

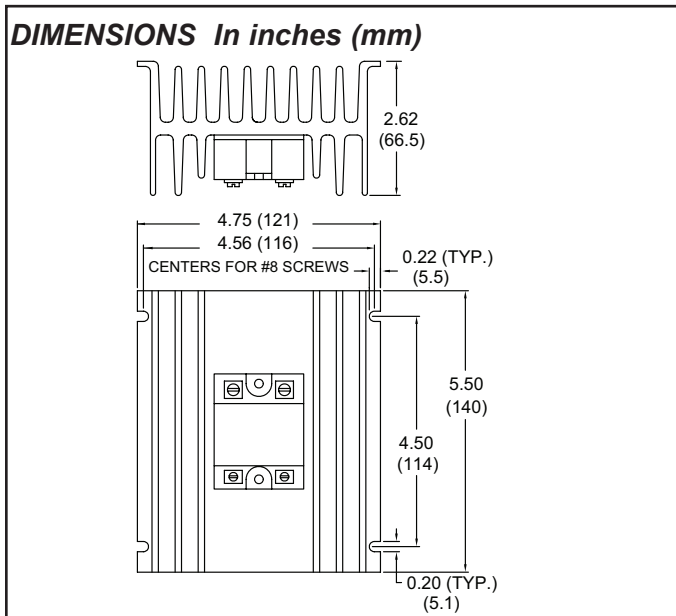
MODEL RLY5 - SOLID STATE POWER UNIT

- SWITCHES UP TO 45 AMPERES @ 240 VAC
- LOW LEVEL DC INPUT CONTROL SIGNAL (3-32 VDC)
- OPTICALLY-ISOLATED OUTPUT
- ZERO VOLTAGE TURN-ON, ZERO CURRENT TURN-OFF FOR REDUCED RFI
- INTERNAL SNUBBERS TO REDUCE FALSE TRIGGERING RELATED TO HIGH dv/dt APPLICATIONS
- SUPPLIED WITH HIGH EFFICIENCY HEATSINK FOR SUPERIOR THERMAL and SURGE CURRENT RATINGS



GENERAL DESCRIPTION

The SSR Power Unit is a solid state relay which can switch load currents up to 45 Amperes @ 240 VAC. The unit interfaces directly with a SSR Drive Module (OMD00003). The input and output terminals are isolated from each other to eliminate ground loops and noise problems. The unit features a zero voltage turn-on and a zero current turn-off detector to minimize radiated RFI when switching. An internal snubber minimizes inrush currents and guards against false triggering of the output; related to high dv/dt applications. A low DC control signal of +3 to +32 VDC is all that is needed for the switching operation. The solid state switch, highlighted by the inverse-parallel SCR output, provides a greatly increased operational life over a mechanical relay by avoiding the usual relay contact problems: arcing, bouncing, mechanical failure, etc. The solid state relay is shipped mounted to the high efficiency heatsink for immediate installation.



ORDERING INFORMATION

MODEL	DESCRIPTION	PART NUMBER
RLY5	SSR Power Unit	RLY50000



Do not dispose of unit in trash - Recycle

SPECIFICATIONS

OUTPUT SPECIFICATIONS

1. **Operating Voltage Range:** 50-280 VAC RMS
2. **Operating Frequency Range:** 47-63 Hz
3. **Maximum Continuous Load Current:** See Thermal Rating Code
4. **Maximum Surge Load Current:** See Peak Surge Current Curve
5. **Minimum Load Current:** 40 mA RMS
6. **Maximum Off-State Leakage Current:** 10 mA RMS
7. **Maximum Transient Voltage:** 600 V peak
8. **Maximum Output Voltage Drop:** 1.6 V peak
9. **Power Dissipation at Full Load:** 50 Watts
10. **Maximum I^2t :** 1600A²sec
(For Fusing Purposes, $t = 8.3$ msec)
11. **Minimum Off-State dv/dt protection:** 500 V/usec

INPUT SPECIFICATIONS

(Use with RLC SSR Drive Module, OMD00003)

1. **Control Voltage Range:** 3 to 32 VDC
2. **Maximum Turn-on Voltage:** 3 VDC
3. **Minimum Turn-off Voltage:** 1 VDC
4. **Maximum Reverse Voltage:** -32 VDC
5. **Minimum Input Impedance:** 1500 Ω
6. **Maximum Turn-on/Turn-off time:** 8.3 msec

GENERAL SPECIFICATIONS

1. **Isolation (Input to Output to Base):** 4000 V RMS
2. **Insulation Resistance:** 10 G Ω
3. **Operating Temperature Range:** -30° to +75°C
4. **Storage Temperature Range:** -40° to +120°C

INSTALLATION

It is recommended to mount the unit outside of an enclosure in an area where there is unrestricted air flow. The unit should always be mounted with the fins in a vertical position to maximize heat dissipation. If mounting the unit inside an enclosure, the internal temperature of the enclosure will normally be higher than the surrounding area and must be accounted for. At full rated load, the unit will dissipate 50 watts and achieve a case temperature in excess of 90°C. In all installations, it is important to allow at least two inches around the power unit for proper ventilation.