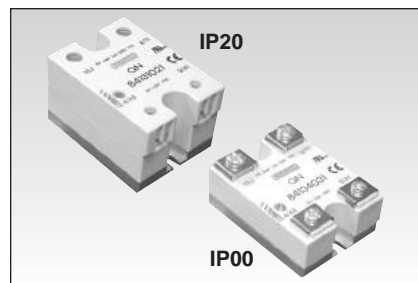


# GN Series Solid State Relays

- ▶ Current ratings from 10 to 125 amps
- ▶ Output voltage from 24 to 660 Vac
- ▶ Back to back SCR's for severe inductive loads
- ▶ Direct bond copper substrate
- ▶ Improved power lead frame design
- ▶ LED input status indicator
- ▶ Transient protection built in
- ▶ 4000 Vac optical isolation
- ▶ Available with IP20 "touch-safe" cover
- ▶ UL E79183, CSA LR 38595, TUV Approved, CE Compliant



## Output Specifications

Voltage range (Vrms)	24 - 280Vac			48 - 660Vac		
Peak Voltage (Vpk, t = 1 min.)	600			1200		
Off-state leakage (@ max. line voltage & Ta = 25°C)	0.1mArms			0.25mArms		
Output Current (Mounted on proper heat sink, see deratings)	<b>10</b>	<b>25</b>	<b>50</b>	<b>75</b>	<b>100</b>	<b>125</b>
Minimum Current (mArms)	50	50	100	100	100	100
Max. 1 cycle surge current (Apk, Ta = 25°C)	150	300	750	1000	1200	1700
Max. 1 second surge current (Apk, Ta = 25°C)	30	75	150	225	300	375
Forward voltage drop (Vpk @ Imax, Ta = 25°C)	1.35	1.35	1.35	1.3	1.3	1.3
IFT (60Hz, 1/2 cycle)	416	937	2458	5000	6000	12.041
Rjb (thermal res. Junction to baseplate, °C/W)	0.5	0.4	0.25	0.16	0.155	0.15
Static off-state dv/dt (Vµs, Ta = 25°C)	500	500	500	500	500	500
Minimum heat sink @ ambient (for max current = °C/W & Ta)	3.0@ 70°C	1.5@ 50°C	1.0@ 40°C	0.7@ 40°C	0.6@ 40°C	0.4@ 40°C

## Input Specifications

Input voltage*	<b>3-32Vdc</b>	<b>90-280Vac**</b>
Drop out voltage	1Vdc	10Vrms
Max. input current	14mA	10mArms
Min. input current (for on-state)	7mA	5mArms
Input Resistance	Current Regulated	
Turn-on time**	8.33ms	20ms
Turn-off time	8.33ms	30ms

\*4-32Vdc for 48-660Vac models

\*\*Random SSR's turn on in less than 100µs

## General Characteristics

Operating Temperature (°C)****	-20 to +80
Storage Temperature (°C)	-40 to +100
Input to output isolation	4000Vrms
Input/output to ground isolation	2500Vrms
Input to output capacitance	8pF (typical)
Operating Frequency	47 to 63 Hz
Housing Material	UL 94V0 (self extinguishing)

## Safety and Noise Immunity Compliance

CE Compliant with the LVD 73/23/EEC

UL / cUL Recognized per UL 508 and CSA C22.2 no. 14-M91

TUV EN60950

IEC 1000-4-2: Electrostatic Discharge – Level 3

IEC 1000-4-3: Radiated Electromagnetic Noise – Level 3

IEC 1000-4-4: Electrically Fast Transients – Level 3

IEC 1000-4-5: Electrical Surges – Level 3

IEC 1000-4-6: Conducted Electromagnetic Noise – Level 3

CISPR 11 – Class A: Allowable Levels of Conducted and Radiated Noise for Industrial Environments

\*\*\* For ambient temperatures above 40°C the maximum control voltage must not exceed 250Vac.

\*\*\*\* Increase minimum input voltage by 1Vdc for operation from -20°C to -40°C.

## Part Numbers (Zero Crossing)

Rating	Output	Input	IP00	IP20	
10 Amp	24-280Vac	90-280Vac	<b>84 134 001</b>	<b>84 137 001</b>	
		3-32Vdc	<b>84 134 000</b>	<b>84 137 000</b>	
		48-660Vac	90-280Vac	<b>84 134 101</b>	<b>84 137 101</b>
25 Amp	24-280Vac	4-32Vdc	<b>84 134 100</b>	<b>84 137 100</b>	
		90-280Vac	<b>84 134 011</b>	<b>84 137 011</b>	
		3-32Vdc	<b>84 134 010</b>	<b>84 137 010</b>	
50 Amp	24-280Vac	48-660Vac	90-280Vac	<b>84 134 111</b>	<b>84 137 111</b>
		4-32Vdc	<b>84 134 110</b>	<b>84 137 110</b>	
		90-280Vac	<b>84 134 021</b>	<b>84 137 021</b>	
75 Amp	24-280Vac	3-32Vdc	<b>84 134 020</b>	<b>84 137 020</b>	
		48-660Vac	90-280Vac	<b>84 134 121</b>	<b>84 137 121</b>
		4-32Vdc	<b>84 134 120</b>	<b>84 137 120</b>	
100 Amp	24-280Vac	90-280Vac	<b>84 134 031</b>	<b>84 137 031</b>	
		3-32Vdc	<b>84 134 030</b>	<b>84 137 030</b>	
		48-660Vac	90-280Vac	<b>84 134 131</b>	<b>84 137 131</b>
125 Amp	24-280Vac	4-32Vdc	<b>84 134 130</b>	<b>84 137 130</b>	
		90-280Vac	<b>84 134 041</b>	<b>84 137 041</b>	
		3-32Vdc	<b>84 134 040</b>	<b>84 137 040</b>	
125 Amp	48-660	90-260Vac	<b>84 134 141</b>	<b>84 137 141</b>	
		4-32Vdc	<b>84 134 140</b>	<b>84 137 140</b>	
		90-280Vac	<b>84 134 081</b>	<b>84 137 081</b>	
125 Amp	48-660Vac	3-32Vdc	<b>84 134 080</b>	<b>84 137 080</b>	
		90-280Vac	<b>84 134 181</b>	<b>84 137 181</b>	
		4-32Vdc	<b>84 134 180</b>	<b>84 137 180</b>	

## Random SSR's

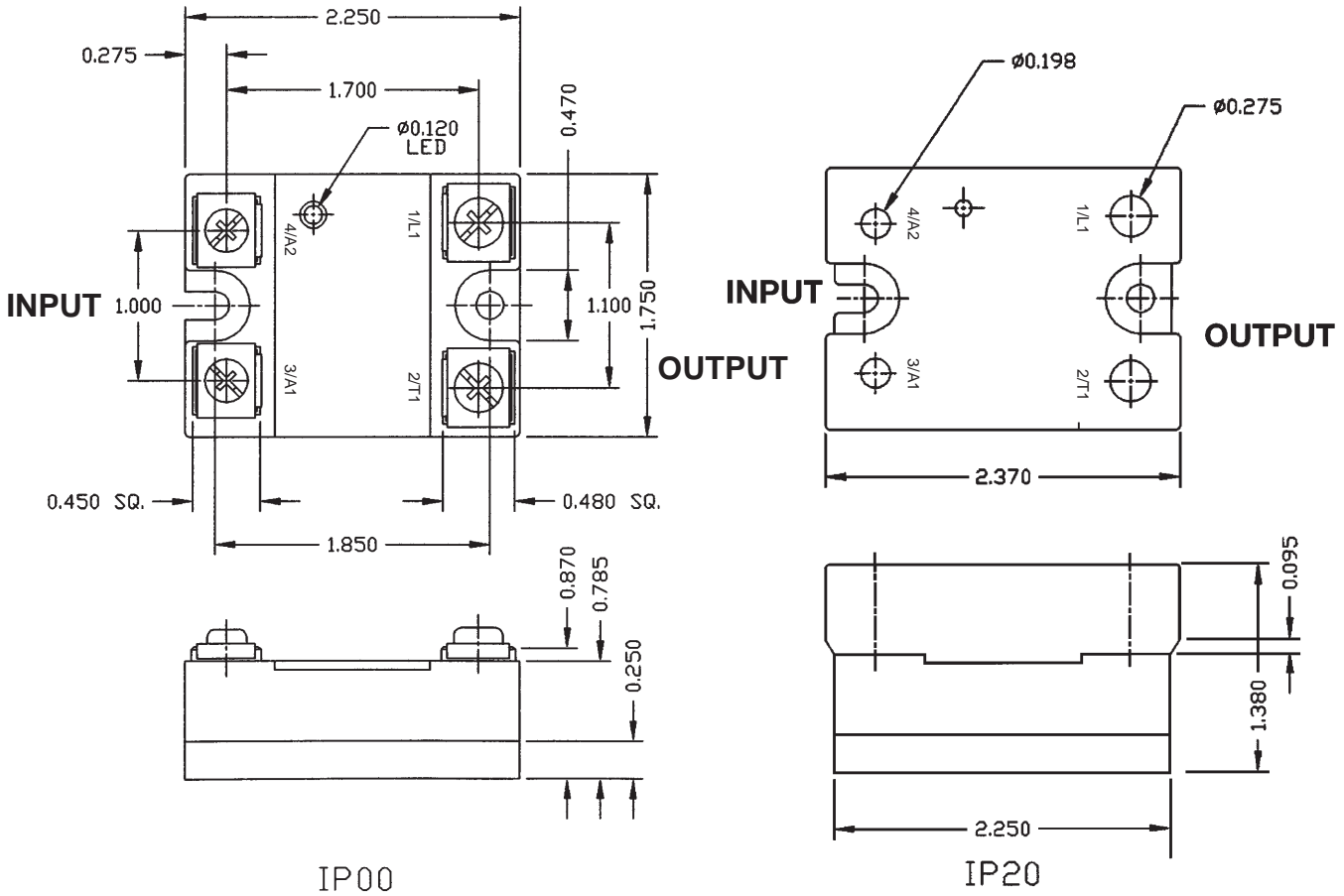
Rating	Output	Input	IP00	IP20
10 Amp	24-280Vac	3-32Vdc	84 134 200	84 137 200
	48-660Vac	4-32Vdc	84 134 300	84 137 300
25 Amp	24-280Vac	3-32Vdc	84 134 210	84 137 210
	48-660Vac	4-32Vdc	84 134 310	84 137 310
50 Amp	24-280Vac	3-32Vdc	84 134 220	84 137 220
	48-660Vac	4-32Vdc	84 134 320	84 137 320
75 Amp	24-280Vac	3-32Vdc	84 134 230	84 137 230
	48-660Vac	4-32Vdc	84 134 330	84 137 330
100 Amp	24-280Vac	3-32Vdc	84 134 240	84 137 240
	48-660Vac	4-32Vdc	84 134 340	84 137 340
125 Amp	24-280Vac	3-32Vdc	84 134 280	84 137 280
	48-660Vac	4-32Vdc	84 134 380	84 137 380

Dimensions – see page 1-4

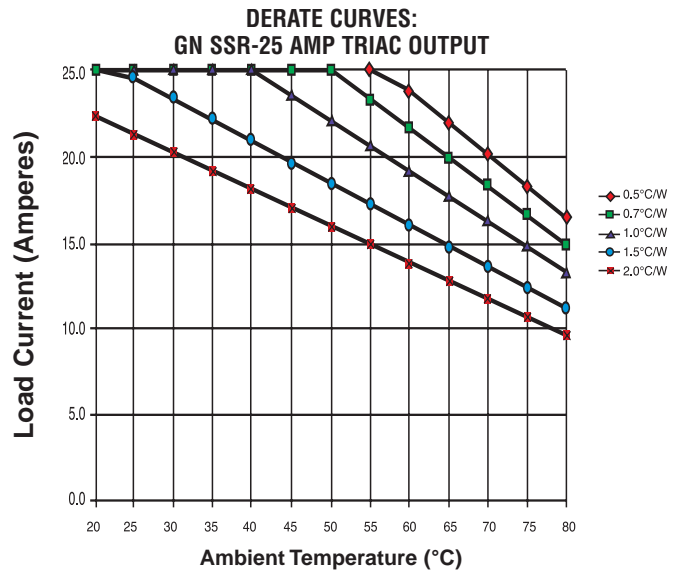
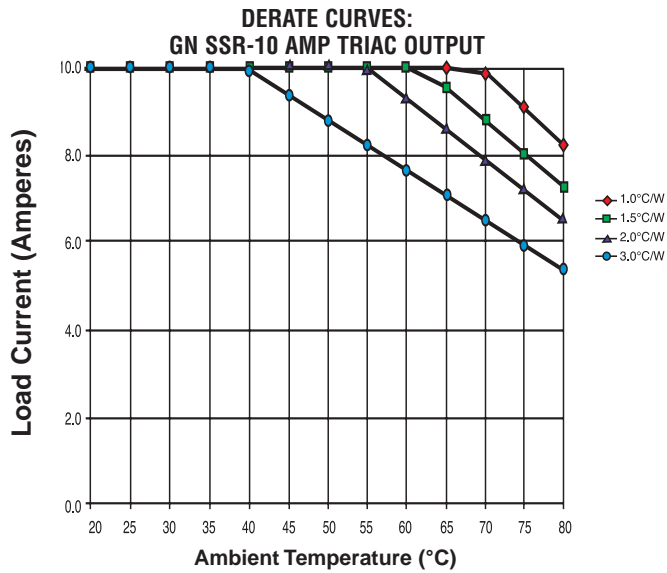
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**DIMENSIONS IN INCHES**

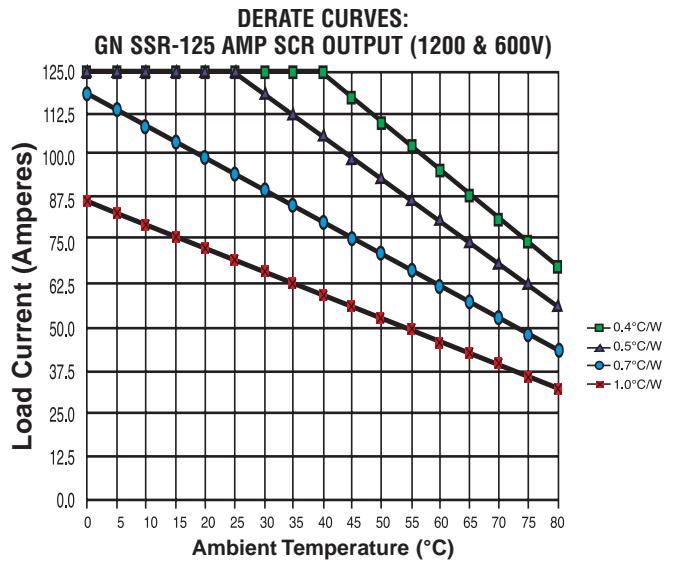
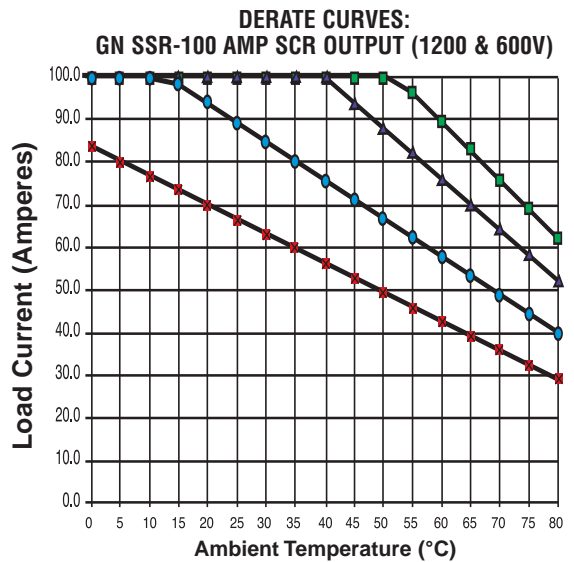
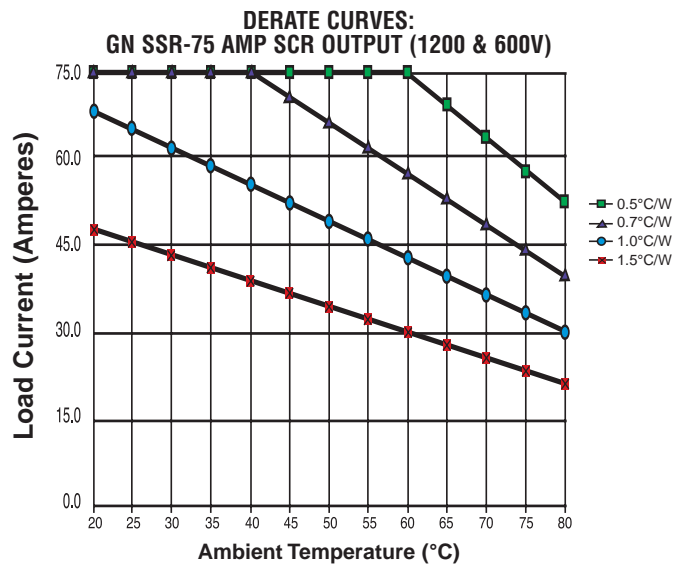
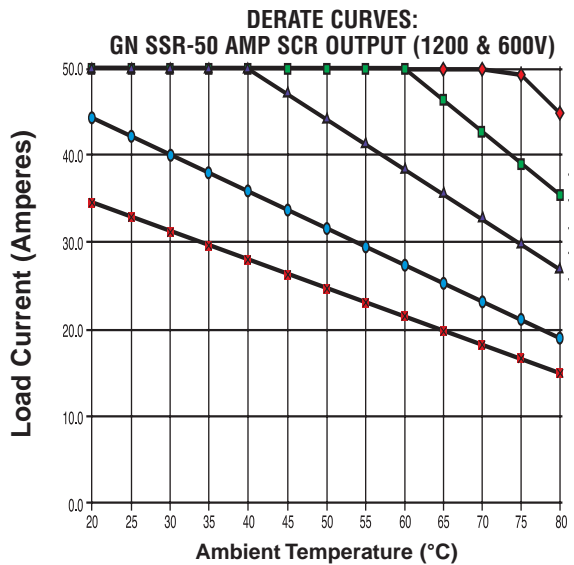
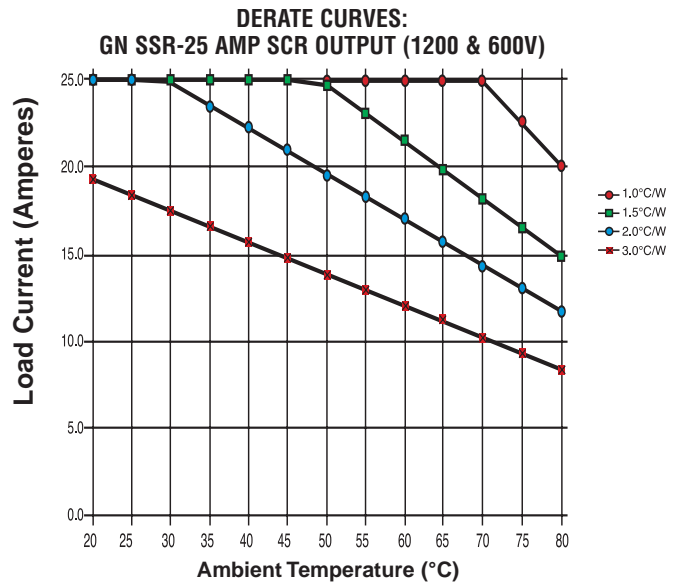
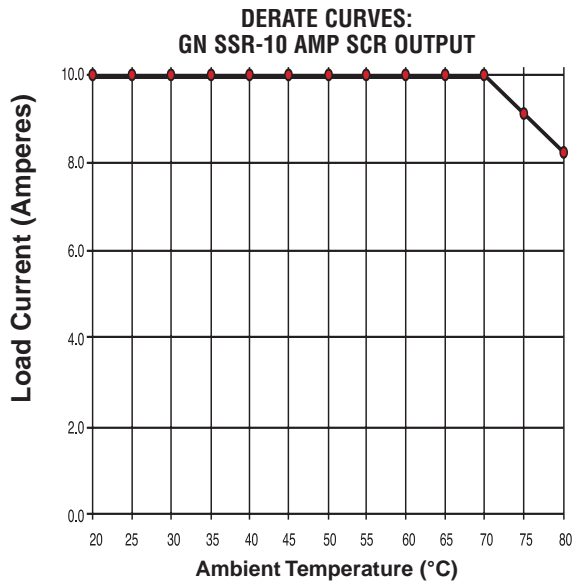


**DERATING CURVES**



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