

## Why Use Solid State Switching Technology?



**Long Life** • Solid state relays and contactors have no moving parts. Therefore, there is no mechanical wear and tear on the output contacts. The typical life expectancy of a solid state relay may be more than 50 times that of an electromechanical relay. Ideal for repetitive applications.



**Quiet Operation** • Solid state switching solutions make no acoustical noise when the output contacts change states. This is highly desirable in many commercial and medical applications.



**Minimum Electrical Noise** • Zero voltage turn-on and zero current turn-off allows for minimum electrical disturbances generated by SSRs.



**Low Power Consumption** • Solid state relays and contactors require very little input power "coil current" to switch large loads. Crydom solid state relays can switch up to 150 A load current with less than 15 mA current draw from the control input.



**Shock & Vibration Resistant** • Solid state switching solutions are not susceptible to erratic or unreliable operation when operating under tough environments.



**Ideal for Harsh Environments** • SSRs & SSCs do not generate sparks or electric arcs, do not bounce either electrically or mechanically. Designed as pollution degree 2 devices per IEC 60664-1. Isolation levels up to 4k V. Magnetic fields have little effect on SSR.



**High Compatibility with Control Systems** • DC controlled SSRs can be switched ON and OFF by digital systems such as PLC and  $\mu$ C based systems. AC controlled SSRs can be driven by limit switches, thermal switches and sensors carrying AC control signals.

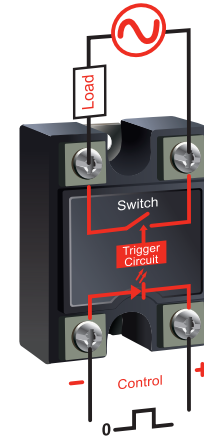


**Fast Switching** • Random turn-on solid state relays and contactors respond to a control signal in less than 100  $\mu$ s. Phase control and Burst control can be easily achieved to provide accurate AC power control.

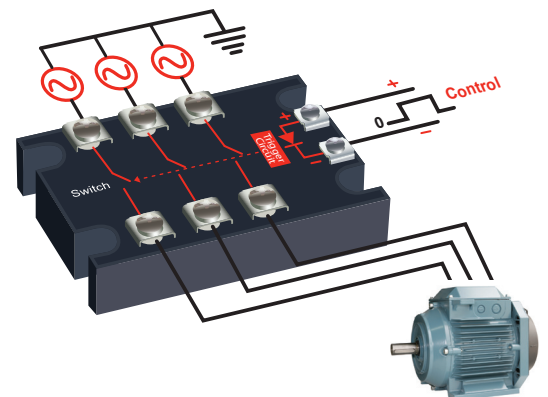


**Position Insensitive** • Suitable for mounting in either vertical or horizontal position, "dead bug" position and adjacent mounting.


## What is a Solid State Relay / Contactor?




A Solid State Relay or Contactor (SSR or SSC) is an electronic component that switches Power (AC or DC current) to a load circuit and provides electrical isolation between an application's control circuit and load circuit. It is a competitive technology to Electromechanical Relays (EMRs) and other switching technologies such as Mercury Displacement Relays (MDRs).



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## Ratings by Type of Package \*



		Panel Mount	DIN Rail Mount	PCB Mount	Plug-In Mount	Contactors
AC Output	Voltage (Volts)	140	140	140	280	480
		280	280	280		530
		530	530	530		600
		660	660	660		
Current (Amps)	Single	150	65	25	5	50
	Dual	50	6	15		
	3 Phase	50	25	15		
DC Output	Voltage (Volts)	1000	200	200	100	250
	Current (Amps)	100	30	20	5	60

\* Crydom's maximum ratings

## Solid State Relay & Contactor Applications

Although there are literally thousands of individual uses for Solid State Relays and Contactors, most can be categorized into the following applications:



### Heating Control

This encompasses the largest segment of solid state relay users. Applications include, but are not limited to: professional food equipment, plastic molding/extrusion machinery, HVAC&R and soldering equipment.

**Benefits:** Long life, no maintenance, safe product, easy to interface, as well as enabling temperature accuracy. Suitable for heater, fan, blower and valve control.



### Lighting Control

These applications are usually broken down into three categories: theatrical, warehouse and commercial. Many of the products used in this segment are custom designed.

**Benefits:** Dimming, silent operation, fast switching, long life, no maintenance, safe product, easy to interface, reduced parts count.



### Motion Control

Includes elevators, lifts, hoists, exercise equipment, conveyor systems, solar trackers, fans, solenoid and valve control.

**Benefits:** Endurance, shock & vibration resistance, Soft Start, reversing, no arcing, fast switching, long life, no maintenance, easy to interface, reduced parts count.