



Variable Frequency Drive (VFD) Siemens V20/ G120 / G120X / G130

GENERAL PURPOSE PANEL
ECONOMY / STANDARD PACKAGE

1.0 Overview

North American Electric, Inc. (a.k.a. NAE)
Re: Siemens Economy / Standard Package

General Instructions

Read the instructions carefully before installation and use them as a guide during installation and initial operation.

File these instructions with other documentation, drawings and descriptive data of the NAE panel. Keep this book available for the installation, operation, and maintenance of equipment. Using these instructions will facilitate proper maintenance of the equipment and will prolong its useful life.

Scope of Instructions

The instructions are general in nature. They cover basic requirements for proper installation and maintenance for the panel. These instructions do not attempt to cover all variations and combinations of the panel and installations.

2.0 Safety Notes and Warnings

Equipment operation depends on proper handling, installation and maintenance. Neglecting fundamental requirements may lead to personal injury, failure of the equipment and property damage.

Safety as described in this instruction book involves two conditions:

- Personal injury
- Product or property damage

2.1 Safety Labels

Safety notations alert personnel to possible death, injury or property damage situations. The safety labels posted on our panels are:



WARNING:

Indicates HIGH VOLTAGE INSIDE! Electrical power must be disconnected before opening enclosure door. "Entry by qualified personnel only"



CAUTION:

Heavy object. Spreader bar required for lifting.



CAUTION:

Automatic equipment. May start at any time.

Personnel installing, operating or maintaining this equipment must be qualified on all applicable local, regional, industrial, governmental and OSHA safety procedures as well as commonly accepted safe working practices. Personnel working in or around this equipment must also exhibit common sense and good judgment regarding the potential hazards for themselves and other personnel in the area. These instructions are intended for use by fully qualified personnel and are not a substitute for adequate training, experience and supervision.

Should clarification or additional information be required, please refer the matter to NAE. When communicating with NAE regarding the product covered by this book, always reference the NAE assigned **MODEL NUMBER** and/or **SERIAL NUMBER**:

 NAE Motor Controls	
P.O. Box 130 • 350 Vaiden Drive, Hernando, MS 38632 800-884-0404 • sales@naemotors.com www.naemotors.com	
Model Number:	
Serial Number:	
Enclosure:	
Rated Motor Load:	
Full Load Amps:	
Overload Range:	
Main Supply:	
Control Voltage:	
Field Wiring:	
SCCR:	
Line Side Torque:	
Motor Side Torque:	
Drawing Number:	
Inspected:	
	

3.0 Receiving, Handling & Storage

Upon receipt, examine the panel for damage or loss. Check the contents against the packing list before discarding any packing material. Notify the carrier and NAE at once of any discrepancies.

If there is damage from improper handling, file a claim at once with the carrier and notify NAE.

3.1 Storage

Store all panels indoors in a well-ventilated area. The storage building should have a well-drained paved floor. The temperature should be between 23°F (-5°C) and 104°F (40°C). The air should be dry (50% maximum humidity).

The panels are shipped wrapped in plastic for protection during shipment only. Remove the plastic wrap just before placing into storage. Cover with heavy wrapping paper or other moisture barrier. Use materials that will not trap moisture inside the unit. Do not cover louvered openings.

For long term storage, or in high-humidity, use space heaters to keep the interior dry.

4.0 Inspection and Installation

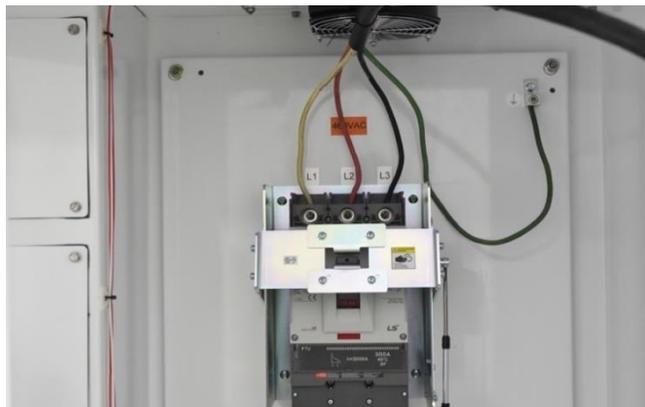
4.1 Inspection

1. Remove packing and shipping materials.
2. Make sure that all internal parts are clean and dry. If moisture is present, blow dry with warm air.

4.2 Installation

1. Properly ground panel per the NEC and local codes
2. With the panel properly installed per the NEC and local codes, you are now ready to perform the following steps:

- 2a) **Pre-Start Requirements:**
Apply Line Side Power.



2b) Verify that proper line side voltage is present.



Check between L1 & L3



Check between L1 & L2



Check between L2 & L3

2c) StrikeSorb (If applicable): For most applications, modules must be used in accordance with the electrical system voltages



NOTE: Verify voltage to ground on each phase L1 to ground, L2 to ground and L3 to ground.

WARNING: If any unusual conditions exist, such as a high leg to ground, please contact NAE Customer Support BEFORE moving forward.

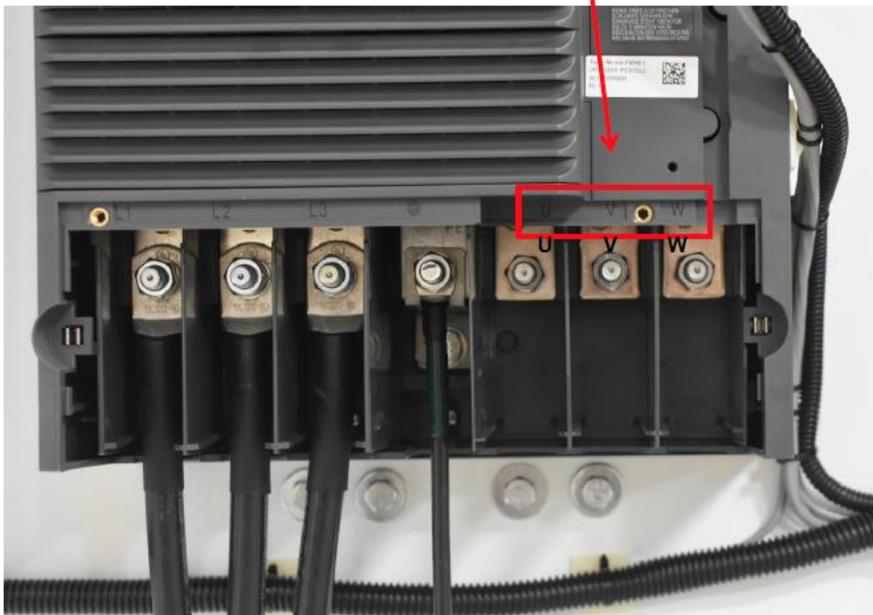
2d) MotorSaver(If applicable): Settings must be properly adjusted in accordance with calculations located on instruction sheet found on inside enclosure door or inside customer packet.



3. Motor Connection:

4.a. Be sure to properly ground motor.

IMPORTANT: Connect motor leads to “U V W”.



4. Turn on Circuit Breaker (shown in UP position) after line side voltage verification.



5.0 Putting Panel Into Service

The panel is now ready to be put into service.

There are hazards of electrical shocks and/or burns whenever working in or around electrical equipment. Turn off power of the NAE panel before performing any inspection or maintenance operations. Check incoming line terminals to verify that the equipment is de-energized and grounded. Check outgoing terminals to ensure that no back feed condition exists.

6.0 Maintenance

6.1 Overview

Visually inspect all NAE panel installations at frequent intervals. If the observer notes any loose parts or connections, please take corrective action immediately.

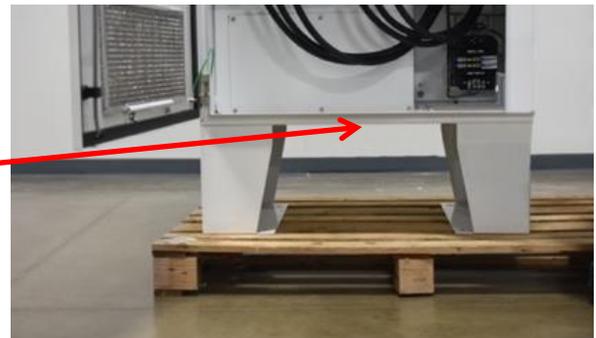
6.2 Quarterly Inspection

Perform a thorough inspection of the NAE panel at least quarterly. Emphasize the following points:

1. Perform an overall visual inspection.
2. Check all indicators, meters and instruments for proper operation.
3. Bolted and/or screw connections should be properly tightened; excessive corrosion, cracks or discolored insulation may indicate an overheated connection.
4. Check the control wiring for signs of damage or wear.
5. Change the wires that present doubtful conditions.
6. Check for undue noise and or vibration.
7. Look for evidence of moisture inside the NAE panel.
8. Inspect and clean any and all air intake filters.

6.3 Tunnel Maintenance (If Applicable)

1. Turn off all power to enclosure.
2. Inspect and clean bottom air intake screen.



3. Inspect and clean top exhaust screens.



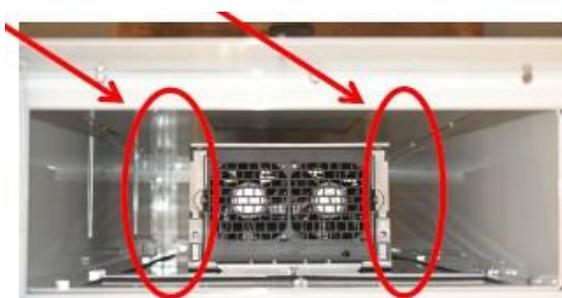
4. Inspect tunnel internally for blockage, through access panels located on front of tunnel above and below VFD. Remove any blockages.



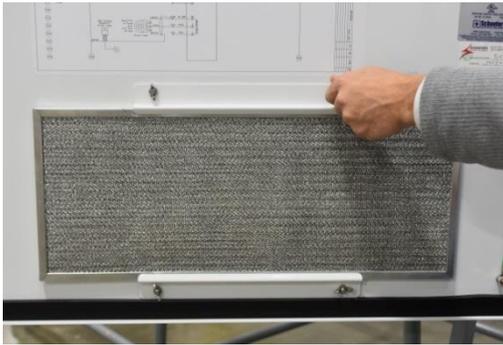
4a) To access top exhaust screen, loosen external screws located on the front and back of Enclosure and lift off the top hood.



4b) Make sure to inspect down the sides of the VFD.



5. Inspect necessary and clean front door air filter (use warm water; dry filter before re-installing). Replace when necessary.



6. Inspect and clean internal circulation fan (make sure fan is in proper working condition).



6.4 Semi-Annual Inspection

In addition to the quarterly inspection, perform the following recommended inspection and maintenance semi-annually, or sooner, if required by local conditions or regulations.

- Check the resistors and other devices prone to overheating.
- Follow the recommendations of any individual device instructions furnished for maintenance of the device.

6.5 Spare Parts

For replacement parts, please call NAE Customer Service at 800-884-0404

6.6 End of Life of Product

The responsibility of the company is to facilitate subsequent recycling or disposal at the end of the product's life. During disposal of the product, it is always necessary to act in accordance with all local and national legal requirements that are in effect at the time of disposal.



CONTACT INFORMATION:
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