



GNR SERIES | 45MM

DIN RAIL MOUNT SOLID STATE RELAYS



Features

- Current rating of 45 amps
- Output voltage rating: 48-600 VAC
- Direct Bond Copper (DBC) Substrate
- LED input status indicator
- UL 508 Endurance Rating for Enhanced Reliability
- UL/CSA/TUV Approved, CE Compliant
- Built-in overvoltage protection
- DIN Rail or Panel Mount
- Zero voltage turn-on output

PRODUCT SELECTION

Control Voltage	45A
4-32 VDC	GNR45DHZ

SPECIFICATIONS

Output ⁽¹⁾

Description	GNR45
Operating Voltage (47-400Hz) [Vrms]	48-600
Transient Overvoltage [Vpk, t=1 min.]	1100
Maximum Load Current [Arms]	45
Minimum Load Current [Arms]	0.1
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.25
Static Off-State dv/dt (V/μsec, Ta=25°C) ⁽²⁾	500
1 Second Surge Current (Apk Ta=25°C) 50/60 Hz	150
Forward Voltage Drop (Vpk @ max, Ta=25°C)	1.35
Maximum Surge Current (50/60 Hz, 1 cycle) [Apk]	716/750
Maximum I ² t for Fusing (50/60Hz, 1/2 cycle) [A ² sec]	2562/2334
HP Ratings at 120V / FLC [Arms]	1.5/20
HP Ratings at 240V / FLC [Arms]	3/17
HP Ratings at 480V / FLC [Arms]	5/14
Min/Max stranded wire	16/8 AWG
Min/Max solid wire	16/10 AWG

Input ⁽¹⁾

Description	GNR45Dx
Control Voltage Range ⁽³⁾	4.0-32 VDC
Minimum Turn-On Voltage	4.0 VDC
Must Turn-Off Voltage	1.0 VDC
Minimum Input Current (for on-state)	16 mA
Maximum Input Current	19 mA
Input Resistance	Current Regulated
Maximum Turn-Off Time [msec]	1/2 Cycle
Maximum Turn-On Time [msec] ⁽⁴⁾	1/2 Cycle
Min/Max stranded/solid wire	24/16 AWG

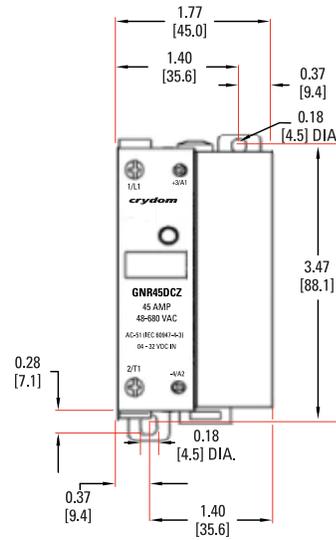
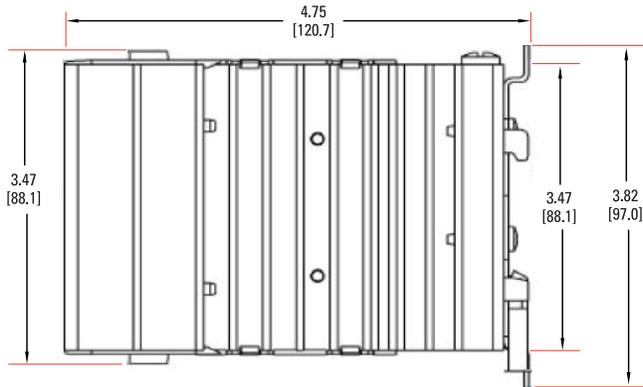
General ⁽¹⁾

Description	Parameters
Ambient Operating Temperature Range ⁽³⁾	-20 to 80°C
Ambient Storage Temperature Range	-40 to 100 °C
Dielectric Strength, Input to Output (50/60Hz)	4000 Vrms
Dielectric Strength, Input/Output to Ground (50/60Hz)	2500 Vrms
Maximum Capacitance, Input/Output	8 pF
Housing Material	UL 94V0 (self extinguishing)
Input Status Indicator	Green LED
Weight (typical)	14.1oz (400g)

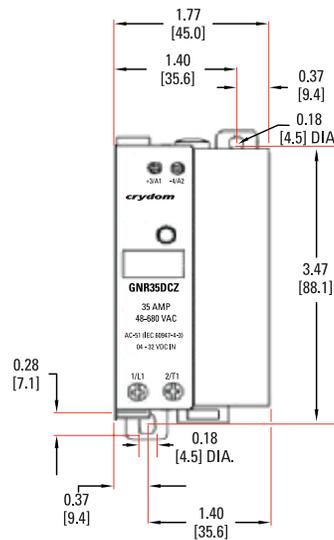
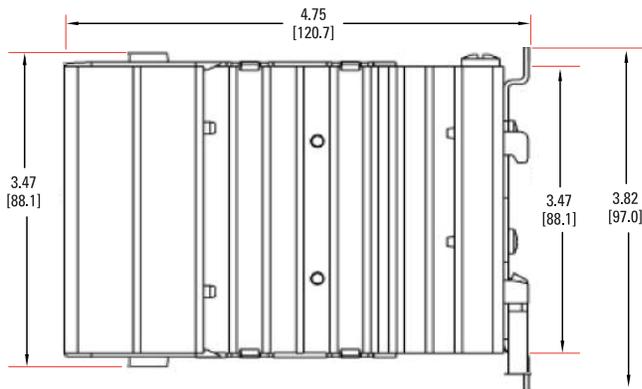
MECHANICAL SPECIFICATIONS (1)

Tolerance: ± 0.02 in / 0.5 mm
 All dimensions are in: inches [millimeters]

Contactors Configuration

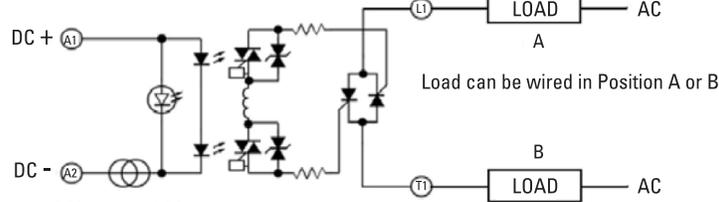


Relay Configuration

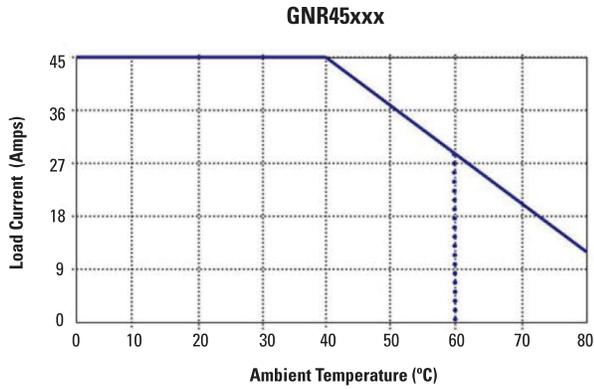


WIRING DIAGRAM

DC Input Equivalent Circuit



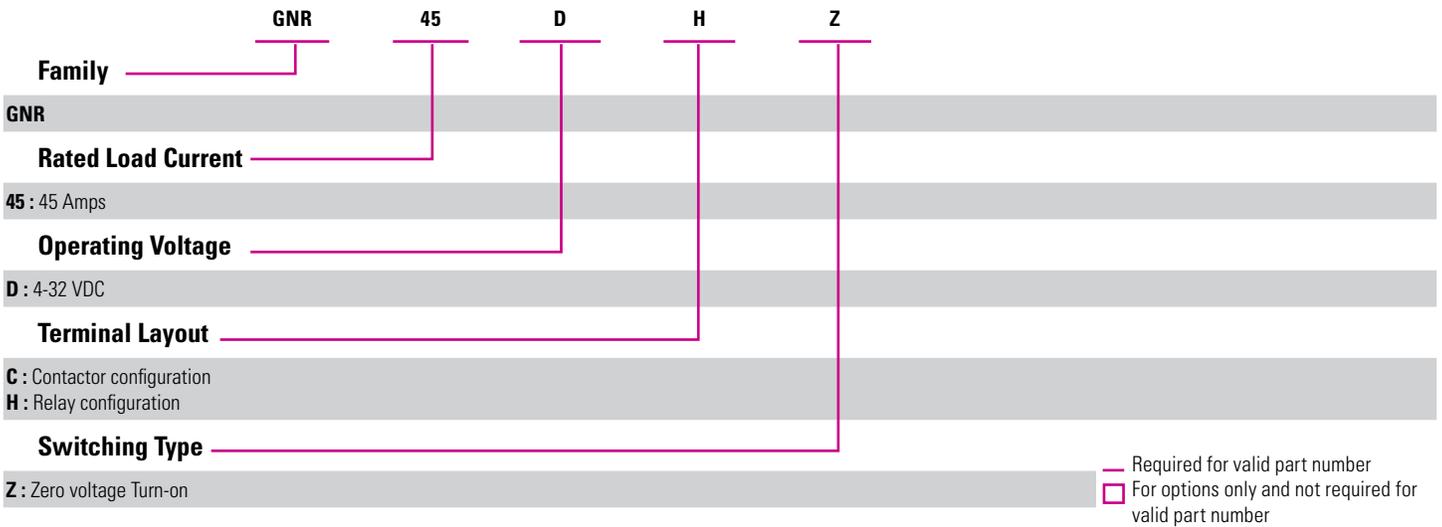
THERMAL DERATE INFORMATION



*GNR45A Series rated to 60°C max ambient

ORDERING OPTIONS

Example : GNR45DHZ



GENERAL NOTES

- (1) All parameters at 25°C unless otherwise specified.
- (2) Off-State dv/dt test method per EIA/NARM standard RS-443, paragraph 13.11.1
- (3) For 180-280 VAC Control. Maximum Ambient operating temperatures is 60°C.
- (4) TUV Certification according to EN 60950-1/A1:2010

For additional information or specific questions, contact Sensata Technical Support.

AGENCY APPROVALS & CERTIFICATIONS



EMC Compatibility

Designed in accordance with the requirements of IEC 62314

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

WARNINGS



RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

Failure to follow these instructions can result in serious injury, or equipment damage.



HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

Failure to follow these instructions will result in death or serious injury.

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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

CONTACT US

Americas

+1 (877) 502 5500
sales.crydom@sensata.com

Europe, Middle East & Africa

+44 (1202) 416170
ssr-info.eu@sensata.com

Asia Pacific

sales.isasia@list.sensata.com
China +86 (21) 2306 1500
Japan +81 (45) 277 7117
Korea +82 (31) 601 2004
India +91 (80) 67920890
Rest of Asia +886 (2) 27602006
ext 2808