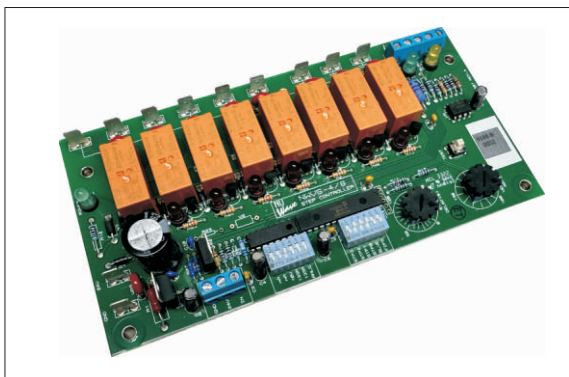


# Vernier Step Controller NWVS-4 / NWVS-8

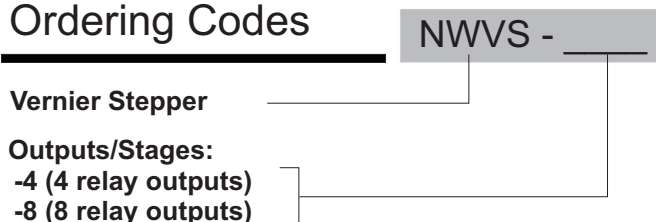


- Utilizes Latest Microcontroller Technology
- RoHS Compliant
- Adjustable Stage Delay
- Pulsed or Analog Vernier output
- Adjustable Vernier ratio
- Expandable to 16 stages
- LIFO/FIFO selection
- Test Button
- Brown Out Protection
- Available in 4 or 8 Stages

## Product Description

The NWVS is a microcontroller-based step controller that provides precise modulation in multi-stage heater applications such as duct heaters. The built-in Vernier stage allows for smooth, precision control of the load without increasing switching wear.

## Ordering Codes



## Input Specifications

Power Supply	24VAC -15/+15%50/60Hz < 10VA.
Brown Out Protection	Stages restart from zero upon loss of power
Command Input	0-5V, 0-10V, 1-5V, 2-10V, 0-20mA, 4-20mA, 0-135Ohm. Selectable via dipswitch.

## Output Specifications

Stage Relay Output Ratings	30 VAC @ 1.0A SPST Mechanical Relays w/MOV protection, up to max of 5A total for all of the stages. Up to 8 stages per board.
Stage Outputs	Selectable from 1 to 16 stages via dipswitch. More than 8 stages requires an additional unit setup for slave operation.
Vernier Output	Time Proportioning: Current limited ~24VDC nominal. Time Proportioned 4 second cycle time for driving an SSR. Analog: 0-10VDC output for driving an SCR power control. 10VDC output tolerance is +5/-8% at 24VAC power. 10VDC output tolerance is +5/-25% at 20VAC power.

## Output Specifications (Continued)

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<b>Slave Output</b>	<b>0-5V output for expanding beyond 8 stages.</b>
<b>Stage Output Modes</b>	<b>LIFO or FIFO Selectable via dipswitch.</b>
<b>Stage Delay</b>	<b>Adjustable from 0-180 seconds via potentiometer.</b>
<b>Vernier Ratio</b>	<b>Adjustable via potentiometer from 100 to 200%.</b>
<b>Stage Output Indication</b>	<b>Each Stage has a RED LED that is energized when each relay coil is energized.</b>
<b>Vernier Output Indication</b>	<b>Green LED that varies in intensity when analog mode is selected or blinks when time proportioning is selected.</b>
<b>Slave Output Indication</b>	<b>Yellow LED that varies in intensity when a slave output signal is present.</b>
<b>Test Button</b>	<b>When the test button is held down, the command input is forced to 100% and all of the stages will turn on at one stage per second. When the button is released, the stages will turn off at the set stage delay rate.</b>

## Mechanical Specifications

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<b>I/O Connections</b>	<b>0.250" Faston lugs for power and stage outputs, screw terminal blocks for low voltage I/O and command.</b>
<b>Board Specifications</b>	<b>7.075" x 2.700", RoHS compliant.</b>
<b>Shipping Weight</b>	<b>Approximately 2 lbs.</b>

## Thermal Specifications

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<b>Ambient Temperature Range</b>	<b>0 to 80C.</b>
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