

User Guide



Transformer box

N1C.LR-10TXR

1. Important Safety Warnings

1.1 Safety instructions

Please comply with all warnings and operating instructions in this manual strictly. Save this manual properly and read carefully the following instructions before installing the unit. Do not operate this unit before reading through all safety information and operating instructions carefully.

- Do not try to repair the unit yourself, contact your local supplier or your warranty will be void.
- To eliminate any overheating of the Transformer box, keep all ventilation openings free from obstruction and do not place any foreign objects on top of the Transformer box. Keep the Transformer box 20 cm away from the wall.
- Do not install the Transformer box under direct sunlight. Your warranty will be void if the iso fail due to overheating.
- This Transformer box is not designed for use in dusty, corrosive and salty environment.
- The warranty for this Transformer box will be void if water or other liquid is spilt or poured directly onto the Transformer box. Similarly we do not warrant any damage to the Transformer box if foreign objects are deliberately or accidentally inserted into the Transformer box enclosure.
- Servicing of Transformer box should be performed or supervised by trained personnel with knowledge of Transformer box and the required precautions.

1.2 Operating environment

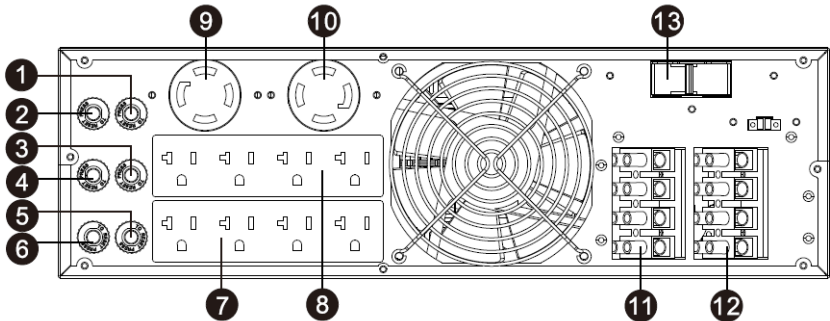
Temperature	Storage	-15°C ~ 45°C
Maximum altitude	Operation	1,000 meters
	Storage	15,000 meters (50000 feet)
Humidity	Relative Humidity	0% - 95% , No condensation

- Make sure the Transformer box is installed within the proper environment as specified.

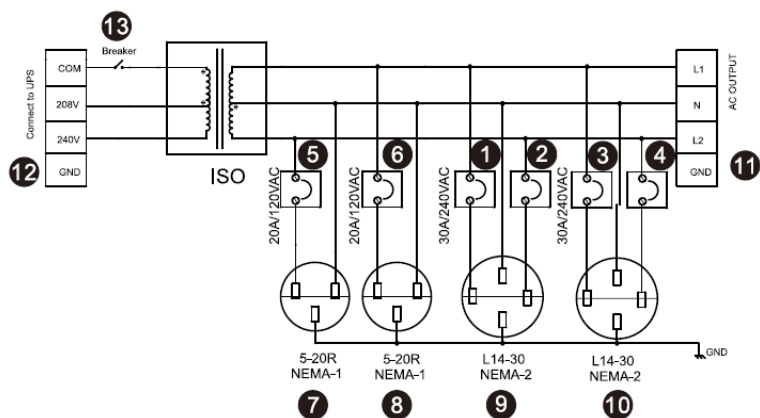
2. Product Overview

NOTE: Before installation, please inspect the unit. Be sure that nothing inside the package is damaged. Please keep the original package in a safe place for future use.

2.1 Rear Panel View



- ❶ Output circuit breaker 240V/30A
- ❷ Output circuit breaker 240V/30A
- ❸ Output circuit breaker 240V/30A
- ❹ Output circuit breaker 240V/30A
- ❺ Output circuit breaker 120V/20A
- ❻ Output circuit breaker 120V/20A
- ❼ 5-20R output receptacles
- ❽ 5-20R output receptacles
- ❾ L14-30R output receptacles
- ❿ L14-30R output receptacles
- ⓫ Optional load output connection
- ⓬ Input (to UPS output)
- ⓭ Output circuit breaker



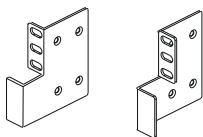
3 Installation and Setup

3.1 Unpacking & Inspection

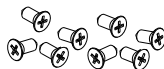
1. Remove the Transformer box from the packing.

Note: The Transformer box is very heavy, be cautious when unpacking and lifting the unit to avoid injury.

2. Check the inside package
 - Handles for rack installation x 2
 - Handle screws x 8
 - Cable glands x 2
 - Metal plates x 2
 - Rails x 2
 - Nuts x 6
 - Screws x 12



Handles for rack installation



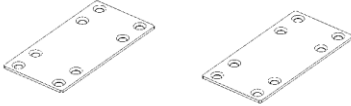
Handle screws



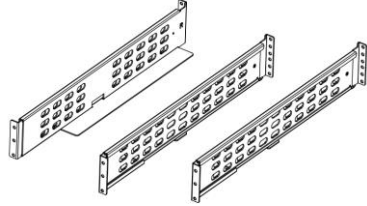
Screws



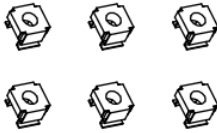
Cable glands



Metal plates



Rails



Nuts

3.2 Selecting Installation Position

It is necessary to select a proper environment to install the unit, in order to minimize the possibility of damage to the Transformer box and extend the life of the Transformer box. Please follow the instructions below:

1. Keep at least 20cm (8 inches) clearance from the rear panel of the unit from the wall or other obstructions.
2. Do not block the air-flow to the ventilation openings of the unit.
3. Please ensure the installation site environmental conditions are in accordance with the unit's working specifications to avoid overheat and 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.

3.3 Install into rack enclosure

Step 1: Attach mounting ears to the side mounting holes of Transformer box using the screws provided and the ears should face forward. Please refer to chart 1.

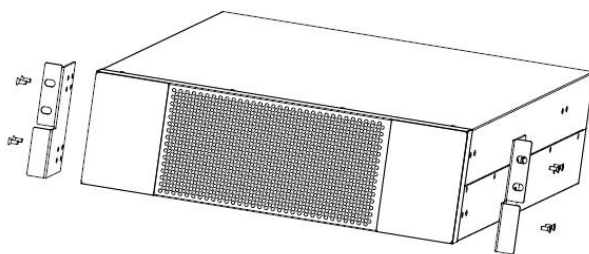


Chart 1

Step 2: Lift the Transformer box module and slide it into rack enclosure. Attach the Transformer box to the rack with screws, nuts and washers (user-provided) through its mounting ears and into the rack rails. Please refer to chart 2.

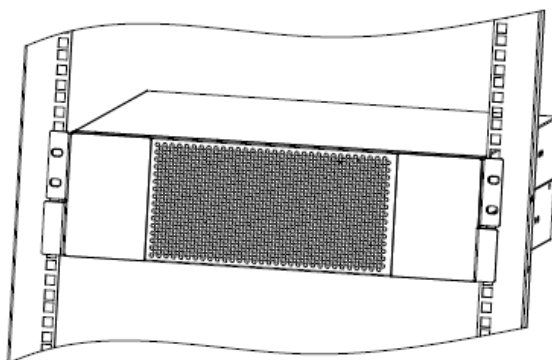
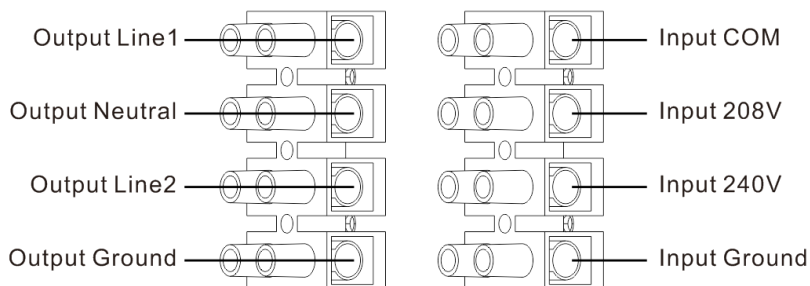


Chart 2



Terminal block wiring diagram of TRANSFORMER BOX

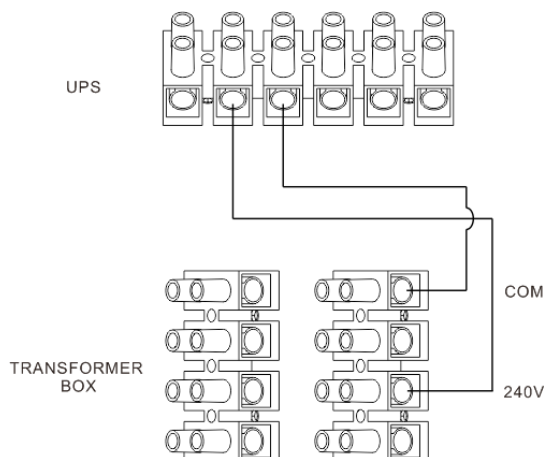
3.4 Connecting with UPS

Output of the UPS should be connected to the input of transformer box and the output of transformer box is the final output of system.

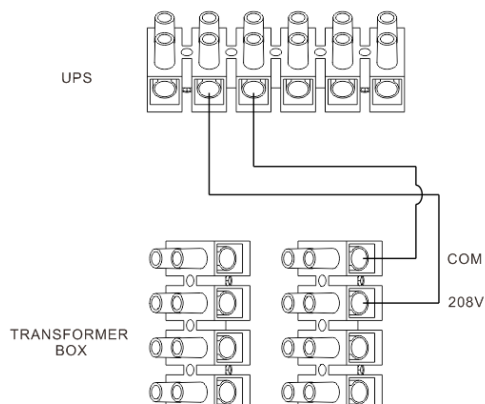
Transformer box	Wire Spec (AWG)	Torque (N·m)
N1C.LR-10TXR	4	1

Follow below diagram to connect UPS output to Input of transformer box.

240V Input



208V Input



Confirm the UPS output voltage through the front panel and verify that it matches the transformer box output voltage.

For example, if the input to UPS is 208V, then voltage selection should be 208V.

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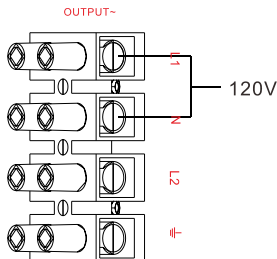
There are 3 different output configurations on transformer box

The follow figure shows the transformer box block diagram. The I/O terminal block is hardwired. Before making hardwire, please be sure the power is completely off.

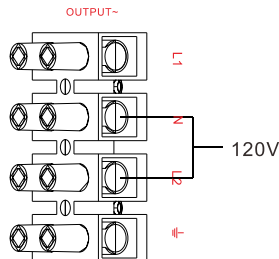
- Switch off utility power at the distribution point where the transformer box will be connected. Be absolutely sure there is no power.
- Verify that the output circuit breaker is in the OFF position.

Three output configurations and the wiring is listed as below:

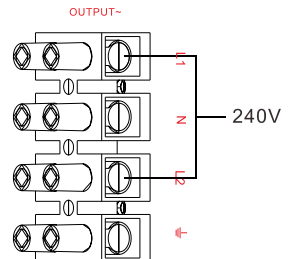
Option 1: Connect L1 and N to get 120V output



Option 2: Connect L2 and N to get 120V output

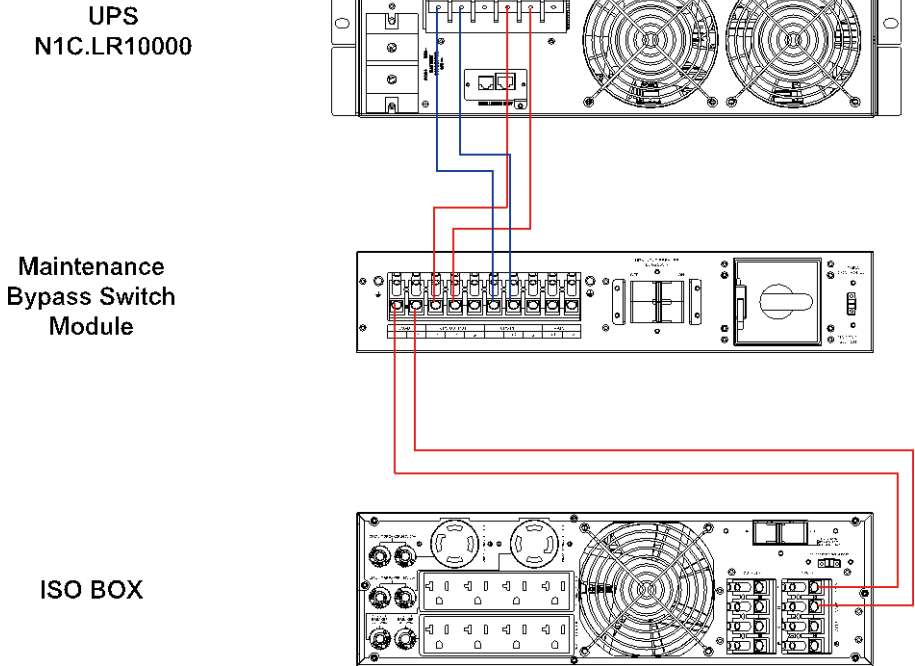


Option 3: Connect L1 and L2 to get 240V output



Do not overload the transformer box. For 120V output voltage, the

output of L1 or L2 can only be half-loaded.



Wiring diagram to connect UPS, transformer box and maintenance bypass

Start Up

Step 1: Ensure the Mains of the bypass module is connected to the mains, and then switch on the input breaker of the maintenance bypass switch module, the bypass module will supply power to the UPS.

Step 2: After the LCD and the LINE indicators of the UPS are lighted on, switch on the input breaker of the transformer box. Then, whole system is turned on completely.

Appendix A: Input/Output Voltage Selection

Input Voltage (Vac)	Output Voltage 5-20R	
	208V Input Wire Position	240V Input Wire Position
200	-	100
208	120	-
220	127	110
230	-	115
240	-	120

For L14-30R(L1-L2) Output

Input Voltage (Vac)	Output Voltage 5-20R	
	208V Input Wire Position	240V Input Wire Position
200	-	200
208	240	-
220	254	220
230	-	235
240	-	240

N1C Products Limited Warranty: LR-Series, LX-Series Lithium Battery UPS Systems

WARRANTOR: The warrantor for the limited warranties set forth herein is N1 Critical Technologies, Inc., a Wisconsin company ("N1C or Company").

LIMITED WARRANTY PERIOD: For units which are registered online at www.lithium-ion-ups.com/warrantyregistration the period covered by this Warranty for Product installed [and currently located] in the fifty (50) United States, the District of Columbia, and Canada is one hundred twenty (120) months from the date of registration, or one hundred twenty-three (123) months from the date of original shipment from the Company, regardless of registration date. For units which are not registered or do not contain a battery, the warranty period is 24 months from the date of purchase. Purchase documentation will be required.

WHAT THIS LIMITED WARRANTY COVERS: The warrantor warrants that the Product and battery (individually and collectively, the "Warranted Items") are free from defects in material and workmanship. If, in the opinion of Company, a Warranted Item is defective and the defect is within the terms of this Warranty, Company's sole obligation will be to repair or replace such defective Warranted Item (including by providing service, parts and labor, as applicable), at the option of Company.

PROCEDURES FOR REPAIR OR REPLACEMENT OF WARRANTED ITEMS: The Warranted Item will be repaired or replaced at a Company site, or such other location as determined by Company.

If the Warranted Item is to be replaced by the Company, and the End-User supplies a credit card number or purchase order for the value of the replacement Product, the Company will use commercially reasonable business efforts to ship (via standard ground shipment and at no cost to the End-User) in advance, the replacement Warranted Item to the End-User within one (1) business day after Company receives notice of the warranty claim. In such case, the End-User must return (at End-User's expense) the defective Warranted Item to the Company in the same packaging as the replacement Warranted Item received by the End-User or as otherwise instructed by Company. If Company does not receive the defective Warranted Item, Company will either charge the End-User's credit card, or send the End-User an invoice (which the End-User agrees to pay), for the value of the replacement Product.

If the Warranted Item is to be replaced by Company, but the End-User is unwilling or unable to supply a credit card number or purchase order for the value of the replacement Product, Company will use commercially reasonable business efforts to ship (via standard ground shipment and at no cost to the End-User) the replacement Warranted Item to the End-User within one (1) business day after Company receives the defective Product from the End-User (shipped at the End-User's expense).

Any returned Warranted Item or parts that are replaced may be replaced with new components, reconditioned components, or like-kind components (should original components no longer be available). All Warranted Items returned to Company and all parts replaced by Company shall become the property of Company. Any Warranted Items repaired or replaced pursuant to this Warranty will be warranted for the remaining term of the originally purchased Product's Warranty subject to all the terms thereof.

WHAT THIS LIMITED WARRANTY DOES NOT COVER: This Warranty does not cover any defects or damages caused by: (a) failure to properly store the Product before installation, including the charge of batteries no later than the date indicated on the packaging (if applicable); (b) shipping and delivery of the Product if shipping is FOB Factory; (c) neglect, accident, abuse, misuse, misapplication, or incorrect installation; (d) repair or alteration not authorized in writing by Company personnel or performed by an authorized Company Customer Service Engineer or Agent; (e) improper testing, operation, maintenance, adjustment, or an authorized Company Customer Service Engineer or Agent; (e) improper testing, operation, maintenance, adjustment, or modification of any kind not authorized in writing by Company personnel or performed by an authorized Company Customer Service Engineer or Agent; or (f) use of the Product under other than normal operating conditions or in a manner inconsistent with the Product's labels or instructions.

This Warranty is not valid if the Product's serial numbers have been removed or are illegible. Any Warranted Items repaired or replaced pursuant to this Warranty will be warranted for the remaining portion of the original Warranty subject to all the terms thereof.

COMPANY DOES NOT WARRANT SOFTWARE, INCLUDING SOFTWARE EMBEDDED IN PRODUCTS, THAT IS NOT CREATED BY COMPANY. WITHOUT LIMITING THE FOREGOING, COMPANY SPECIFICALLY DOES NOT WARRANT SOFTWARE (SUCH AS LINUX) THAT WAS CREATED USING AN "OPEN SOURCE" MODEL OR IS DISTRIBUTED PURSUANT TO AN OPEN SOURCE LICENSE. Communications cards of any kind, cables, mounting hardware, hardware, or enclosures, are not covered beyond 12 months from date of purchase.

LIMITED WARRANTY: This limited warranty (this "Warranty") applies only to the original End-User (the "End-User") of any N1C LR or LX-Series Lithium-ion Products (individually and collectively, the "Product") purchased on or after May 1, 2021 and cannot be transferred. This Warranty applies even in the event that the Product is initially sold by Company for resale to an End-User. Company shall not be responsible for any charges or expenses incurred for testing, checking, removal, or installation of Warranted Items.

LIMITATION OF LIABILITY: The remedies of the End-User set forth herein are exclusive and are the sole remedies for any failure of Company to comply with its obligations hereunder. In no event shall Company be liable in contract, in tort (including negligence or strict liability) or otherwise for damage to property or equipment other than the Products, including loss of profits or revenue, loss of use of Products, loss of data, cost of capital, claims of customers of the End-User, or any special, indirect, or revenue, loss of use of Products, loss of data, cost of capital, claims of customers of the End-User, or any special, indirect, incidental, or consequential damages whatsoever. The total cumulative liability of Company hereunder whether the claims are based in contract (including indemnity), in tort (including negligence or strict liability), or otherwise, shall not exceed the price of the Product on which such liability is based.

Company shall not be responsible for failure to provide service or parts due to causes beyond Company's reasonable control.

END-USER'S OBLIGATIONS: In order to receive the benefits of this Warranty, the End-User must use the Product in a normal way; follow the Product's user's guide; and protect against further damage to the Product if there is a covered defect.

OTHER LIMITATIONS: Company's obligations under this Warranty are expressly conditioned upon receipt by Company of all payments due to it (including interest charges, if any). During such time as Company has not received payment of any amount due to it for the Product, in accordance with the contract terms under which the Product is sold, Company shall have no obligation under this Warranty. Also, during such time, the period of this Warranty shall continue to run and the expiration of this Warranty shall not be extended upon payment of any overdue or unpaid amounts.

COSTS NOT RELATED TO WARRANTY: The End-User shall be invoiced for, and shall pay for, all services not expressly provided for by the terms of this Warranty, including without limitation, site calls involving an inspection that determines no corrective maintenance is required. Any costs for replacement equipment, installation, materials, freight charges, travel expenses, or maintenance is required. Any costs for replacement equipment, installation, materials, freight charges, travel expenses, or labor of Company representatives outside the terms of this Warranty will be borne by the End-User.

OBTAINING WARRANTY SERVICE: USA or Canada contact, N1 Critical Technologies, Inc. Janesville, WI 53545 **24 Hr Toll Free Support: (877)226-3311 or service@n1critical.com**