

## SOLID STATE RELAYS IN PROFESSIONAL FOOD EQUIPMENT

### Background

Efficient, safe, and precise cooking and food preparation equipment is critical for commercial, industrial, and residential kitchens.

Today's successful restaurants and cafes rely upon the latest machinery for cooking, warming, and beverage preparation. This includes mixers, convection ovens, combi steamers, deep fat fryers, dough divider rounders, food warming cabinets, coffee machines, etc.

This demand has increased the use of highly accurate digital control technology that ensures compliance with related standards, such as low EMC directives for commercial and household use.

*SSRs are well suited for use with digital control signals due to their low input current and higher switching speed, which is required to maintain a proper temperature control.*

### Solution

Sensata offers a broad range of solid state relays and contactors that are perfectly suited for use in the food equipment industry.

In the past, electromechanical relays (EMRs) were extensively used because of their low cost. In recent years, solid state relays (SSRs) have been replacing EMRs because of the rising use of digital equipment. SSRs are well suited for use with digital control signals because of their low input current and higher switching speed. This is required in most of these applicators to maintain proper temperature controls but the EMRs cannot keep up.

SSRs have a much greater life expectancy than EMRs. Although the initial SSR cost is higher, the long term cost is lower because of how frequently worn out EMRs must be replaced.

Additionally, solid state relays have no acoustic noise due to their lack of moving parts and they produce less EMI noise. Sensata SSRs utilize a patented trigger circuit that can reduce the switching noise generated by the SSR to comply with levels specified by standard IEC60947-4-3 Environment B for low voltage domestic, commercial, and light industrial locations/installations.



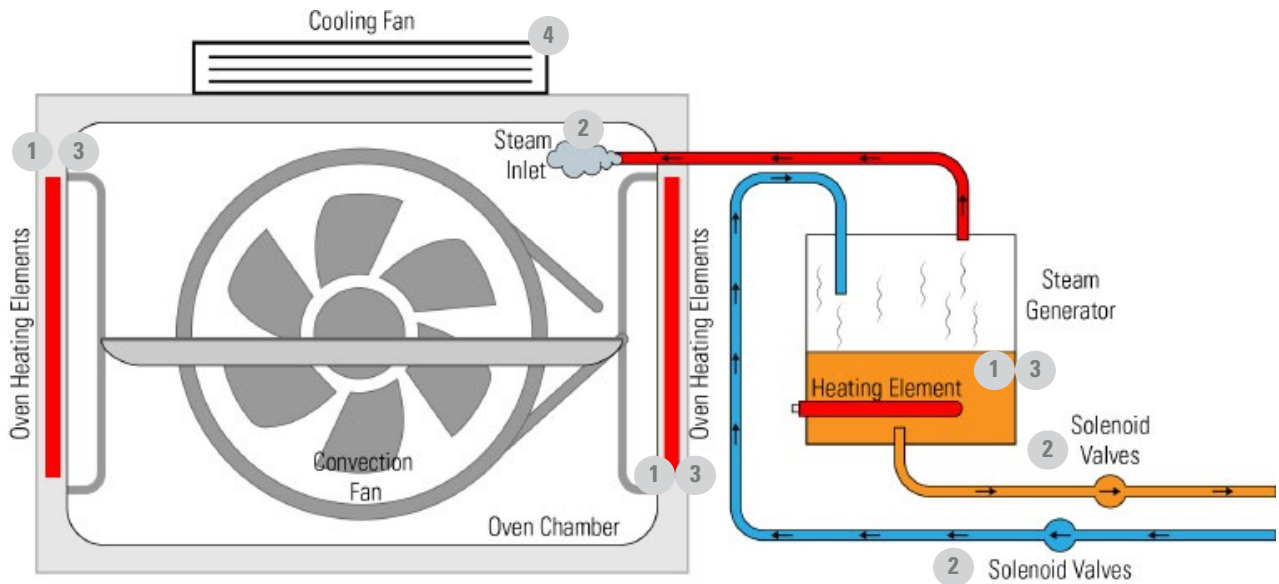


## RECOMMENDED PRODUCTS

Reference on Diagram	Product	Function	Features	Brand
1	LN Series	Heating Control (with Low EMI Noise)	<ul style="list-style-type: none"> <li>Panel Mount solid state relay with patented Low Noise circuit</li> <li>25 to 75 Amp ratings</li> <li>Built-in overvoltage protection</li> <li>Available in 3 configurations: IP00, IP20, and with standoffs (for PC Board mounting)</li> </ul>	Crydom
2	SeriesOne DR	Solenoid Valves On/Off Control	<ul style="list-style-type: none"> <li>Compact DIN Rail Mount solid state relay</li> <li>3 to 12 Amp ratings</li> <li>Class I Div 2 rated</li> </ul>	Crydom
3	PMP Series	Heating Control	<ul style="list-style-type: none"> <li>Single phase proportional control SSR</li> <li>25 to 90 Amp ratings</li> <li>Multi-function</li> <li>Selectable control input</li> </ul>	Crydom
4	DRC Series	Fan On/Off Control	<ul style="list-style-type: none"> <li>Solid State Contactor</li> <li>For 3-phase motors up to 5HP (3.7kW)</li> <li>Available with auxiliary contacts</li> <li>Built-in overvoltage protection</li> </ul>	Crydom



## COMMERCIAL COMBI STEAMER



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