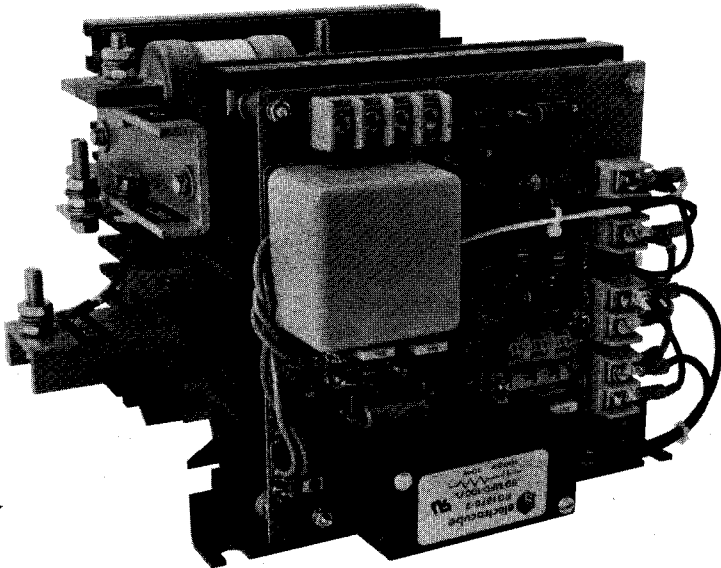


# Series 500 Solid State Power Contactor



## GENERAL

The single phase power contactor provides isolated solid state zero crossover switching for resistive loads up to 100 amps at 240 or 480 VAC. It is a highly reliable and durable external switching device designed to replace inefficient and short-lived high power mechanical contactors. Its rugged solid state design contributes to reduced operating costs and maintenance free operation.

## FEATURES

- SCR Output Devices.
- Optical Isolation.
- Zero Crossover Switching to Minimize R.F.I. and E.M.I.
- Transient Voltage Protection.
- Fast Acting I<sup>2</sup>T Type Integral Fuse.
- Input Isolated from Load.
- Field Selectable Input Switching Options.
- Large Convection Cooled Heat Sinks.
- Factory Selectable Load Voltage/Current Options.
- Screw Terminals Standard on Input.
- Heavy Duty Load Terminals.
- Easy 4-Hole Installation.
- Reliable, Durable Solid State Construction.



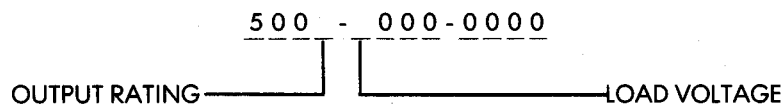
# WATLOW

# SPECIFICATIONS

- Factory Selectable Options: (by order number)
  - \*A. Load Voltage:
    1. 240 VAC:  $\pm$  10%, 50/60 Hz., Single Phase.
    2. 480 VAC:  $\pm$  10%, 50/60 Hz., Single Phase.
  - B. SCR/Load Current Rating:
    1. 50 Amps Resistive @ 240 or 480 VAC.
    2. 75 Amps Resistive @ 240 or 480 VAC.
    3. 100 Amps Resistive @ 240 or 480 VAC.
  
- Field Selectable Input Switching Options:
  1. 10-25 VDC, Input impedance = 2 K Ohms
  2. 120 VAC. Input impedance = 22 K Ohms
  3. 240 VAC. Input impedance = 44 K Ohms
  
- Power Consumption: Less than 4 V.A.
- Transient Protection: RC Network Standard.
- Surge Current Protection: Fast Acting I<sup>2</sup>T Type Fuse.
- Operating Ambient: 30°F to 130°F.
- Isolation: Input and Circuitry Isolated from Load and Line.
- Weight: Less than 10 lbs.

\*Contactor operates only at specified voltage.

# ORDER INFORMATION



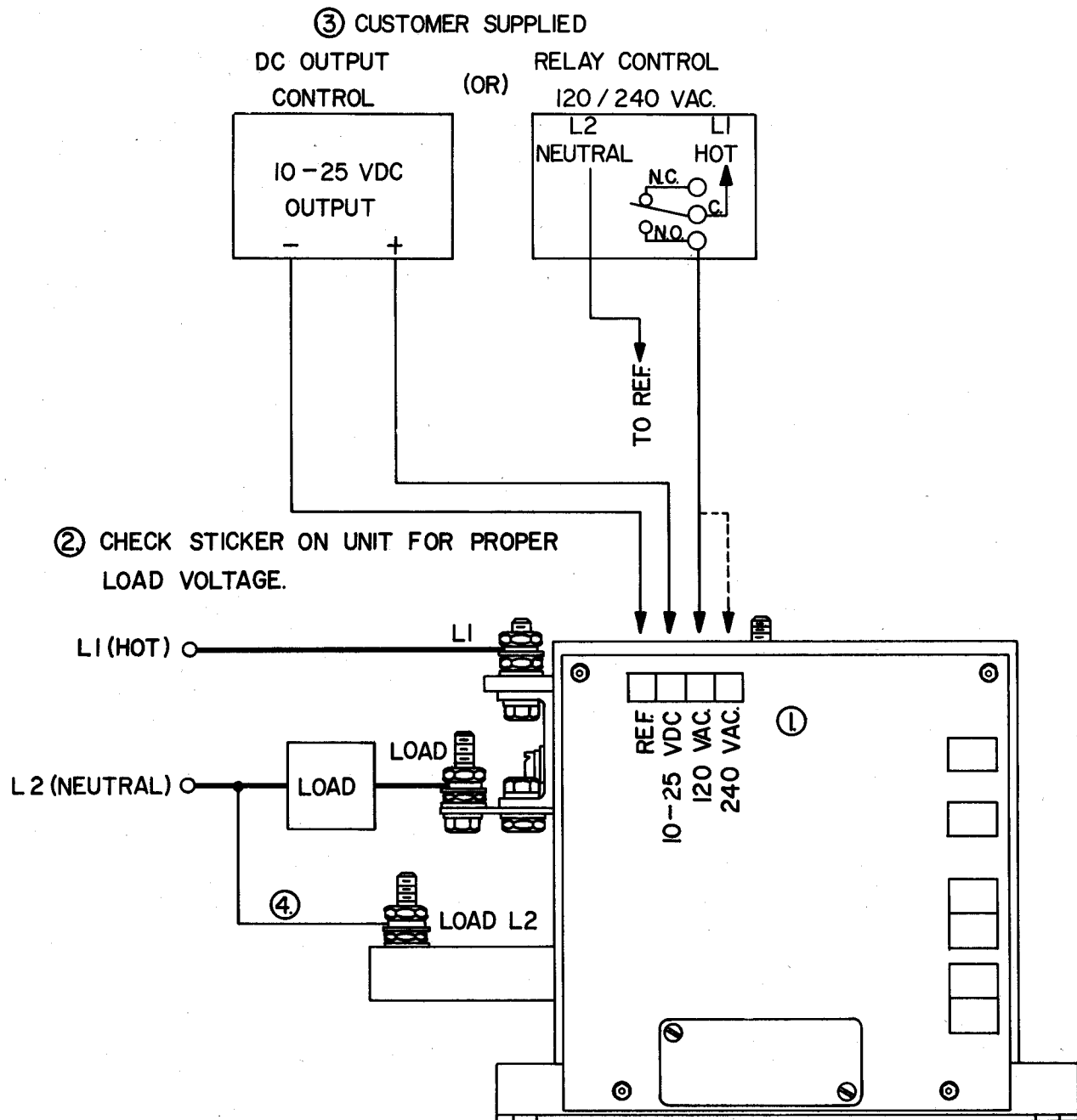
- |             |            |
|-------------|------------|
| A. 50 Amp.  | 1. 240 VAC |
| B. 75 Amp.  | 2. 480 VAC |
| C. 100 Amp. |            |

EXAMPLE: 500A-1000-0000 = Output: 50 Amp.

Load Voltage: 240 VAC.

REPLACEMENT PARTS		
For Model Number	Fuse	SCR Module
500A-1000-0000	0808-0039-0001	0802-0302-0002
500B-1000-0000	0808-0039-0002	0802-0307-0002
500C-1000-0000	0808-0040-0001	0802-0309-0002
500A-2000-0000	0808-0039-0001	0802-0302-0003
500B-2000-0000	0808-0039-0002	0802-0307-0003
500C-2000-0000	0808-0040-0001	0802-0309-0003

# ELECTRICAL CONNECTIONS



1. Input Switching Options (Select ONLY one of the following):

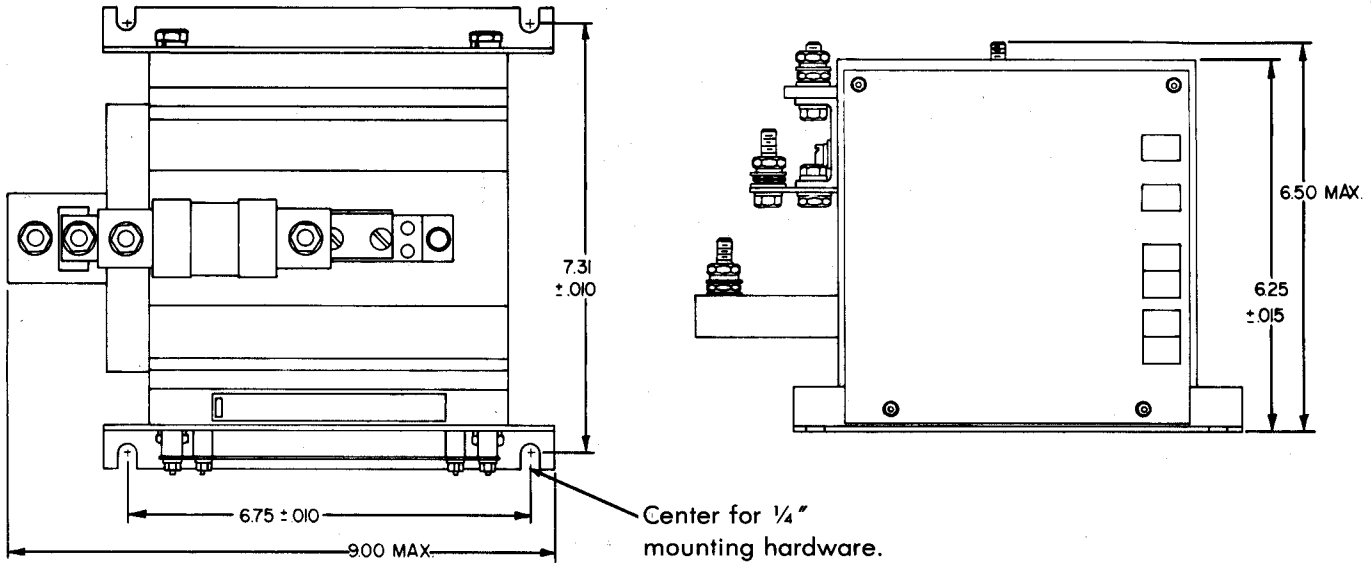
- 1) 10-25 VDC
- 2) 120 VAC
- 3) 240 VAC

2. 240 or 480 VAC (factory option) load voltage is independent of input voltage.

3. Series 500 Power Contactor is compatible with all Watlow relay and 10-25 VDC output controls and similar competitive controls.

4. All wiring should conform to the National Electric Code NFPA70. Contact your local board for additional information.

# INSTALLATION AND DIMENSIONAL INFORMATION



For optimum convection cooling, mount power contactor on a vertical plane with load terminals either up or down and in a well ventilated area.

## TROUBLESHOOTING CHART

### Symptom

### Diagnosis

### Remedy

Load will not turn on

Check for presence and proper connection of line, load, and input switching terminals. If not present and proper .....

Connect per "Electrical Connection Diagram."

If present and proper,

Remove power and check resistance across fuse. If open .....

Order fuse from factory. Consult Order Information.

If not open .....

Return unit to factory.

Check for proper voltage @ input switching terminals. If present and proper .....

Return unit to factory.

If not present and proper .....

Check customer supplied controller for proper operation.

Load will not turn off

Check for presence and proper connection of line and load. If present and proper .....

Return unit to factory.

If not present and proper .....

Connect per "Electrical Connection Diagram."

Remove power and check resistance across SCR module (Terminals L1 and Load). If shorted .....

Order SCR Module from factory. Consult Order Information.

If not shorted .....

Return unit to factory.