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 state. 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 μC based systems. AC controlled SSRs can be driven by limit switches and sensors carrying AC control signals.

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

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

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

**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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Solid State Relay & Contactor Applications

There are literally thousands of individual uses for Solid State Relays and Contactors. Most can be categorized into the following applications:

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

**Heating Control**
Applications include: professional food equipment, plastic molding/extrusion machinery, HVAC&R and soldering equipment.

**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.

**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.