

22.5mm DIN-RAIL SSR

- ▶ Epoxy-Free Design Eliminates Internal Component Stress
- ▶ DIN-RAIL or Panel Mount
- ▶ Relay or Contactor Output Terminal Configuration
- ▶ Direct Bond Copper (DBC) Substrate
- ▶ 100k-cycle UL508 Endurance Rating
- ▶ Back-to-Back Dual SCR Output (600V models)
- ▶ Internal Transient Protection
- ▶ Zero-Crossing or Random-Fire Output
- ▶ UL / CSA / TUV Approved, CE Compliant
- ▶ EMC Compliant Level 3
- ▶ RoHS Compliant (January 2006)

Output Specifications

Voltage range (Vrms)	24-240Vac	48-600Vac	48-600Vac
Output Current (40°C)	10	20	30
Peak Voltage (Vpk , t = 1 min.)	550	1100	1100
Off-state leakage uArms	100	250	250
(@ max. line voltage & Ta = 25°C)			
Minimum Current (mArms)	100	100	100
1 cycle surge current 50 Hz	190	275	710
1 cycle surge current 60 Hz	200	300	750
1 second surge current 50/60 Hz	65	85	150
(Apk, Ta = 25°C)			
Forward voltage drop	1.5	1.35	1.35
(Vpk @ Imax, Ta = 25°C)			
I ² T (50Hz, ½ cycle)	180	380	2520
I ² T (60Hz, ½ cycle)	160	370	2320
Static off-state dv/dt	500	500	500
HP Ratings at 120V		1/2	3/4
HP Ratings at 240V		1	2
Output Type	Triac	SCR	SCR
Min/Max stranded wire	16/8 AWG	16/8 AWG	16/8 AWG
Min/Max solid wire	16/10 AWG	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 (°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)		
Weight (grams)	200	225	225
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
Pollution Degree 2	



"Relay"
Configuration



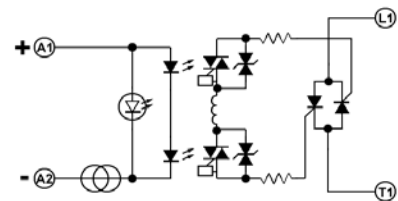
"Contactor"
Configuration

Part Numbers

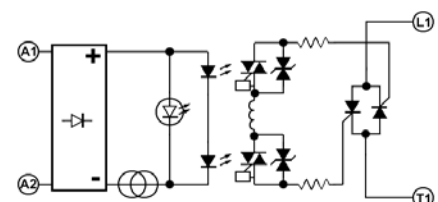
Relay Configuration	Zero Crossing Output			
	Rating	Output	Input	Part Number
	10 Amp	24-280 Vac	180-280VAC	GNR10AHZ
	10 Amp	24-280 Vac	90-140VAC	GNR10BHZ
	10 Amp	24-280 Vac	4-32Vdc	GNR10DHZ
	20 Amp	48-600Vac	180-280VAC	GNR20AHZ
	20 Amp	48-600Vac	90-140VAC	GNR20BHZ
	20 Amp	48-600Vac	4-32Vdc	GNR20DHZ
	30 Amp	48-600Vac	180-280VAC	GNR30AHZ
	30 Amp	48-600Vac	90-140VAC	GNR30BHZ
	Random Fire Output			
	Rating	Output	Input	Part Number
	20 Amp	48-600Vac	4-32Vdc	GNR20DHR
	30 Amp	48-600Vac	4-32Vdc	GNR30DHR

Part Numbers

Contactor Configuration	Zero Crossing Output			
	Rating	Output	Input	Part Number
	10 Amp	24-280 Vac	180-280VAC	GNR10ACZ
	10 Amp	24-280 Vac	90-140VAC	GNR10BCZ
	10 Amp	24-280 Vac	4-32Vdc	GNR10DCZ
	20 Amp	48-600Vac	180-280VAC	GNR20ACZ
	20 Amp	48-600Vac	90-140VAC	GNR20BCZ
	20 Amp	48-600Vac	4-32Vdc	GNR20DCZ
	30 Amp	48-600Vac	180-280VAC	GNR30ACZ
	30 Amp	48-600Vac	90-140VAC	GNR30BCZ
	Random Fire Output			
	Rating	Output	Input	Part Number
	20 Amp	48-600Vac	4-32Vdc	GNR20DCR
	30 Amp	48-600Vac	4-32Vdc	GNR30DCR



DC Input Equivalent Circuit

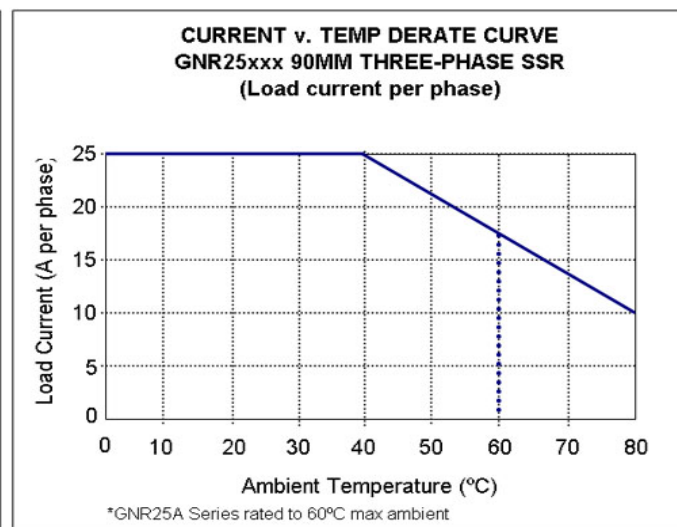
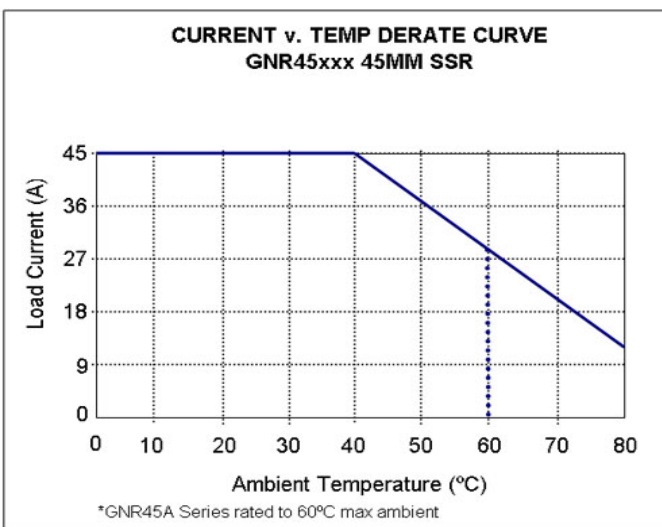
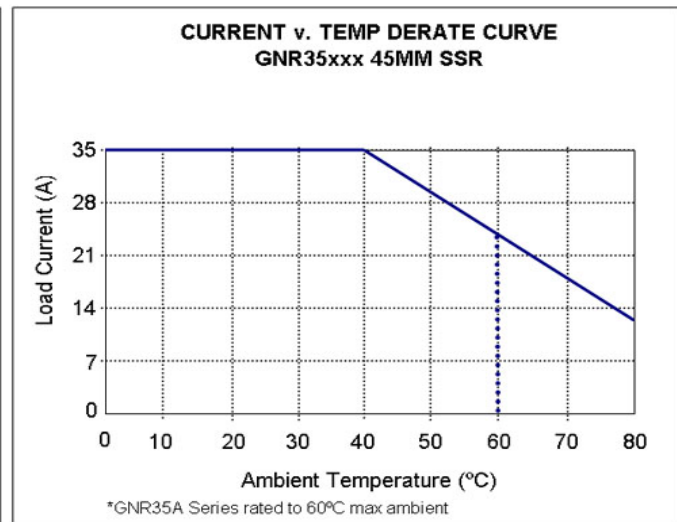
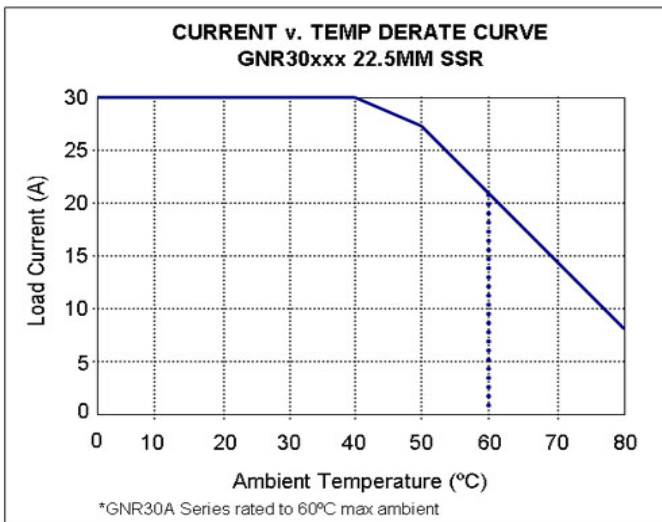
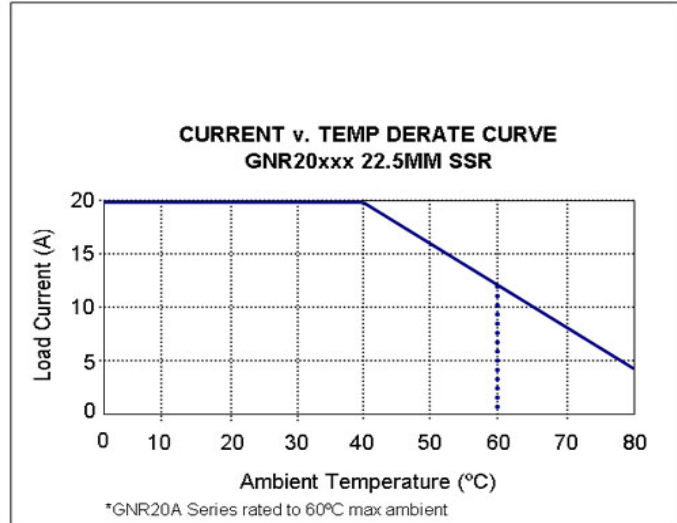
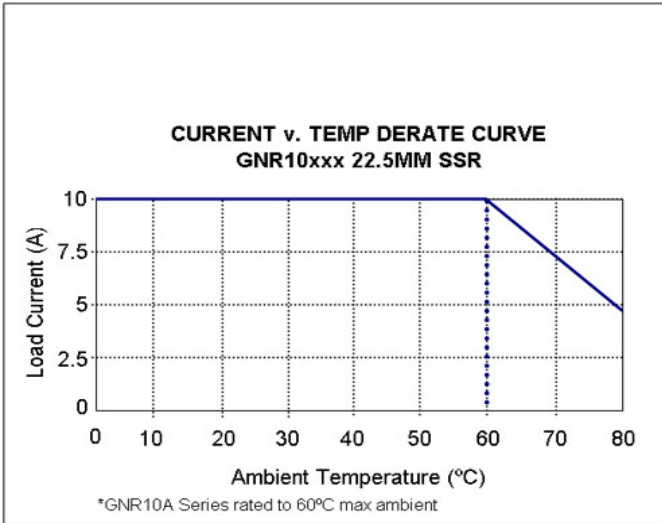


AC Input Equivalent Circuit

Products and specifications subject to change without notice

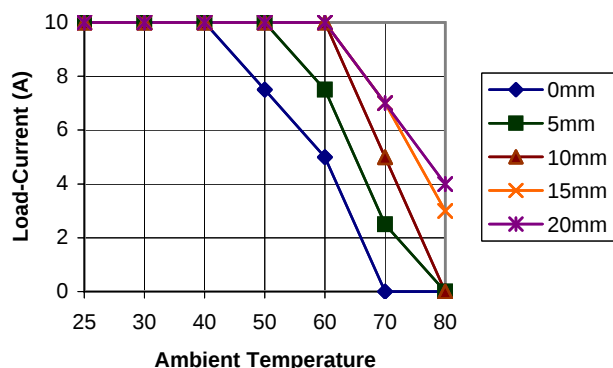
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GNR DIN-Rail SSR Derate Curves

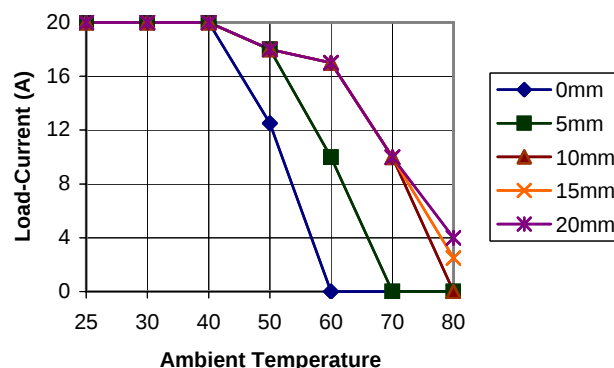


GNR DIN-Rail SSR Horizontal Spacing Requirements

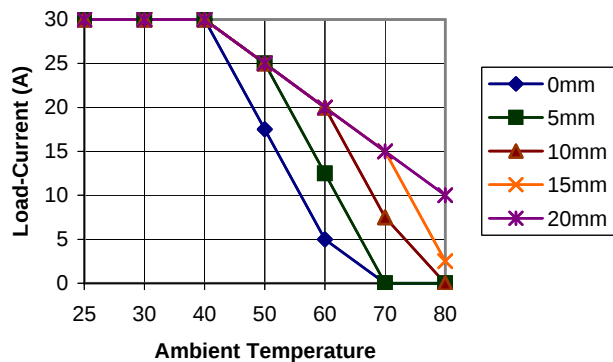
**GNR22.5mm 10A Allowable Load-Current
(Horizontal Spacing)**



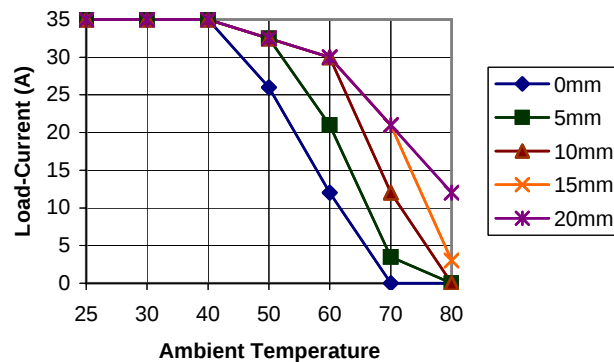
**GNR22.5mm 20A Allowable Load-Current
(Horizontal Spacing)**



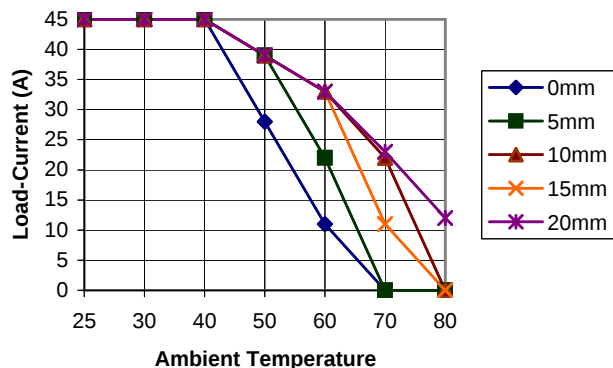
**GNR22.5mm 30A Allowable Load-Current
(Horizontal Spacing)**



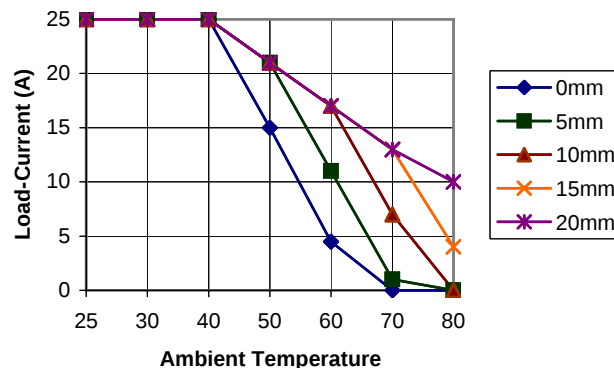
**GNR45mm 35A Allowable Load-Current
(Horizontal Spacing)**



**GNR45mm 45A Allowable Load-Current
(Horizontal Spacing)**



**GNR90mm 25A Allowable Load-Current
(Horizontal Spacing)**



DIN-Rail SSR Dimensional Drawings



Dimensions mm (inches)

