

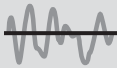
Why Use Solid State Switching Technology?



Long Life • Solid state relays and contactors have no moving parts. Therefore, there is no mechanical wear and tear on the output contact, 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 solid state relays and contactors.



Low Power Consumption • Solid state relays and contactors require very little input power "coil current" to switch large loads.



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



Ideal for Harsh Environments • Solid state relays and contactors do not generate sparks or electric arcs and do not bounce either electrically or mechanically.



High Compatibility with Control Systems • DC controlled SSRs can be switched by digital systems such as μ C based systems. AC controlled SSRs can be driven by limit switches and sensors carrying AC control signals.



Fast Switching • Instantaneous turn-on solid state relays and contactors respond to a control signal in less than 100 μ s.



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



Reduced Weight • Solid state relays and contactors are much lighter than equivalent electromechanical versions; depending on the power can be up to 70%.

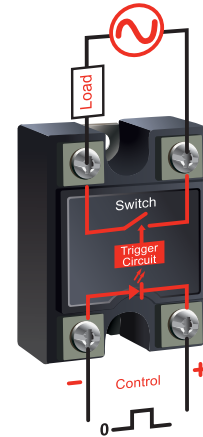


Magnetic Noise Immunity • Magnetic fields have little effect on solid state relays and contactors since, unlike electromechanical contactors, they don't use a magnetic coil to switch the load.

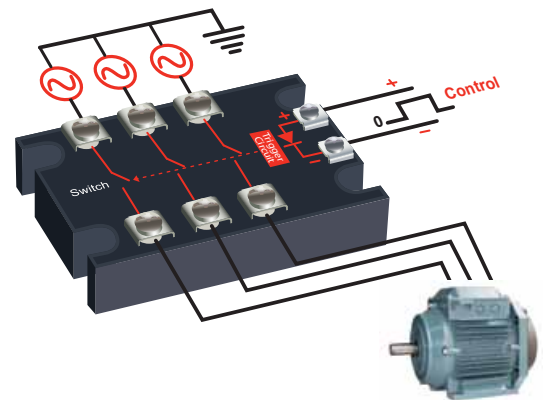


Reduced Energy Cost • Energy savings are achieved from switching the load off when it is not required; using automation to ensure maximum system efficiency.

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:

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.

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.

Power Control

Includes power supplies, transformers, regulators, inverters, converters, UPS systems, etc. as well as any load that is not specifically for heating, lighting or motion control.

Benefits: Long life, silent operation, high speed switching, endurance, mechanical shock and vibration resistance, position insensitive, logic compatibility, arc and bounce free switching, and low electromagnetic emissions.

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.