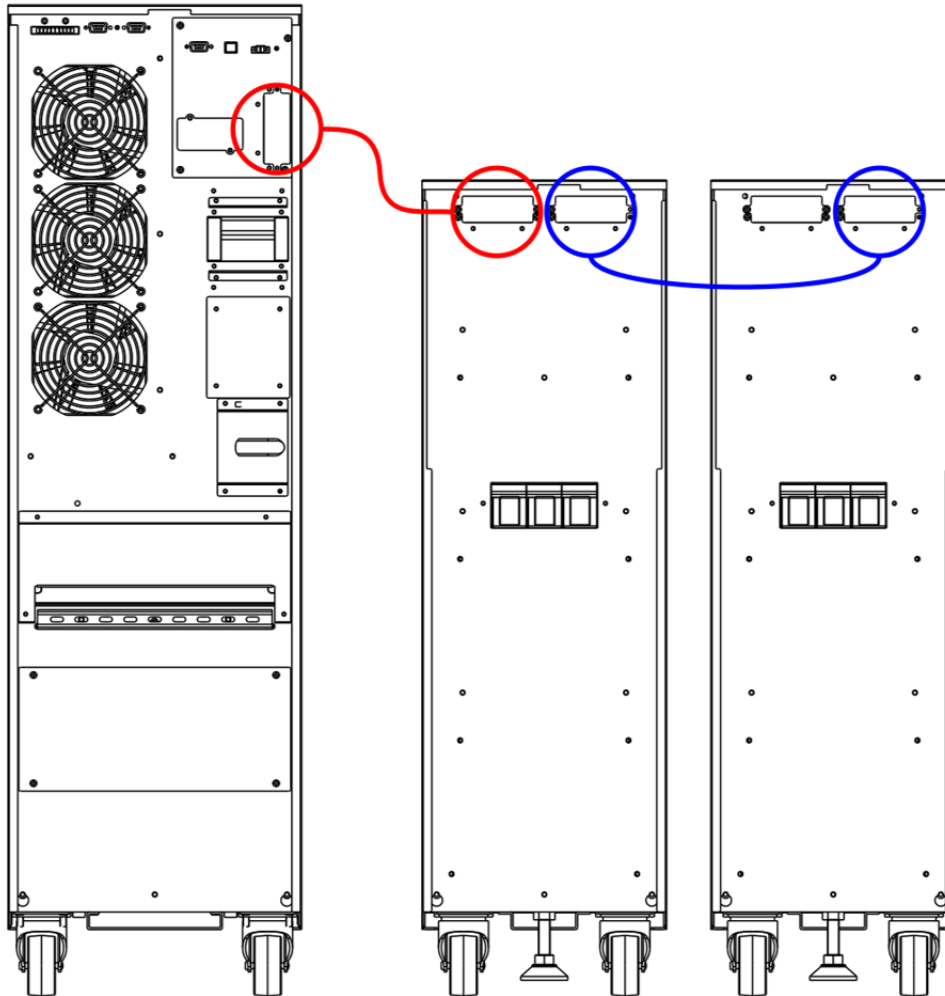
1. Maintain at least 20 cm (8 inches) clearance between the unit's rear panel and a wall (or other obstructions).
2. Do not block airflow to the unit's ventilation openings.
3. Ensure the installation site environmental conditions are in accordance with the unit's working specifications to avoid overheating and/or excessive moisture.
4. Do not place the unit in a dusty or corrosive environment or near any flammable objects.
5. This unit is not designed for outdoor use.

### Connecting a UPS to the Battery Pack

The external battery pack will increase the battery runtime. As a result, recharge time will also increase. Follow the installation diagram below to connect a UPS to a battery pack using the included cable. Make sure that cables are fully inserted into their connectors. Small sparks may result during battery connection; this is normal. Be sure to connect the protective earth wire ring terminals to the earth bonding screw on each cabinet.

Do not connect or disconnect battery packs when the UPS is running on battery power.

**Note:** The battery pack's DC connectors are connected together. Connecting cables may be plugged into either connector.



## 2. Installation and Setup

### 2.3 Installing Batteries in an External Battery Pack Cabinet



If your external battery pack cabinet does not include batteries installed, follow the proper procedures to install batteries inside the unit.

**MAKE SURE THE BATTERY PACK CABINET IS DISCONNECTED FROM THE UPS BEFORE PERFORMING THE FOLLOWING SEQUENCE OF OPERATIONS.**

#### WARNING:

- Equipment should be installed by service personnel.
- When installing the batteries, use the same battery number and type as shown on the battery label.
- Do not open or mutilate the battery or batteries. The released electrolyte is harmful to the skin and eyes.
- A battery can present a risk of electric shock and high short-circuit current. Observe the following precautions when working on batteries:
  - o Remove watches, rings or other metal objects.
  - o Use tools with insulated handles.

#### Install Batteries in an External Battery Pack Cabinet:

**Note:** Refer to the *External Battery Pack Wiring Diagram* and *External Battery Pack Cabinet Battery Wiring Table* for more information.

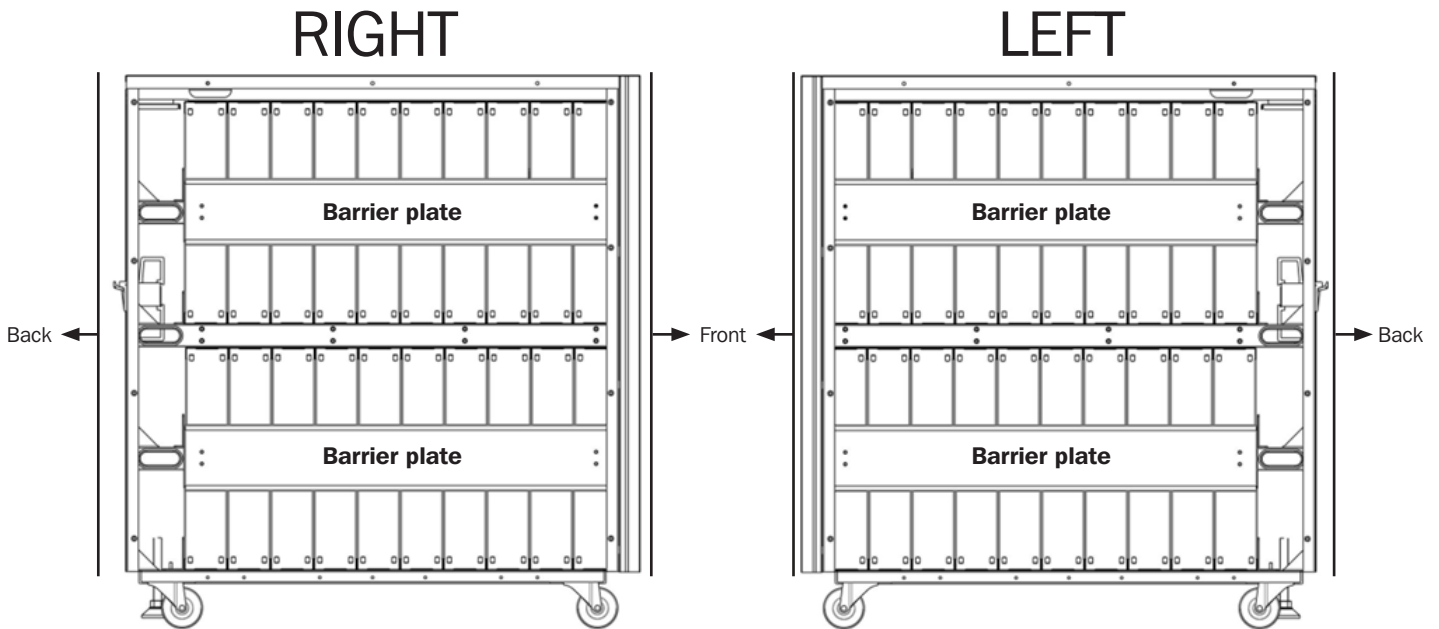
1. Remove the two side plates and four barrier plates.
2. Install 80 batteries into the battery pack.
3. Reinstall the four barrier plates to secure all batteries.



**When installing the barrier plates, do not short circuit the battery terminals. Injury or fire may result.**

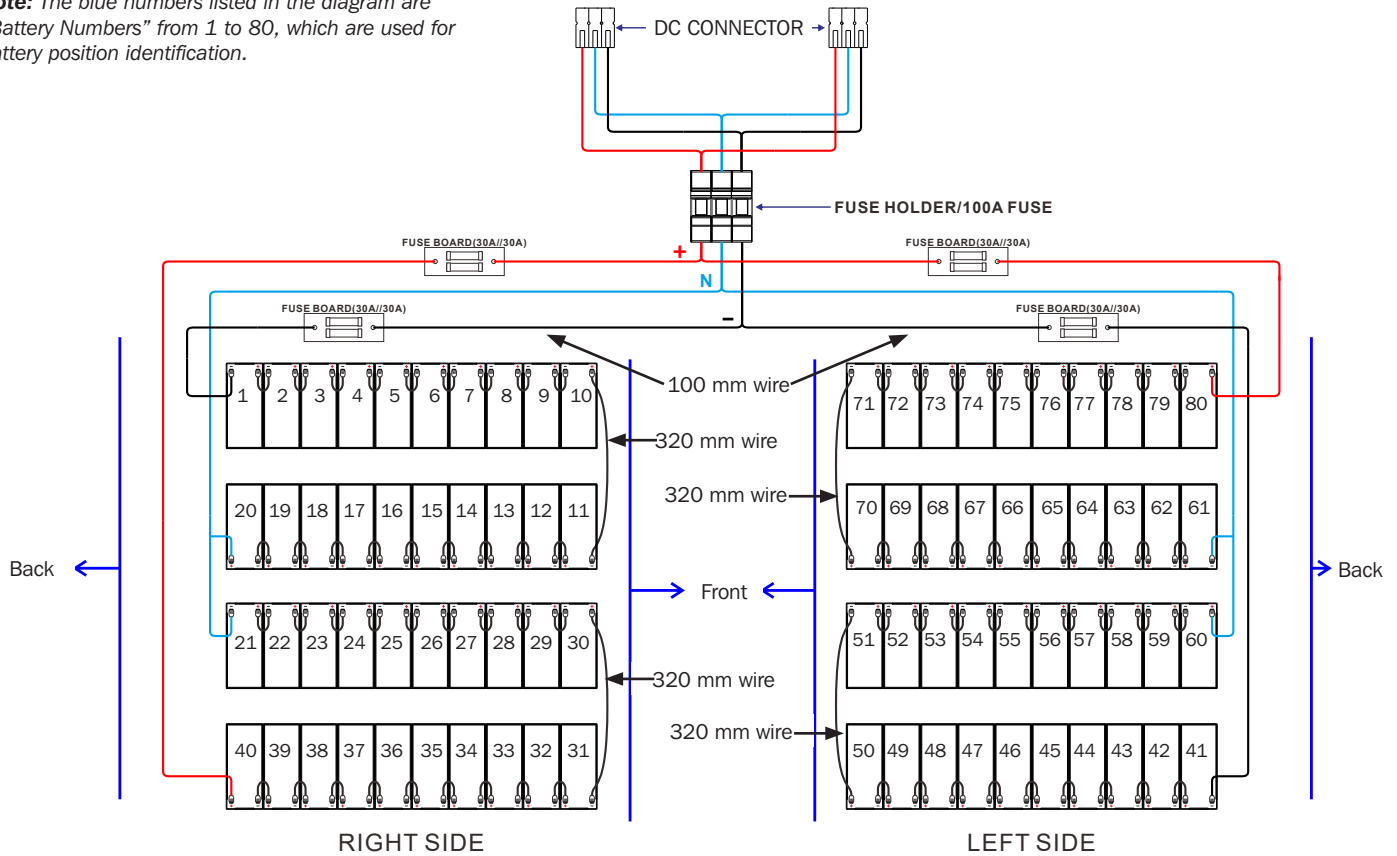
4. Connect the two red wires, two black wires and four blue wires from the fuse holder to the batteries.
5. Connect four 320 mm wires.
6. Connect 72 100 mm wires.

#### External Battery Pack Wiring Diagram



## 2. Installation and Setup

**Note:** The blue numbers listed in the diagram are “Battery Numbers” from 1 to 80, which are used for battery position identification.



**External Battery Pack Wiring Table**

BAT Number	1		2		3		4		5		6		7		8		9		10	
Terminal	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
Connection Wire	<b>Black wire from Fuse Holder</b>		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		See Below	

BAT Number	10		11		12		13		14		15		16		17		18		19	
Terminal	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
Connection Wire	320 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		See Below	

BAT Number	19		20		21		22		23		24		25		26		27		28	
Terminal	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
Connection Wire	100 mm Wire		<b>Blue wire from Fuse Holder</b>		<b>Blue wire from Fuse Holder</b>		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		See Below	

BAT Number	28		29		30		31		32		33		34		35		36		37	
Terminal	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
Connection Wire	100 mm Wire		100 mm Wire		320 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		See Below	

BAT Number	37		38		39		40	
Terminal	-	+	-	+	-	+	-	+
Connection Wire	100 mm Wire		100 mm Wire		100 mm Wire		<b>Red wire from Fuse Holder</b>	

## 2. Installation and Setup

BAT Number	41		42		43		44		45		46		47		48		49		50	
Terminal	–	+	–	+	–	+	–	+	–	+	–	+	–	+	–	+	–	+	–	+
Connection Wire	<b>Black wire from Fuse Holder</b>	100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		See Below

BAT Number	50		51		52		53		54		55		56		57		58		59	
Terminal	–	+	–	+	–	+	–	+	–	+	–	+	–	+	–	+	–	+	–	+
Connection Wire	320 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		See Below	

BAT Number	59		60		61		62		63		64		65		66		67		68	
Terminal	–	+	–	+	–	+	–	+	–	+	–	+	–	+	–	+	–	+	–	+
Connection Wire	100 mm Wire		Blue wire from Fuse Holder		Blue wire from Fuse Holder		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		See Below	

BAT Number	68		69		70		71		72		73		74		75		76		77	
Terminal	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
Connection Wire	100 mm Wire		100 mm Wire		320 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		100 mm Wire		See Below	

BAT Number	77		78		79		80	
Terminal	-	+	-	+	-	+	-	+
Connection Wire	100 mm Wire		100 mm Wire		100 mm Wire		<b>Red wire from Fuse Holder</b>	

## 3. Specifications

Battery Cabinet Model	Included Breakers	Unit Dimensions (H x W x D)	Shipping Dimensions (H x W x D)	Unit Weight	Shipping Weight	Description
BP480V09	100A Fuses	836 x 250 x 779 mm	1018.5 x 380 x 919.5 mm	246.5 kg	273.5 kg	Battery cabinet with 80 x 9Ah batteries pre-installed.
BP480V10				273 kg	290 kg	Battery cabinet with 80 x 10Ah batteries pre-installed.
BP480V10-NIB				55 kg	82 kg	Battery cabinet without batteries installed, but designed for 80 x 10Ah/9Ah batteries. Battery links and fuses included.

## 4. Storage and Service

### Storage

If the charging source remains off for an extended period of time, it should be turned on periodically to allow the batteries to recharge. The charging source should be turned on and the batteries should be recharged for at least one uninterrupted 24-hour period every 3 months. Failure to recharge the batteries periodically may cause permanent battery damage.

### Service

Your Tripp Lite product is covered by the warranty described in this manual. A variety of Extended Warranty and On-Site Service Programs are also available from Tripp Lite. For more information on service, visit [www.tripplite.com/support](http://www.tripplite.com/support). Before returning your product for service, follow these steps:

1. Review the installation and operation procedures in this manual to insure that the service problem does not originate from a misreading of the instructions.
2. If the problem continues, do not contact or return the product to the dealer. Instead, visit [www.tripplite.com/support](http://www.tripplite.com/support).
3. If the problem requires service, visit [www.tripplite.com/support](http://www.tripplite.com/support) and click the Product Returns link. From here you can request a Returned Material Authorization (RMA) number, which is required for service. This simple on-line form will ask for your unit's model and serial numbers, along with other general purchaser information. The RMA number, along with shipping instructions will be emailed to you. Any damages (direct, indirect, special or consequential) to the product incurred during shipment to Tripp Lite or an authorized Tripp Lite service center are not covered under warranty. Products shipped to Tripp Lite or an authorized Tripp Lite service center must have transportation charges prepaid. Mark the RMA number on the outside of the package. If the product is within its warranty period, enclose a copy of your sales receipt. Return the product for service using an insured carrier to the address given to you when you request the RMA.

## 5. Warranty

### 1-YEAR LIMITED WARRANTY

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship for a period of one (1) year from the date of initial purchase. If the product should prove defective in material or workmanship within that period, Seller will repair or replace the product, in its sole discretion. Service under this Warranty can only be obtained by your delivering or shipping the product (with all shipping or delivery charges prepaid) to: Tripp Lite, 1111 W. 35th Street, Chicago, IL 60609 USA. Seller will pay return shipping charges. Visit [www.tripplite.com/support](http://www.tripplite.com/support) before sending any equipment back for repair.

THIS WARRANTY DOES NOT APPLY TO NORMAL WEAR OR TO DAMAGE RESULTING FROM ACCIDENT, MISUSE, ABUSE OR NEGLIGENCE. SELLER MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY EXPRESSLY SET FORTH HEREIN. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ALL IMPLIED WARRANTIES, INCLUDING ALL WARRANTIES OF MERCHANTABILITY OR FITNESS, ARE LIMITED IN DURATION TO THE WARRANTY PERIOD SET FORTH ABOVE; AND THIS WARRANTY EXPRESSLY EXCLUDES ALL INCIDENTAL AND CONSEQUENTIAL DAMAGES. (Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may have other rights which vary from jurisdiction to jurisdiction).

WARNING: The individual user should take care to determine prior to use whether this device is suitable, adequate or safe for the use intended. Since individual applications are subject to great variation, the manufacturer makes no representation or warranty as to the suitability or fitness of these devices for any specific application.

### Regulatory Compliance Identification Numbers

For the purpose of regulatory compliance certifications and identification, your Tripp Lite product has been assigned a unique series number. The series number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to the series number. The series number should not be confused with the marketing name or model number of the product.

### WEEE Compliance Information for Tripp Lite Customers and Recyclers (European Union)



Under the Waste Electrical and Electronic Equipment (WEEE) Directive and implementing regulations, when customers buy new electrical and electronic equipment from Tripp Lite they are entitled to:

- Send old equipment for recycling on a one-for-one, like-for-like basis (this varies depending on the country)
- Send the new equipment back for recycling when this ultimately becomes waste

Tripp Lite has a policy of continuous improvement. Specifications are subject to change without notice.



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