

# 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)	<b>48-600Vac</b>	<b>48-600Vac</b>
Output Current (40°C)	35	45
Peak Voltage (Vpk, t = 1 min.)	1100	1100
Off-state leakage uArms (@ 480V & Ta = 25°C)	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 = 25°C)	130	150
Forward voltage drop (Vpk @ Imax, Ta = 25°C)	1.35	1.35
I <sup>2</sup> T (50Hz, ½ cycle)	2230	2520
I <sup>2</sup> T (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	<b>4-32Vdc</b>	<b>90-140VAC</b>	<b>180-280VAC</b>
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)	400
Input/Output Torque	

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

## Standards of Compliance

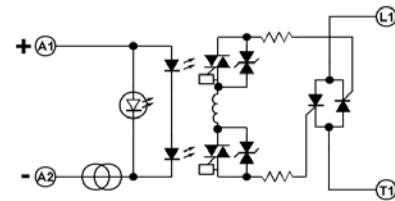
CE Compliant with the LVD 73/23/EEC	
UL Recognized per UL 508 and CSA C22.2 no. 14-95	
TUV Certified per EN 60950	
IEC 62314	
IEC 60068-2-6	35mm/10-55Hz
IEC 60068-2-27	15G / 11ms
IEC 61000-4-2 Level 3	Electrostatic Discharge
IEC 61000-4-3 Level 3	Radiated Electromagnetic Noise
IEC 61000-4-4 Level 3	Immunity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

## Part Numbers

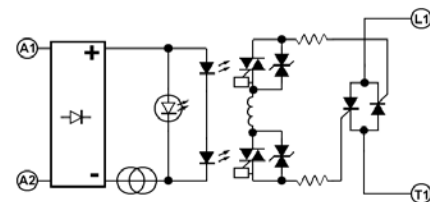
Relay Configuration	Zero Crossing Output			
	Rating	Output	Input	Part Number
	35 Amp	48-600Vac	180-280VAC	GNR35AHZ
	35 Amp	48-600Vac	90-140VAC	GNR35BHZ
	35 Amp	48-600Vac	4-32Vdc	GNR35DHZ
	45 Amp	48-600Vac	180-280VAC	GNR45AHZ
	45 Amp	48-600Vac	90-140VAC	GNR45BHZ
45 Amp	48-600Vac	4-32Vdc	GNR45DHZ	
Relay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

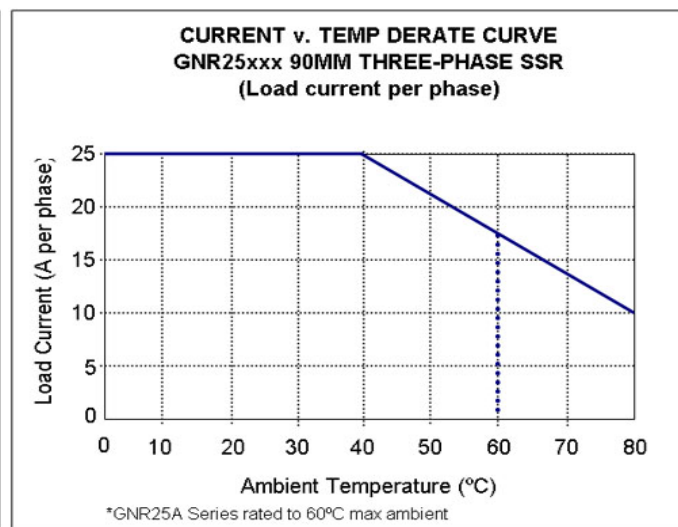
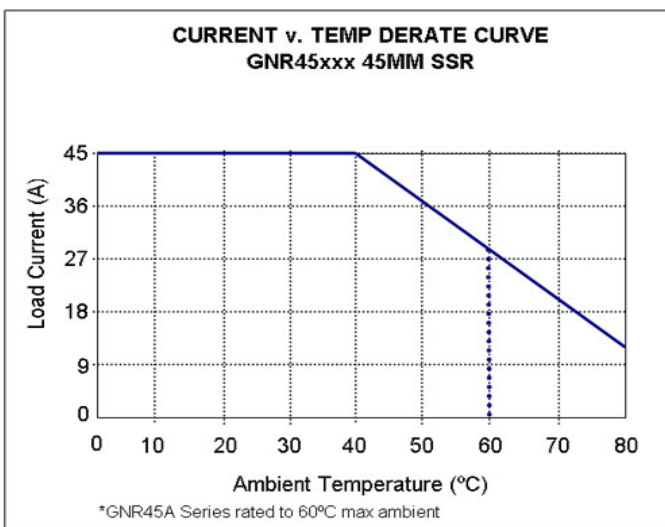
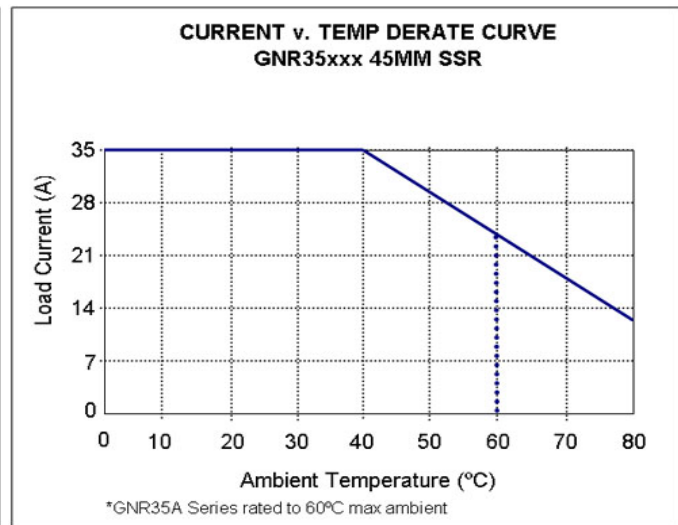
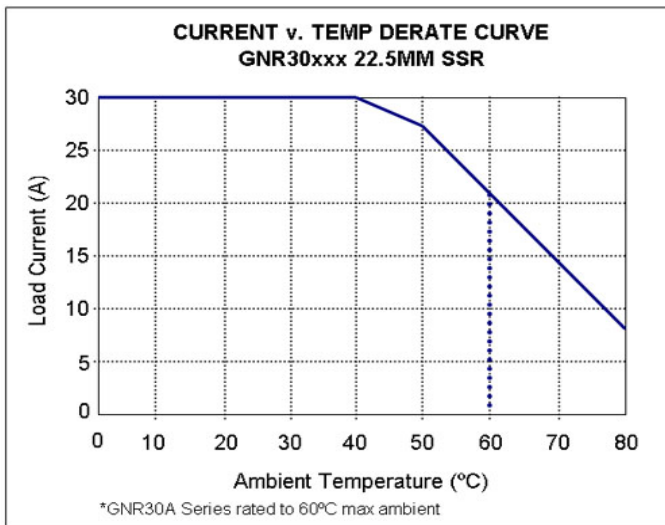
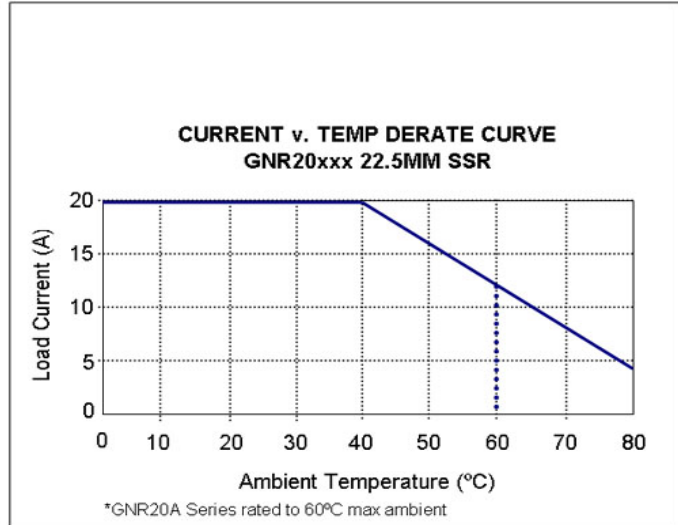
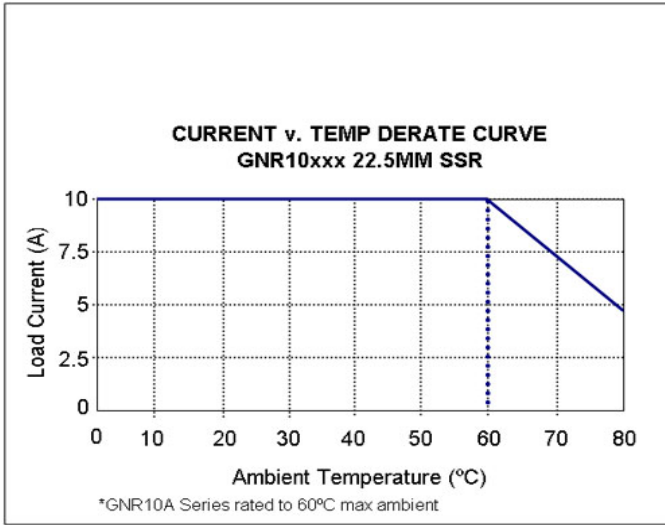


AC Input Equivalent Circuit

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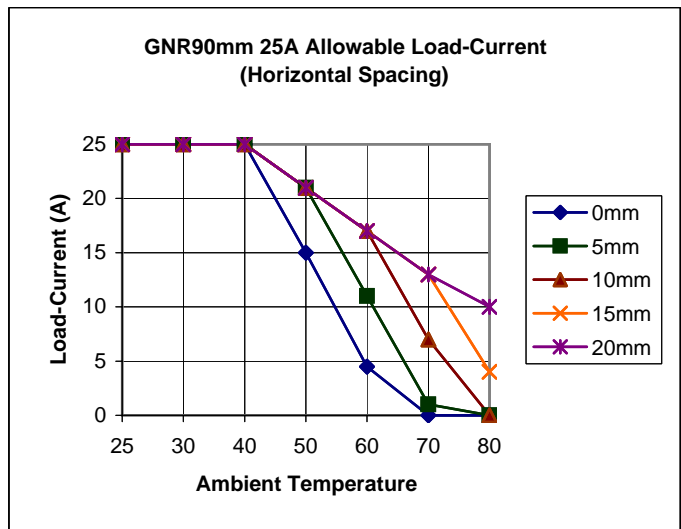
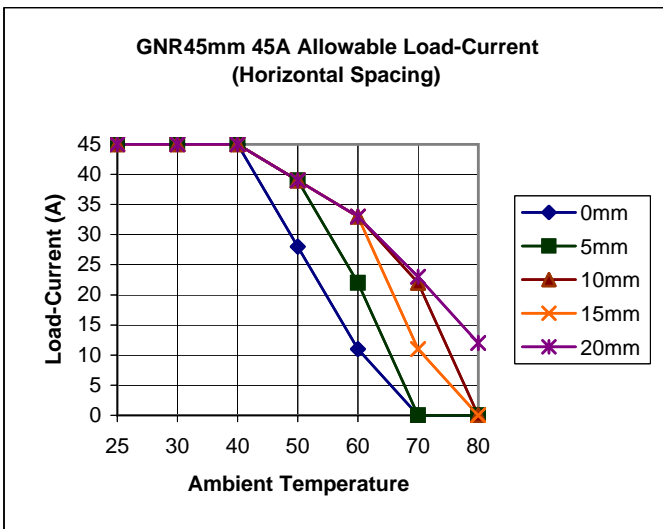
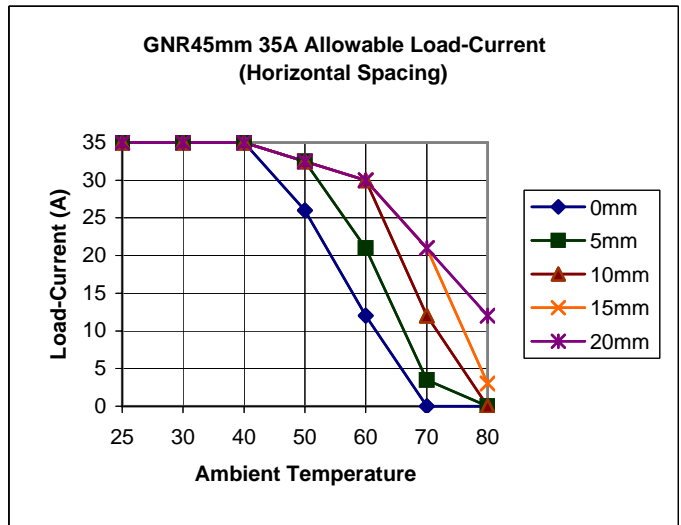
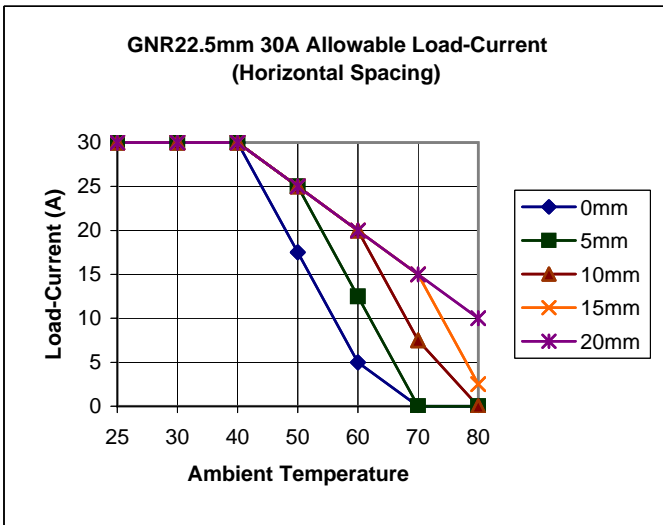
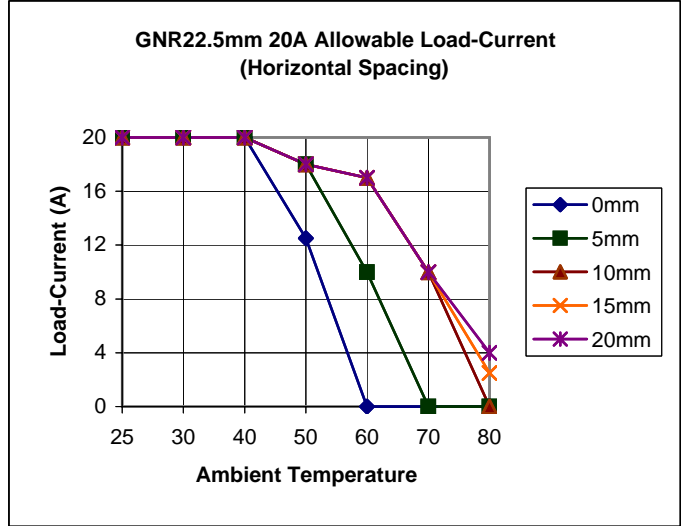
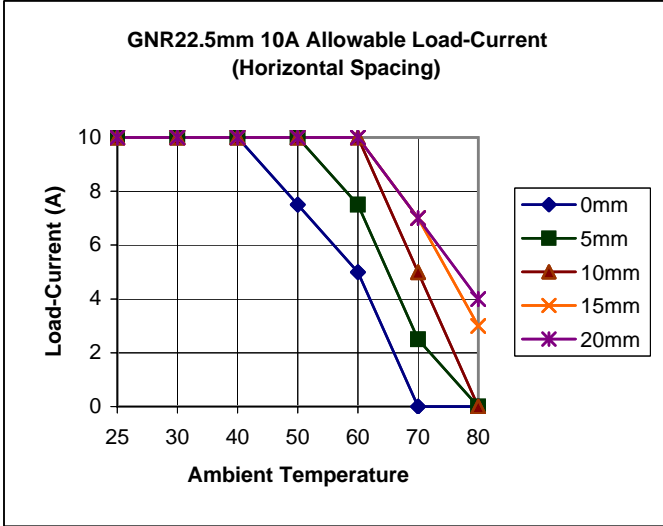
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# GNR DIN-Rail SSR Derate Curves



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# GNR DIN-Rail SSR Horizontal Spacing Requirements

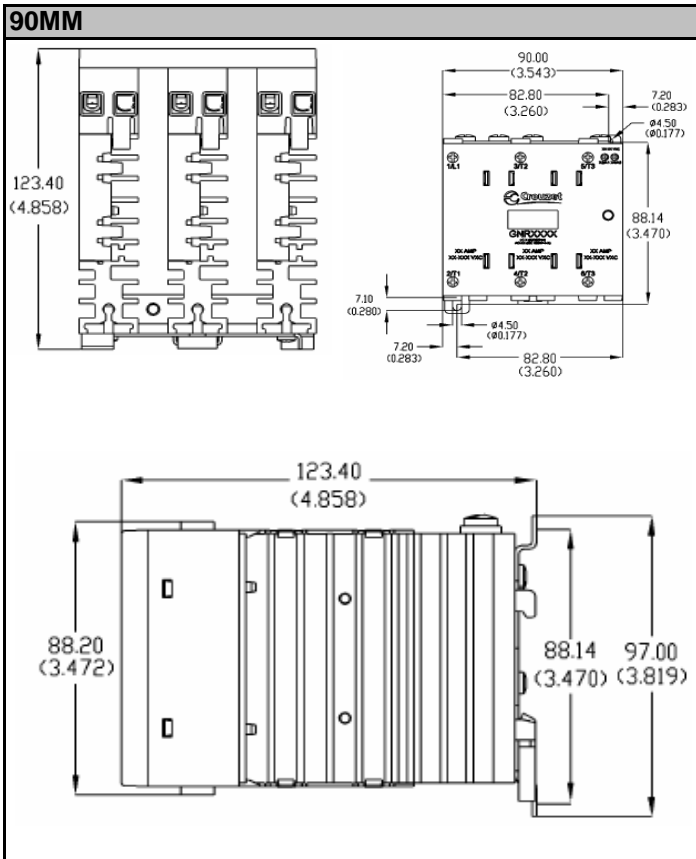
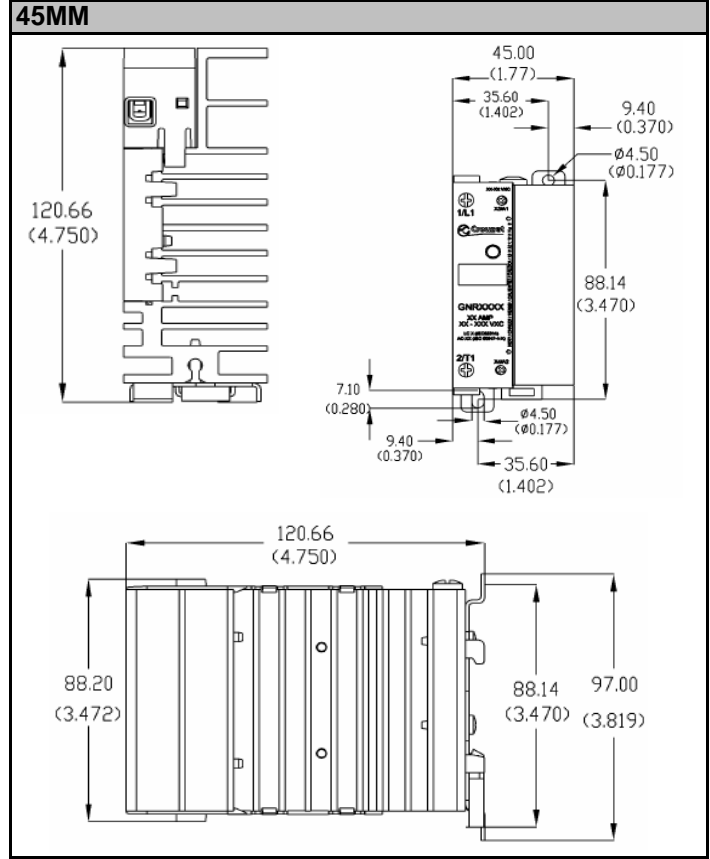
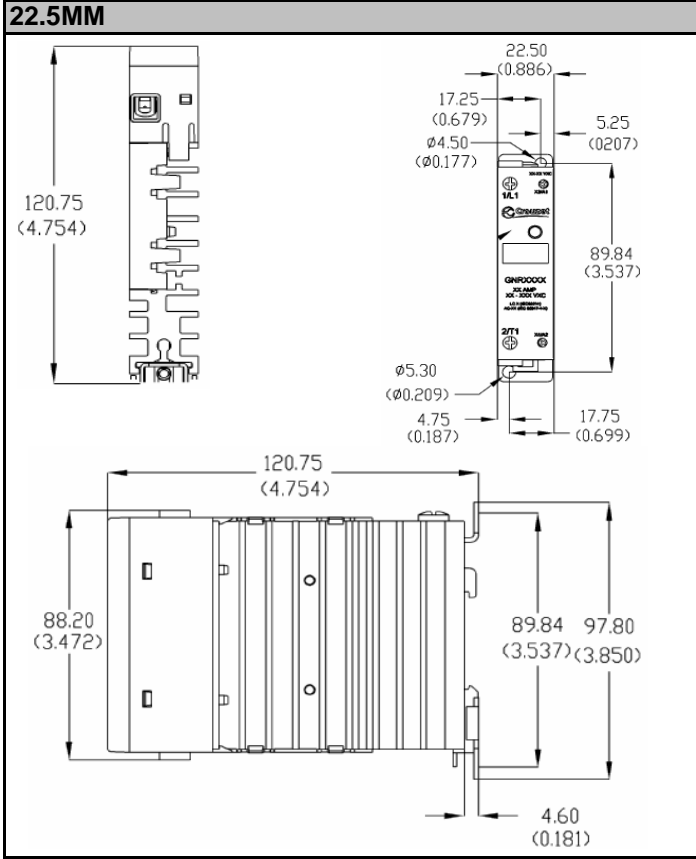


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# DIN-Rail SSR Dimensional Drawings



## Dimensions mm (inches)



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