45mm DIN-RAIL SSR

- **Epoxy-Free Design Eliminates Internal Component Stress**
- **DIN-RAIL or Panel Mount**
- **Relay or Contactor Output Terminal Configuration**
- **DBC Substrate for Superior Thermal Pe**
- **100k-cycle UL508 Endurance Rating for Enhanced Reliability**
- **Back-to-Back Dual SCR Output**
- **No External Transient Protection Required (Internal TVS)**
- **Zero-Crossing or Random-Fire Output**
- **UL / CSA / TUV Approved, CE Compliant**
- **EMC Compliant Level 3**
- **RoHS Compliant**

"Relay" Configuration

"Contactor" Configuration

Output Specifications

Voltage range (Vrms)	**48-600Vac**	**48-600Vac**
Output Current (40°C)	35	45
Peak Voltage (Vpk , t = I min.)	1100	1100
Off-state leakage uArms (@ 480V & Ta = 25ºC)	250	250
Minimum Current (mArms)	100	100
1 cycle surge current 50 HZ	665	710
1 cycle surge current 60 HZ	700	750
1 second surge current 50/60 Hz (Apk, Ta = 25ºC)	130	150
Forward voltage drop (Vpk @ Imax, Ta = 25ºC)	1.35	1.35
I^2T (50Hz, ½ cycle)	2230	2520
I^2T (60Hz, ½ cycle)	2020	2320
Static off-state dv/dt	500	500
HP Ratings at 240V	2	3
HP Ratings at 480V	3	4
Output Type	SCR	SCR
Min/Max stranded wire	16/8 AWG	16/8 AWG
Min/Max solid wire	16/10 AWG	16/10 AWG

Input Specifications

Input voltage	**4-32Vdc**	**90-140VAC**	**180-280VAC**
Drop out voltage	1Vdc	10VAC	10VAC
Min. input current (for on-state)			
Maximum input current	19mA	23mA	23mA
Input Resistance (Ohms)		Current Regulated	
Turn-on time*	8.33msec	20mSec	20mSec
Turn-off time	8.33msec	30mSec	30mSec
Min/Max stranded/solid wire	24/16 AWG	24/16 AWG	24/16 AWG

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

General Characteristics

Operating Temperature (ºC)**	-20 to + 80
Storage Temperature (ºC)	-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)
Weight (grams)	400
Input/Output Torque	

**** -20 to +60 for 180-280VAC input**

Standards of Compliance

CE Compliant with the LVD 73/23/EEC	
UL Recognized per UL 508 and CSA C22.2 no. 14-95	
TUV Certified per EN 60950	
IEC 62314	
IEC 60068-2-6	35mm/10-55Hz
IEC 60068-2-27	15G / 11ms
IEC 61000-4-2 Level 3	Electrostatic Discharge
IEC 61000-4-3 Level 3	Radiated Electromagnetic Noise
IEC 61000-4-4 Level 3	Immunity to Electrically Fast Transients
IEC 61000-4-5 Level 3	Immunity to Electrical Surges
IEC 61000-4-6 Level 3	Conducted Electromagnetic Noise
CISPR 11 Calss A	Conducted and Radiated Noise for Industrial Enviroments

Part Numbers

Relay Configuration

Zero Crossing Output

Rating	Output	Input	Part Number
35 Amp	48-600Vac	180-280VAC	GNR35AHZ
35 Amp	48-600Vac	90-140VAC	GNR35BHZ
35 Amp	48-600Vac	4-32Vdc	GNR35DHZ
45 Amp	48-600Vac	180-280VAC	GNR45AHZ
45 Amp	48-600Vac	90-140VAC	GNR45BHZ
45 Amp	48-600Vac	4-32Vdc	GNR45DHZ

Random Fire Output

Rating	Output	Input	Part Number
35 Amp	48-600Vac	4-32Vdc	GNR35DHR
45 Amp	48-600Vac	4-32Vdc	GNR45DHR

Part Numbers

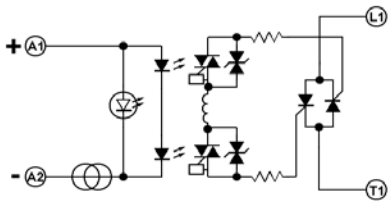
Contactor Configuration

Zero Crossing Output

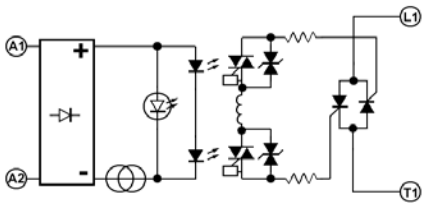
Rating	Output	Input	Part Number
35 Amp	48-600Vac	180-280VAC	GNR35ACZ
35 Amp	48-600Vac	90-140VAC	GNR35BCZ
35 Amp	48-600Vac	4-32Vdc	GNR35DCZ
45 Amp	48-600Vac	180-280VAC	GNR45ACZ
45 Amp	48-600Vac	90-140VAC	GNR45BCZ
45 Amp	48-600Vac	4-32Vdc	GNR45DCZ

Random Fire Output

Rating	Output	Input	Part Number
35 Amp	48-600Vac	4-32Vdc	GNR35DCR
45 Amp	48-600Vac	4-32Vdc	GNR45DCR

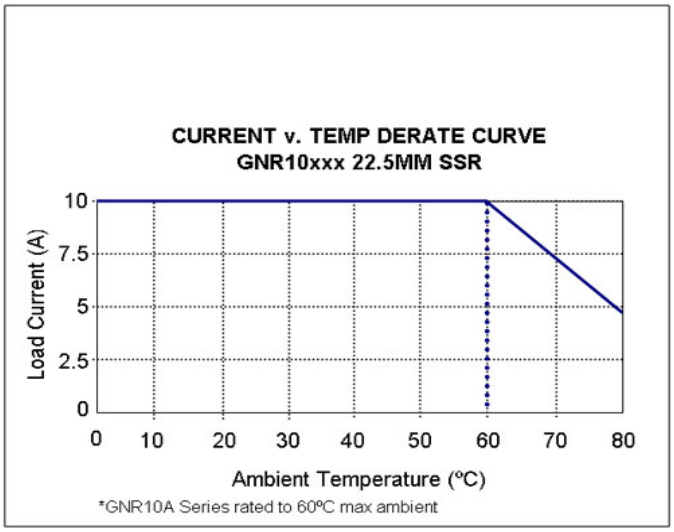


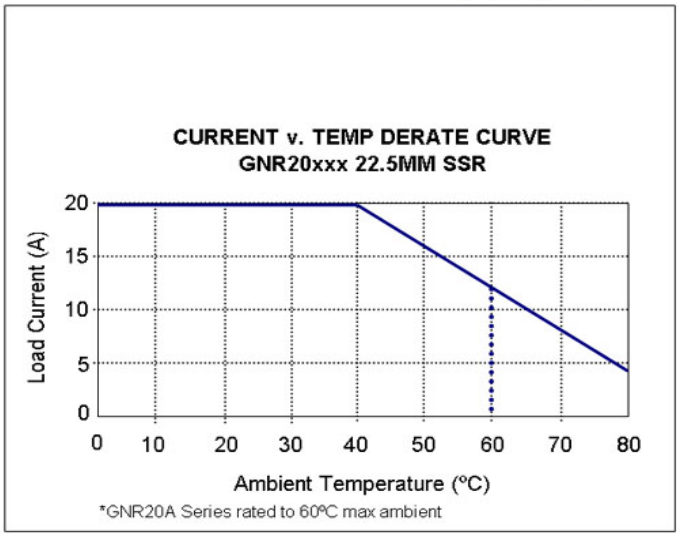
DC Input Equivalent Circuit

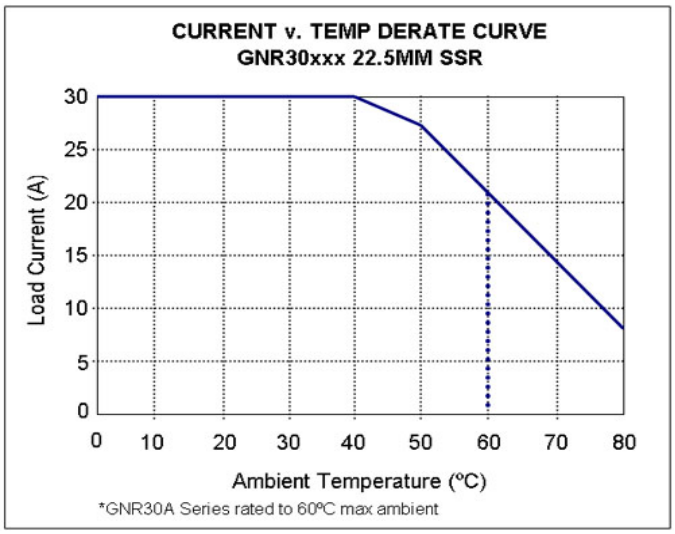


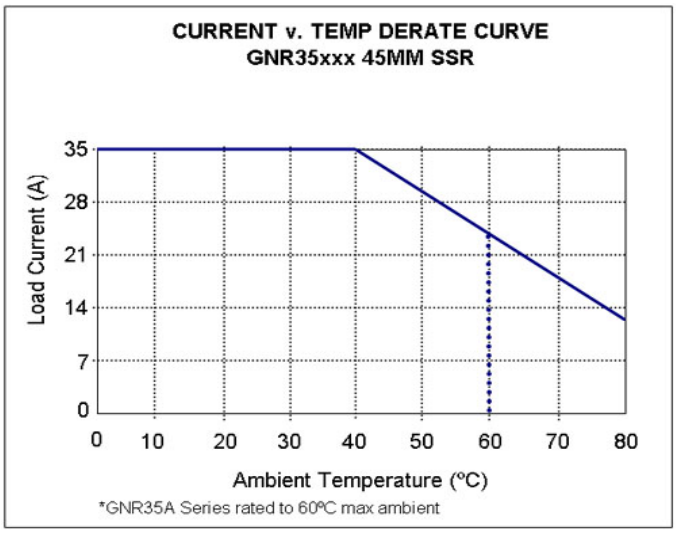
AC Input Equivalent Circuit

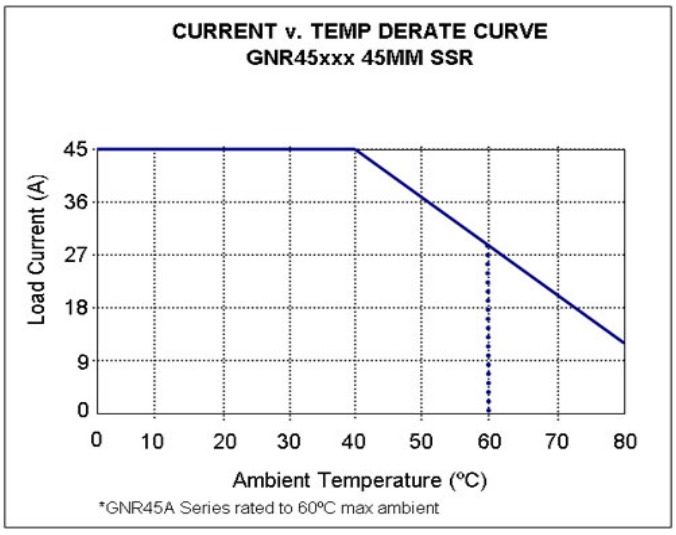
GNR DIN-Rail SSR Derate Curves

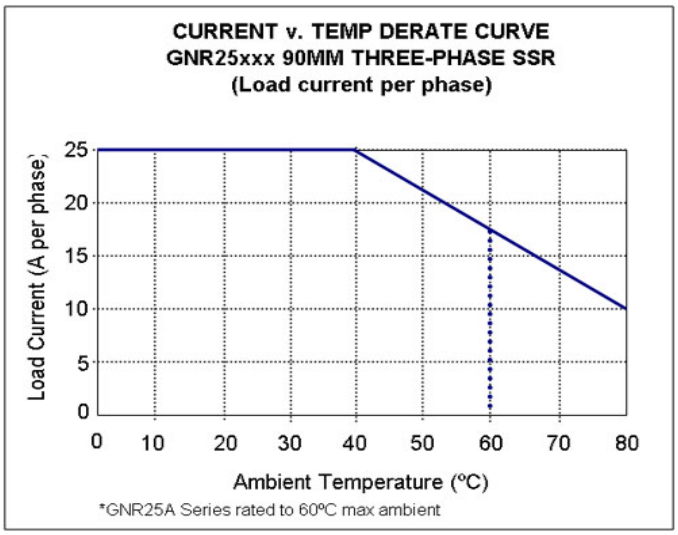




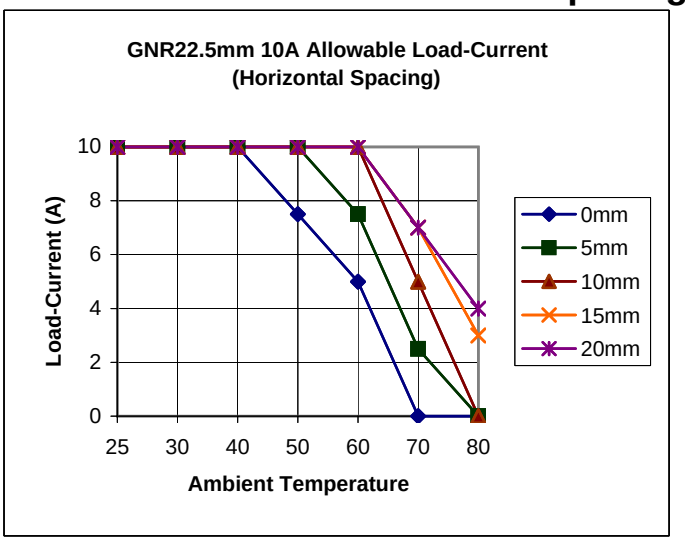


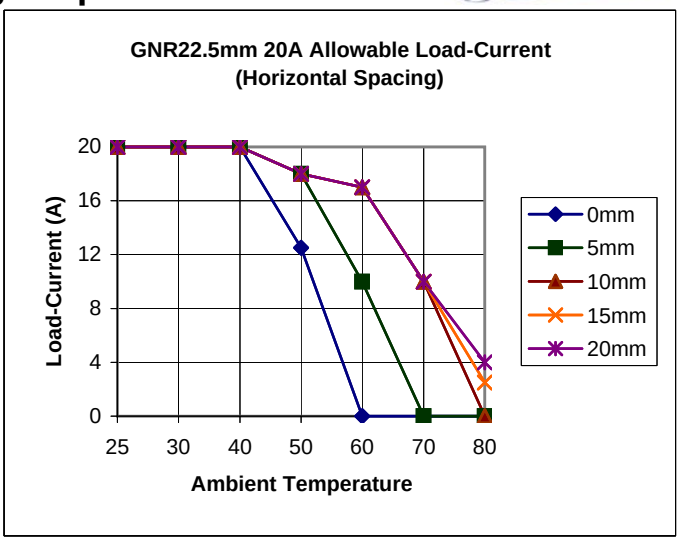


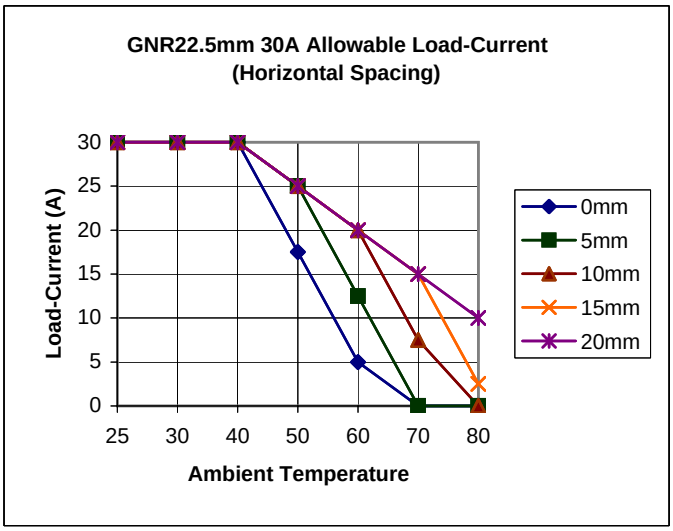


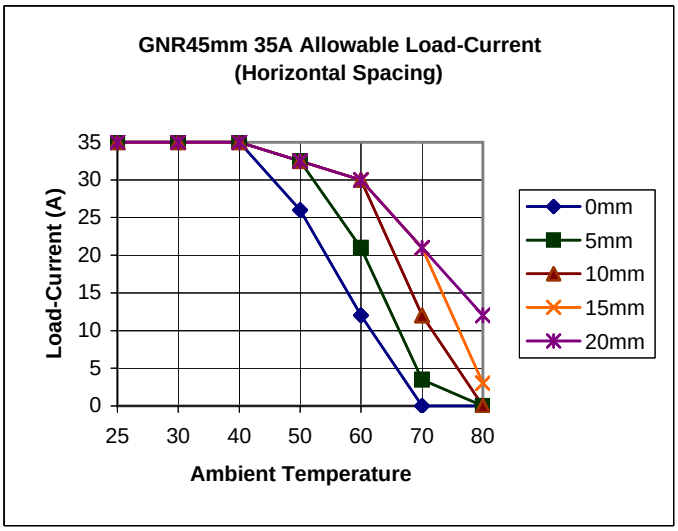


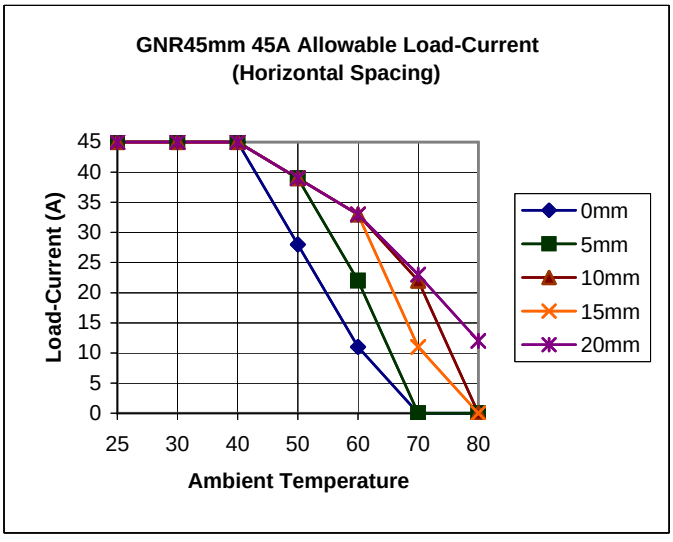
GNR DIN-Rail SSR Horizontal Spacing Requirements

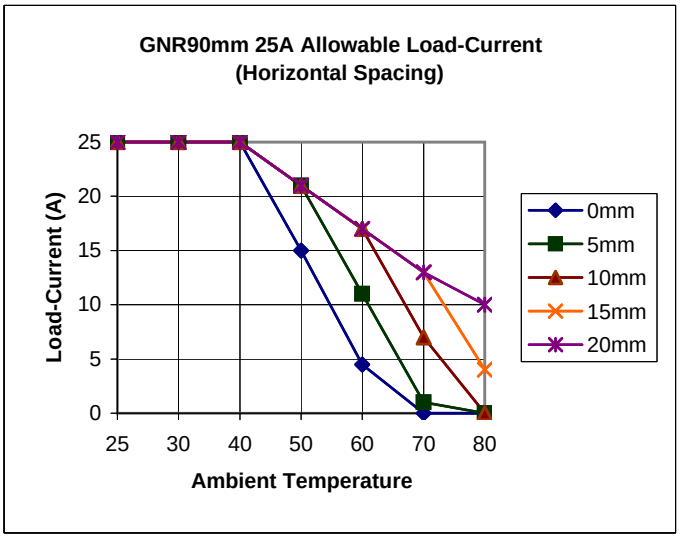








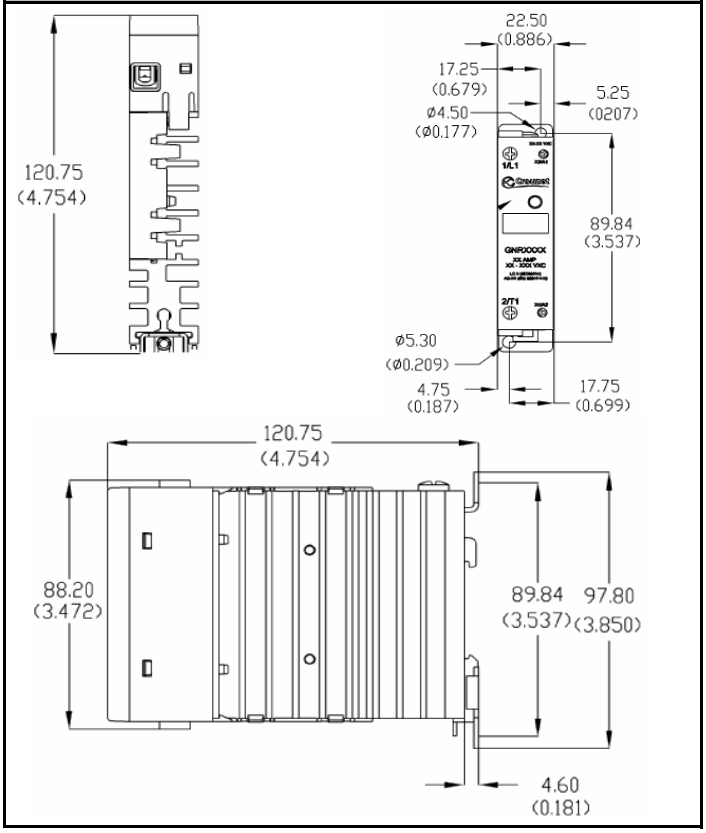




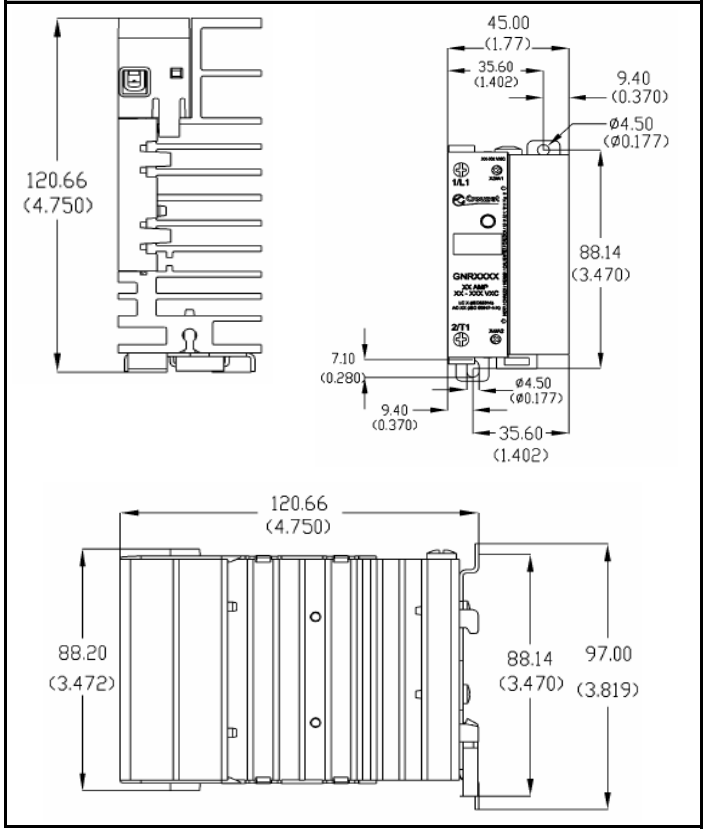
DIN-Rail SSR Dimensional Drawings

Dimensions mm (inches)

22.5MM



45MM



90MM