



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.

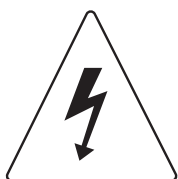
Before connecting to the step-down transformer, check that the input voltage into the step-down transformer is within specifications.

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.

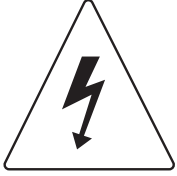
Remove watches, rings or other metal objects. Use tools with insulated handles.

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.

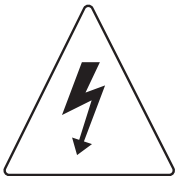
To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area, free of conductive contaminants. (Please see specifications for acceptable temperature and humidity range).

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.

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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.

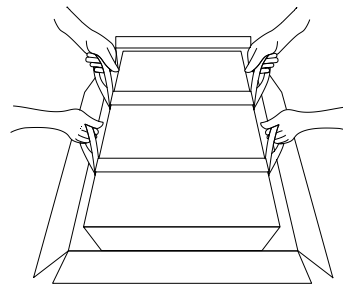
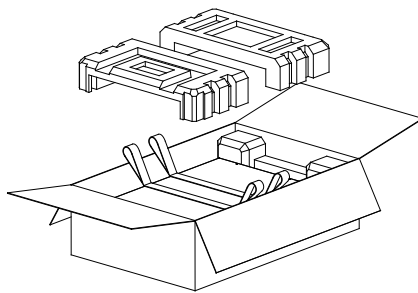
UNPACKING PROCEDURES



Information, advice, help

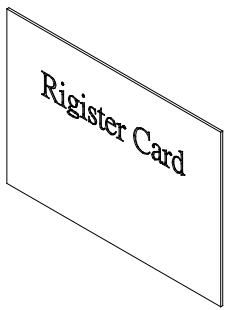
The UPS system is very heavy, please handle with care. Wear safety shoes and use a hydraulic equipment lift if one is available. At least two people are required for all handling operations, including unpacking, lifting, and installation in a rack system. Do not use the lifting straps to carry the unit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

USE LIFTING STRAPS TO REMOVE UNIT FROM THE BOX.



INTRODUCTION CONT.

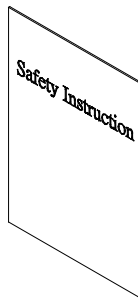
WHATS IN THE BOX



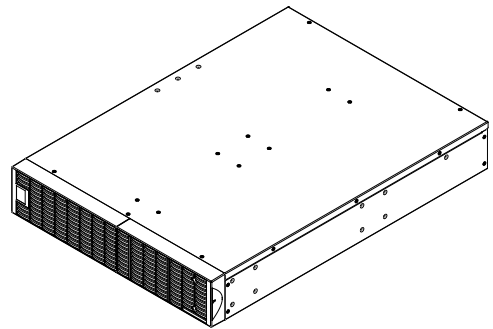
REGISTRATION
CARD **x1**



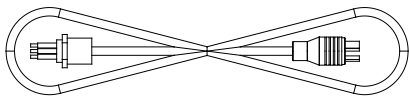
QUICK START
GUIDE **x1**



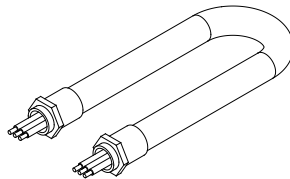
SAFETY
INSTRUCTION
CARD **x1**



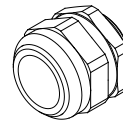
OL6KSTF 6,000 VA/6,000 W STEP-DOWN
AND ISOLATION TRANSFORMER **OR**
OL10KSTF 10,000 VA/10,000 W STEP-DOWN
AND ISOLATION TRANSFORMER **x1**



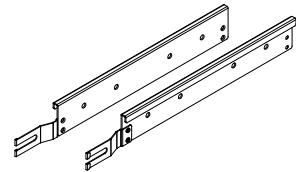
6 FT NEMA L6-30 LOCKING
MALE PLUG TO 3-WIRE
ROJ (REMOVE OUTER JACKET)
POWER CABLE (L630PHW6FT
INCLUDED WITH OL6KSTF) **x1**



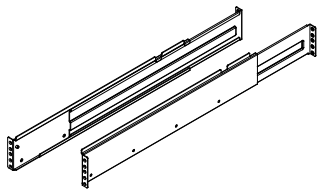
3 FT 10/3 AWG CONDUCTOR
WIRE ROJ (REMOVE OUTER
JACKET) WITH CONDUIT
(6AWGHW3FT INCLUDED
WITH OL10KSTF) **x1**



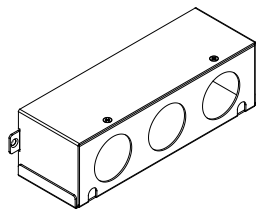
TERMINAL
BLOCK CABLE
GLANDS **x2**



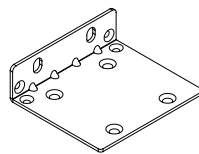
LEFT & RIGHT
HANGING
BRACKETS **x1**



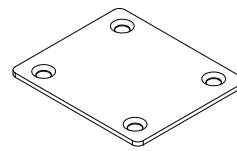
LEFT & RIGHT
RACKMOUNT
RAILS **x1**



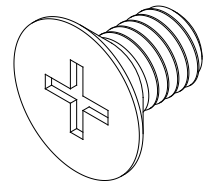
INPUT/OUTPUT
TERMINAL BLOCK
COVER **x1**



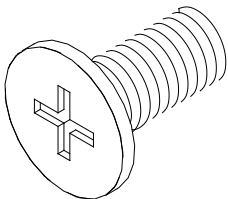
2U RACK MOUNT
EARS (TOWER
STANDS) **x2**



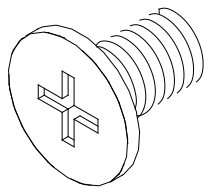
TOWER
INSTALLATION
TIE PLATE **x1**



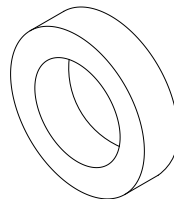
BLACK M5X7L
FLAT HEAD
SCREWS **x8**



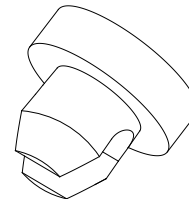
BLACK M5X12L PAN
HEAD SCREWS **x12**



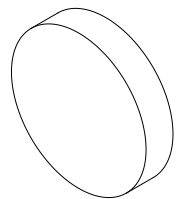
SILVER M5X6L PAN
HEAD SCREWS **x6**



PLASTIC
WASHERS **x8**



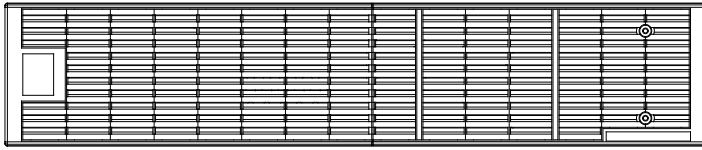
SCREW HOLE
DUST COVERS **x12**



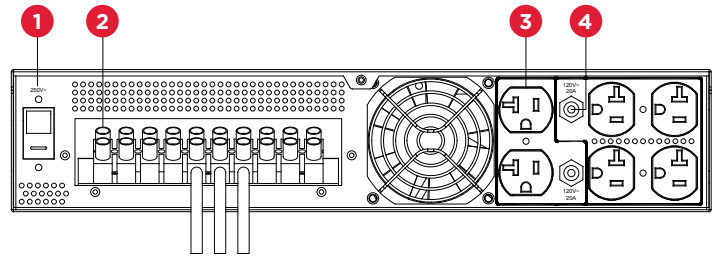
RUBBER
PADS **x12**

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

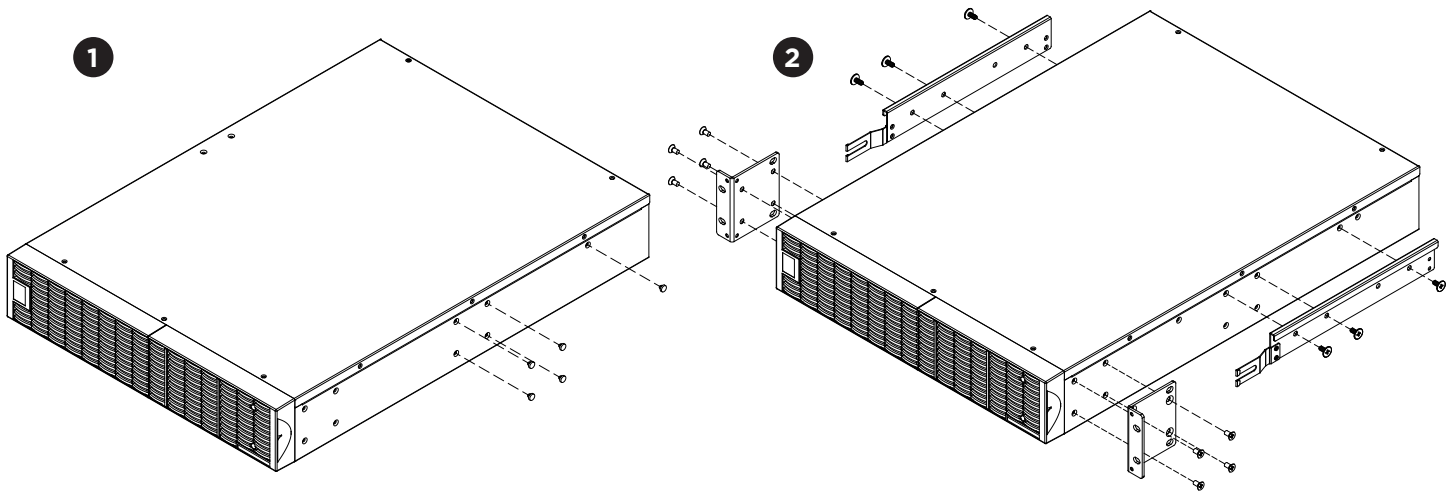
To prevent the risk of fire or electric shock, only use the supplied hardware to attach the mounting brackets.

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.

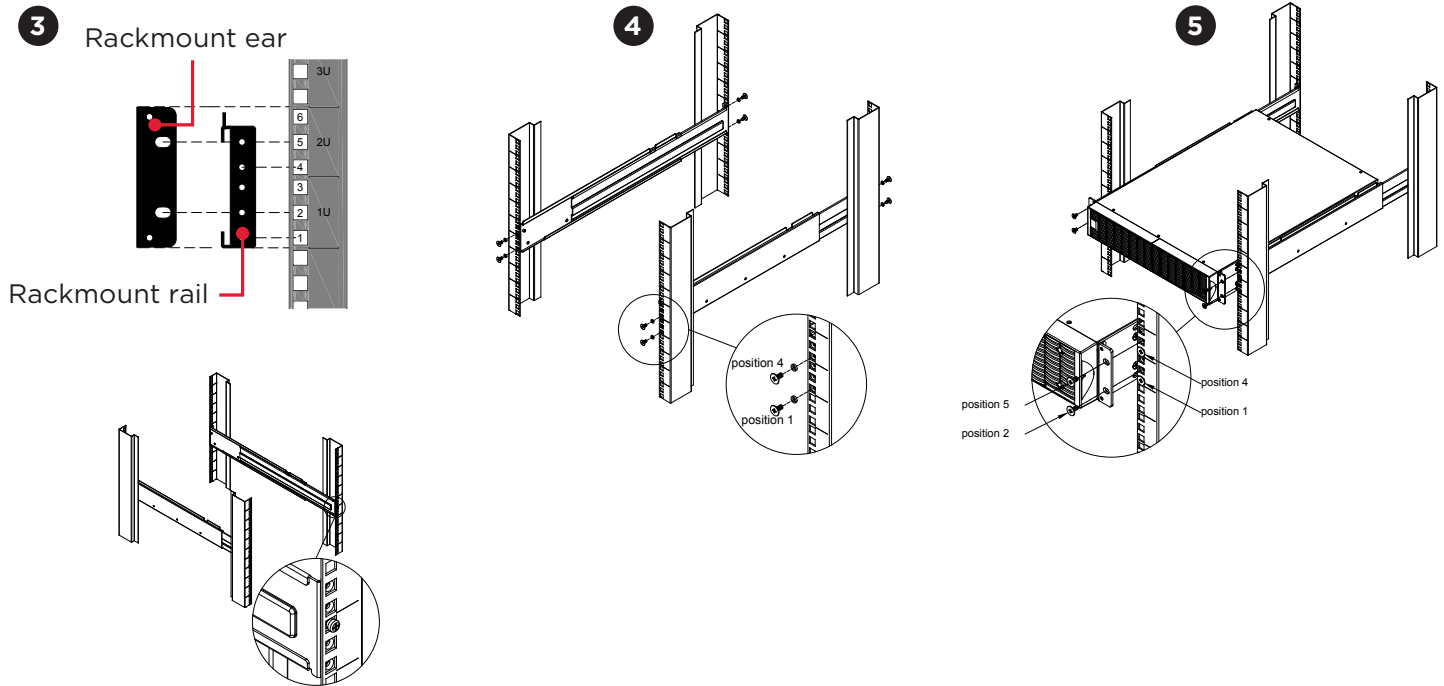
Position the guide screws on the back of the rackmount rails into the rear rack square holes to temporarily support the rails in place.

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.

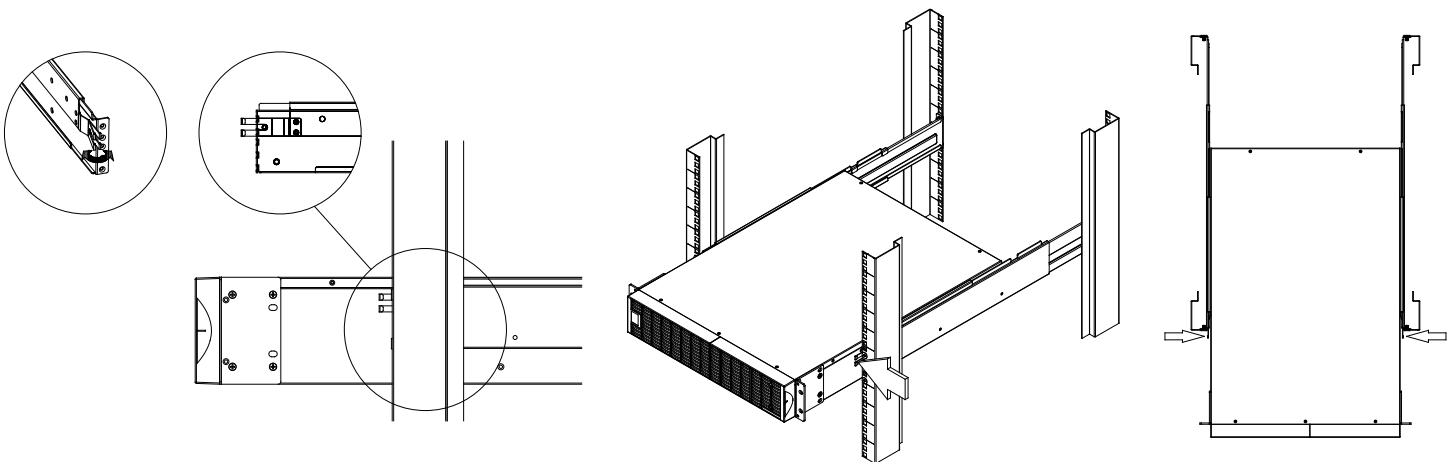


Step 5: Place and secure the step-down transformer on the rails

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.

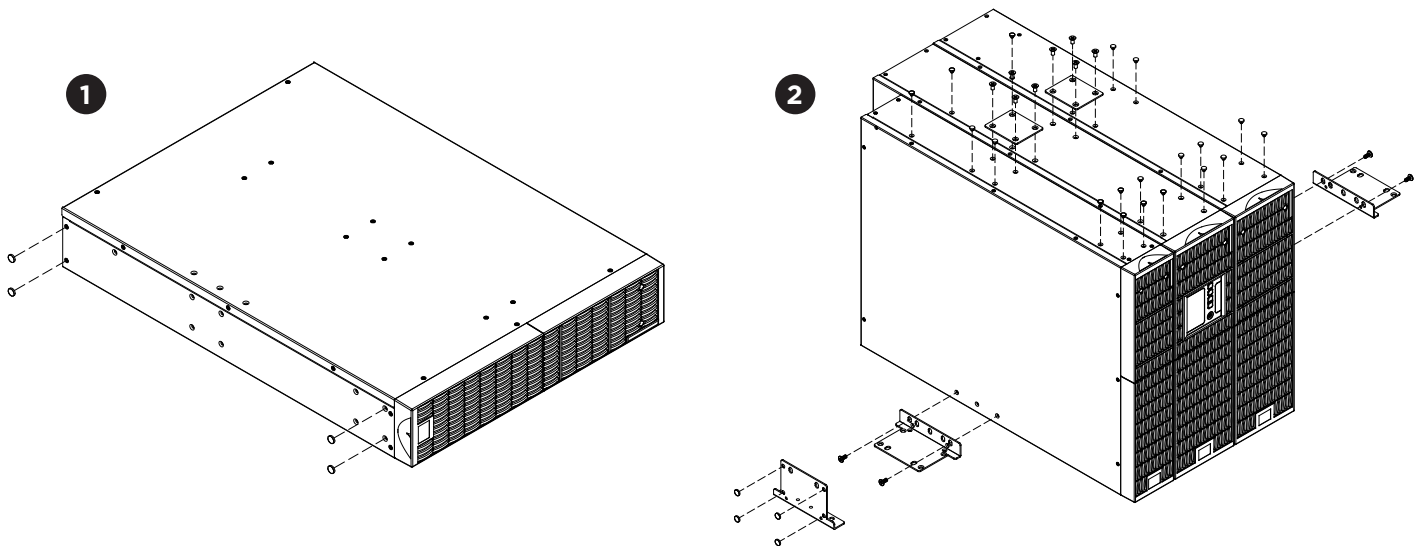
VERTICAL/TOWER INSTALLATION

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

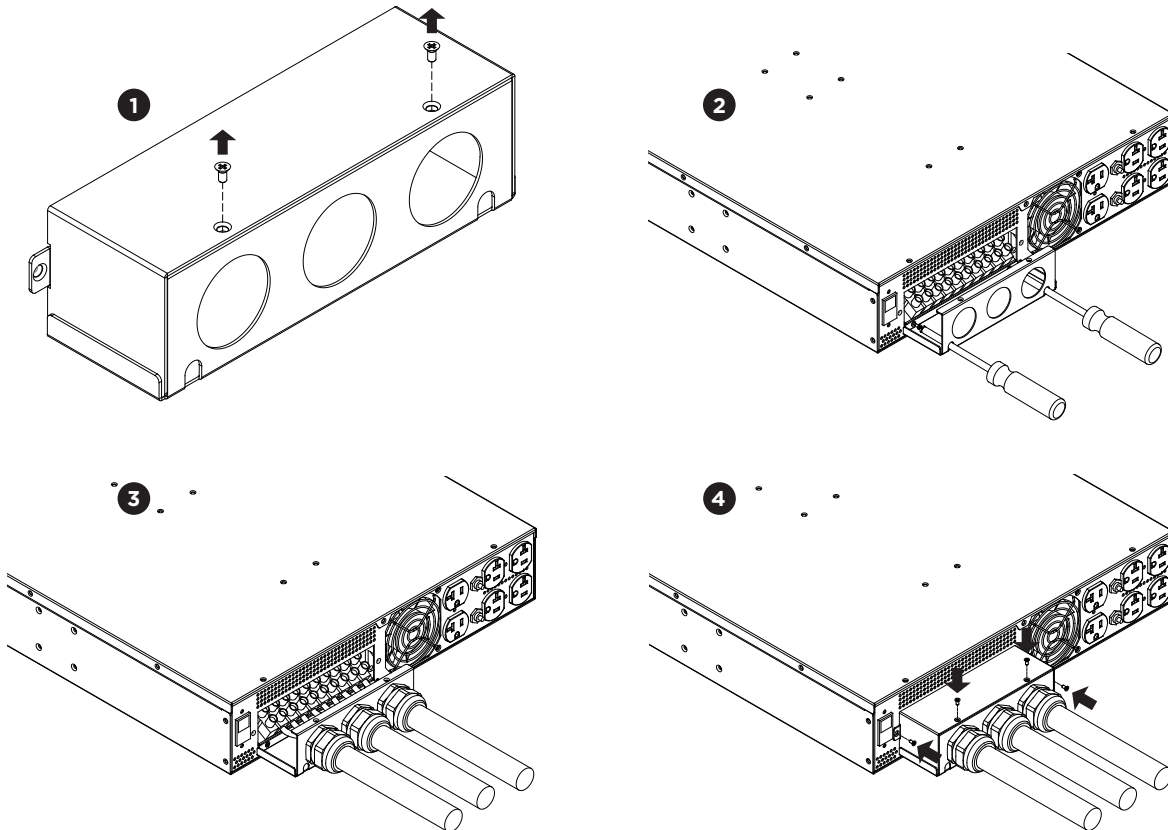
Tighten the two screws to secure the bottom cover on to the step-down transformer terminal block.

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.

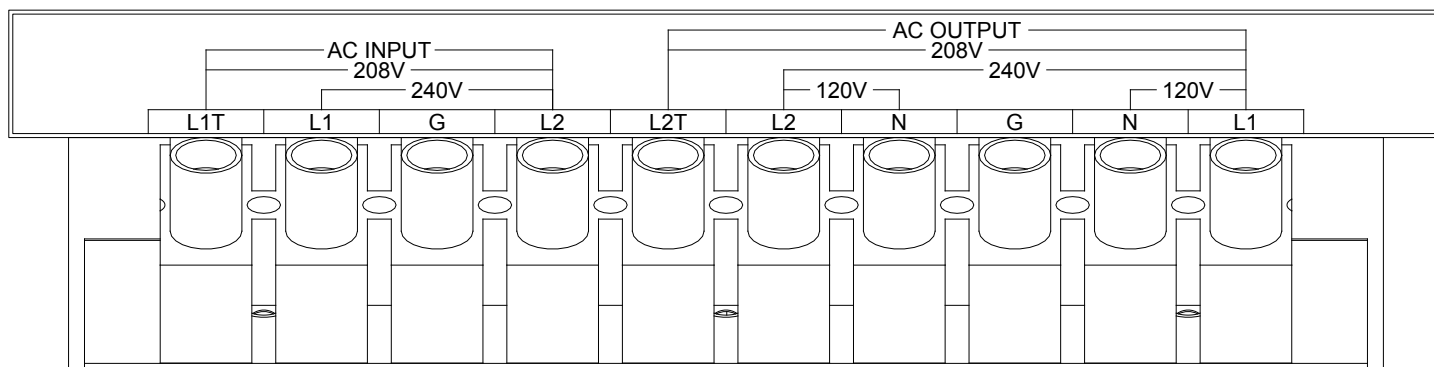
Step 4: Secure the top cover

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

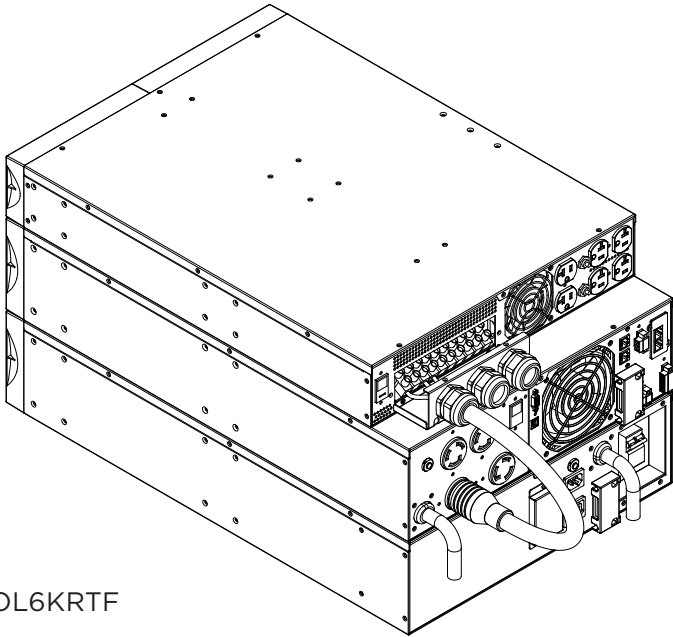
INPUT VOLTAGE	AC OUTPUT CONNECTION	OUTPUT VOLTAGE
L1T → L2 = 208 Vac	L1 → N ← L2	120 Vac → 0 ← 120 Vac
	L1 → L2	240 Vac
	L1 → L2T	208 Vac

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

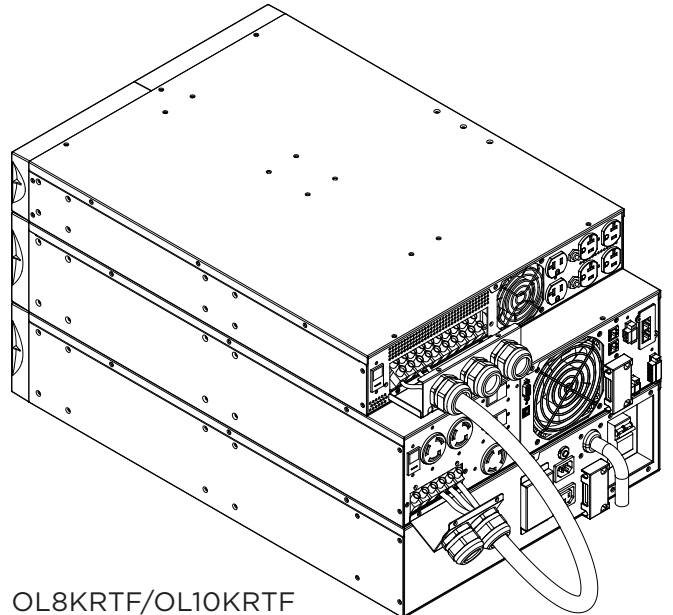
ELECTRICAL INSTALLATION CONT.

CONNECTING A STEP-DOWN TRANSFORMER TO A UPS POWER MODULE

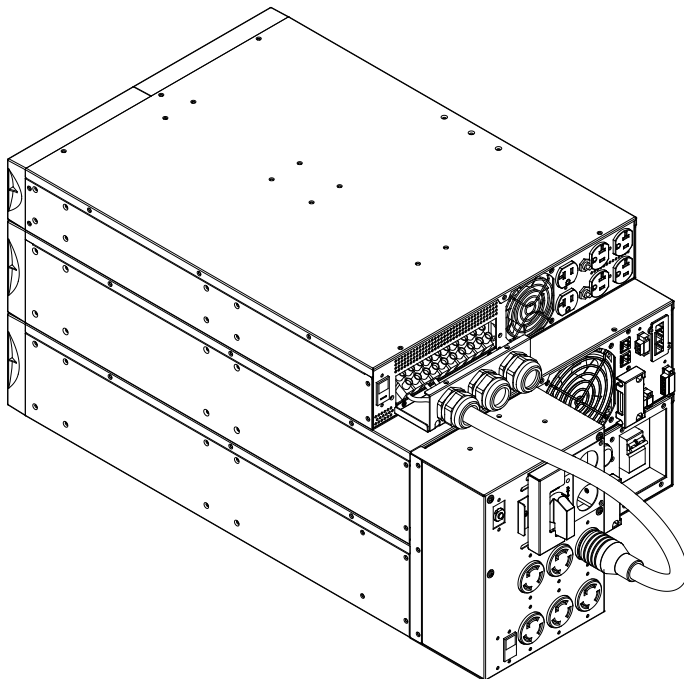
The following illustrations provide the recommended connections between a step-down transformer and a CyberPower Smart App Online UPS System.



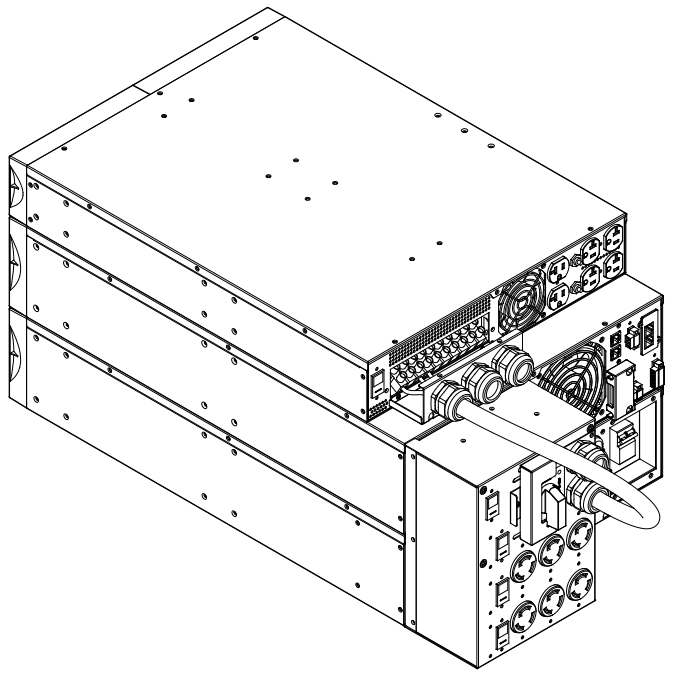
OL6KRTF



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

Read the following terms and conditions carefully before using the CyberPower OL6KSTF/OL10KSTF. By using the Product you consent to be bound by and become a party to the terms and conditions of this Limited Warranty and Connected Equipment Guarantee (together referred to as this “Warranty”). If you do not agree to the terms and conditions of this Warranty, you should return the Product for a full refund prior to using it.

Who is Providing this Warranty?

CyberPower Systems (USA), Inc. (“CyberPower”) provides this Limited Warranty.

What Does This Warranty Cover?

This warranty covers defects in materials and workmanship in the Product under normal use and conditions. It also covers equipment that was connected to the Product and damaged because of the failure of the Product.

What is the Period of Coverage?

This warranty covers the Product for three years and connected equipment for as long as you own the Product.

Who Is Covered?

This warranty only covers the original purchaser. Coverage ends if you sell or otherwise transfer the Product.

How Do You Get Warranty Service?

1. Before contacting CyberPower, identify Your Product model number, the Purchase Date, and each item of Connected Equipment.
2. Email us at tech@cpsww.com or Call us at (877) 297-6937.
3. If your product requires warranty service you must provide a copy of your dated purchase receipt or invoice.

LIMITED WARRANTY AND CONNECTED EQUIPMENT GUARANTEE CONT.

How Do You Open A Connected Equipment Claim?

1. Call us at (877) 297-6937 or write to us at Cyber Power Systems (USA), Inc., 4241 12th Ave. E., STE 400, Shakopee, MN 55379, or send us an e-mail message to claims@cpsww.com for instructions, within 10 days of the occurrence.
2. When you contact CyberPower, identify the Product, the Purchase Date, and the item(s) of Connected Equipment. Have information on all applicable insurance or other resources of recovery/payment that are available to the Initial Customer and Request a Claim Number.
3. You must provide a dated purchase receipt (or other proof of the original purchase) for the Cyber Power unit and connected equipment. You also need to provide a description of the damage to your connected equipment.
4. Pack and ship the product to CyberPower and, if requested, the item(s) of Connected Equipment, a repair cost estimate for the damage to the Connected Equipment, and all claim forms that CyberPower provides to you. Show the Claim Number on the shipping label or include it with the product. You must prepay all shipping costs, you are responsible for packaging and shipment, and you must pay the cost of the repair estimate.

How Long Do I Have To Make A Claim?

All claims must be made within ten days of the occurrence.

What Will We Do To Correct Problems?

CyberPower will inspect and examine the Product.

If the Product is defective in material or workmanship, CyberPower will repair or replace it at CyberPower's expense, or, if CyberPower is unable to or decides not to repair or replace the Product (if defective) within a reasonable time, CyberPower will refund to you the full purchase price you paid for the Product (purchase receipt showing price paid is required).

Who Pays For Shipping?

We pay when we send items to you; you pay when you send items to us.

LIMITED WARRANTY AND CONNECTED EQUIPMENT GUARANTEE CONT.

What Are Some Examples Of What This Warranty Does Not Cover?

1. This Warranty does not cover any software that was damaged or needs to be replaced due to the failure of the Product or any data that is lost as a result of the failure or the restoration of data or records, or the reinstallation of software.
2. This Warranty does not cover or apply to: misuse, modification, operation or storage outside environmental limits of the Product or the equipment connected to it, nor for damage while in transit or in storage, nor if there has been improper operation or maintenance, or use with items not designed or intended for use with the Product, such as laser printers, appliances, aquariums, medical or life support devices, etc.

What Other Limitations Apply?

The sole and exclusive remedies of the Initial Customer are those provided by this Warranty.

1. This Warranty does not apply unless the Product and the equipment that was connected to it were connected to properly wired and grounded outlets (including compliance with electrical and safety codes of the most current electrical code), without the use of any adapters or other connectors.
2. The Product must have been plugged directly into the power source and the equipment connected to the Product must be directly connected to the Product and not “daisy-chained” together in serial fashion with any extension cords, another Product or device similar to the Product, surge suppressor, or power tap. Any such installation voids the Limited Warranty.
3. The Product and equipment connected to it must have been used properly in a suitable and proper environment and in conformance with any license, instruction manual, or warnings provided with the Product and the equipment connected to it.
4. The Product must have been used at all times within the limitations on the Product’s VA capacity.

The Product was designed to eliminate disrupting and damaging effects of momentary (less than 1ms) voltage spikes or impulses from lightning or other power transients. If it can be shown that a voltage spike lasting longer than 1ms has occurred, the occurrence will be deemed outside the rated capabilities of the Product and the Limited Warranty is void. CyberPower Does Not Cover or Undertake Any Liability in Any Event for Any of the Following:

1. Loss of or damage to data, records, or software or the restoration of data or records, or the reinstallation of software.
2. Damage from causes other than AC Power Line Transients, spikes, or surges on properly installed, grounded and code-compliant 120 volt power lines in the United States and Canada; transients, surges or spikes on standard telephone land lines, PBX telephone equipment lines or Base 10T Ethernet lines, when properly installed and connected. (This exclusion applies, for example, to fluctuations in data transmission or reception, by CATV or RF transmission or fluctuations, or by transients in such transmission.)
3. Damage from any circumstance described as excluded above with respect to the Product.
4. Damages from fire, flood, wind, rain, rising water, leakage or breakage of plumbing, abuse, misuse or alteration of either the product or the Connected Equipment.

LIMITED WARRANTY AND CONNECTED EQUIPMENT GUARANTEE CONT.

What Other Limitations Apply? Cont.

5. CyberPower excludes any liability for personal injury under the Limited Warranty and Connected Equipment Guarantee. CyberPower excludes any liability for direct, indirect, special, incidental or consequential damages, whether for damage to or loss of property [EXCEPT FOR (AND ONLY FOR) the specific limited agreement of CyberPower to provide certain warranty benefits regarding "Connected Equipment" under this Warranty], loss of profits, business interruption, or loss of information or data. NOTE: Some States or Provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.
6. The Product is not for use in high-risk activities or with aquariums. The Product is not designed or intended for use in hazardous environments requiring fail-safe performance, or for use in any circumstance in which the failure of the Product could lead directly to death, personal injury, or severe physical or property damage, or that would affect operation or safety of any medical or life support device (collectively, "High Risk Activities"). CyberPower expressly disclaims any express or implied warranty of fitness for High Risk Activities or with aquariums. CyberPower does not authorize use of any Product in any High Risk Activities or with Aquariums. ANY SUCH USE IS IMPROPER AND IS A MISUSE OF THE PRODUCT.

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

(877) 297-6937 | claims@cpsww.com

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.

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