

## Solid State Relays - Panel Mount: SMR24



### Features

25-90Amp • 120/240 Vac - AC OUTPUT

Product	INPUT SPECIFICATIONS	OUTPUT SPECIFICATIONS			
	Control Voltage Range	Load Current	Switching Voltage Type	Turn On	Load Voltage Range
<b>SMR2425</b>	8-32 Volts DC	0.04-25 Amps RMS	AC	Zero cross	60-280 Volts RMS
<b>SMR2450</b>	8-32 Volts DC	0.04-50 Amps RMS	AC	Zero cross	60-280 Volts RMS
<b>SMR2490</b>	8-32 Volts DC	0.04-90 Amps RMS	AC	Zero cross	60-280 Volts RMS

- **System Monitoring Solid State Relay**
- **LED Status Indicators**
- **Alarm Output Signal**
- **Zero Voltage Switching**

The SMR Series of System Monitoring Relays offer the user a number of fault condition alarms. Low line voltage, load circuit high impedance, damaged relay output and loss of DC supply

current constantly monitored by this unique Solid State Relay (SSR).

The alarm circuit output is a normally on NPN transistor capable of sinking current up to 100mA. State-of-the-art Surface Mount Technology assembly ensures reliability in a compact standard SSR package.

Manufactured in Crydom's ISO 9001 Certified facility for optimum product performance and reliability.

MODEL NUMBERS	SMR2425	SMR2450	SMR2490
<b>OUTPUT SPECIFICATIONS ①</b>			
Operating Voltage (47-63 Hz) [Vrms]	60-280	60-280	60-280
Max. Load Current ③ [Arms]	25	50	90
Min. Load Current, [mArms]	40	40	40
Transient Overvoltage [Vpk]	600	600	600
Max. Surge Current, (16.6ms) [Apk]	250	625	1200
Max. On-State Voltage Drop @ Rated Current [Vpk]	1.6	1.6	1.6
Thermal Resistance Junction to Case (R <sub>θJC</sub> ) [°C/W]	1.02	0.63	0.28
Maximum I <sup>2</sup> t for Fusing, (8.3 msec.) [A <sup>2</sup> sec]	260	1620	6000
Max. Off-State Leakage Current @ Rated Voltage [mArms]	10	10	10
Min. Off-State dv/dt @ Max. Rated Voltage [V/μsec] ②	500	500	500
Max. Turn-On Time	1/2 Cycle	1/2 Cycle	1/2 Cycle
Max. Turn-Off Time	1/2 Cycle	1/2 Cycle	1/2 Cycle
Power Factor (Min.) with Max. Load	0.5	0.5	0.5

## INPUT SPECIFICATIONS ①

Logic Supply Voltage Range (pin 3)	8-32 Vdc
Turn-On Control Voltage Range (pin 6)	8-32 Vdc
Min. Turn-Off Voltage (pin 6)	0.4 Vdc
DC Supply Current @ 12 Vdc	8 mA
DC Control Current @ 12 Vdc	6 mA
Maximum Alarm Output Current	100 mA
Alarm On Output Voltage (Open), (pin 7)	Supply Voltage
Maximum Alarm Off Output Voltage @ 100 mA (Active Low), (pin 7)	1.5 Vdc
Alarm Delay (Min.-Max.)	30-100 msec.

## GENERAL NOTES

- ① All parameters at 25° C unless otherwise specified.  
 ② Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1  
 ③ Heat sinking required, for derating curves see page 2.

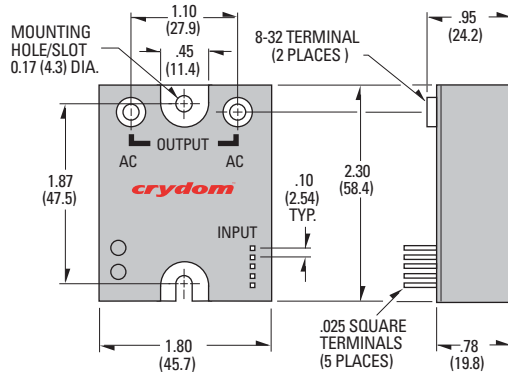
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### GENERAL SPECIFICATIONS

Dielectric Strength 50/60Hz Input/Output/Base	4000 Vrms
Insulation Resistance (Min.) @ 500 Vdc	10 <sup>9</sup> Ohm
Max. Capacitance Input/Output	8 pF
Ambient Operating Temperature Range	-40 to 80°C
Ambient Storage Temperature Range	-40 to 125°C

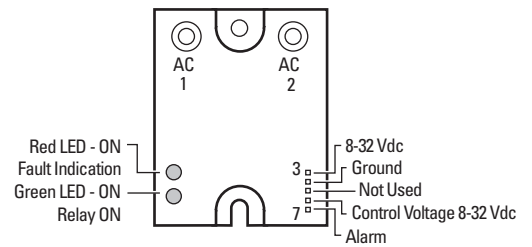
### MECHANICAL SPECIFICATIONS

Weight: (typical)	3.0 oz. (86.5g)
Encapsulation:	Thermally Conductive Epoxy
Output Terminals:	Screws and Saddle Clamps Furnished, Unmounted
Input Connector (locking):	Panduit No. MLSS100-5 or Equivalent
Mating Connector (supplied):	Panduit No. CT100F22-5 or Equivalent

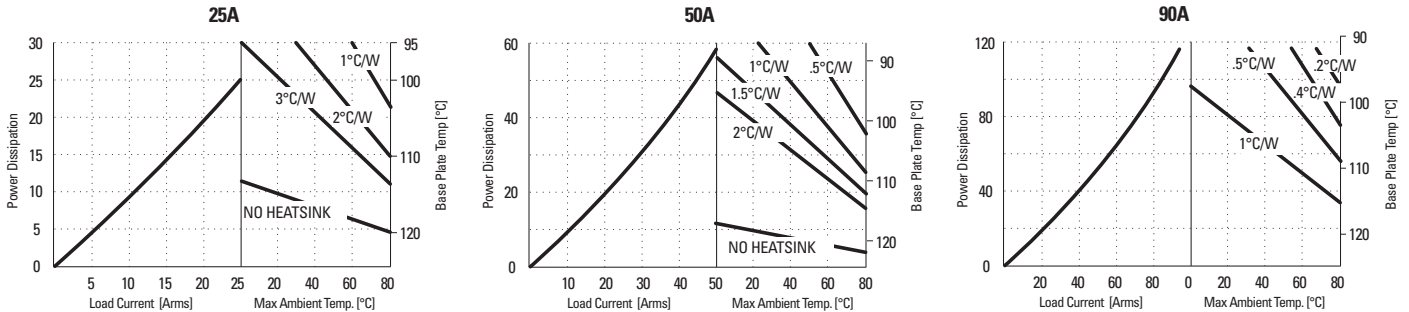


All dimensions are in inches (millimeters)  
**Screw Torque Requirements:**  
 8-32 Screws - 20in. lbs.  
 (Screws dry without grease.)

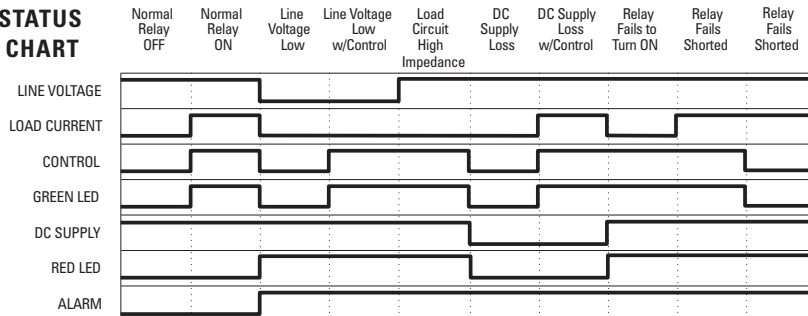
### WIRING DIAGRAM



### CURRENT DERATING CURVES



### STATUS CHART



**Crydom Heat Sinks** offer excellent thermal management and are perfectly matched to the load current ratings of Crydom panel mount relays. Request Crydom's Heat Sink specification sheet for all the details.

### APPROVALS

UL E116949  
 CSA LR81689  
 VDE 10143 UG



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