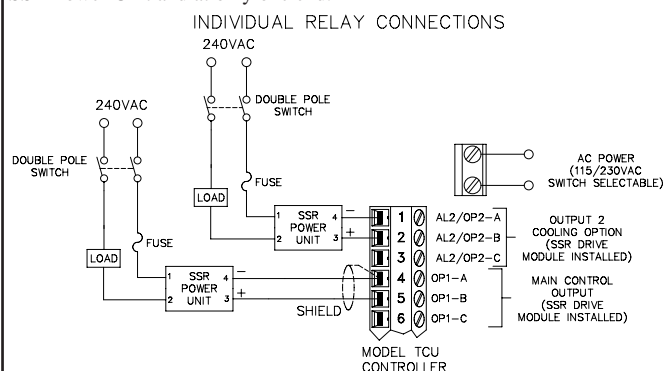


MODEL	DESCRIPTION	PART NUMBER
RLY5	SSR Power Unit	RLY50000

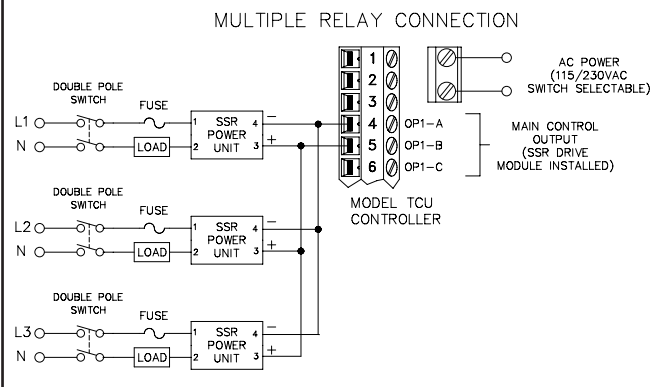
CONNECTIONS

Separate power feed lines should be run to the load side of the relay. The controller unit and the load should NEVER share the same power feed. It is recommended to install the SSR Power Unit as close to the load as possible to keep the power cable runs short. This will help reduce noise from radiating into other equipment. The input control signal cable can be run over distances in excess of 200 ft. with shielded cable from the controller to the SSR power unit. Connect the shield to the minus "-" terminal of the control signal, on the SSR Power Unit and at only one end.



MULTIPLE UNITS

For increased power handling, up to four SSR Power Units may be parallel connected, and all controlled by a single output of an SSR Drive Module (OMD00003). The output of the SSR Power Units must NOT be parallel connected to the same load because of unequal current sharing among the devices. The outputs should be wired to individual heaters, but they may share the same supply. If five or more SSR Power Units are required, a Relay Output Module (OMD00000) may be used in conjunction with an external +12 VDC power source (RLC Model APS01000) to switch the SSR Power Units.

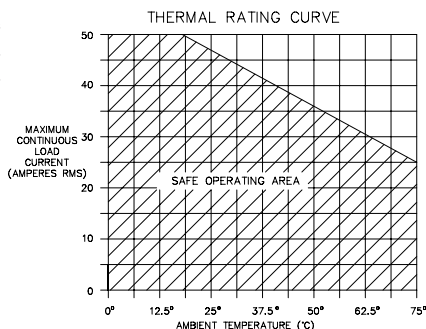


OPERATION

The following are important aspects of operation of the SSR power unit which must be considered. Adhering to these guidelines will ensure reliable and trouble free operation.

THERMAL RATING CURVES

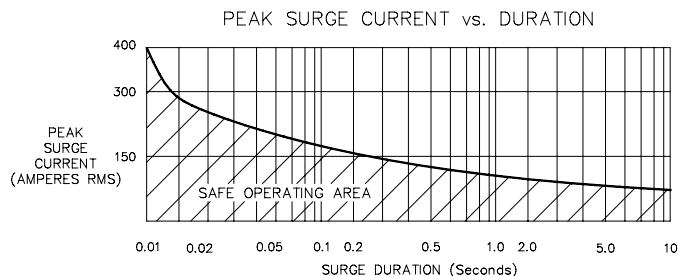
The Thermal Rating Curve will determine the maximum allowable ambient operating temperature for the maximum continuous load current. The two parameters must intersect in the Safe Operating Area of the graph. Operation outside the safe operating area will shorten the life of or cause permanent damage to the SSR Power Unit. The ambient temperature of the power unit should be measured with all of the associated equipment operating to verify the Thermal Ratings.



SURGE CURRENT

When the SSR Power Unit switches a load on, an in-rush (surge) current that is higher than the continuous load current will flow. The surge current can be estimated from the table below which outlines the ratio of surge to steady state current for various load devices. The surge current duration must be within the Safe Operating Area of the Peak Surge Current vs. Time Figure. Surge currents outside the safe operating area will shorten the life of or cause permanent damage to the power unit.

Load Device	Ratio Surge Current to Steady State Current
Incandescent Bulbs (cold)	5
Quartz Heaters (cold)	7
Motors (motionless)	10
Compressors	10



FUSING

The output of the SSR Power Unit should be protected by a fast blow I²t fuse (Bussman KAX-30 or equivalent). This guards against long duration surge currents, short circuits, etc., which may damage the SSR Power Unit.

MECHANICAL INTERRUPT SWITCH

The off-state output leakage current of the power unit is 10 mA maximum. The voltage level of the output will rise proportional to the resistance of the load due to this leakage current. Full line voltage can be measured when the output is connected to a high resistance load and the power unit is in the off-state.

A mechanical interrupt switch (double pole) should be placed between both sides of the line voltage and the load. The switch should be opened when servicing any part of the output wiring. When measuring the off-state output voltage of the unit for correct operation, load the output of the SSR Power Unit with a small resistance (approximately 100 ohms).

SNUBBING

The power unit has internal snubbers to guard against transients generated by most loads. Loads with low power factors (ie. motors) may require additional external snubbing network.

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