

### Termination

#### VC 3000 Voltage Converter

The VC3000 series voltage converter is powered with 24 VAC. Wire as shown in Fig. 1 below. When properly wired, the red Power Output LED will light.

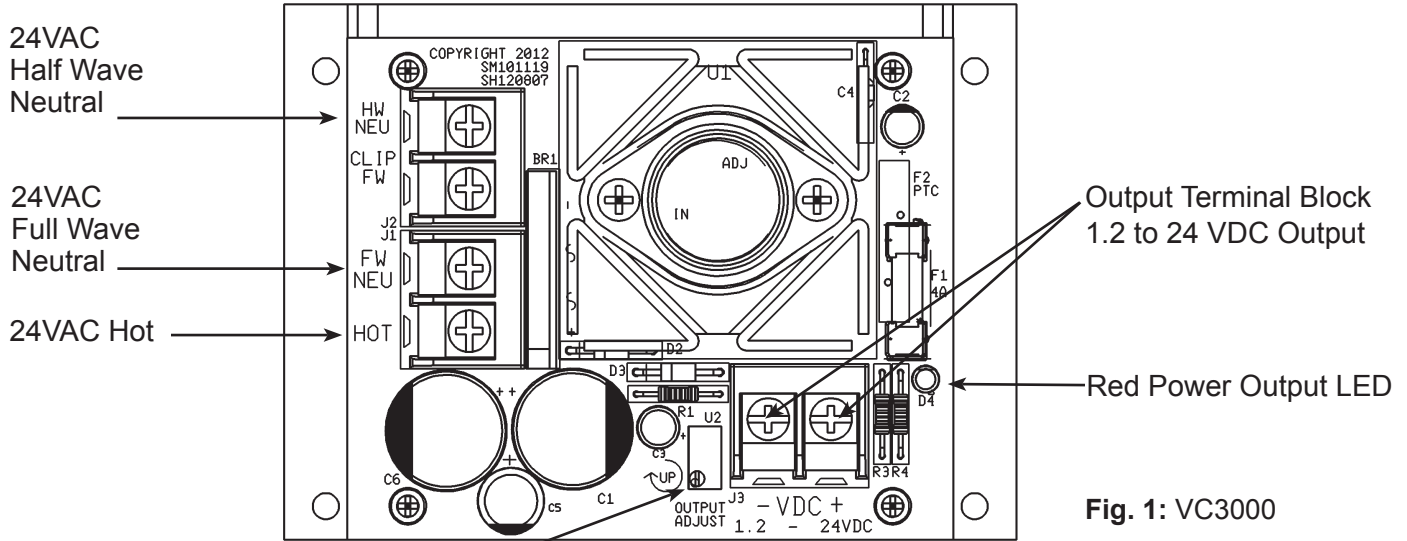


Fig. 1: VC3000

**NOTE:** The selection of the “Hot” and “Neutral” wires for the 24VAC input is very important.

Output Adjust Trim Potentiometer Factory Set at 24 VDC

Note: The voltage converter output is set at the factory, but can be adjusted in the field. Please refer to the “Voltage Output Adjustment” instructions on page 2 of this document.

### Clip Settings

#### Rectification Settings

The AC to DC rectification may be set to either full wave or half wave by attaching the supplied clip to terminal block J2. Attach the clip to J2 for full wave. Do not use the clip for half wave. Note: If the VC3000 is ordered FW the clip is installed on J2. If the VC3000 is ordered HW, the clip is taped to the bottom of the metal plate.

When multiple devices (such as controllers, actuators, and the VC3000) are connected to one transformer, the full wave/half wave rectification of all devices must match. For example, if the controllers being used are half wave and connected to the same transformer that supplies the voltage converter board, then do not use the clip on J2. Always remove 24 VAC power before changing the clip position.

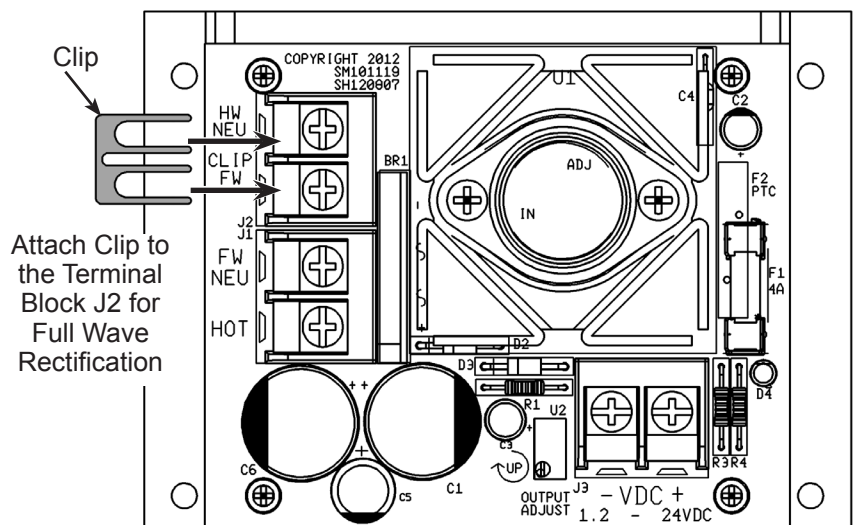


Fig. 2: Attach Clip for Full Wave Rectification

Specifications subject to change without notice.

### Voltage Output Adjustment

**VC3000** series voltage converters have an adjustable output of 1.2 to 24 VDC. Adjust output to a custom voltage as follows:

1. Using a voltmeter, connect the positive lead to the “+” and the negative lead to the “-” of the terminal block labeled “VDC”.
2. With a small, straight bladed screwdriver, adjust the “Output Adjust” trim potentiometer (located next to the “VDC” terminal block) until the voltmeter reads the desired output.
3. Disconnect the voltmeter
4. Connect the load.
5. If exact output voltage is required, measure the voltage out under load and adjust accordingly.

### Diagnostics

#### PROBLEMS:

No voltage on output

#### POSSIBLE SOLUTIONS:

- Verify that input voltage is correct
- If the unit has a replaceable glass fuse, check it for continuity. If a replacement fuse is needed, replace it with a 4.0 A fuse.

#### \*Loading higher value fuses may cause damage and void warranty

- If the unit has a resettable fuse and the fuse is tripped, it may be an output short circuit or overload. Remove input power and determine the problem. When the problem is corrected, reapply power to the unit.

Voltage on output is reading low or high

- Verify that input voltage is correct
- Verify that the “Output Adjust” trim potentiometer is set correctly using the “Voltage Output Adjustment” procedure shown below
- Check wiring for proper termination

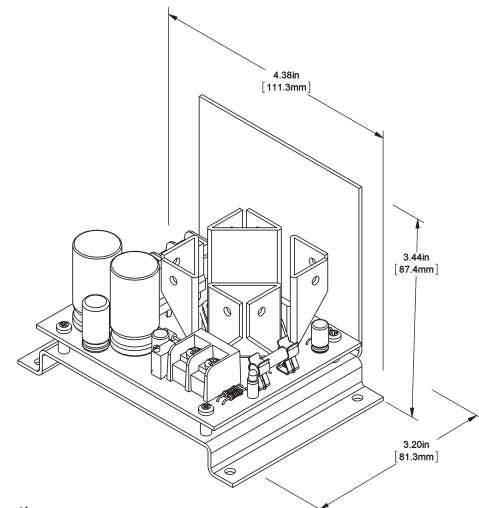
### Diagnostics

#### Half Wave

Input Voltage ..... 18 to 28 VAC  
Input Current ..... 3.1 Amps AC max @ 24 VAC (75 VA)  
Output Voltage ..... 1.2 to 24 VDC @ 1.5 Amps max  
Output Ripple ..... 20 mV max

#### Full Wave

Input Voltage ..... 18 to 28 VAC  
Input Current ..... 4.1 Amps AC max @ 24 VAC (98 VA)  
Output Voltage ..... 1.2 to 24 VDC @ 2.5 Amps max  
Output Ripple ..... 25 mV max



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