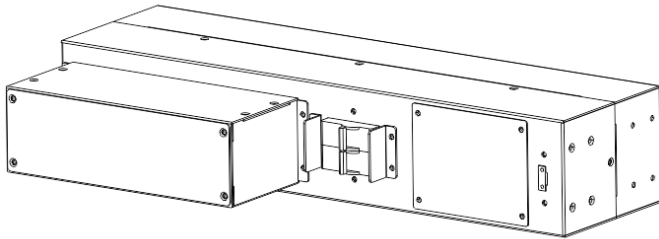


N1C



Maintenance Bypass Switch Module

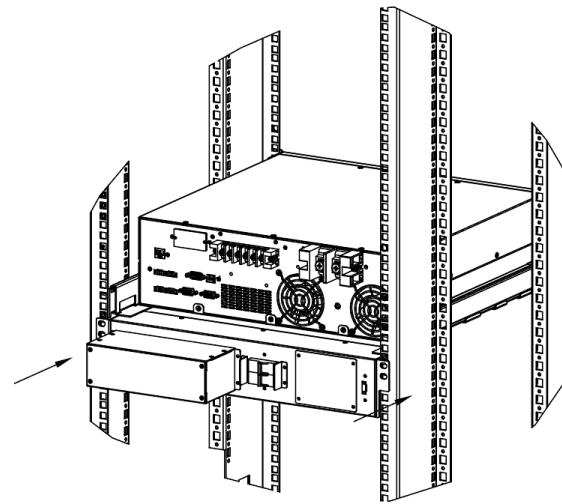
N1C.LR-MBM

1. Introduction

The module is used as an external maintenance bypass switch to provide continuous power without shutting down the connected loads during UPS scheduled maintenance or battery replacement. It's perfect to use in conjunction with 6KVA & 10KVA UPS.

Rack Mount the Unit

The module can be mounted to a 19" enclosure. Please follow below chart for rack mount installation.



2. Product Overview

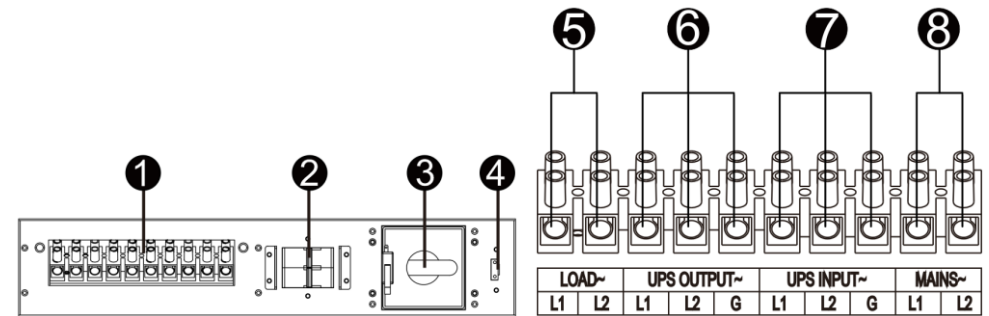


Diagram 1: Rear panel View

Diagram 2: Terminal overview

- ❶ Input/Output terminal
(Refer to diagram 2 for the details)
- ❷ UPS input breaker
- ❸ Maintenance bypass switch
- ❹ Control output signal slot

- ❺ Load terminal
- ❻ UPS output terminal
- ❼ UPS input terminal
- ❽ Mains terminal

3. Installation and Operation

Inspection

Unpack the package and check the package contents. The shipping package contains:

- Maintenance bypass switch module x 1
- User Guide x 1
- Control signal cable x 1

NOTE: Before installation, please inspect the unit. Be sure that nothing inside the package is damaged during transportation. Do not turn on the unit and notify the carrier and dealer immediately if there is any damage or missing of some parts.



Please keep the original package in a safe place for future use.

Initial Setup

The Installation and wiring must be performed in accordance with the local electric laws/regulations and execute the following instructions by professional personnel.

1) Make sure the mains wire and breakers in the building are enough for the rated capacity of UPS to avoid the hazards of electric shock or fire.

NOTE: Do not use the wall receptacle as the input power source for the UPS, as its rated current is less than the UPS's maximum input current. Otherwise, the receptacle may be burned and destroyed.

2) Switch off the mains switch in the building before installation.

3) Turn off and shut down the connected UPS.

4) Prepare wires based on the following table:

UPS	Wire Spec (AWG)	Torque (N·m)
6KVA	6	1
10KVA	4	1

NOTE 1: The cable should be able to withstand over 40A current. It is recommended to use 6 AWG or thicker wire for safety and efficiency.

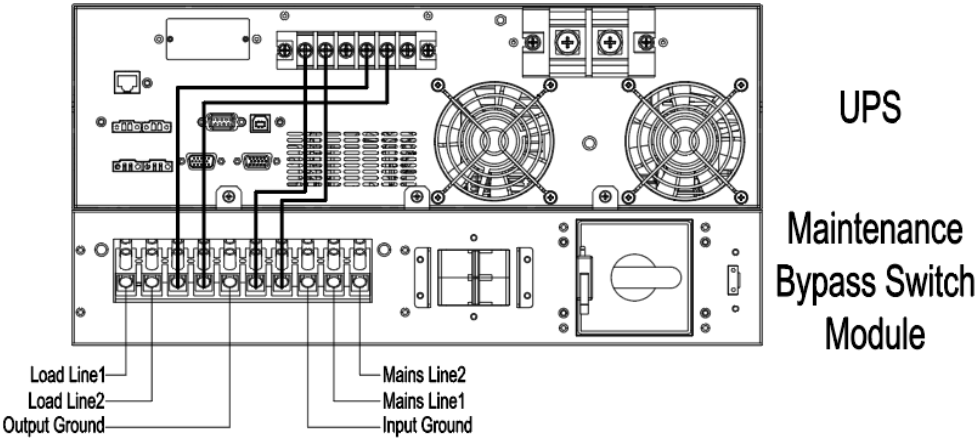
NOTE 2: The selections for color of wires should be followed by the local electrical laws and regulations.

5) Remove the terminal block cover on the rear panel of the module. Then connect the wires according to the following terminal block diagrams:

Connect UPS and External Maintenance Bypass Switch Module

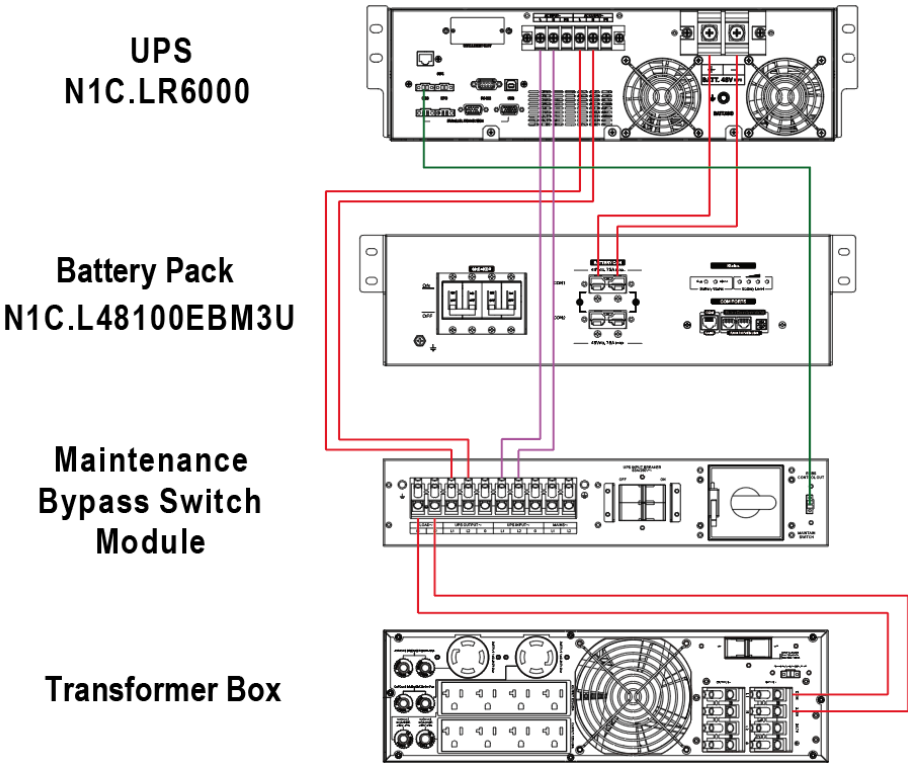
Remove the terminal block cover on the rear panel of the module. Then connect output terminals of UPS to output terminals of switch module. Connect utility input terminals of UPS to UPS input terminals of switch module. Connect signal slots of UPS and switch module with control signal cable attached to the package.

Refer to the following terminal block diagrams:



NOTE : Make sure that the wires are connected tightly with the terminals.

Wiring diagram example to connect UPS, battery pack, ISO box and maintenance bypass switch module:



6) Replace the terminal block cover back to the rear panel of the bypass.

4. Operation

Transfer to Maintenance Bypass

To transfer to maintenance bypass from UPS, follow the below steps:

Step 1: Press “OFF” button of UPS unit to transfer the UPS to internal bypass mode.

Step 2: Open the maintenance module switch cover. If step 1 is not executed first, then UPS unit will transfer to bypass mode automatically with control output signal connection when opening the maintenance switch cover.

Step 3: Rotate rotary switch to “BPS” position and switch off UPS input breaker on the bypass module. Then, all devices are directly powered by utility and there is no current through the UPS. The output and input of UPS are isolated from the system. You may now service or maintain the UPS by shutting down the batteries of UPS.

Transfer to UPS Protection

After maintenance service is done, follow below steps to transfer back to UPS operation.

Step 1: Switch on the input breaker of the module and reconnect UPS battery input breaker. Then UPS will enter to bypass mode.

Step 2: Transfer rotary switch to “UPS” position. Then, all devices are powered by utility through UPS bypass mode.

Step 3: Close back maintenance switch cover and press “ON” button of UPS unit. Then, all devices are protected by the UPS.

NOTE: If maintenance will be executed in another place, before removing the UPS and the module, please follow steps of “Transfer to Maintenance Bypass” and then disconnect all wires between UPS and the module for complete isolation.

5. Specification of Critical Components

Parameter		Max.
Input breaker	Current	63 A
	Voltage	230 V
Bypass switch	Current	63 A
	Voltage	440 V
Input/Output terminal	Current	87 A
	Voltage	300 V

Dimensions with package (D x W x H)	Outside	590*515*233 mm (23.2*20.3*9.2 in)
	Inside	500*215*110 mm (19.7*8.5*4.3 in)
Dimensions without package (D x W x H)	/	438*206*86 mm (17.2*8.1*3.4 in)
Weight with package	Outside(5PCS)	24 Kg / 52.9 lbs
	Inside	4.5 Kg / 9.9 lbs
Weight without package	/	3.8 Kg / 8.4 lbs

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