



Crouzet

Solid State Relays

DataSheet

Panel Mount

GN Series



- Current ratings from 10 to 125 amps
- Output voltage 24-280 and 48-660 VAC
- Direct bond copper substrate
- LED input status indicator
- Available with IP20 “touch-safe” cover
- Transient protection built-in
- UL508 Endurance Rating (10-50A)
- UL/CSA/ TUV Approved, CE Compliant to EN60950-1

PRODUCT SELECTION

Control Voltage	10A	25A	50A	75A	100A	125A
3-32 VDC	84134000	84134010	84134020	84134030	84134040	84134080
18-36 VAC	84134002	84134012	84134022	84134032	84134042	84134082
90-280 VAC	84134001	84134011	84134021	84134031	84134041	84134081

AVAILABLE OPTIONS

Series

8413

Package Style

4: IP00
7: IP20

Output Type

0: 24 to 280 VAC/Zero Cross
1: 48 to 660 VAC/Zero Cross
2: 24 to 280 VAC/Random
3: 48 to 660 VAC/Random

Current

0: 10 Amps
1: 25 Amps
2: 50 Amps
3: 75 Amps
4: 100 Amps
8: 125 Amps

Control Voltage

0: 3 to 32 VDC*
1: 90 to 280 VAC
2: 18 to 36 VAC

Relay Options

H: Thermal Pad Installed

Required for valid part number

For options only and not required for valid part number

*4 to 32 VDC for 48 to 660 VAC models

OUTPUT SPECIFICATIONS (Voltage) (1)

Description	280 VAC	660 VAC
Operating Voltage (47-440Hz) [Vrms]	24-280	48-660
Transient Overvoltage [Vpk, t = 1 min.]	600	1200
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.1	0.25
Static off-state dv/dt (Vµs, Ta =25°C)	500	500



OUTPUT SPECIFICATIONS (Current) (1)

Description	10A	25A	50A	75A	100A	125A
Maximum Load Current (3) [Arms]	10A	25A	50A	75A	100A	125A
Minimum Load Current [mArms]	50	50	100	100	100	100
1 cycle surge current (50Hz)	150	275	710	1050	1120	1600
1 cycle surge current (60Hz)	175	300	750	1100	1200	1700
1 second surge current (Apk. Ta = 25°C) 50/60 Hz	50	85	150	225	300	375
Forward Voltage Drop (Vpk @ Imax, Ta = 25°C)	1.35	1.35	1.35	1.3	1.3	1.3
I²T (50Hz, 1/2 cycle)	110	380	2520	5500	6270	12800
I²T (60Hz, 1/2 cycle)	120	370	2320	5000	6000	12050
Thermal Resistance Junction to baseplate (Rjb) [°C/W]	0.5	0.4	0.25	0.155	0.155	0.15
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	0.5 @ 40°C	0.4 @ 40°C

INPUT SPECIFICATIONS (1)

Description	8413xxx0	8413xxx2	8413xxx1
Input Voltage Range (2)	3-32 VDC	18-36 VAC	90-280 VAC (3)
Minimum Turn-On Voltage	3.0 VDC	18 Vrms	90 Vrms
Drop out Voltage	1.0 VDC	2 Vrms	10 Vrms
Maximum Input Current	14mA	20mArms	10mArms
Minimum input current (for on-state)	7mA	16mArms	5mArms
Input Resistance	Current Regulated		
Turn-on time (4)	8.33ms	20ms	20ms
Turn-off time	8.33ms	30ms	30ms

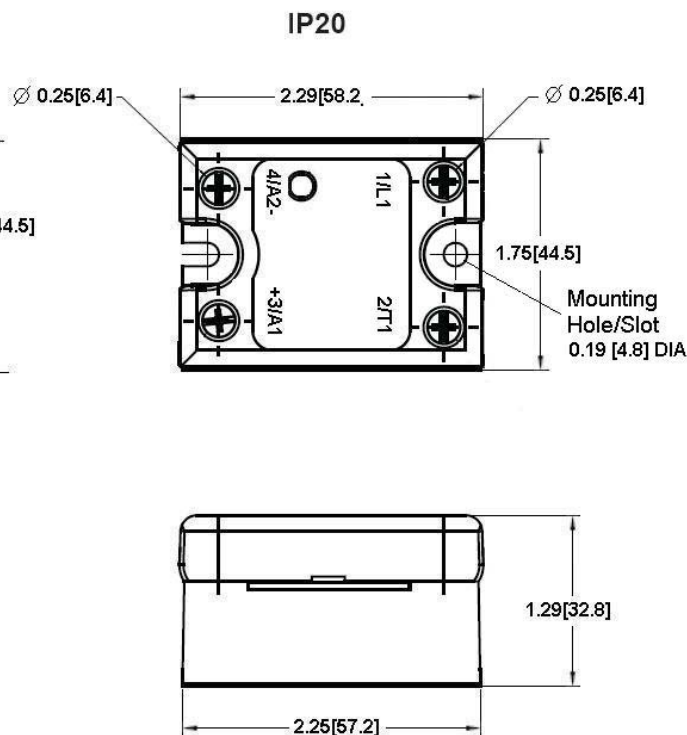
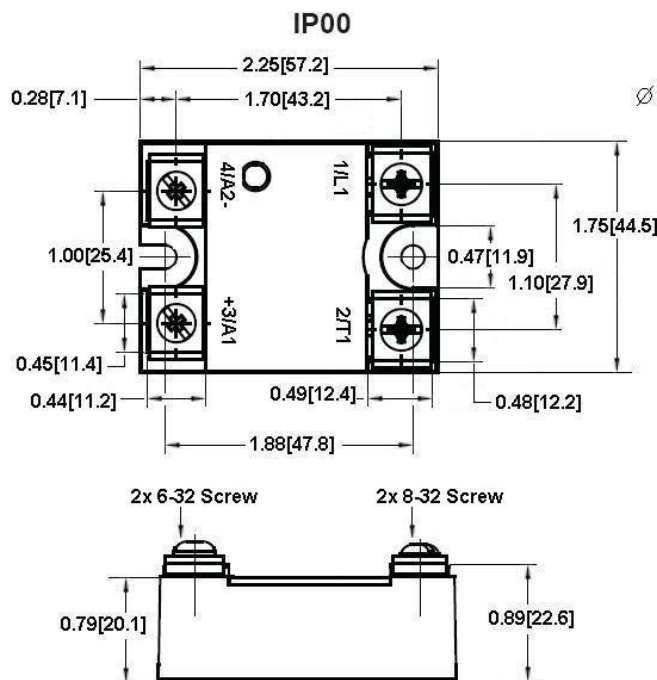
GENERAL SPECIFICATIONS

Description	Parameters
Ambient Operating Temperature Range (5)	-20 to 80 °C
Ambient Storage Temperature Range	-40 to 100 °C
Input to output isolation	4000 Vrms
Input/output to ground isolation	2500 Vrms
Input to output capacitance	8 pF
Housing Material	UL 94V0 (self extinguishing)
Status Indicating Display	Green LED
Weight (typical)	3.0 oz (86.5 g)
Input Terminal Screw Torque (6-32 screw) [in lbs/Nm]	8-10 / 0.9-1.1
Output Terminal Screw Torque (8-32 screw) [in lbs/Nm]	15-20 / 1.7-2.2

GENERAL NOTES

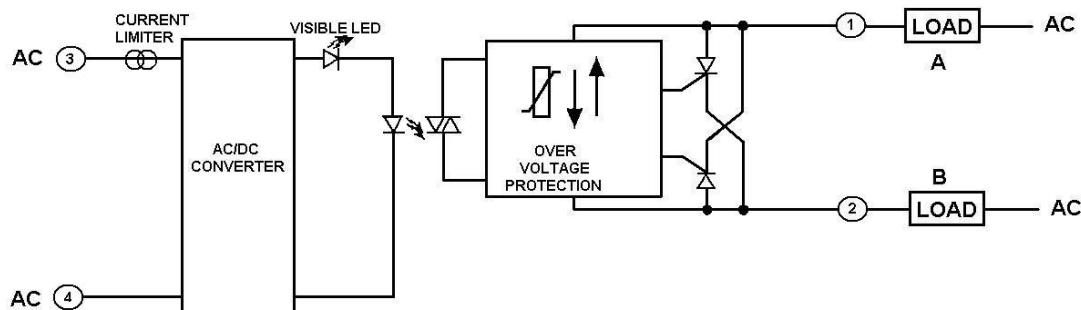
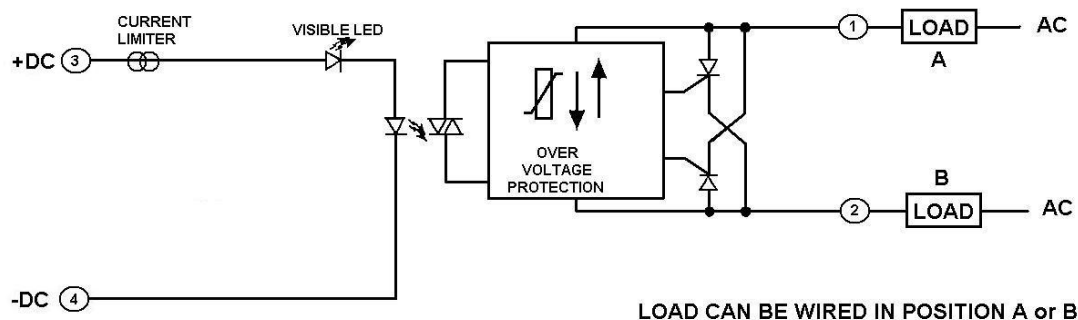
- 1) All parameters at 25°C unless otherwise specified.
- 2) 4-32Vdc for 48-660Vac models
- 3) For ambient temperatures above 40°C the maximum control voltage must not exceed 250Vac.
- 4) Random turn-on time is 100µs (for DC control only).
- 5) Increase minimum input voltage by 1 Vdc for operation from -20° to -40°C

MECHANICAL SPECIFICATIONS

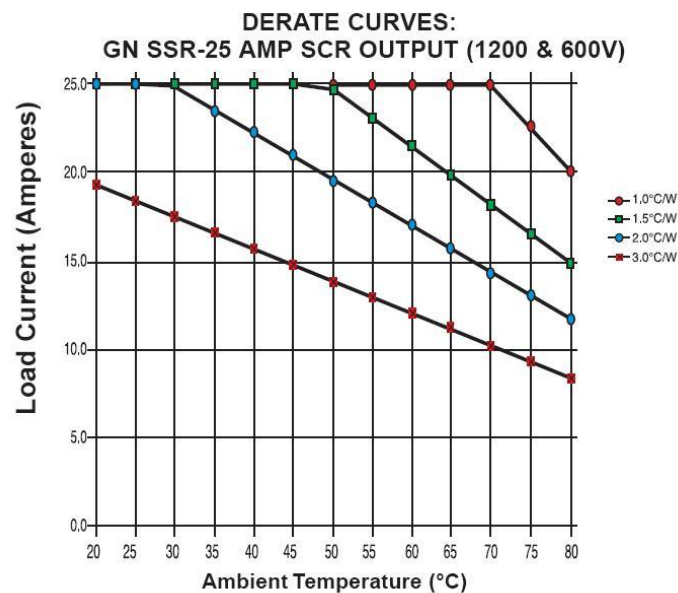
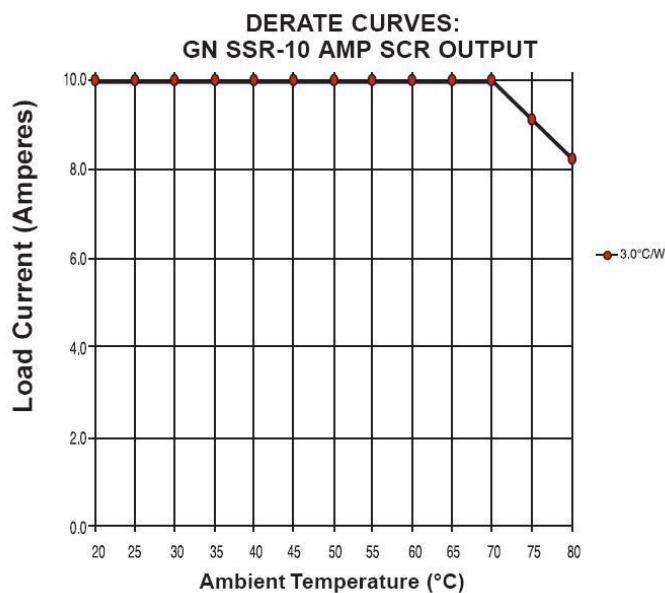


All dimensions are in inches [millimeters]

WIRING DIAGRAM

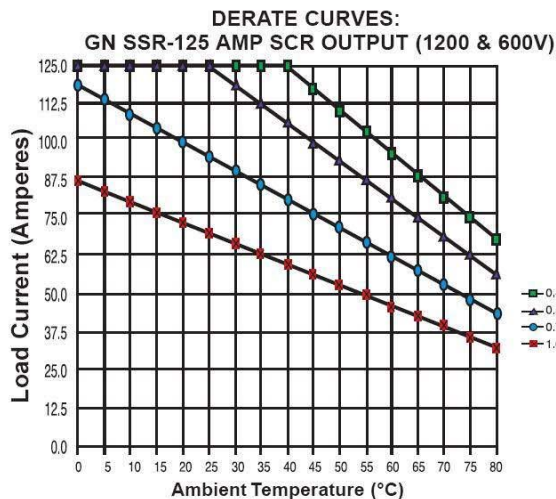
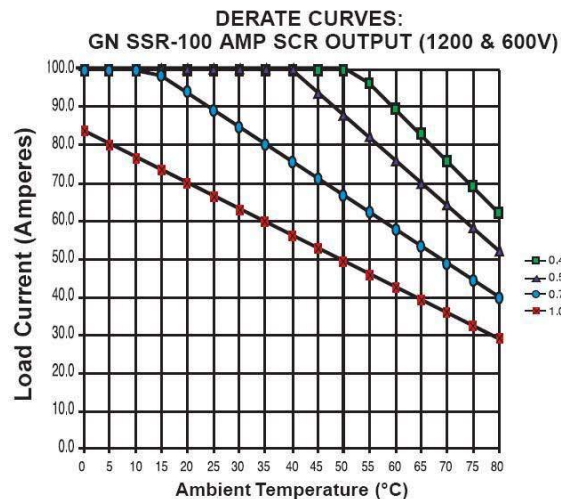
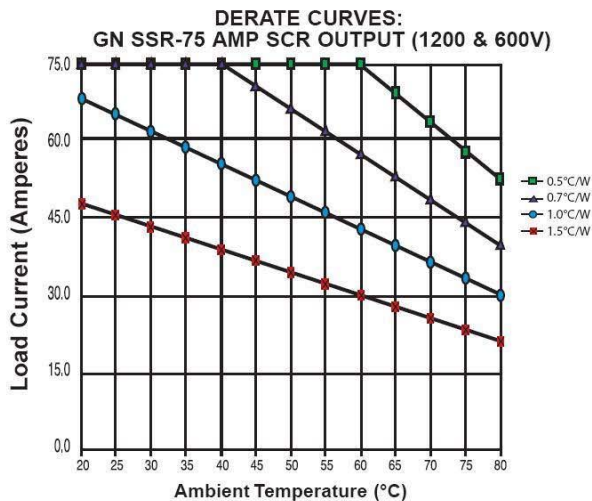
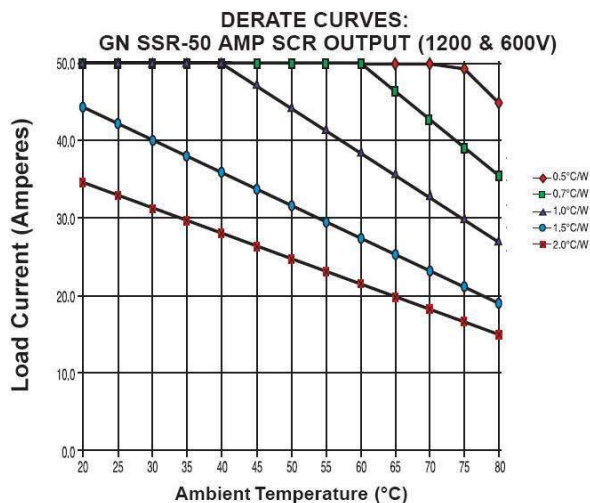


THERMAL DERATE INFORMATION



Heat sink part numbers corresponding to °C/W rating above: 3°C/W = HS301 1.5°C/W = HS151
 2°C/W = HS201 1.0°C/W = HS103

THERMAL DERATE INFORMATION



Heat sink part numbers corresponding to °C/W rating above:

2°C/W = HS201	0.7°C/W = HS072
1.5°C/W = HS151	0.5°C/W = HS053
1.0°C/W = HS103	0.4°C/W = Consult Factory

AGENCY APPROVALS

Designed in accordance with the requirements of IEC 62314
 EN60950 : Meets the requirements of sections 1.5: 1.7: 2.9: 2.10.5.3: 4.2: 4.5: 4.7:
 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
 CISPIR 11 – Class A: Allowable Levels of Conducted and Radiated Noise for Industrial Environments

cRU E79183, **SP** LR38595

TÜV **CE** **RoHS**

Rev. 091812