

Vari-Watt

Power Controller

0113-10237

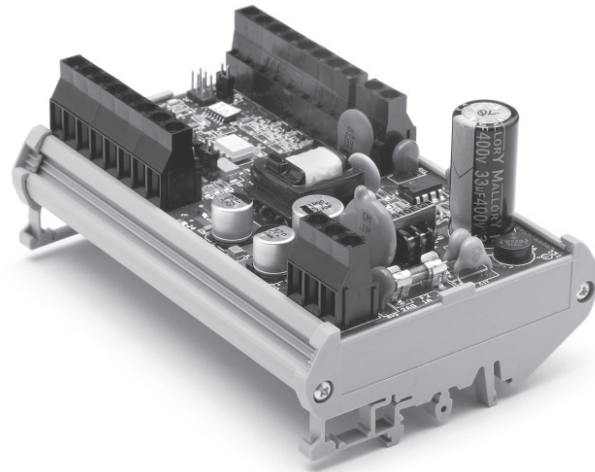
- Allows Automatic or Manual Control of Heater Loads Using Chromalox SSR Series Solid State Relays
 - Demand Oriented Transfer (DOT) Firing for Analog Inputs
 - 50 or 60 Hz (Jumper Selectable)
 - Load Management Feature for Multiple SSR's
- Analog Inputs
 - 4-20 mAdc
 - 0-5 Vdc
 - 0-10 Vdc
- 50 or 60 Hz Operation, (Jumper Selectable)
- Open Board Design
- DIN Rail Mounting



ISO9001
APPROVED • CERT. NO. A3164

Chromalox[®]
PRECISION HEAT AND CONTROL

Vari-Watt 0113-10237
PDS & Instruction Sheet



Description

The Chromalox Vari-Watt Controller accepts an analog control signal input and produces a proportional output signal to drive Solid State Relays such as the Chromalox SSR series. Demand Oriented Transfer (DOT) firing for each SSR provides precise control with resolution to 3 cycles (select 50 or 60 Hz operation). In a typical application the Vari-watt is used to convert temperature/process control signal (4-20 mA) to a Zero Crossing SSR power control. When using multiple SSR's the Load Management feature automatically offsets the turn-on signal for each SSR output to limit inrush current.

Manual control provides open loop control of the output from 0 to 100% with input from a 10K Potentiometer. Auto/Manual Control allows a single pole switch to select between Manual Control or Automatic Control from any of the analog signal inputs.

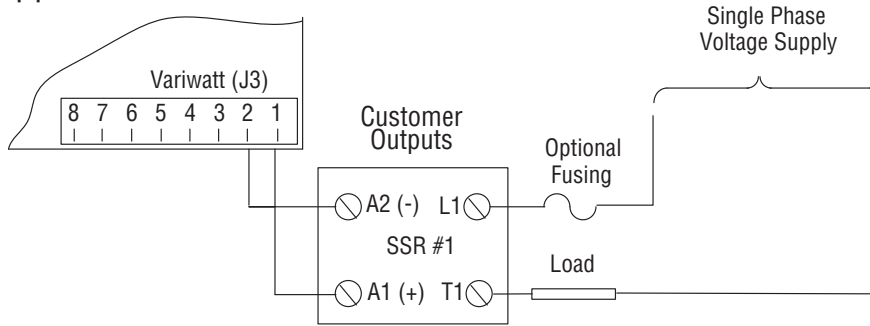
Specifications

- Instrument power
 - 95 to 250 Vac power, less than 15VA
- Operating Environment:
 - 32-150 °F ambient temperature
 - Relative humidity less than 95% non-condensing.
- Analog Input types:
 - 4-20 mAdc into 250 Ohm
 - 0-5 Vdc into 10K Ohm
 - 0-10 Vdc into 20K Ohm
 - 10K potentiometer
- Outputs (Up to 4 total)
 - SSR drive (12 Vdc at 100 mAdc (total current for outputs))
- DOT timing
 - 3 cycle, 50 or 60 Hz (jumper selectable)

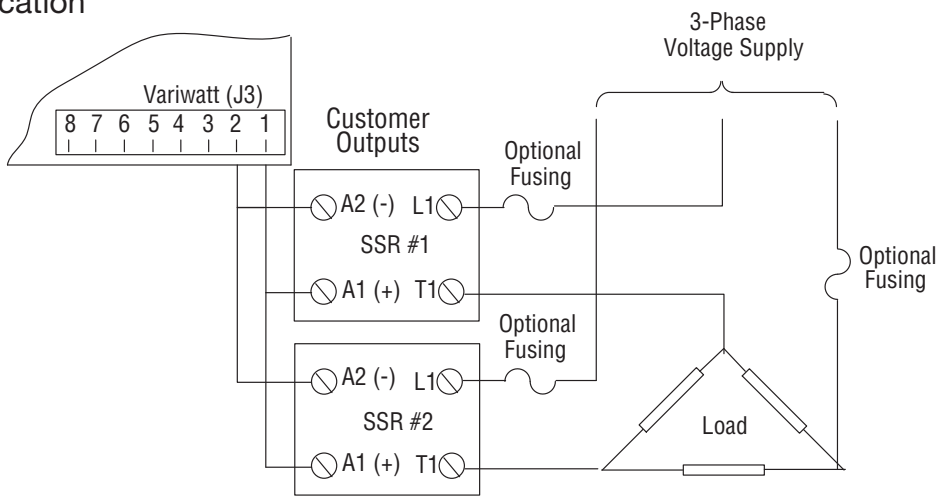
Vari-Watt Power Controller

Application Diagrams (Typical)

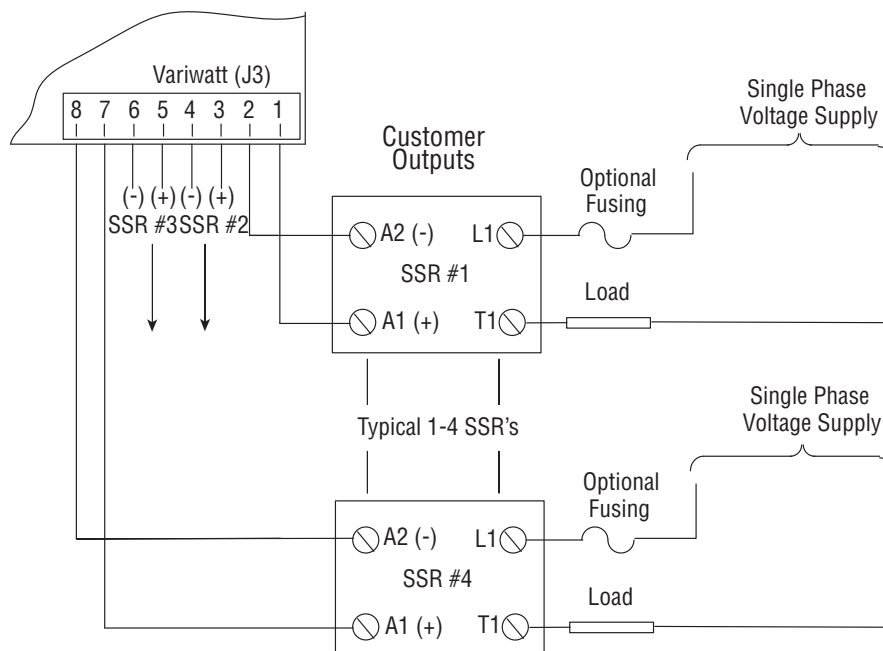
Single Phase Application



3-Phase Application

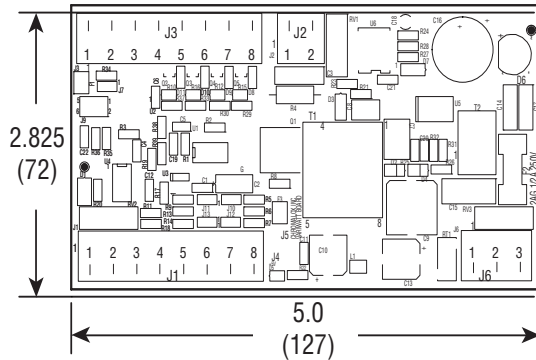


Multiple Output Applications Load Management



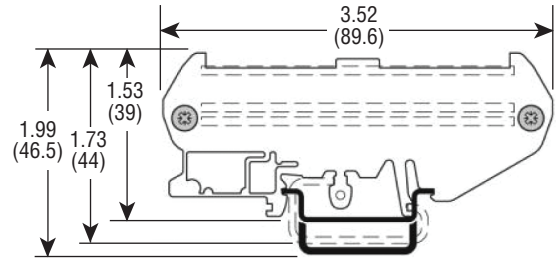
Vari-Watt Power Controller

Board Dimensions



End View of DIN Rail Enclosure

- 3.5x5.1" (90x130) Overall Dimensions
- Allow 2" (51) for circuit Board Height Above DIN Rail Enclosure

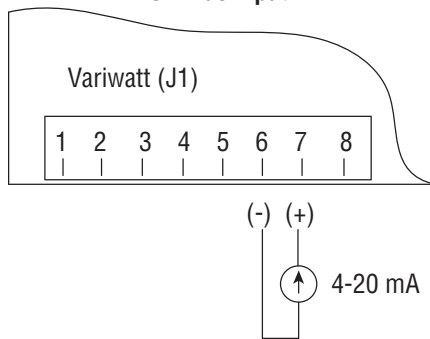


Ordering Information

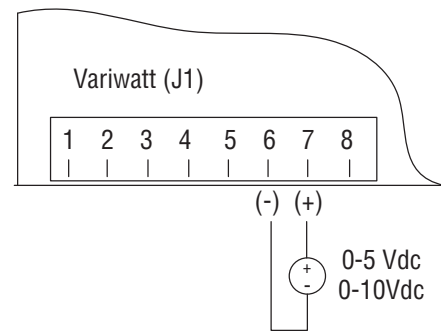
Description	Number	PCN
Vari-Watt Controller	0113-10237	339768
Potentiometer (10K)	0135-27000	313947

Input Connections

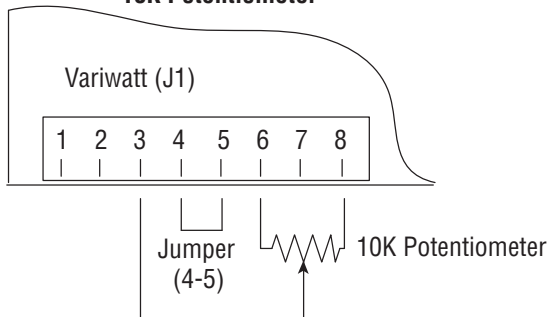
4-20 mAdc Input



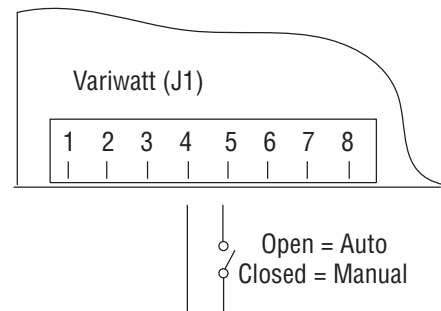
0-5 Vdc, 0-10Vdc Inputs



Manual Input 10K Potentiometer

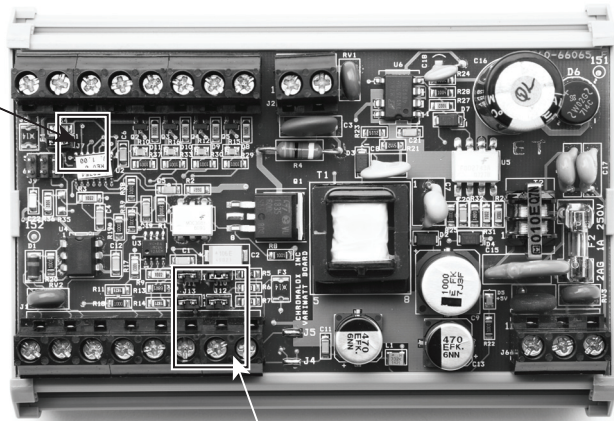
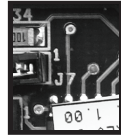


Auto/Manual Selection



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See Table
Remove J7 for 50 Hz
Operation



Jumper Selection Table

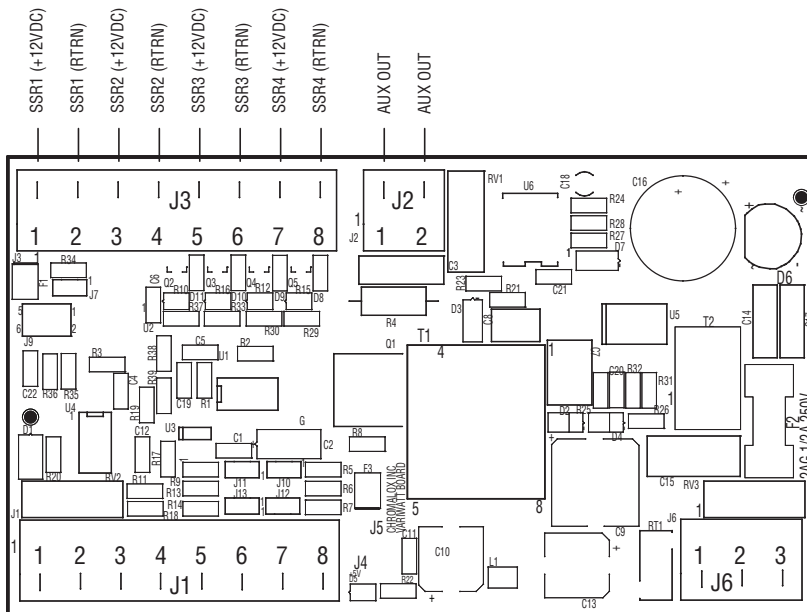
(0 = Remove Jumper, X = Jumper Installed)

Input Type	J10	J11	J12	J13	J7
4 - 20 mA DC	X	X	X	X	N/A
0 - 5 Vdc	0	0	X	0	N/A
0 - 10 Vdc	0	0	0	0	N/A
50 Hz	N/A	N/A	N/A	N/A	0
60 Hz	N/A	N/A	N/A	N/A	X

See Table
Input Jumper Selections
(J10, J11, J12, J13)



CUSTOMER OUTPUTS



CUSTOMER INPUTS

[POT WIPER INPUT]
AUTO / MANUAL CONTROL
AUTO / MANUAL CONTROL
ANALOG INPUT - [OUT TO POT]
ANALOG INPUT +
+5 VDC [OUT TO POT]

AC POWER
(90-250Vac, 50 or 60 Hz Selectable)

AC LINE
AC NEUTRAL
EARTH GROUND