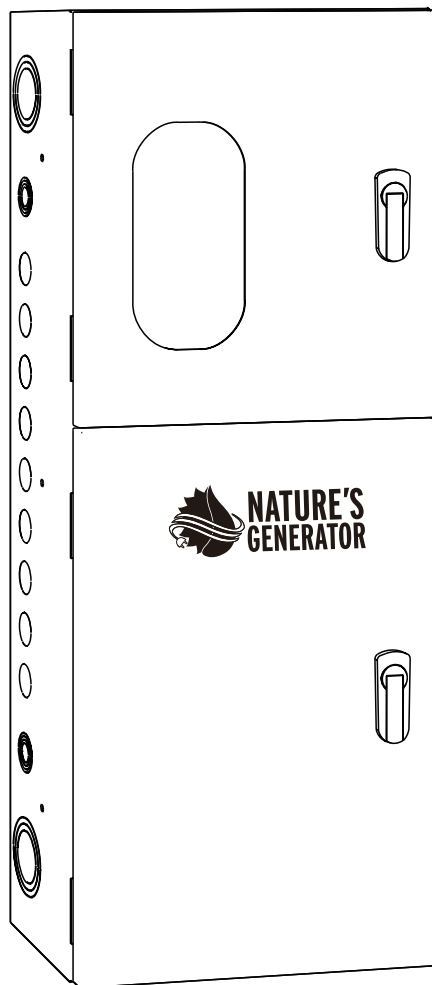


Nature's Generator 125A 24 Spaces 48 Circuits Automatic Transfer Switch User Manual



Warning

Loss of Life. This product is not intended to be used in critical life support applications. Failure to adhere to this warning could result in death or serious injury.

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Welcome

Congratulations on the purchase of your new Nature's Generator 125A 24 Spaces 48 Circuits Automatic Transfer Switch, a state-of-art automatic transfer switch that switches the power between the main power source and backup power source automatically when connected to your home's electrical panel board.

Please read the instructions below thoroughly prior to any use, then store this manual in a safe place for future reference.

If at any time you have questions about this product, or if you require additional assistance, please do not hesitate to email us at support@naturesgenerator.com or contact our Customer Support line at 800-975-7909.

Warning!

THIS AUTOMATIC TRANSFER SWITCH MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN IN COMPLIANCE WITH ALL APPLICABLE ELECTRICAL CODES!

PLEASE DO NOT CONNECT APPLIANCES THAT EXCEED THE CAPACITY OF THIS AUTOMATIC TRANSFER SWITCH.

PLEASE SHUT DOWN THE MAIN POWER SOURCE AND BACKUP POWER SOURCE BEFORE WORKING ON THIS AUTOMATIC TRANSFER SWITCH.

BE AWARE OF HIGH VOLTAGE! HIGH VOLTAGE IS PRESENT IN TRANSFER SWITCH AND TERMINALS.

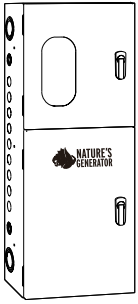
BE AWARE OF AUTOMATIC START-UP! THIS AUTOMATIC TRANSFER SWITCH STARTS AUTOMATICALLY WHEN EITHER THE MAIN POWER SOURCE OR BACKUP SOURCE ENERGIZES THIS AUTOMATIC TRANSFER SWITCH.

PERFORM THE INSTALLATION EXACTLY ACCORDING TO THIS MANUAL. FAILURE TO DO SO COULD DAMAGE THIS AUTOMATIC TRANSFER SWITCH AND CONNECTED EQUIPMENT OR APPLIANCES.

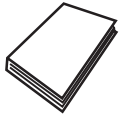
THIS PRODUCT IS NOT INTENDED TO BE USED IN A CRITICAL LIFE SUPPORT APPLICATION.

Unpack Your Automatic Transfer Switch

1. Automatic Transfer Switch



2. This User Manual



3. Manual Override Handle

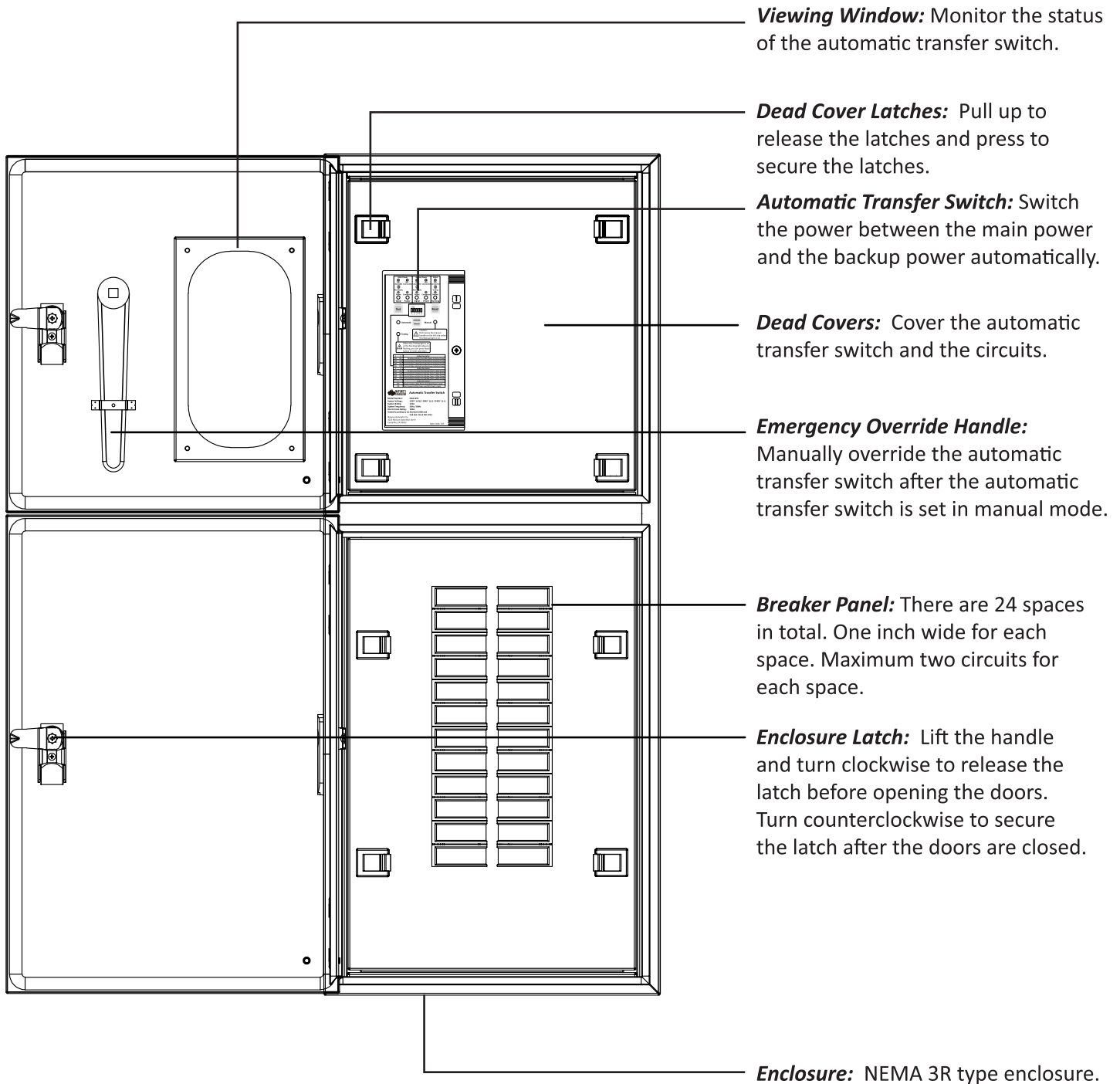


4. Isolation Pads x 4



Install Your Automatic Transfer Switch

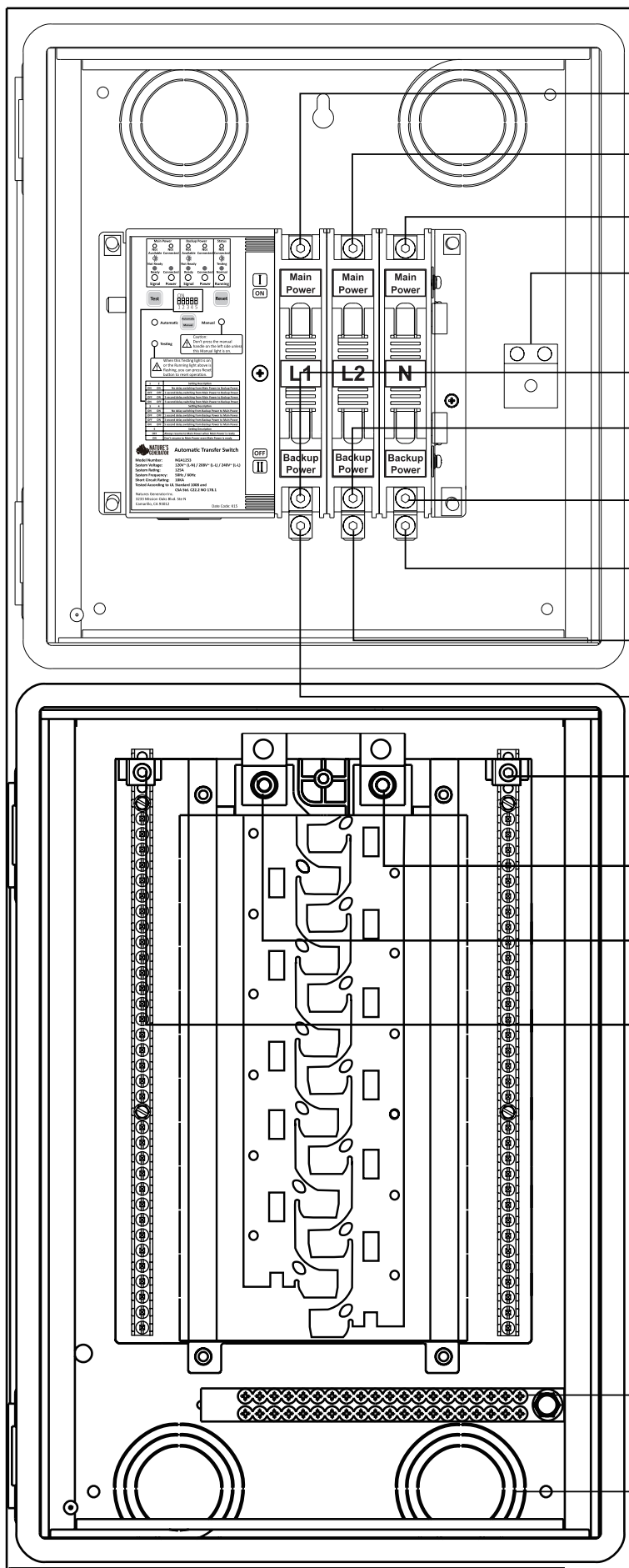
Key Components of Automatic Transfer Switch



Mount Your Automatic Transfer Switch

1. Locate your existing electrical panel board.
2. Decide the appropriate location to mount the automatic transfer switch. You might need to consider the layout of installation, the convenience and proximity to the electrical panel boards, the existing power source, the alternative power source and the circuits you want to power.
3. Mount the automatic transfer switch vertically to prevent any distortion.
4. If you prefer to flush mount the automatic transfer switch, purchase the flush mount kit through www.naturesgenerator.com or 800-975-7909 before the installation.
5. The enclosure is rated NEMA 3R. You can mount it either indoors or outdoors by following the appropriate building code.

Follow the diagrams below to connect the wires. Choose the appropriate gauges for your specific application. Each terminal is able to accommodate up to 2/0 AWG.



Main Power L1 Terminal: Connect to the hot 1 wire of the main power source.

Main Power L2 Terminal: Connect to the hot 2 wire of the main power source.

Main Power N Terminal: Connect to the neutral wire of the main power source.

Ground Bar: Connect the ground wires. This ground bar connects to the other ground bar below.

Backup Power L1 Terminal: Connect to the hot 1 wire of the backup power source.

Backup Power L2 Terminal: Connect to the hot 2 wire of the backup power source.

Backup Power N Terminal: Connect to the neutral wire of the backup power source.

Load N Terminal: Connect to the neutral wire of the load

Load L2 Terminal: Connect to the hot 2 wire of the load.

Load L1 Terminal: Connect to the hot 1 wire of the load.

Neutral Bar: Connect to the neutral wires.

L2 Bus Bar: Connect to the hot 2 wires.

L1 Bus Bar: Connect to the hot 1 wires.

Neutral Bar: Connect to the neutral wires.

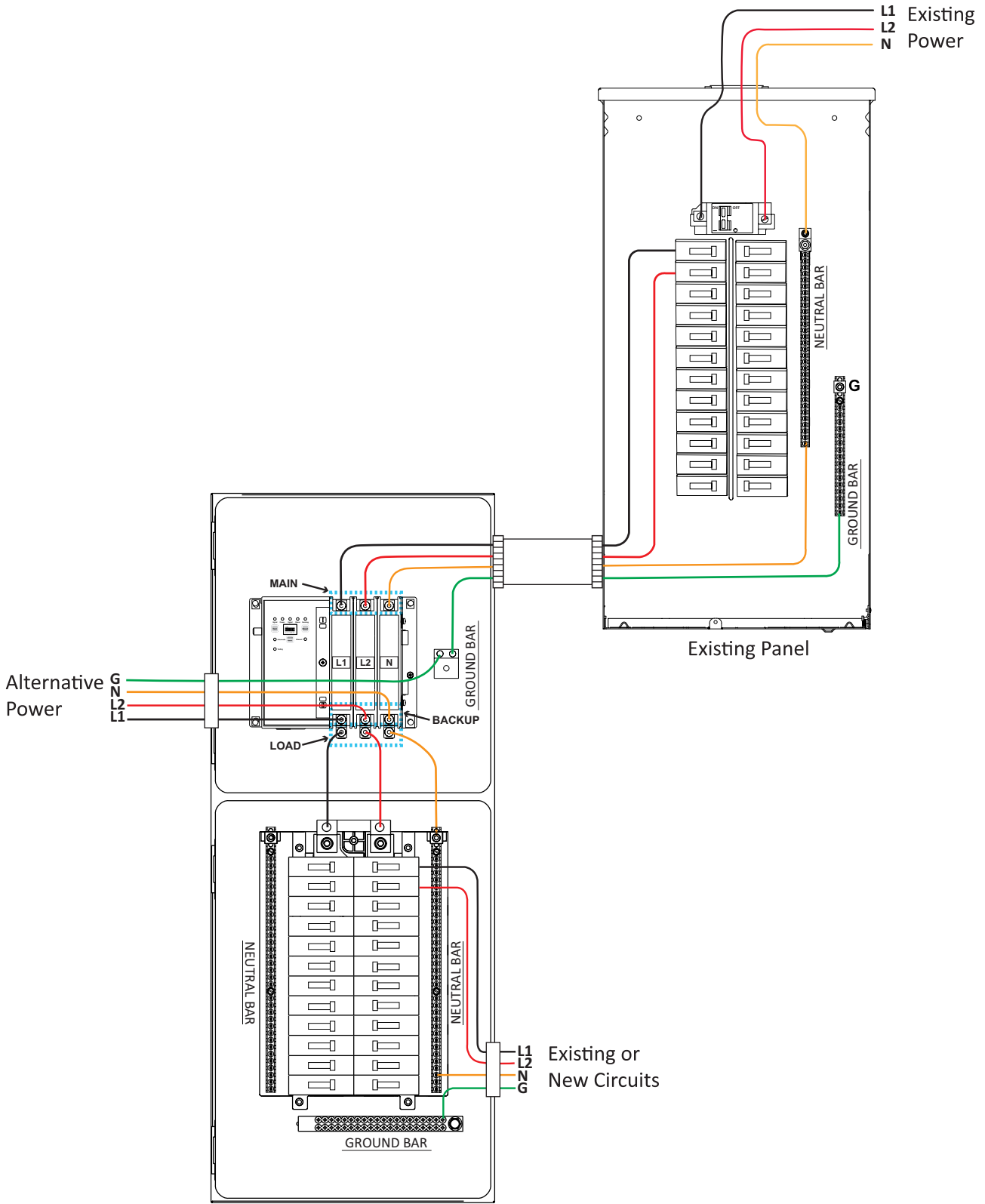
Ground Bar: Connect to the ground wires. This ground bar connects to the other ground bar above.

Knockouts: For hardwire connections.

Diagram #1:

The automatic transfer switch is installed after the existing 120V/240V electrical panel.

The existing power is the main power source, and the alternative power is the backup power source.

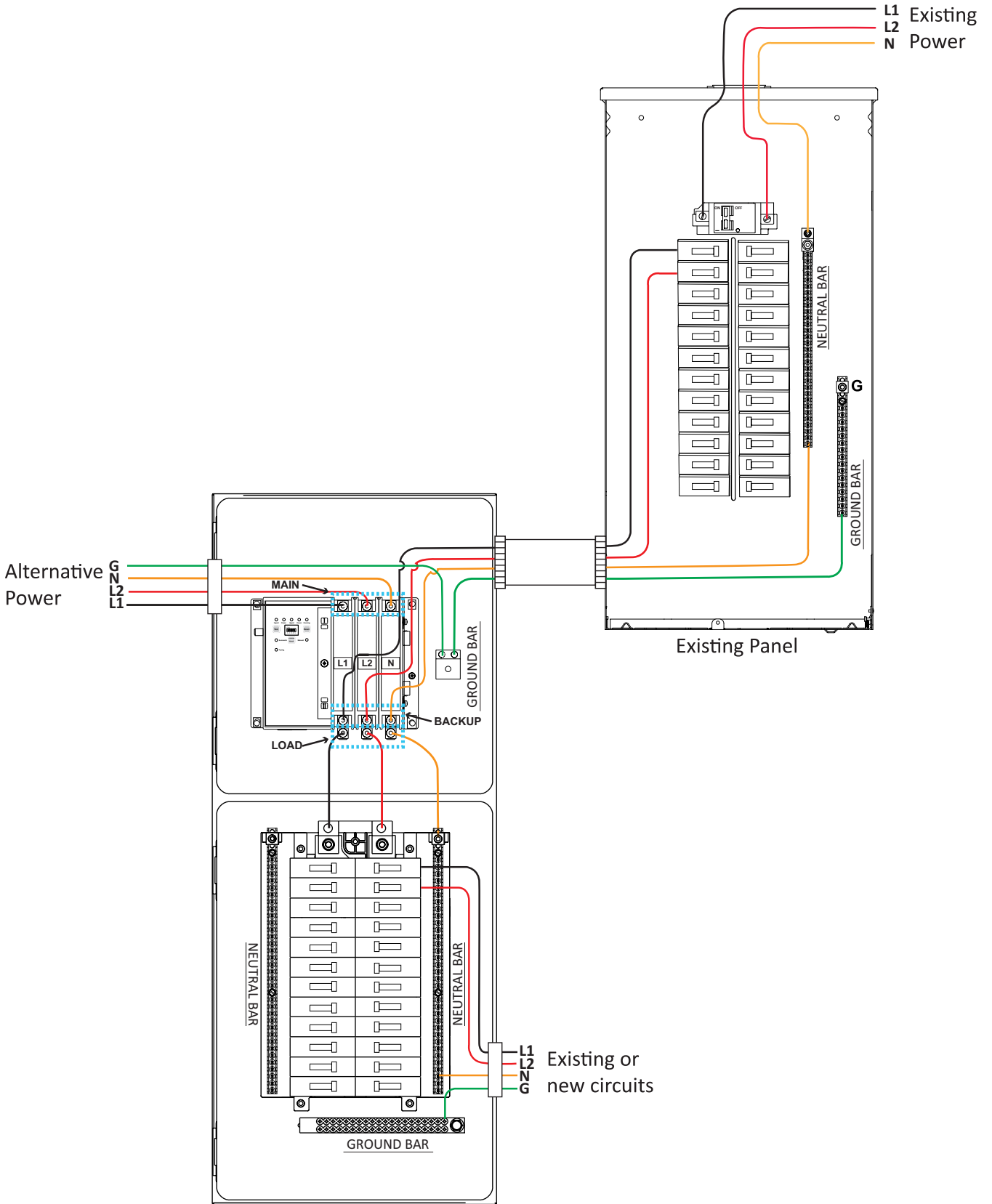


LINE 1 HOT 1 "L1"
 LINE 2 HOT 1 "L2"
 NEUTRAL "N"
 GROUND "G"

Diagram #2:

The automatic transfer switch is installed after the existing 120V/240V electrical panel.

The alternative power is the main power source, and the existing power is the backup power source.

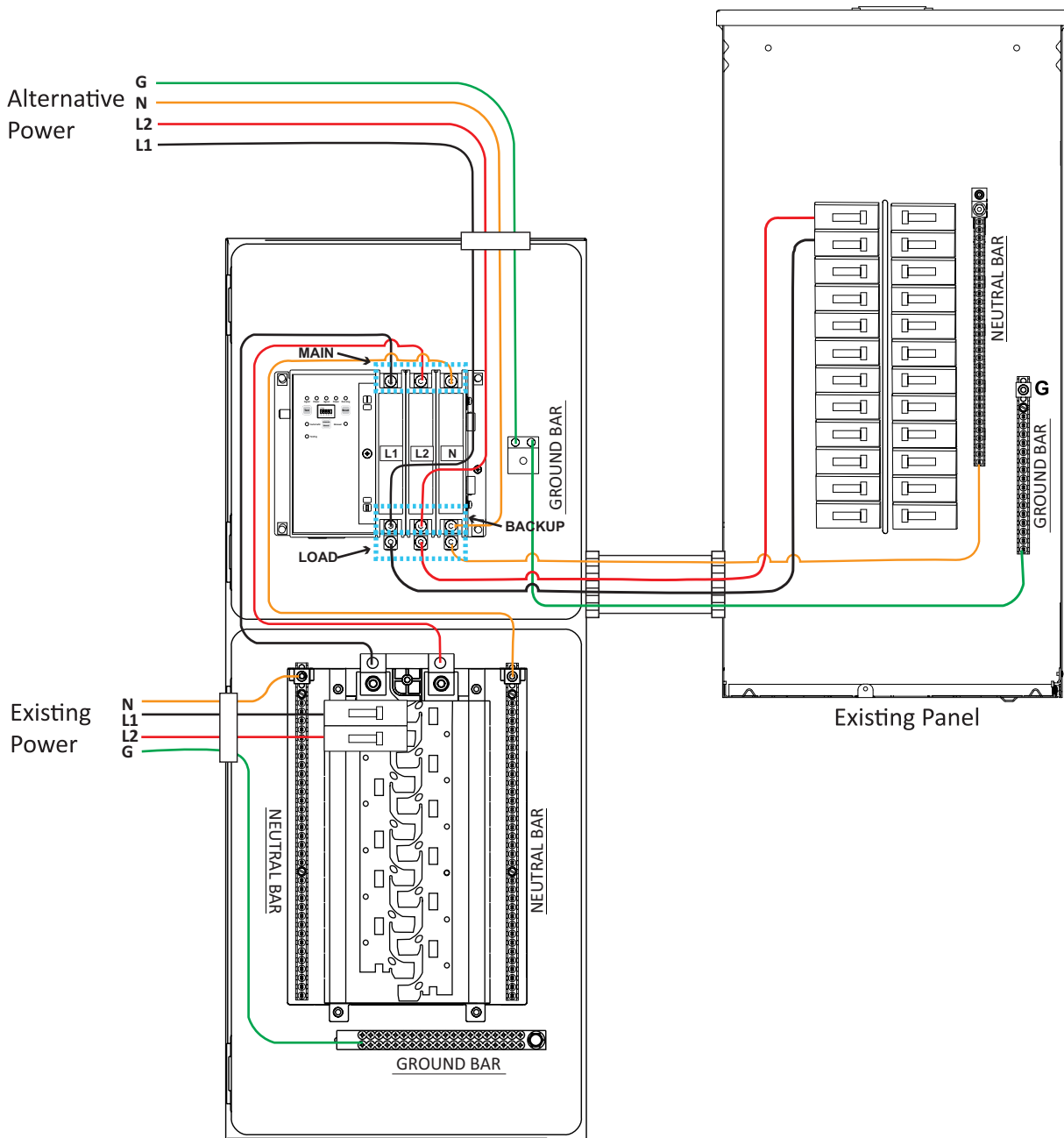


LINE 1 HOT 1 "L1"
 LINE 2 HOT 1 "L2"
 NEUTRAL "N"
 GROUND "G"

Diagram #3:

The automatic transfer switch is installed prior to the existing 120V/240V electrical panel.

The existing power is the main power source, and the alternative power is the backup power source.

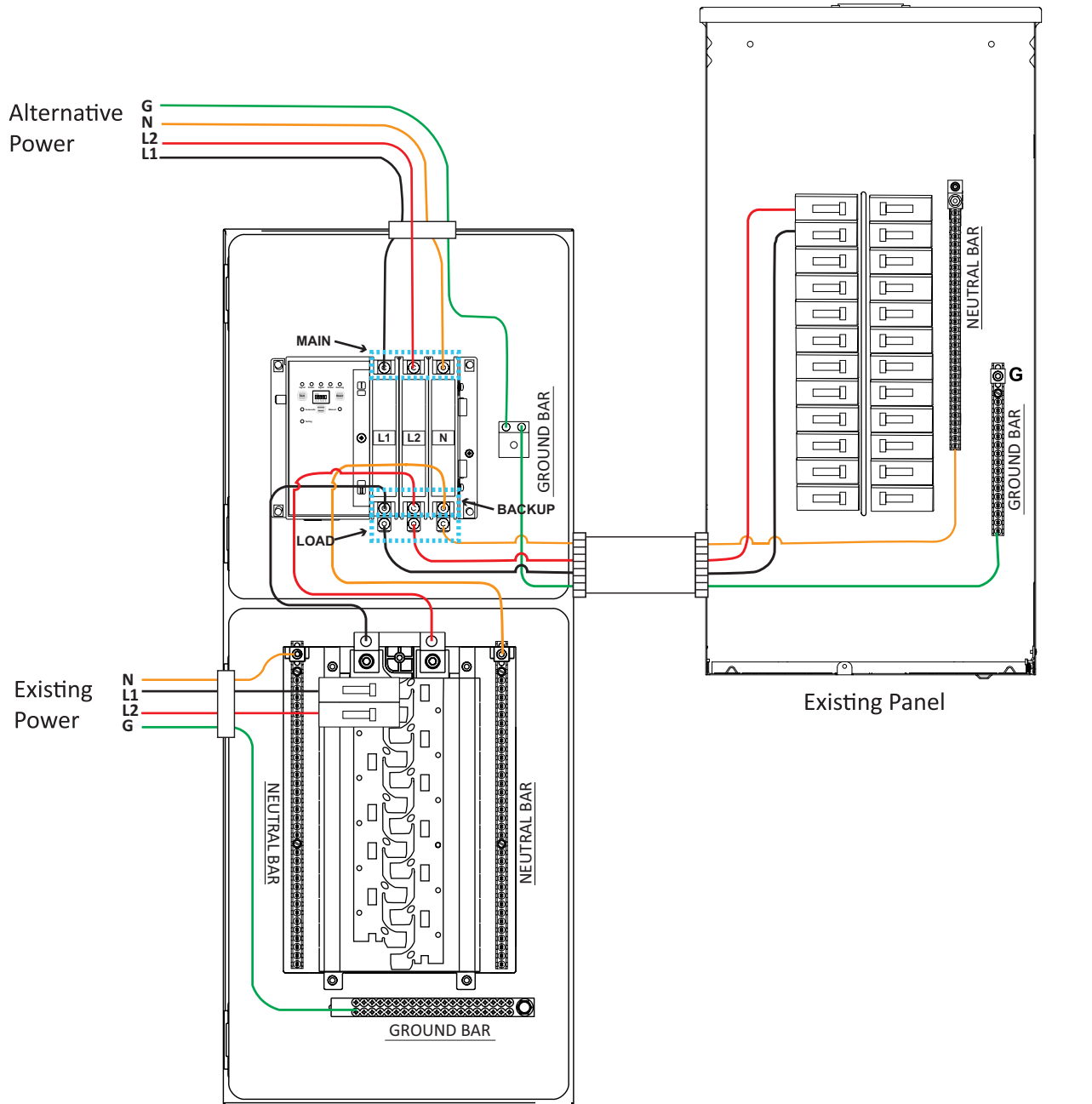


LINE 1 HOT 1 "L1"
 LINE 2 HOT 1 "L2"
 NEUTRAL "N"
 GROUND "G"

Diagram #4:

The automatic transfer switch is installed prior to the existing 120V/240V electrical panel.

The alternative power is the main power source, and the existing power is the backup power source.

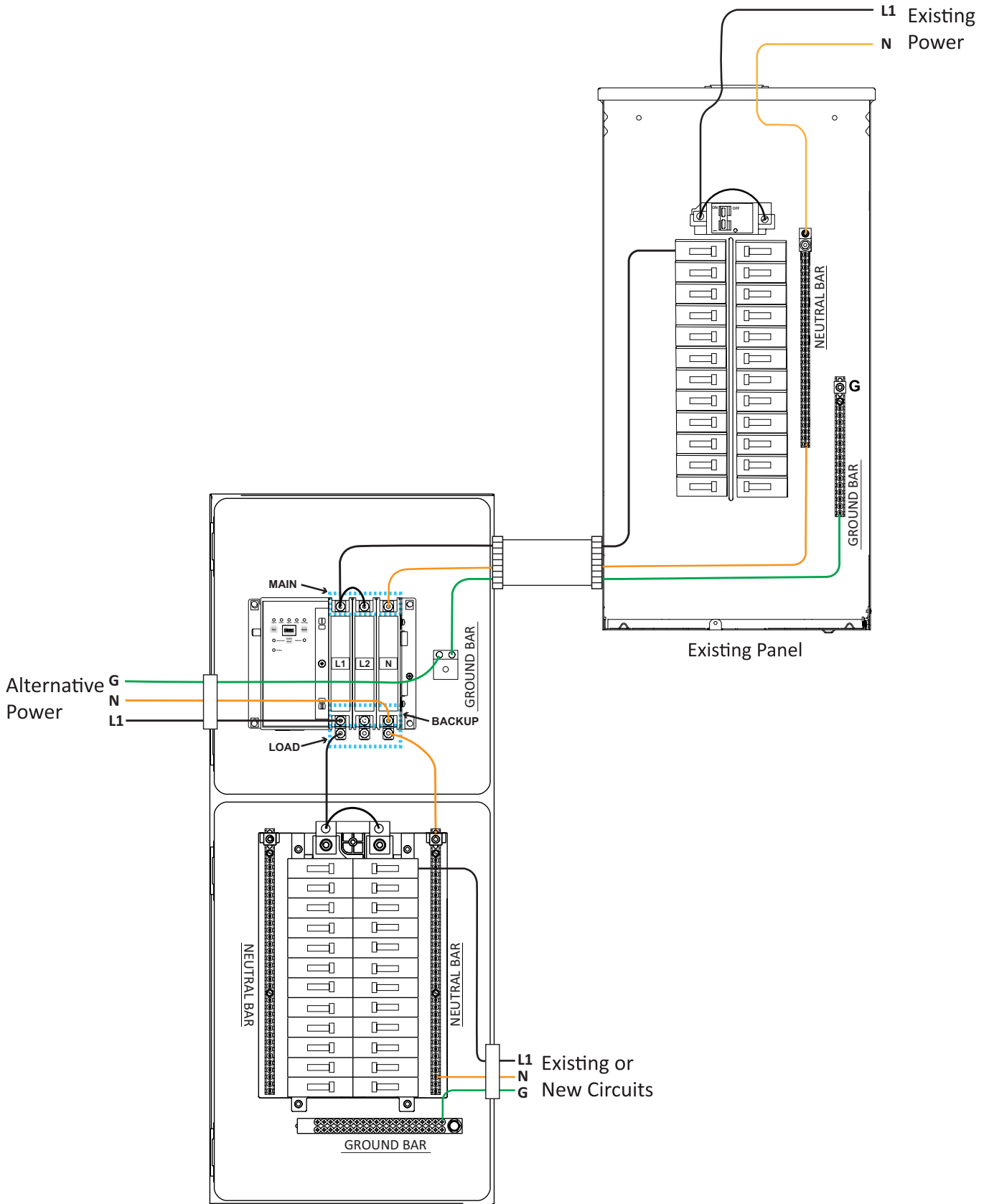


LINE 1 HOT 1 "L1"
 LINE 2 HOT 1 "L2"
 NEUTRAL "N"
 GROUND "G"

Diagram #5:

The automatic transfer switch is installed after the existing 120V electrical panel.

The existing power is the main power source, and the alternative power is the backup power source.

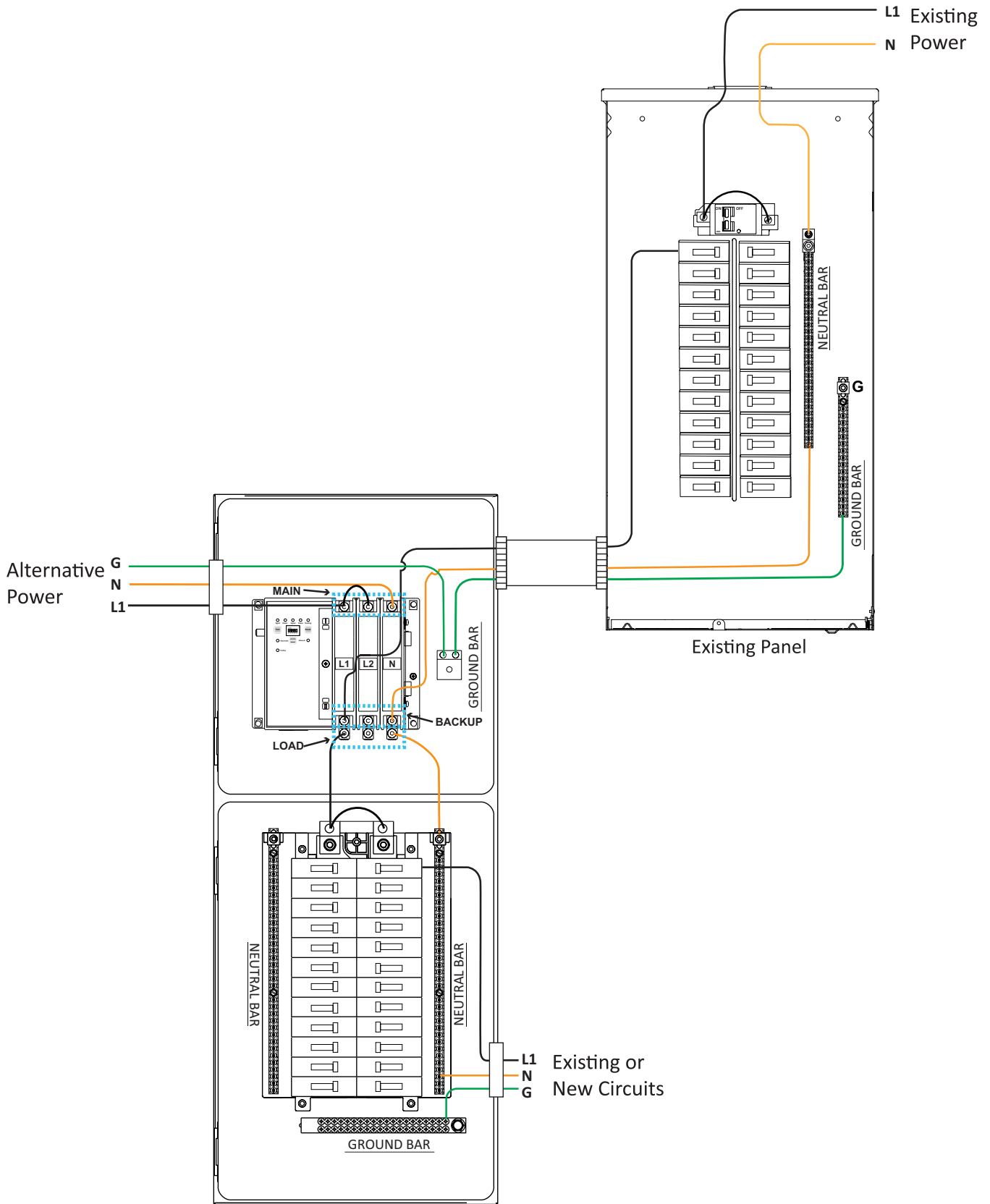


— LINE 1 HOT 1 "L1" — NEUTRAL "N" — GROUND "G"

Diagram #6:

The automatic transfer switch is installed after the existing 120V electrical panel.

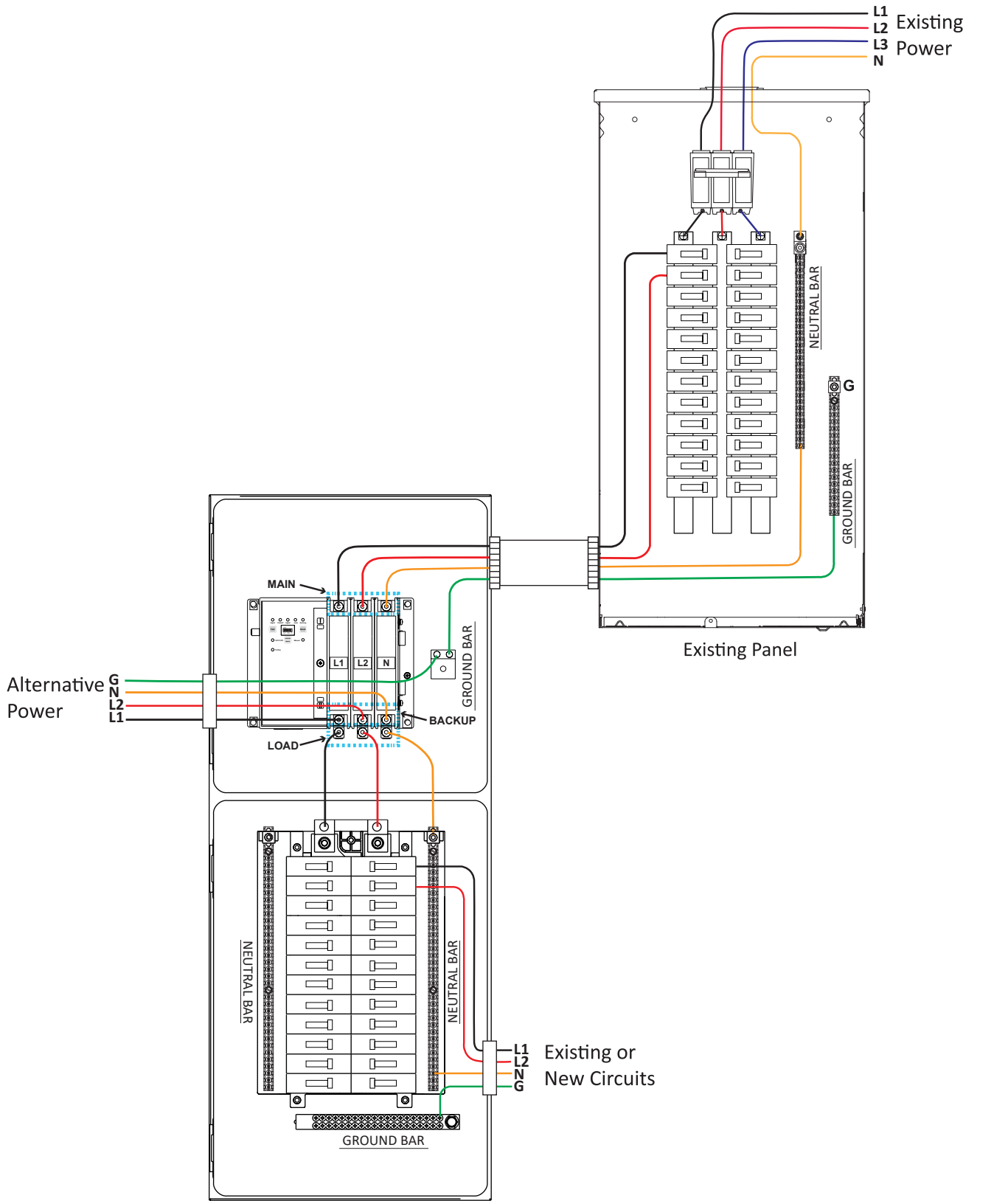
The alternative power is the main power source, and the existing power is the backup power source.



— LINE 1
HOT 1 "L1" — NEUTRAL "N" — GROUND "G"

Diagram #7:

The automatic transfer switch is installed after the existing 120V/208V electrical panel. The existing power is the main power source, and the alternative power is the backup power source. This automatic transfer switch only supports two phases out of the three phases of 120V/208V.



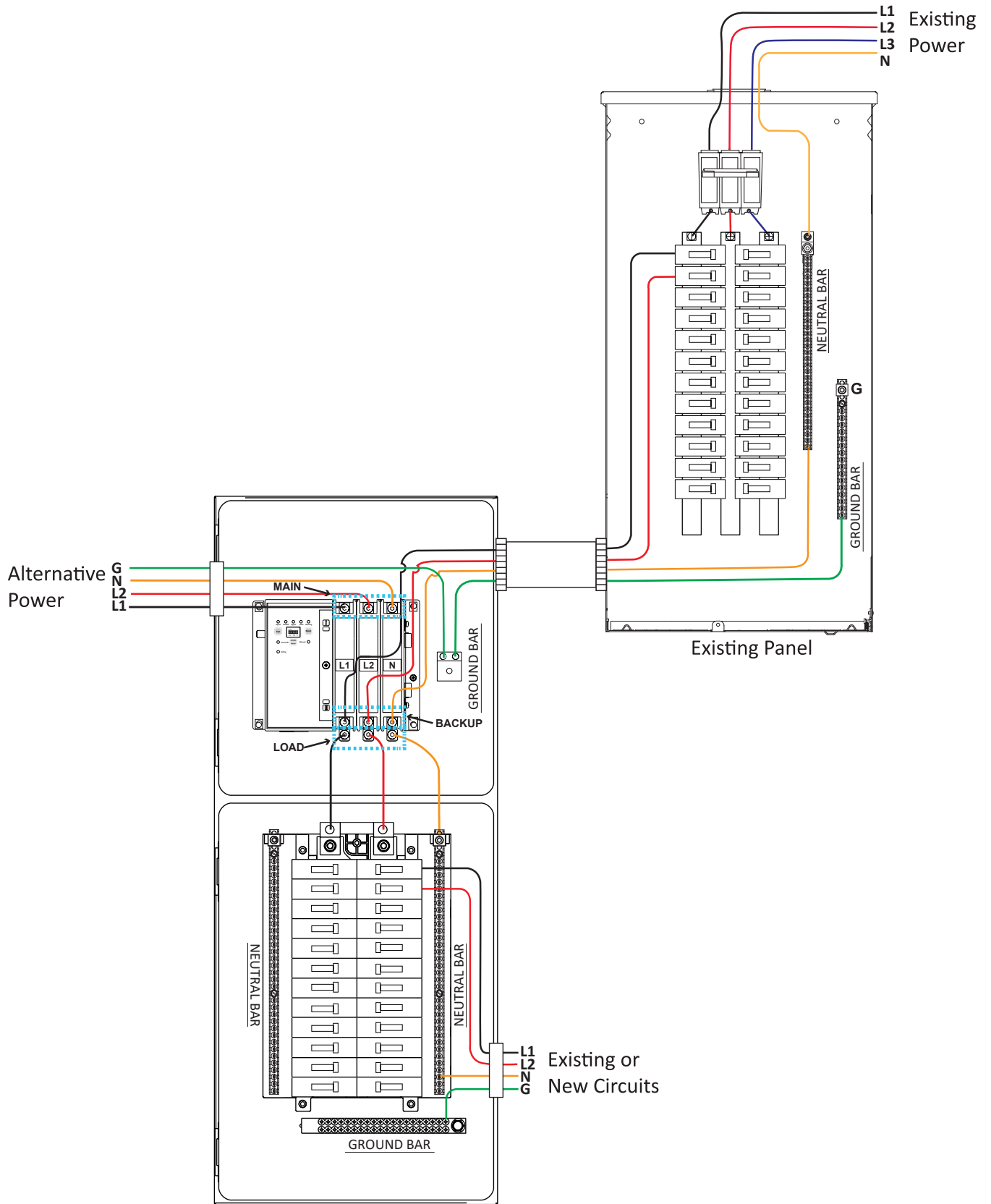
LINE 1 HOT 1 "L1"
 LINE 2 HOT 1 "L2"
 LINE 3 HOT 1 "L3"
 NEUTRAL "N"
 GROUND "G"

Diagram #8:

The automatic transfer switch is installed after the existing 120V/208V electrical panel.

The alternative power is the main power source, and the existing power is the backup power source.

This automatic transfer switch only supports two phases out of the three phases of 120V/208V.

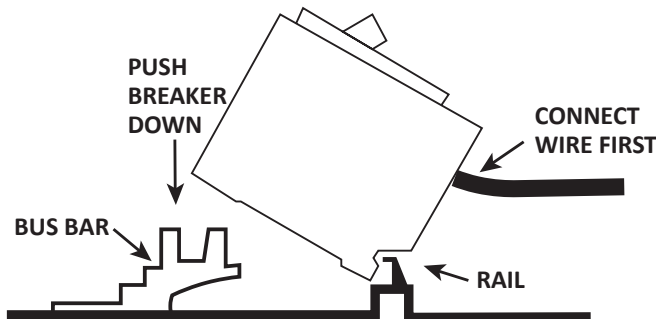


- LINE 1
HOT 1 "L1"
- LINE 2
HOT 1 "L2"
- LINE 3
HOT 1 "L3"
- NEUTRAL "N"
- GROUND "G"

Install the Breakers

Nature's Generator automatic transfer switch offers 24 spaces that are suitable for one inch standard, tandem, GFCI, AFCI breakers from Simens/Murray, Easton, GE, Square D/Schneider and other listed suppliers.

1. Release the dead cover latches to remove the dead cover.
2. Remove the required breaker knockouts for installation.
3. Insert the tab on the breaker to the rail and push down the breaker into the bus bar.



4. Mark each circuit on the directory label accordingly.

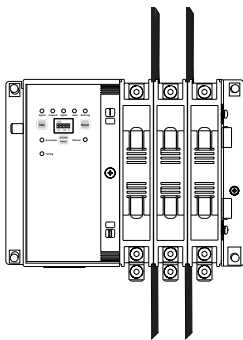
Install Circuit Conductors

Continue the installation by installing the circuit conductors.

1. Decide what knockouts need to be punched.
2. Install properly sized conductors into the automatic transfer switch through the punched knockouts.
3. Connect the hot conductors to the properly sized circuit breakers approved to use with this automatic transfer switch.
4. Terminate the neutral conductors at the neutral bars.
5. Terminate the grounding conductors at the grounding bars.
6. Size all conductors, conduits, raceways, junction boxes, if required to the applicable NEC (National Electric Code) or CEC (Canadian Electric Code) if in Canada.

Insert the Isolation Pads

Nature's Generator automatic transfer switch offers 4 isolation pads that isolate L1, L2 and N lines. Cut the pads to the appropriate sizes and insert them in between the lines.



Finish the Installations

1. Verify the installation has been properly performed as directed by this manual and meets all applicable laws and codes.
2. Verify proper operation of the automatic transfer switch as directed by this manual.
3. Apply necessary labels, marks and protections as needed. Educate the end user on proper operation, maintenance and service procedures.

Operate Your Automatic Transfer Switch

Understand the Controlling Panel.

Main Power Signal Light: If the light is on and steady, the main power is ready. If it is flashing, the main power is not ready.

Main Power Power Light: If the light is on and steady, the main power is connected.

Backup Power Signal Light: If the light is on and steady, the backup power is ready. If it is flashing, the backup power is not ready.

Backup Power Power Light: If the light is on and steady, the backup power is connected.

Running light: If the light is on and steady, the automatic transfer switch operates normally. If it is flashing, the automatic transfer switch is in testing mode.

DIP (Dual In-line Package) switch: Change the settings of the automatic transfer switch.

1	2	Setting Description
ON	ON	No delay switching from Main Power to Backup Power
OFF	OFF	1 second delay switching from Main Power to Backup Power
OFF	ON	3 second delay switching from Main Power to Backup Power
ON	OFF	5 second delay switching from Main Power to Backup Power
3	4	Setting Description
ON	ON	No delay switching from Backup Power to Main Power
OFF	OFF	1 second delay switching from Backup Power to Main Power
OFF	ON	3 second delay switching from Backup Power to Main Power
ON	OFF	5 second delay switching from Backup Power to Main Power
5		Setting Description
OFF		Always resume to Main Power when Main Power is ready
ON		Don't resume to Main Power even Main Power is ready

Main Power Status: If it is on, the main power is connected to the load. If it is off, the main power is not connected to the load.

Reset Button: Press this button to resume the default operating mode.

Test Button: Press this button to enter testing mode.

Manual Light: If the light is on and steady, the automatic transfer switch is in manual mode.

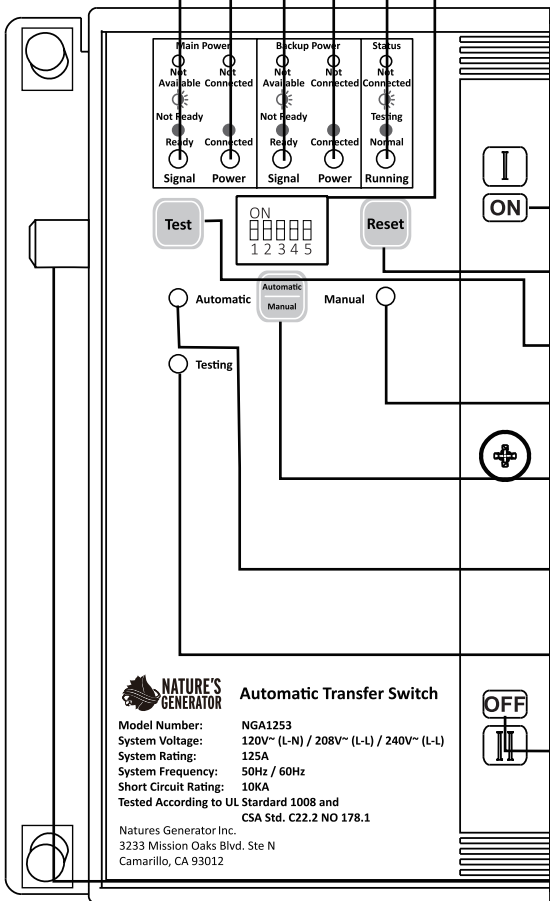
Automatic/Manual Button: Press this button to switch between automatic mode and manual mode.

Automatic Light: If the light is on and steady, the automatic transfer switch is in automatic mode.

Testing Light: If the light is on and steady, the automatic transfer switch is in testing mode or protection mode.

Backup Power Status: If the light is on and steady, the backup power is connected to the load. If it is off, the backup power is not connected to the load.

Manual Override Rod: It only works during the manual mode! Press down this rod by the manual override handle to switch between the main power and the backup power.



Manual Override Operation

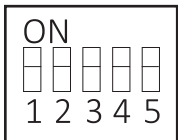
Never operate the automatic transfer switch manually in the automatic mode!

A manual override handle is shipped with the automatic transfer switch. During emergency situations when the automatic transfer switch does not operate normally, you can use the manual override handle to operate the transfer switch.

1. Press the automatic/manual button to switch the automatic transfer switch to the manual mode. The manual light turns on.
2. Use the manual override handle to hold the manual override rod.
3. Press down the manual override handle to switch between the main power source and backup power source.

Adjust the DIP (Dual In-line Packages) Switches.

You can adjust Nature’s Generator automatic transfer switches settings by using the DIP switches. There are five switches that are named 1, 2, 3, 4 and 5 from left to right. Each switch has two positions: the top is on, and the bottom is off.



The number 1 switch and number 2 switch control how fast to switch from the main power to the backup power.

1	2	Setting Description
ON	ON	No delay switching from Main Power to Backup Power
OFF	OFF	1 second delay switching from Main Power to Backup Power
OFF	ON	3 second delay switching from Main Power to Backup Power
ON	OFF	5 second delay switching from Main Power to Backup Power

The number 3 switch and number 4 switch control how fast to switch from the backup power to the main power.

3	4	Setting Description
ON	ON	No delay switching from Backup Power to Main Power
OFF	OFF	1 second delay switching from Backup Power to Main Power
OFF	ON	3 second delay switching from Backup Power to Main Power
ON	OFF	5 second delay switching from Backup Power to Main Power

The number 5 switch controls whether to resume to the main power or not.

5	Setting Description
OFF	Always resume to Main Power when Main Power is ready
ON	Don't resume to Main Power even Main Power is ready

FAQ

Where shall I install the automatic transfer switch?

It depends on the layout of installation. You might need to consider the convenience and proximity to the electrical panel boards, the existing power source, the alternative power source and the circuits you want to power.

Can the automatic transfer switch be installed outdoors?

Yes. The enclosure is rated NEMA 3R. Follow the proper building codes for the installation.

Can the automatic transfer switch flush mounted?

Yes. The enclosure is designed to fit in between two studs that are 16" on center or 24" on center. The flush mount is not included in the box. Purchase the flush mount kit through www.naturesgenerator.com or 800-975-7909 before the installation.

Does the automatic transfer switch work with 240V?

Yes. It works with 120/240V electrical system. Follow the diagrams in the section "Connect Your Automatic Transfer Switch".

Does the automatic transfer switch work with 120V only?

Yes. It works with 120V only electrical system. Follow the diagrams in the section "Connect Your Automatic Transfer Switch".

Does the automatic transfer switch work with 120V/208V?

Yes. It works with 2 phases out of 3 phases of 120V/208V electrical system. Make sure your alternative power source is compatible with the circuits you want to power. Follow the diagrams in the section "Connect Your Automatic Transfer Switch".

Does the automatic transfer switch work with 277V/480V?

No, it does not.

Can the automatic transfer switch handle 50A current?

Yes. It can handle up to 125A for line 1 and line 2.

Can the automatic transfer switch handle 100A current?

Yes. It can handle up to 125A for line 1 or line 2.

Can the automatic transfer switch work with other solar generators?

Yes. It can work with other brands of solar powered or battery powered generators as long as the output voltage and current are within the specifications of the automatic transfer switch.

Can the automatic transfer switch work with gas generators?

Yes. It also works with fuel powered generators as long as the output voltage and current are within the specifications of the automatic transfer switch. Either this automatic transfer switch needs to be installed outdoors or an outdoor inlet box is required since the gas generator must be outdoors.

Does the automatic transfer switch recharge the solar generator?

No. It does not recharge the solar generator. The automatic transfer switch only connects to the output port of the solar generator.

Does the automatic transfer switch start the gas generator automatically?

No. It does not auto start the gas generator.

What type of power sources are usually connected to the automatic transfer switch?

The main function of the automatic transfer switch is to switch between the main power source and the backup power source. It can connect between the grid and the generator, or between two generators or even between two grids.

Why does the automatic transfer switch also control the neutral line?

We understood some other brands of automatic transfer switch do not control the neutral line. Nature's Generator believes safety is of paramount importance and decided to control the neutral line as well.

Can I use it off the grid like in cabin or RV or tiny house?

Yes. It can be used to manage the power sources from two generators or manage the power sources between the generator and the temporary shore power.

How many circuits can be installed in the automatic transfer switch?

You can install up to 48 circuits by using tandem breakers.

What type of breakers can I install in the automatic transfer switch?

You can install one inch standard, tandem, GFCI, AFCI breakers from Simens/Murray, Easton, GE, Square D/Schneider and other listed suppliers.

Do I need to bond the neutral bar and ground bar?

It depends. You need to follow the proper electrical code to decide bonding or not.

Does automatic transfer switch work same as the UPS (uninterrupted power supply)?

Similar, but not exactly. The automatic transfer switch usually operates slower than the UPS.

Specifications

System Rating:

125A

System Voltage:

120 V~ (L-N) / 208V~ (L-L) / 240V~ (L-L)

System Frequency:

50Hz / 60Hz

Number of Spaces:

24 spaces

Number of Circuits:

Expandable to 48 circuits with tandem breakers

Dimensions

35.3 x 14.2 x 6.3 inches

Weight:

58 lbs

Limited Warranty

One Year Limited Warranty

Natures Generator Inc. warrants to you, the original purchaser of this new product, that the product shall be free of defects in the original manufacture of the material or workmanship for a period of one (1) year from the original date of your purchase of the product ("Warranty Period"). This product must be purchased from an authorized dealer and packaged with this warranty statement. This warranty does not cover a refurbished product.

What does this Warranty Cover?

During the Warranty Period, if the original manufacture of the material or workmanship of the product is determined to be defective by an authorized dealer, Natures Generator, Inc. will (at its sole option):

- (1) repair the product with new or rebuilt parts;
or
- (2) replace the product at no charge with new or rebuilt comparable products or parts.

Products and parts replaced under this warranty become the property of Nature's Generator and are not returned to you. If service of products or parts are required after the Warranty Period expires, you must pay all labor and parts charges. This warranty lasts as long as you own your product during the Warranty Period. Warranty coverage terminates if you sell or otherwise transfer the product.

How to Obtain Warranty Service?

Please call 1-800-975-7909 Monday through Friday, 9:00AM to 5:00PM PST. You will be provided with a Return Merchandise Authorization (RMA) number and return instructions.

Send product to:

Natures Generator Inc
3233 Mission Oaks Blvd. Ste N
Camarillo, CA 93012

Please include the RMA number prominently displayed on the shipping box and include your name, phone number and address with the product inside the box.

Where is the Warranty Valid?

This warranty is valid only to the original purchaser of the product in United States.

What our Warranty does not Cover?

This warranty does not cover:

- Cosmetic damage
- Damage due to acts of God, such as lightning strikes
- Accident
- Misuse
- Abuse
- Negligence
- Commercial use
- Modification of any part of the product
- Damage due to incorrect operation or maintenance
- Connection to an incorrect voltage supply
- Attempted repair by anyone other than a facility authorized by Natures Generator Inc. to service the product
- Products sold as is or with all faults
- Consumables, such as batteries
- Products where the factory applied serial number has been altered or removed

REPAIR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS YOUR EXCLUSIVE REMEDY. NATURES GENERATOR INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR THE BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT, INCLUDING, BUT NOT LIMITED TO LOST DATA, LOSS OF USE OF YOUR PRODUCT, LOST BUSINESS OR LOST PROFITS. NATURES GENERATOR, INC. PRODUCTS MAKES NO OTHER EXPRESS WARRANTIES WITH RESPECT TO THE PRODUCT, ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE WARRANTY PERIOD SET FORTH ABOVE AND NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE WARRANTY PERIOD. SOME STATES, PROVINCES AND JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE OR PROVINCE TO PROVINCE.

Natures Generator Inc
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Camarillo, CA 93012
For customer service please call 1-800-975-7909

