

22.5mm DIN-RAIL SSR



- ▶ Epoxy-Free Design Minimizes Internal Component Stress
- ▶ DIN-RAIL or Panel Mount
- ▶ Relay or Contactor Output Terminal Configuration
- ▶ DBC Substrate for Superior Thermal Performance
- ▶ 100k-cycle UL508 Endurance Rating for Enhanced Reliability
- ▶ Back-to-Back Dual SCR Output (600V models)
- ▶ No External Transient Protection Required (Internal TVS)
- ▶ Zero-Crossing or Random-Fire Output
- ▶ UL / CSA / TUV Approved, CE Compliant
- ▶ EMC Compliant for Reliable Operation in Harsh Environments

Output Specifications

Voltage range (Vrms)	24-240Vac	48-600Vac	48-600Vac
Output Current	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
Max. 1 cycle surge current	100	495	750
(Apk, Ta = 25°C)			
Max. 1 second surge current	30	100	150
(Apk, Ta = 25°C)			
Forward voltage drop	1.5	1.35	1.35
(Vpk @ Imax, Ta = 25°C)			
I ² T (60Hz, ½ cycle)	340	1020	2350
Static off-state dv/dt	500	500	500
(Vµs, Ta = 25°C)			
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)	16mA	5mA	6mA
Maximum input current	19mA	6mA	8mA
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 Class A	Conducted and Radiated Noise for Industrial Environments
Pollution Degree 2	

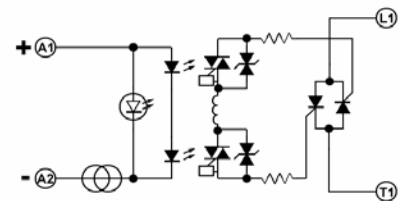


Part Numbers

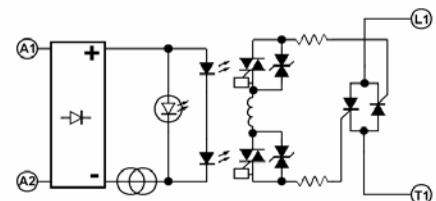
Relay Configuration	Zero Crossing Output			
	Rating	Output	Input	Part Number
	10 Amp	24-280 Vac	180-280VAC	GNR10AHZ
	10 Amp	24-280 Vac	90-140VAC	GNR10BHZ
	10 Amp	24-280 Vac	4-32Vdc	GNR10DHZ
	20 Amp	48-600Vac	180-280VAC	GNR20AHZ
	20 Amp	48-600Vac	90-140VAC	GNR20BHZ
	20 Amp	48-600Vac	4-32Vdc	GNR20DHZ
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

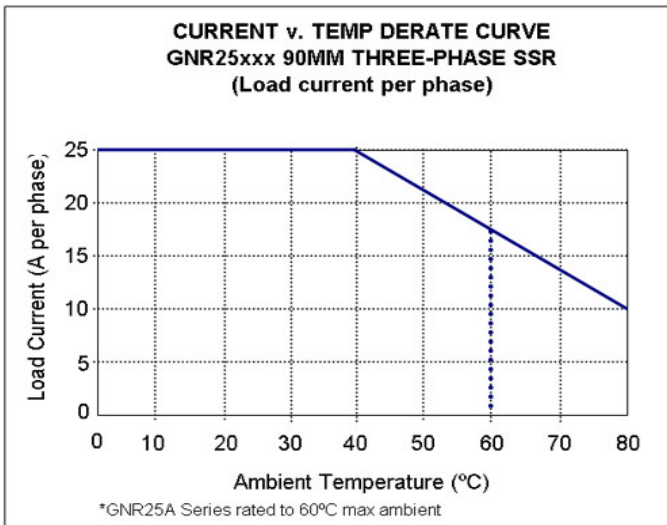
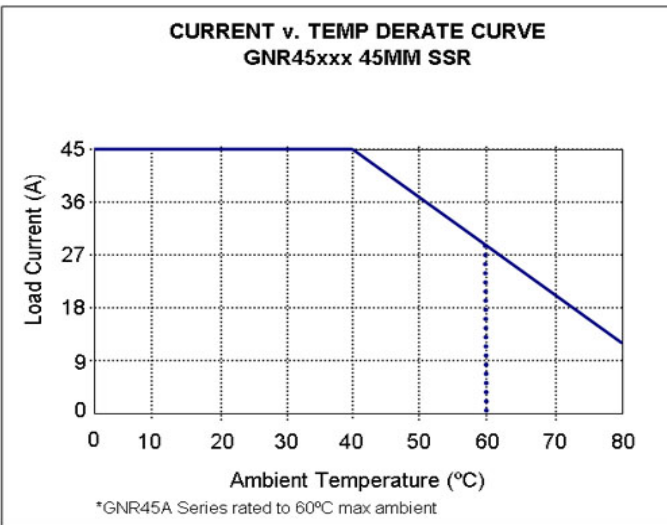
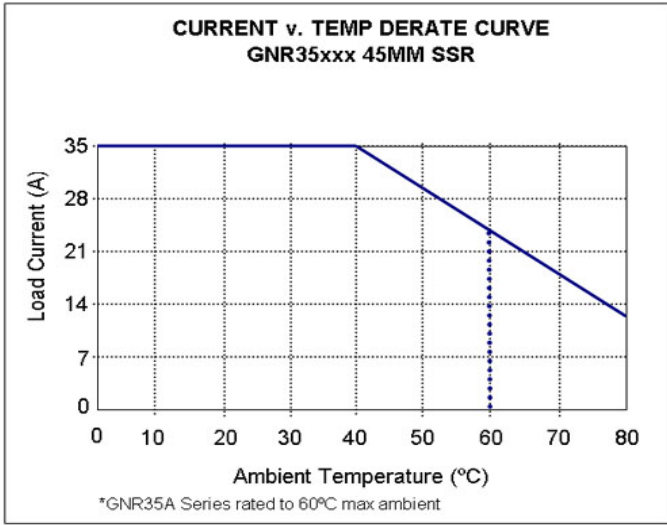
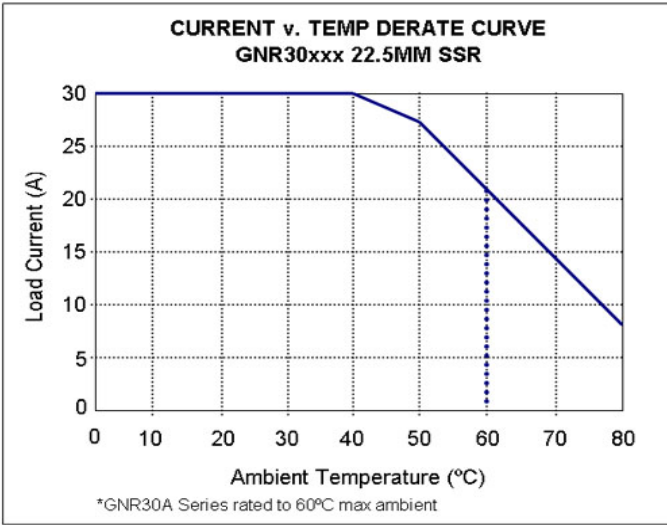
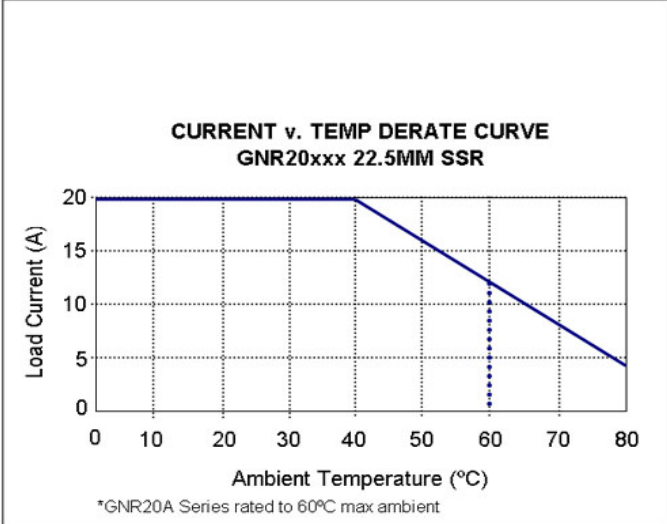
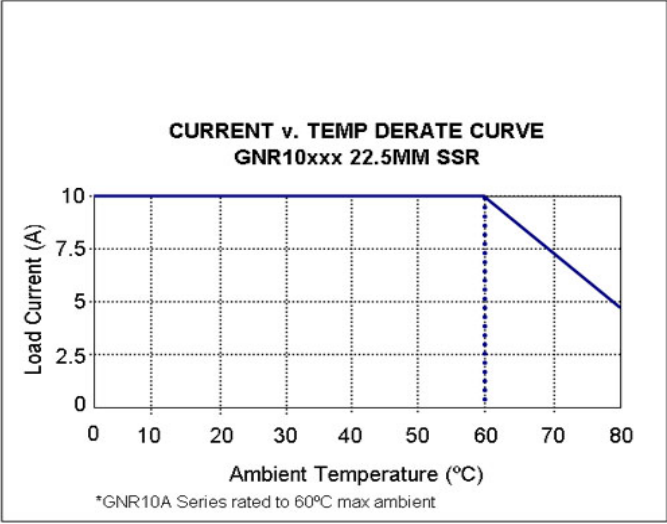


AC Input Equivalent Circuit

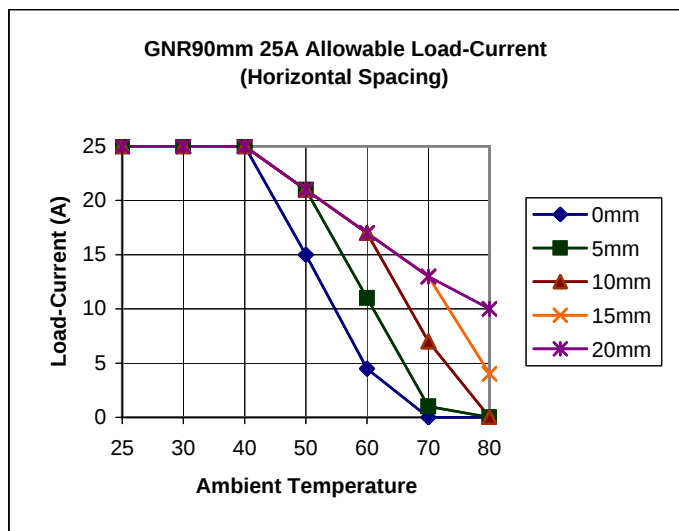
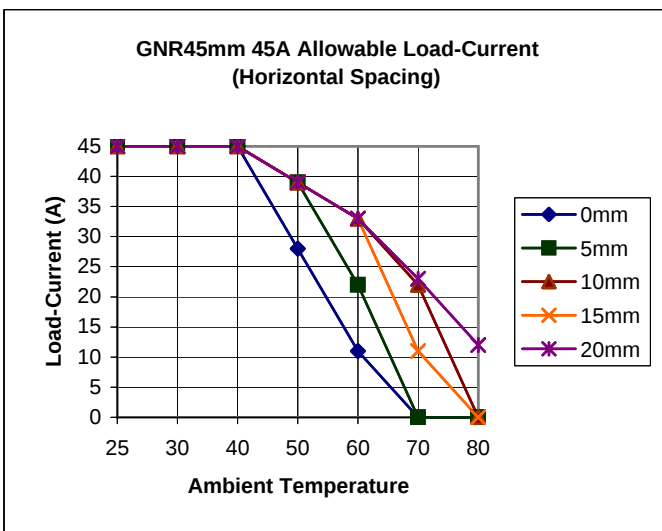
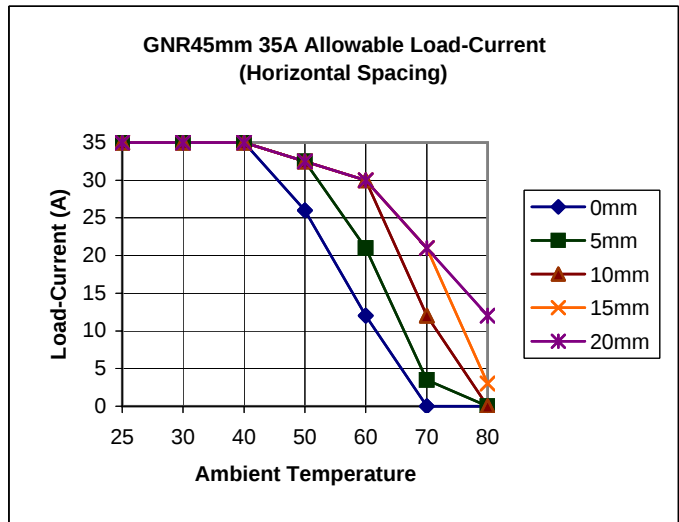
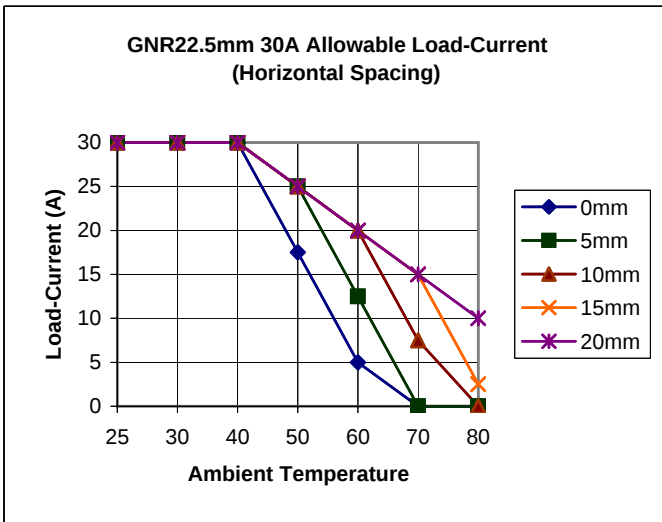
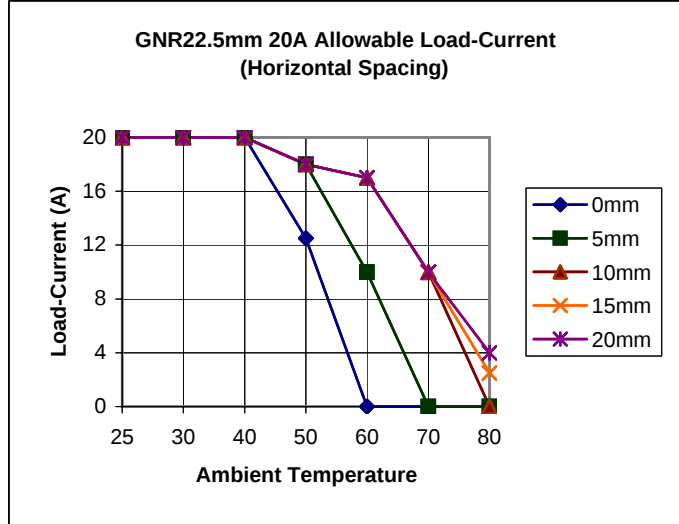
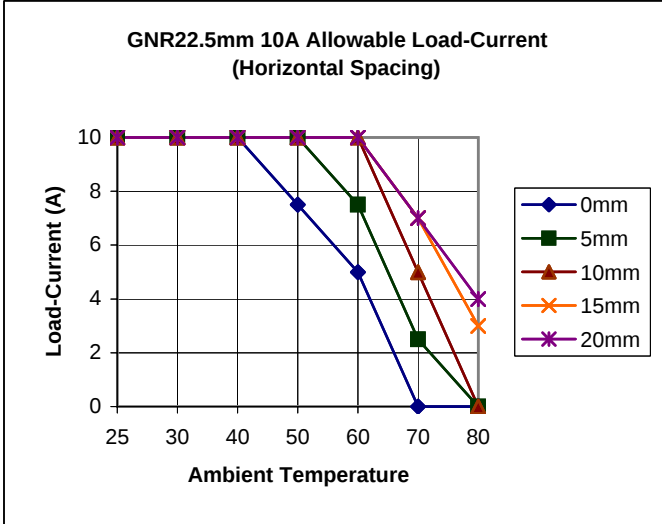
Products and specifications subject to change without notice

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GNR DIN-Rail SSR Derate Curves



GNR DIN-Rail SSR Horizontal Spacing Requirements



22.5MM

Technical drawing of a 22.5mm wide terminal block. The drawing includes three views: a front view, a side view, and a top view. Dimensions are provided in millimeters (mm) and inches (in).

- Front View:**
 - Overall width: 22.50 (0.886)
 - Distance from top edge to center of terminal: 17.25 (0.679)
 - Terminal diameter: $\phi 4.50$ (0.177)
 - Distance from center of terminal to bottom edge: 5.25 (0.207)
 - Overall height: 89.84 (3.537)
 - Distance from bottom edge to center of terminal: 17.75 (0.699)
 - Terminal pitch: 4.75 (0.187)
 - Terminal diameter: $\phi 5.30$ (0.209)
- Side View:**
 - Overall width: 120.75 (4.754)
 - Overall height: 88.20 (3.472)
 - Distance from top edge to center of terminal: 89.84 (3.537)
 - Distance from center of terminal to bottom edge: 97.80 (3.850)
 - Distance from bottom edge to center of terminal: 4.60 (0.181)
- Top View:**
 - Overall width: 120.75 (4.754)
 - Overall height: 88.20 (3.472)
 - Distance from top edge to center of terminal: 89.84 (3.537)
 - Distance from center of terminal to bottom edge: 97.80 (3.850)
 - Distance from bottom edge to center of terminal: 4.60 (0.181)

45MM

Technical drawing of a 45mm wide terminal block. The drawing includes three views: a front view, a side view, and a top view. Dimensions are provided in millimeters (mm) and inches (in).

- Front View:**
 - Overall width: 45.00 (1.77)
 - Distance from top edge to center of terminal: 35.60 (1.402)
 - Terminal diameter: $\phi 4.50$ (0.177)
 - Distance from center of terminal to bottom edge: 9.40 (0.370)
 - Overall height: 88.14 (3.470)
 - Distance from bottom edge to center of terminal: 35.60 (1.402)
 - Terminal pitch: 7.10 (0.280)
 - Terminal diameter: $\phi 4.50$ (0.177)
- Side View:**
 - Overall width: 120.66 (4.750)
 - Overall height: 88.20 (3.472)
 - Distance from top edge to center of terminal: 88.14 (3.470)
 - Distance from center of terminal to bottom edge: 97.00 (3.819)
 - Distance from bottom edge to center of terminal: 4.60 (0.181)
- Top View:**
 - Overall width: 120.66 (4.750)
 - Overall height: 88.20 (3.472)
 - Distance from top edge to center of terminal: 88.14 (3.470)
 - Distance from center of terminal to bottom edge: 97.00 (3.819)
 - Distance from bottom edge to center of terminal: 4.60 (0.181)

90MM

Technical drawing of a 90mm wide terminal block. The drawing includes three views: a front view, a side view, and a top view. Dimensions are provided in millimeters (mm) and inches (in).

- Front View:**
 - Overall width: 90.00 (3.543)
 - Distance from top edge to center of terminal: 82.80 (3.260)
 - Terminal diameter: $\phi 4.50$ (0.177)
 - Distance from center of terminal to bottom edge: 7.20 (0.283)
 - Overall height: 88.14 (3.470)
 - Distance from bottom edge to center of terminal: 82.80 (3.260)
 - Terminal pitch: 7.10 (0.280)
 - Terminal diameter: $\phi 4.50$ (0.177)
- Side View:**
 - Overall width: 123.40 (4.858)
 - Overall height: 88.20 (3.472)
 - Distance from top edge to center of terminal: 88.14 (3.470)
 - Distance from center of terminal to bottom edge: 97.00 (3.819)
 - Distance from bottom edge to center of terminal: 4.60 (0.181)
- Top View:**
 - Overall width: 123.40 (4.858)
 - Overall height: 88.20 (3.472)
 - Distance from top edge to center of terminal: 88.14 (3.470)
 - Distance from center of terminal to bottom edge: 97.00 (3.819)
 - Distance from bottom edge to center of terminal: 4.60 (0.181)

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