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 1PT 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
WINONA, MINNESOTA 55987
1265 EAST SANBORN
PHONE 507 454-5300
SPECIFICATIONS

- Factory Selectable Options: (by order number)
  *A. Load Voltage:
    1. 240 VAC: ± 10%, 50/60 Hz., Single Phase.
    2. 480 VAC: ± 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.
- Surge Current Protection: Fast Acting IT 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

500 - 000 - 0000

OUTPUT RATING LOAD VOLTAGE
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

<table>
<thead>
<tr>
<th>For Model Number</th>
<th>Fuse</th>
<th>SCR Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>500A-1000-0000</td>
<td>0808-0039-0001</td>
<td>0802-0302-0002</td>
</tr>
<tr>
<td>500B-1000-0000</td>
<td>0808-0039-0002</td>
<td>0802-0307-0002</td>
</tr>
<tr>
<td>500C-1000-0000</td>
<td>0808-0040-0001</td>
<td>0802-0309-0002</td>
</tr>
<tr>
<td>500A-2000-0000</td>
<td>0808-0039-0001</td>
<td>0802-0302-0003</td>
</tr>
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<tr>
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<td>0808-0040-0001</td>
<td>0802-0309-0003</td>
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</tbody>
</table>
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 Watoow 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

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Diagnosis</th>
<th>Remedy</th>
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</thead>
<tbody>
<tr>
<td>Load will not turn on</td>
<td>Check for presence and proper connection of line, load, and input switching terminals. If not present and proper</td>
<td>Connect per “Electrical Connection Diagram.”</td>
</tr>
<tr>
<td></td>
<td>If present and proper, Remove power and check resistance across fuse.</td>
<td>Order fuse from factory. Consult Order Information.</td>
</tr>
<tr>
<td></td>
<td>If open</td>
<td>Return unit to factory.</td>
</tr>
<tr>
<td></td>
<td>If not open</td>
<td>Return unit to factory.</td>
</tr>
<tr>
<td></td>
<td>Check for proper voltage @ input switching terminals. If present and proper</td>
<td>Check customer supplied controller for proper operation.</td>
</tr>
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<td></td>
<td>If not present and proper</td>
<td>Return unit to factory.</td>
</tr>
<tr>
<td>Load will not turn off</td>
<td>Check for presence and proper connection of line and load. If present and proper</td>
<td>Connect per “Electrical Connection Diagram.”</td>
</tr>
<tr>
<td></td>
<td>If not present and proper</td>
<td>Order SCR Module from factory. Consult Order Information.</td>
</tr>
<tr>
<td></td>
<td>Remove power and check resistance across SCR module (Terminals L1 and Load). If shorted</td>
<td>Return unit to factory.</td>
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