



SMART APP ONLINE STEP-DOWN TRANSFORMER

INSTALLATION AND OPERATION MANUAL

OL6KSTF | OL10KSTF

SAVE THESE INSTRUCTIONS

Please read this manual and follow the instructions for installation and operation.

SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

This manual contains important instructions that should be followed during installation and maintenance of the STEP-DOWN TRANSFORMER

The Smart App Online OL6KSTF and OL10KSTF step-down transformer models that are covered in this manual are intended for installation in an environment within 32°F to 104°F (0°C to 40°C), free of conductive contaminants.

SPECIAL SYMBOLS



Warning: High voltage – Risk of Electric Shock



Caution - Important Instructions: must always be followed.



Do Not Discard: the UPS or UPS batteries in trash. The batteries contain lead acid. For more information, contact your local recycling or hazardous waste facility.



Information, advice, help



See applicable user manual

SAFETY INSTRUCTIONS CONT.

PERSONAL SAFETY

CAUTION



The AC electrical service where the step-down transformer is connected should be close to the unit and easily accessible.

Please use only UL-marked mains cable, (e.g. the mains cable of your equipment), to connect the step-down transformer to the AC outlet.

Please use only UL-marked power cables to connect any equipment to the step-down transformer.

Do not unplug the unit from AC power during operation, as this will disconnect the protective ground insulation.

Do not use an improper size power cord as it may cause damage to your equipment and cause fire hazards.

Make sure everything is turned off and disconnected completely before conducting any maintenance, repairs or shipment.

Installation environment should be in a temperature and humidity controlled indoor area free of conductive contaminants. Do not install this step-down transformer where excessive moisture or heat is present (Please see specifications for acceptable temperature and humidity range).

Never install a step-down transformer, or associated wiring or equipment, during a lightning storm.

Do not work alone under hazardous conditions.

Input circuit breaker must be “OFF” during the building installation.

Only qualified maintenance personnel should perform this task.

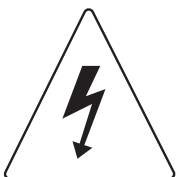
Before connecting to the step-down transformer, check that the input voltage into the step-down transformer is within specifications.

DO NOT INSTALL THE STEP-DOWN TRANSFORMER WHERE IT WOULD BE EXPOSED TO DIRECT SUNLIGHT OR NEAR A STRONG HEAT SOURCE!

DO NOT BLOCK OFF VENTILATION OPENINGS AROUND THE HOUSING!

DO NOT CONNECT DOMESTIC APPLIANCES SUCH AS HAIR DRYERS TO STEP-DOWN TRANSFORMER OUTPUT SOCKETS!

RISK OF ELECTRIC SHOCK



To prevent the risk of fire or electric shock, only use the supplied hardware to attach the mounting brackets.

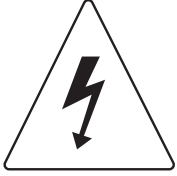
Remove watches, rings or other metal objects. Use tools with insulated handles.

Use tools with insulated handles.

SAFETY INSTRUCTIONS CONT.

PERSONAL SAFETY CONT.

RISK OF ELECTRIC SHOCK CONT.



The step-down transformer must be connected to a grounded AC power source with fuse or circuit breaker protection. DO NOT plug the step-down transformer into an outlet that is not grounded. If you need to power-drain this equipment, turn off and unplug the unit.

(No User Serviceable Parts): Risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

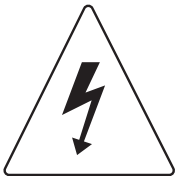
To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area, free of conductive contaminants. (Please see specifications for acceptable temperature and humidity range).

To avoid electric shock, turn off and unplug the unit before installing the input/output power cord with a ground wire. Connect the ground wire prior to connecting the line wires!

Connect the Protection Earth (PE) safety conductor before any other cables are connected.

PRODUCT SAFETY

RISK OF ELECTRIC SHOCK



The step-down transformer should be placed near the connected equipment and easily accessible.

All step-down transformer models covered in this document are permanently-connected equipment and only qualified maintenance personnel may carry out installations.

Wiring must be done by qualified personnel.

DO NOT USE FOR MEDICAL OR LIFE SUPPORT EQUIPMENT! Under no circumstances should this unit be used for medical applications involving life support equipment and/or patient care.

DO NOT USE WITH OR NEAR AQUARIUMS! To reduce the risk of fire, do not use with or near aquariums. Condensation from the aquarium can come in contact with metal electrical contacts and cause equipment to short out.

The unit has a dangerous amount of voltage.

TABLE OF CONTENTS

SAFETY INSTRUCTIONS.....II
Special Symbols.....II
Personal Safety.....III
Product SafetyIV

INTRODUCTION.....1
Unpacking Procedures.....1
Whats In The Box.....2

OVERVIEW.....3
Step-Down Transformer.....3

HARDWARE INSTALLATION4
Rackmount Installation4
Vertical/Tower Installation.....6

ELECTRICAL INSTALLATION.....7
Hardwiring the Input/Output Terminals.....7
Connecting a Step-Down Transformer to a UPS Power Module.....9

TECHNICAL SPECIFICATIONS.....10

PRODUCT REGISTRATION.....10

LIMITED WARRANTY AND CONNECTED EQUIPMENT GUARANTEE.....11

CONFORMANCE APPROVAL.....15

INTRODUCTION

The CyberPower Step-Down and Isolation Transformers support hardwire installations (OL6KSTF/ OL10K-STF) and are designed for a variety of CyberPower UPS systems. When connected to a UPS, the step-down transformer converts voltage from 200-240V down to 100-120V.

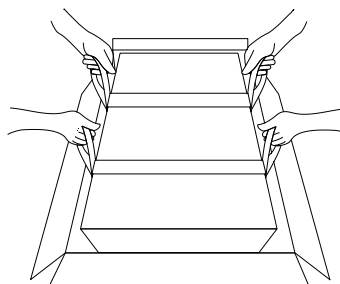
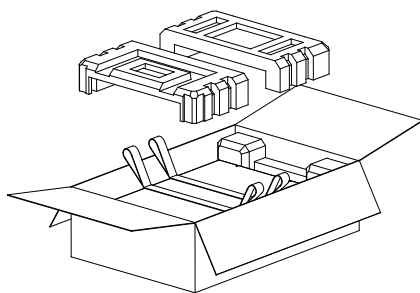
UNPACKING PROCEDURES



Information, advice, help

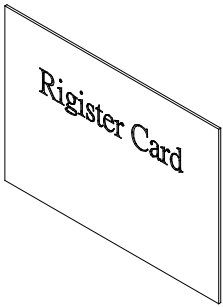
The UPS system is very heavy, please handle with care. Wear safety shoes and use a hydraulic equipment lift if one is available. At least two people are required for all handling operations, including unpacking, lifting, and installation in a rack system. Do not use the lifting straps to carry the unit around; they are provided to manually unpack the unit only.

USE LIFTING STRAPS TO REMOVE UNIT FROM THE BOX.

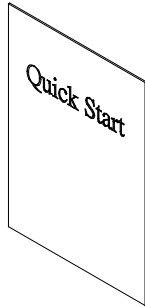


INTRODUCTION CONT.

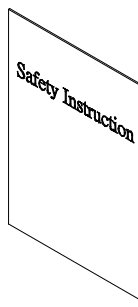
WHATS IN THE BOX



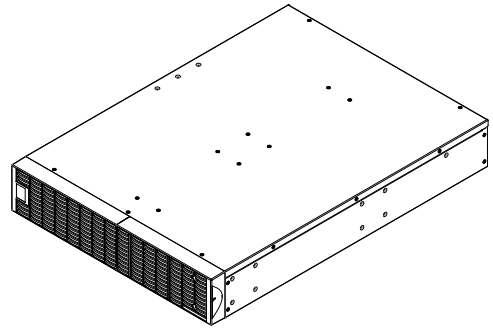
REGISTRATION
CARD **x1**



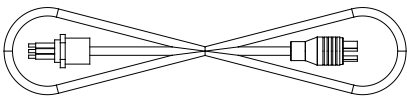
QUICK START
GUIDE **x1**



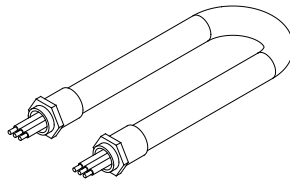
SAFETY
INSTRUCTION
CARD **x1**



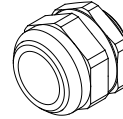
OL6KSTF 6,000 VA/6,000 W STEP-DOWN
AND ISOLATION TRANSFORMER **OR**
OL10KSTF 10,000 VA/10,000 W STEP-DOWN
AND ISOLATION TRANSFORMER **x1**



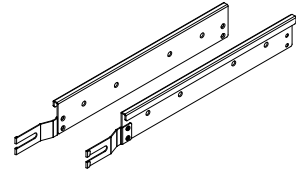
6 FT NEMA L6-30 LOCKING
MALE PLUG TO 3-WIRE
ROJ (REMOVE OUTER JACKET)
POWER CABLE (L630PHW6FT
INCLUDED WITH OL6KSTF) **x1**



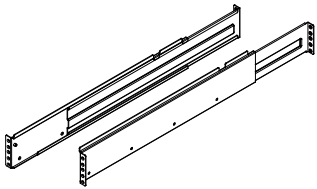
3 FT 10/3 AWG CONDUCTOR
WIRE ROJ (REMOVE OUTER
JACKET) WITH CONDUIT
(6AWGHW3FT INCLUDED
WITH OL10KSTF) **x1**



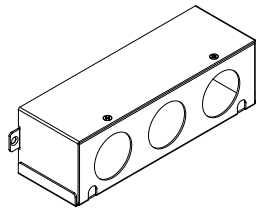
TERMINAL
BLOCK CABLE
GLANDS **x2**



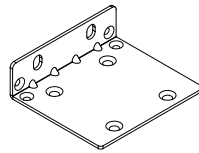
LEFT & RIGHT
HANGING
BRACKETS **x1**



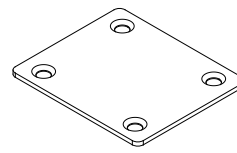
LEFT & RIGHT
RACKMOUNT
RAILS **x1**



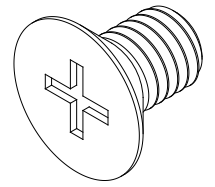
INPUT/OUTPUT
TERMINAL BLOCK
COVER **x1**



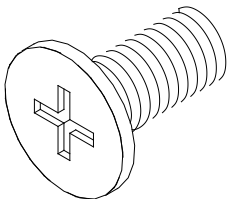
2U RACK MOUNT
EARS (TOWER
STANDS) **x2**



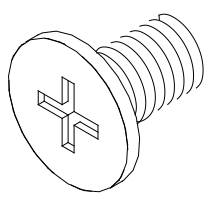
TOWER
INSTALLATION
TIE PLATE **x1**



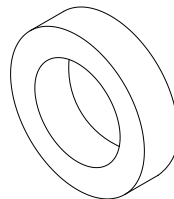
BLACK M5X7L
FLAT HEAD
SCREWS **x8**



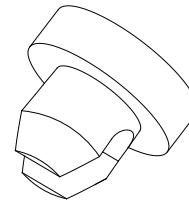
BLACK M5X12L PAN
HEAD SCREWS **x12**



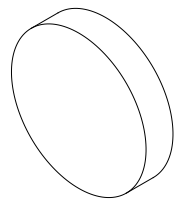
SILVER M5X6L PAN
HEAD SCREWS **x6**



PLASTIC
WASHERS **x8**



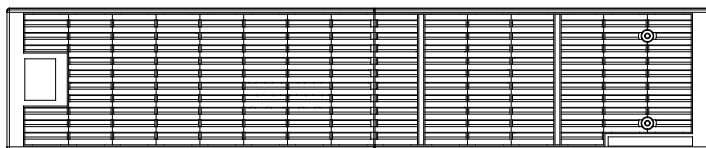
SCREW HOLE
DUST COVERS **x12**



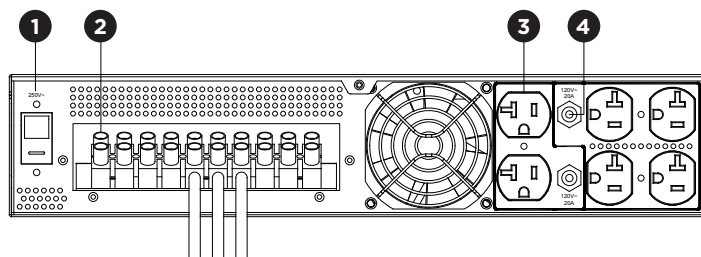
RUBBER
PADS **x12**

OVERVIEW

STEP-DOWN TRANSFORMER



FRONT: OL6KSTF/OL10KSTF



BACK: OL6KSTF/OL10KSTF

1. Input Circuit Breaker

Provides input overload and fault protection.

2. Input/Output Terminal Block

Connect to input power source / output to equipment load.

3. 6x NEMA 5-20R Outlets (120Vac)

Output receptacles to connect equipment load.

4. Output Circuit Breaker (120Vac)

Provides output overload and fault protection.

HARDWARE INSTALLATION

RACKMOUNT INSTALLATION



Caution: Important Instructions

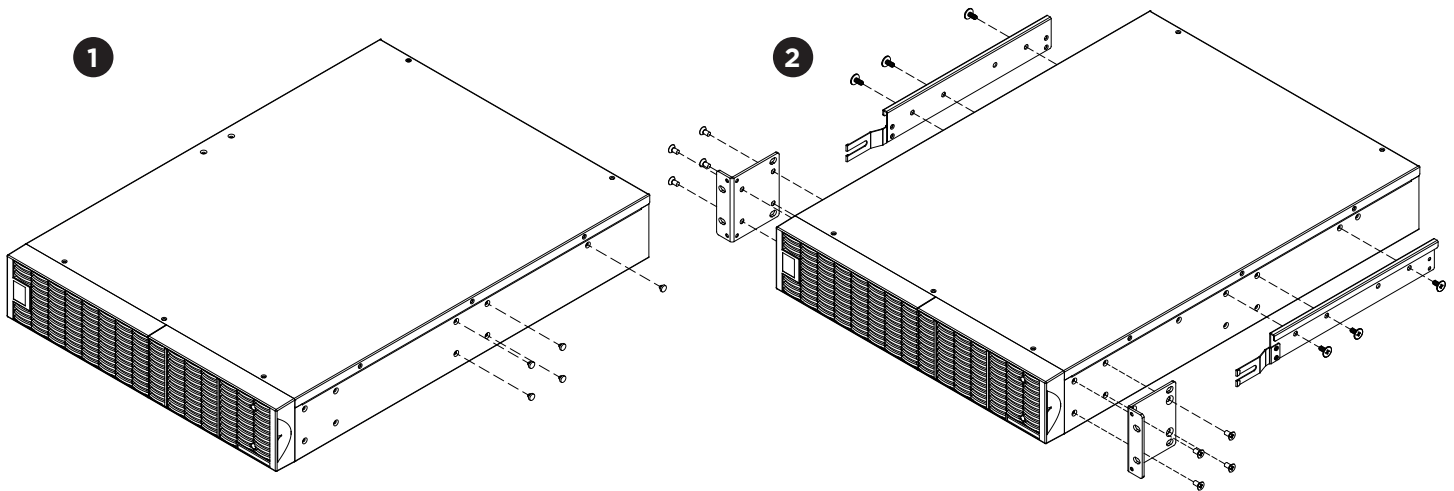
To prevent the risk of fire or electric shock, only use the supplied hardware to attach the mounting brackets.

Step 1: Remove the dust covers

Remove five dust covers from the screw holes as shown below.

Step 2: Rackmount ear & hanging bracket installation

Attach two rack mount ears to the step-down transformer using eight black M5X7L flat head screws. Install hanging brackets using six silver M5X6L pan head screws.



Step 3: Rackmount rail Installation

The rails adjust to mount in 19 in (48 cm) racks from 20.5 in to 36 in (52 cm to 91.5 cm) deep. Select the proper holes in the rack for positioning the step-down transformer in the rack. The step-down transformer takes up 2 rack units: rack hole positions 1 through 6.

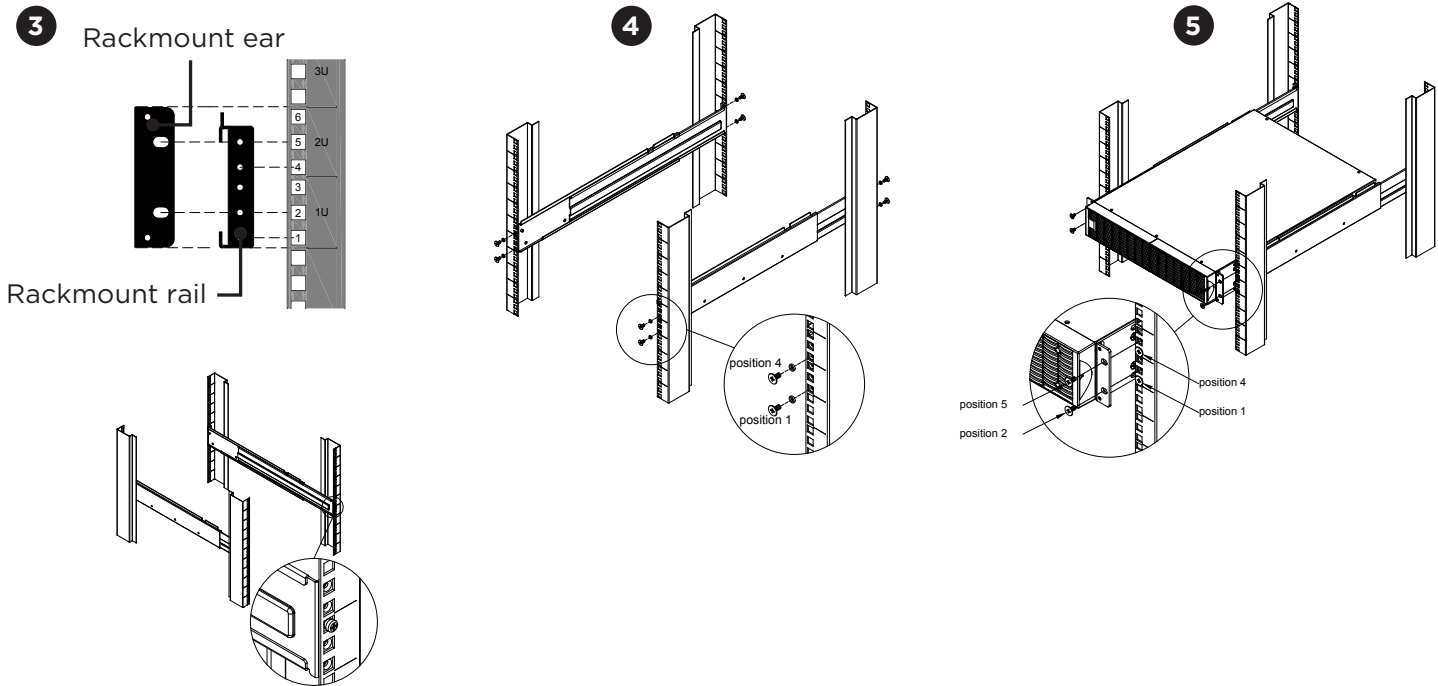
Position the guide screws on the back of the rackmount rails into the rear rack square holes to temporarily support the rails in place.

Step 4: Adjust rackmount rails to fit your rack

Adjust the rail depth to match your rack depth. Attach the rackmount rail to your rack with two black M5X6L pan head screws and two plastic washers at the front of the rack (square holes 1 and 4 as shown below). Secure the rail to the rear of the rack with two black M5X12L screws and two plastic washers.

HARDWARE INSTALLATION CONT.

RACKMOUNT INSTALLATION: RACKMOUNT EARS INSTALLATION CONT.

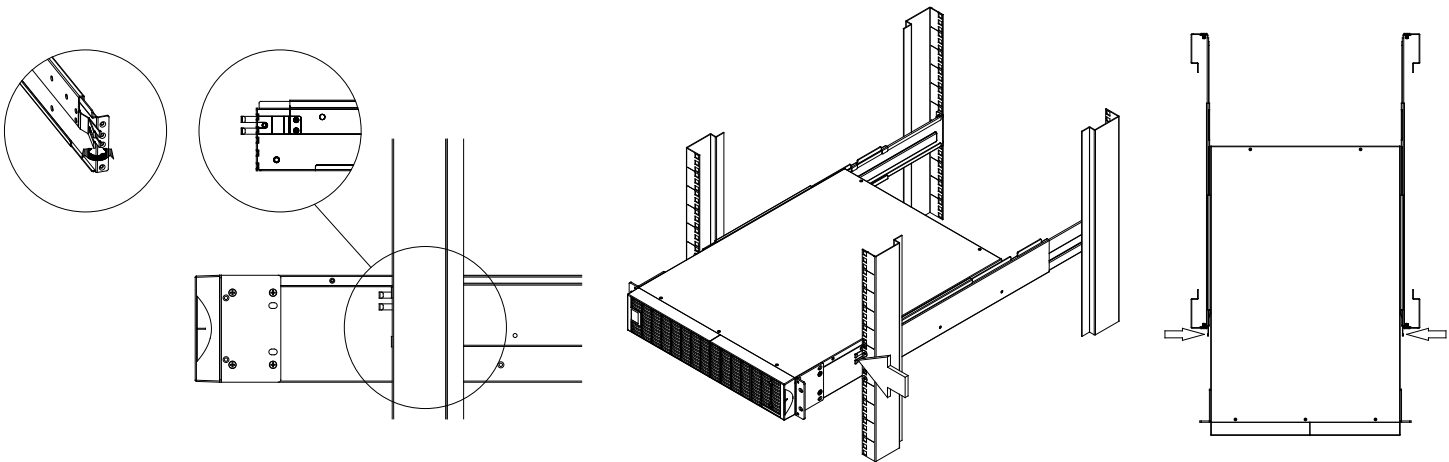


Step 5: Place and secure the step-down transformer on the rails

Slide the hanging brackets on the step-down transformer on to the rails mounted in the rack with the front of the unit facing toward you. Secure the step-down transformer to your rack with four black M5X12L pan head screws at the front of the rack (square holes 1 and 4 as shown above).

NOTE: To slide the step-down transformer out from the rack

The step-down transformer will be secured by a safety locking mechanism midway of pulling it out of the rack. Use both hands to hold the step-down transformer and press the safety locking tab to pull the step-down transformer out.



HARDWARE INSTALLATION CONT.

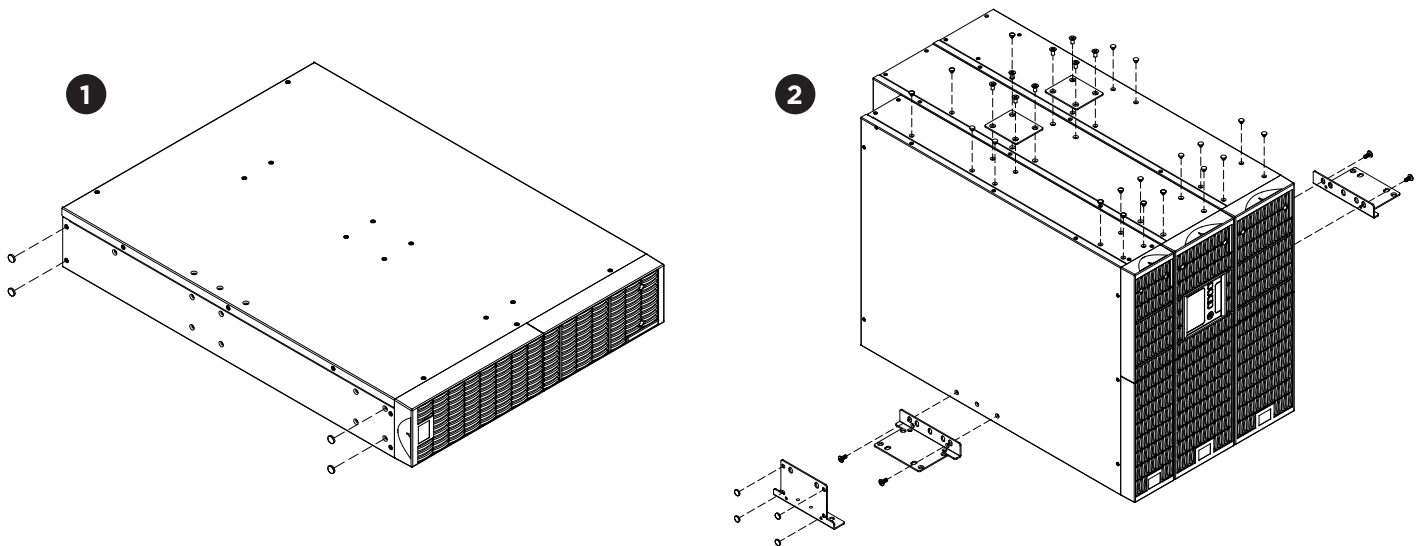
VERTICAL/TOWER INSTALLATION

Step 1: Adhere rubber pads

Adhere the protective rubber pads to the left hand side of the step-down transformer.

Step 2: Attach the base stands and attach the dust covers

Stand the step-down transformer on its side with the rubber pads facing down. Install dust covers on open screw holes. If installing the step-down transformer together with a UPS and Extended Battery Module (EBM) secure the tie plate between the UPS, EBM and the step-down transformer using four black M5X7L flat head screws. Optionally adhere four circular rubber pads to each rack mount ear to use as tower stands and screw them on to the EBM and the step-down transformer using four silver M5X6L pan head screws for added stability as shown below.



ELECTRICAL INSTALLATION

Check wiring dimensions with the following table.

STEP-DOWN AND ISOLATION TRANSFORMERS WITH HARDWIRE INPUT TERMINAL BLOCK	WIRING AWG	WIRING mm ²
OL6KSTF	10 AWG	5.5 mm ²
OL10KSTF	6 AWG	14.0 mm ²

HARDWIRING THE INPUT/OUTPUT TERMINALS

Step 1: Separate the terminal block cover

Loosen the two screws joining the top and bottom terminal block covers to separate them.

Step 2: Secure the bottom cover on to the step-down transformer

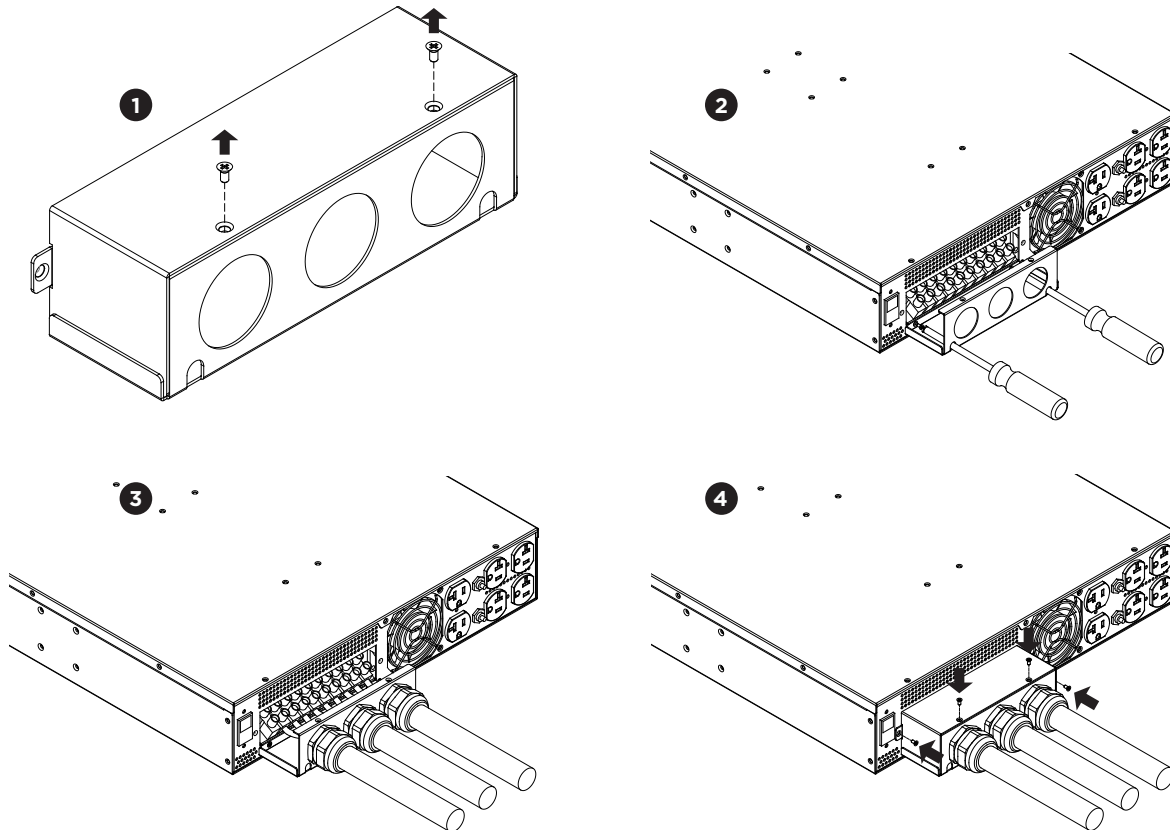
Tighten the two screws to secure the bottom cover on to the step-down transformer terminal block.

Step 3: Input/Output configuration

Insert the input/output cables through the appropriate cable gland. Hardwire the input/output wiring to their respective terminals as shown in the terminal block identification and configuration table.

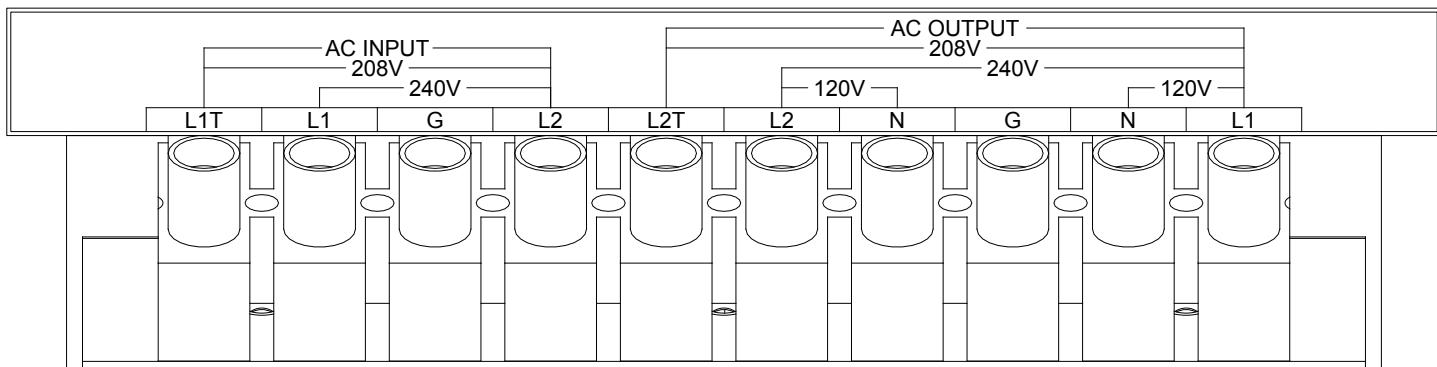
Step 4: Secure the top cover

Use four screws to secure the top terminal block cover on to the step-down transformer.



ELECTRICAL INSTALLATION CONT.

Terminal Block Identification



Terminal Block Configuration

INPUT VOLTAGE	AC OUTPUT CONNECTION	OUTPUT VOLTAGE
L1 → L2 = 200 Vac	L1 → N ← L2	100 Vac → 0 ← 100 Vac
	L1 → L2	200 Vac
L1 → L2 = 220 Vac	L1 → N ← L2	110 Vac → 0 ← 110 Vac
	L1 → L2	220 Vac
L1 → L2 = 230 Vac	L1 → N ← L2	115 Vac → 0 ← 115 Vac
	L1 → L2	230 Vac

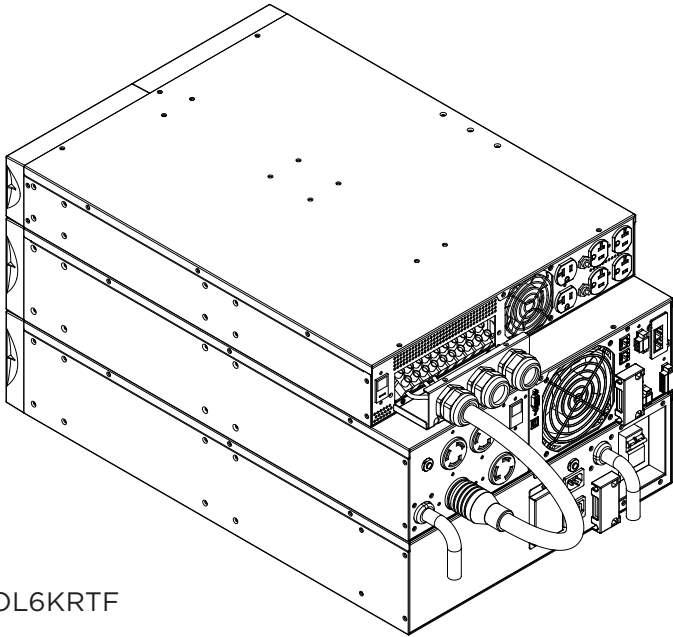
INPUT VOLTAGE	AC OUTPUT CONNECTION	OUTPUT VOLTAGE
L1T → L2 = 208 Vac	L1 → N ← L2	120 Vac → 0 ← 120 Vac
	L1 → L2	240 Vac
	L1 → L2T	208 Vac

INPUT VOLTAGE	AC OUTPUT CONNECTION	OUTPUT VOLTAGE
L1 → L2 = 240 Vac	L1 → N ← L2	120 Vac → 0 ← 120 Vac
	L1 → L2	240 Vac
	L1 → L2T	208 Vac

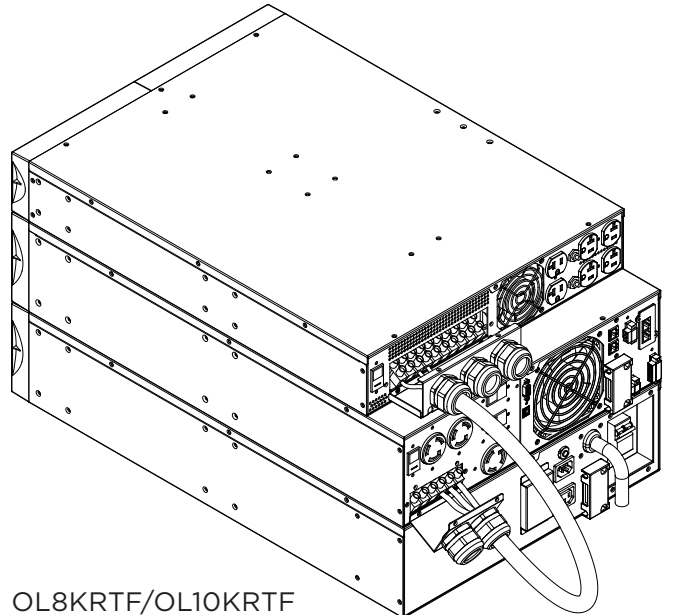
ELECTRICAL INSTALLATION CONT.

CONNECTING A STEP-DOWN TRANSFORMER TO A UPS POWER MODULE

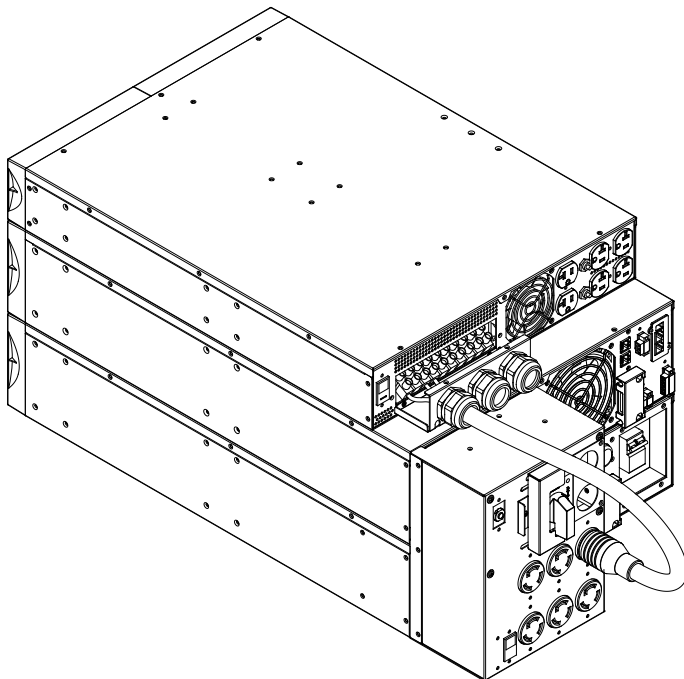
The following illustrations provide the recommended connections between a step-down transformer and a CyberPower Smart App Online UPS System.



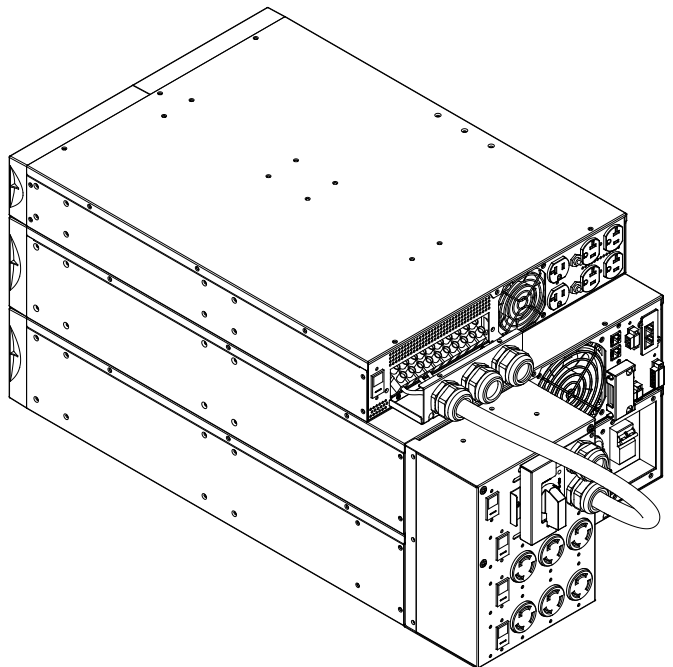
OL6KRTF



OL8KRTF/OL10KRTF



OL6KRTMBTF



OL8KRTMBTF/OL10KRTMBTF

TECHNICAL SPECIFICATIONS

MODELS	OL6KSTF		OL10KRT
CONFIGURATION			
Maximum Output Power (VA)*	6,000 VA		10,000 VA
Maximum Output Power (W)*	6,000 W		10,000 W
Form Factor	Rackmount/Tower		
INPUT			
Nominal Input Voltage	200/208/220/230/240 Vac		
Input Voltage Range	200-240 Vac		
Input Current Rating	30 A	50 A	
Input Frequency	50/60 Hz		
OUTPUT			
Nominal Output Voltage*	100/110/115/120 Vac or 200/208/220/230/240 Vac		
UPS Outlets	(6) NEMA 5-20R (1) Terminal block	(6) NEMA 5-20R (1) Terminal block	
PHYSICAL			
Dimensions	L x W x H = 23.6 x 17 x 3.46in. (60 x 43.3 x 8.8cm)		
Net Weight	95.5 lb (43.4 kg)	119.7 lb (54.4 kg)	
ENVIRONMENTAL			
Operating Temperature	32°F to 104°F (0°C to 40°C)		
Operating Relative Humidity	0 to 90% Non-condensing		
SAFETY			
Conformance Approvals	UL		

*200V are derated by 20%, 208 V are derated by 10% for OL10KSTF

PRODUCT REGISTRATION

CyberPower requests that you complete and return the Warranty Registration Card enclosed with the Product or register the Product at its website (www.cyberpowersystems.com/registration) to establish that you are the Initial Customer of the Product, and therefore entitled coverage under the Limited Warranty and the Connected Equipment Guarantee. (Registration is not required for coverage, but note: if you do not register your purchase, you will be required to provide proof of purchase.)

LIMITED WARRANTY AND CONNECTED EQUIPMENT GUARANTEE

Please visit www.CyberPowerSystems.com for a copy of the Limited Warranty and Connected Equipment Guarantee.

Where Can I Get More Information?

The application of the United Nations Convention of Contracts for the International Sale of Goods is expressly excluded. CyberPower is the warrantor under this Limited Warranty. For further information please feel free to contact CyberPower at:

Cyber Power Systems (USA), Inc.
4241 12th Ave E., STE 400, Shakopee, MN 55379;
call us at **(877) 297-6937**; or submit a web ticket online at cyberpowersystems.com/support.

Cyber Power Systems (USA), Inc. encourages environmentally sound methods for disposal and recycling of its UPS products. Please dispose and/or recycle your UPS and batteries in accordance to the local regulations of your state.

WARNING: This product can expose you to chemicals including bisphenol A (BPA) and styrene, which is known to the State of California to cause reproductive harm and cancer. For more information, go to www.P65Warnings.ca.gov.

CONFORMANCE APPROVAL



FCC NOTICE

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may cause undesired operation.

WARNING!! This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Shielded signal cables must be used with this product to ensure compliance with the Class A FCC limits.

The Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.

Cet appareil numérique de la class A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

This document is believed to be accurate, but CyberPower reserves the right to change or correct the contents and does not assume any responsibility for omissions or errors.

Need Additional Help?

Feel free to contact our Tech Support department with installation, troubleshooting, or general product questions.

CyberPower Technical Support

Phone: 1.877.297.6937

Email: tech@cpsww.com

Web: www.CyberPowerSystems.com

Address: 4241 12th Avenue E, Suite 400 Shakopee, MN 55379, USA

Hours of Operation:

Monday – Friday, 7:00am – 6:00pm (CST)

CyberPower

Cyber Power Systems, Inc. | www.CyberPowerSystems.com

For USA and Canada | 4241 12th Ave East, Suite 400, Shakopee, MN 55379 | Toll-free: 877.297.6937

For all other regions | Please visit our website for local contact information.

Copyright ©2018 Cyber Power Systems, Inc. All rights reserved.