

# MINCO

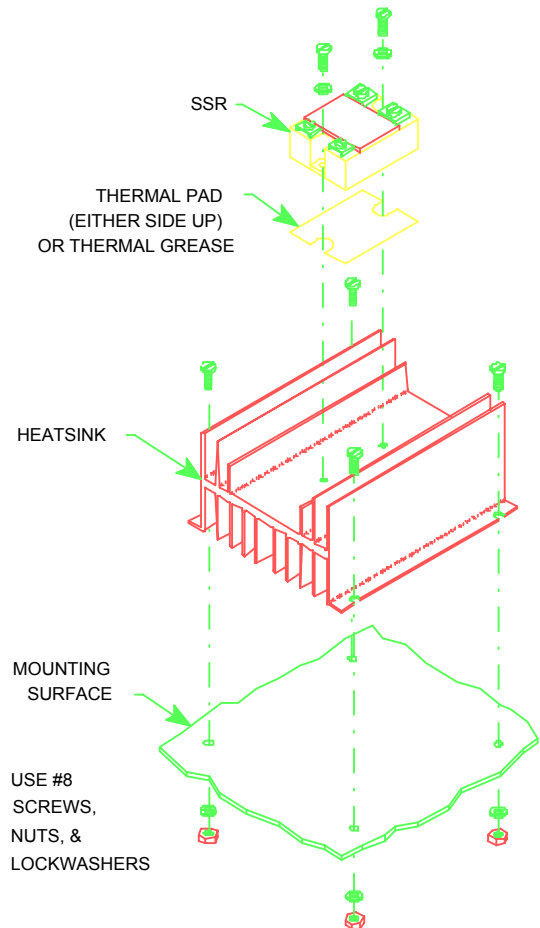
## AC744 (10 AMP), AC745 (25 AMP), AC746 (50 AMP) SOLID STATE RELAY

### Installation Instructions

When using an SSR, it is essential that you remove heat from it. Whether mounting an SSR to a heatsink or an aluminum or steel plate (for example, a control cabinet), a thermal transfer medium should be used between the relay's base plate and the surface. Packaged with the SSR you will find a thermal pad (a piece of white-coated aluminum foil) the size and shape of the base plate of the SSR. This foil insert replaces the thermal grease commonly used and is easier to use. If the thermal pad is damaged, normal thermal grease may be substituted.

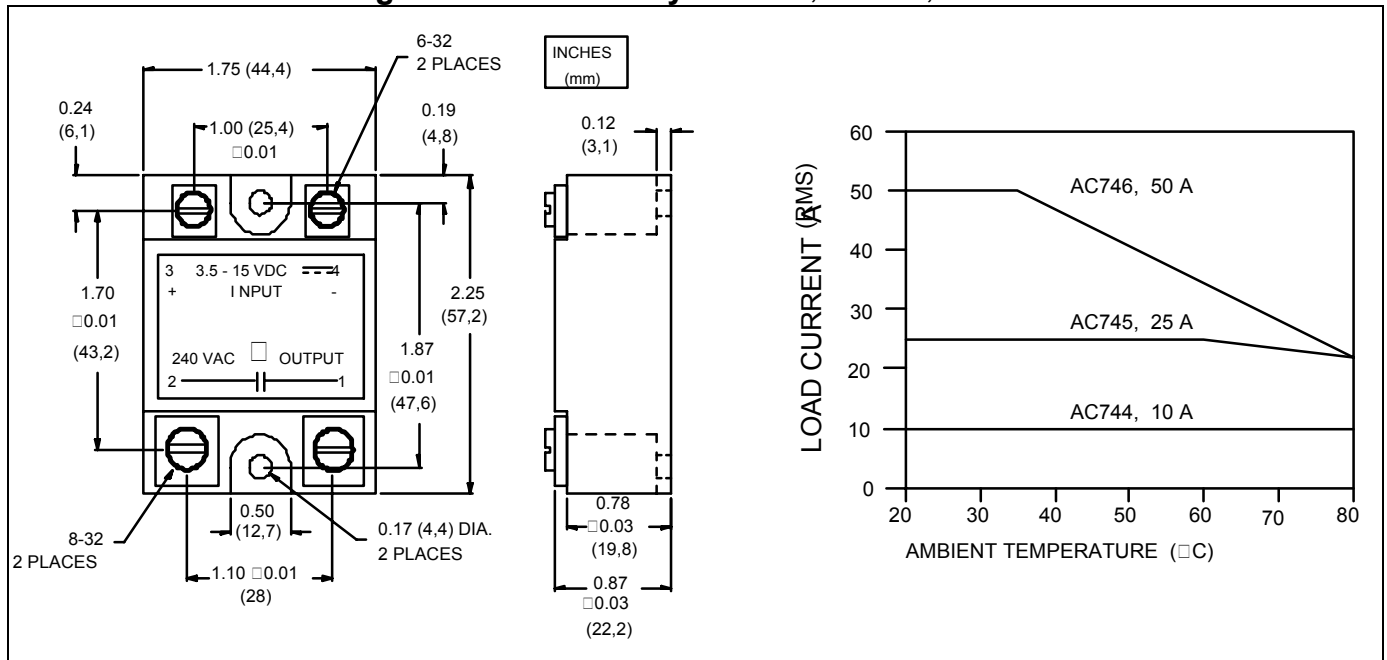
Make sure that the AC power is turned off. Using the SSR's hardware, screw it tightly to the mounting surface (e.g. a heatsink or a metal plate) as shown in Figure 1. If the SSR is mounted to the AC743 heatsink, then mount the heatsink to the mounting surface as shown in Figure 1.

**Note: The heatsink should be mounted so the fins are vertical allowing natural convection to help remove heat from the heatsink/SSR. If the heatsink is mounted with the fins horizontal the relay can carry only 80% of its rated maximum current.**



Assembly of SSR to optional heatsink

### Dimensions and Derating - Solid-State Relays AC744, AC745, AC746



# Electrical Specifications

Specifications subject to change without notice

Final two digits of the CSD number indicate maximum current rating in amperes.

Output Characteristics:	AC744	AC745	AC746	UNITS
	CSD2410	CSD2425	CSD2450	
Operating Voltage Range, 47-63 Hz	24 - 280			V rms
Max. Load Current	10	25	50	A rms
Min. Load Current	0.1			A rms
Transient Overvoltage (Non-Repetitive)	600			V peak
Max. Surge Current (Non-Repetitive) 16.6 ms	120	250	500	A peak
Max. Over Current (Non-Repetitive) 1 sec.	22	40	80	A rms
Max. On-State Voltage Drop (100mA-I <sub>RATED</sub> )	1.6			V peak
Max. I <sup>2</sup> T for fusing (8.3 ms)	60	260	1040	A <sup>2</sup> sec.
Thermal Resistance R <sub>θJC</sub> (T <sub>J</sub> max = 115°C)	1.5	1.0	0.63	°C/W
Power Dissipation @ Max. Current	12	29	55	Watts
Max. Zero Voltage Turn-On	45			V peak
Max. Peak Repetitive Turn-on Voltage	10			V peak
Max. Off-State Leakage Current @ Rated Voltage	1.0			mA rms
Min. Off-State dv/dt (static) @ Max. Rated Voltage, 25°C	200			V / μs

## Input Characteristics:

Control Voltage Range	3.5 - 15		Vdc
Max. Reverse Voltage	3.0		Vdc
Max. Turn-on Voltage	3.5		Vdc
Min. Turn-off Voltage	0.8		Vdc
Min. Input Impedance	330		ohms
Max. Input Current	@ 5 Vdc	13	mAdc
	@ 15 Vdc	45	mAdc
Max. Turn-on Time (@ 60 Hz)	8.3		msec
Max. Turn-off Time (@ 60 Hz)	8.3		msec

## General Characteristics:

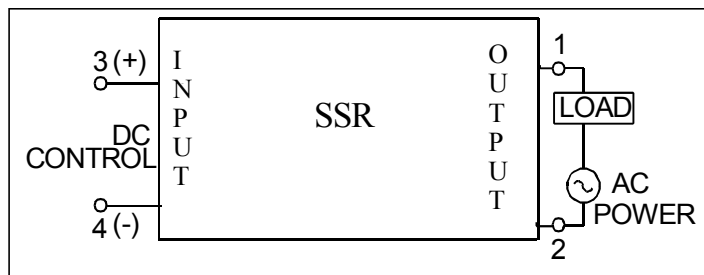
Dielectric Strength 50 - 60 Hz	Input to Output	4000	V rms
	Input and Output to Case	4000	V rms
Insulation Resistance @ 500 Vdc (for 1 minute)	10 <sup>10</sup>		ohms
Max. Capacitance Input/Output	3.0		pf
Ambient Temperature Range	Operating	-30 to 80	°C
	Storage	-40 to 120	°C

Electrical Specifications: (-30°C ≤ TA ≤ 80°C) unless otherwise stated

## Mechanical Specifications

Weight	4 oz. max.
Case Material	Fire retardant polyester
Encapsulant	Thermally conductive epoxy
Case Color	Black
Base Plate	Aluminum, nickel plate
Terminals	Tin-plated brass, nickel plated screws & saddle clamps supplied unmounted

## SSR Pinout and Wiring



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