



GNR 90MM SERIES

DIN RAIL MOUNT



Features

- Current rating: 25 amps
- Output voltage rating: 48-600 VAC
- Direct Bond Copper (DBC) Substrate
- LED input status indicator
- UL 508 Endurance Rating for Enhanced Reliability
- UL/GSA/TUV Approved, CE Compliant
- Built-in overvoltage protection
- DIN Rail or Panel Mount
- Zero voltage or Instantaneous turn-on output



SPECIFICATIONS

Product Selection

Control Voltage	Zero-Crossing	Random Turn-on
4-32 VDC	GNR25DCZ	GNR25DCR
90-140 VAC	GNR25BCZ	
180-280 VAC	GNR25ACZ	

Output Specifications ⁽¹⁾

Description	GNR25
Operating Voltage (47-440Hz) [Vrms]	48-600
Transient Overvoltage [Vpk, t=1 min.]	1100
Maximum Load Current [Arms]	25
Minimum Load Current [Arms]	0.1
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.25
Static Off-State dv/dt (V/ μ sec, Ta=25°C) ⁽²⁾	500
1 Second Surge Current (Apk Ta=25°C) 50/60 Hz	130
Forward Voltage Drop (Vpk @ max, Ta=25°C)	1.30
Maximum Surge Current (50/60 Hz, 1 cycle) [Apk]	286/300
Maximum I ² t for Fusing (50/60Hz, 1/2 cycle) [A ² sec]	410/374
HP Ratings at 240V / FLA [Arms]	1/4.2
HP Ratings at 380V / FLA [Arms]	2/4.3
HP Ratings at 480V / FLA [Arms]	3/4.8
Min/Max stranded wire	16/8 AWG
Min/Max solid wire	16/10 AWG

Input Specifications ⁽¹⁾

Description	GNR25DCX	GNR25BCZ	GNR25ACZ
Control Voltage Range ⁽³⁾	4.0-32 VDC	90-140 Vrms	180-280 Vrms
Minimum Turn-On Voltage	4.0 VDC	90 Vrms	180 Vrms
Must Turn-Off Voltage	1.0 VDC	10 Vrms	10 Vrms
Minimum Input Current (for on-state)	22 mA	15 mArms	19 mA
Maximum Input Current	28 mA	19 mArms	24 mA
Input Resistance	Current Regulated	Current Regulated	Current Regulated
Maximum Turn-Off Time [msec]	1/2 Cycle	20	20
Maximum Turn-On Time [msec] ⁽⁴⁾	1/2 Cycle	30	30
Min/Max stranded/solid wire	24/16 AWG	24/16 AWG	24/16 AWG

General Specifications ⁽¹⁾

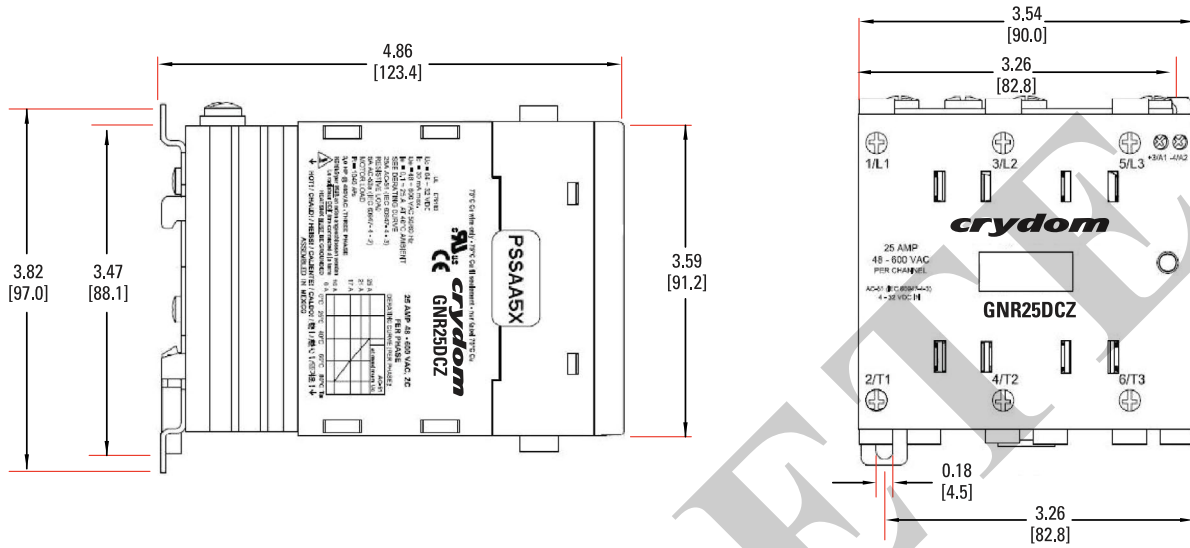
Description	Parameters
Ambient Operating Temperature Range ⁽³⁾	-20 to 80°C
Ambient Storage Temperature Range	-40 to 100 °C
Dielectric Strength, Input to Output (50/60Hz)	4000 Vrms
Dielectric Strength, Input/Output to Ground (50/60Hz)	2500 Vrms
Maximum Capacitance, Input/Output	8 pF
Housing Material	UL 94V0 (self extinguishing)
Input Status Indicator	Green LED
Weight (typical)	21.17 oz (600g)
Recommended Terminal Screw Torque Range	5.0-6.0 in-lb (0.6-0.7 Nm)



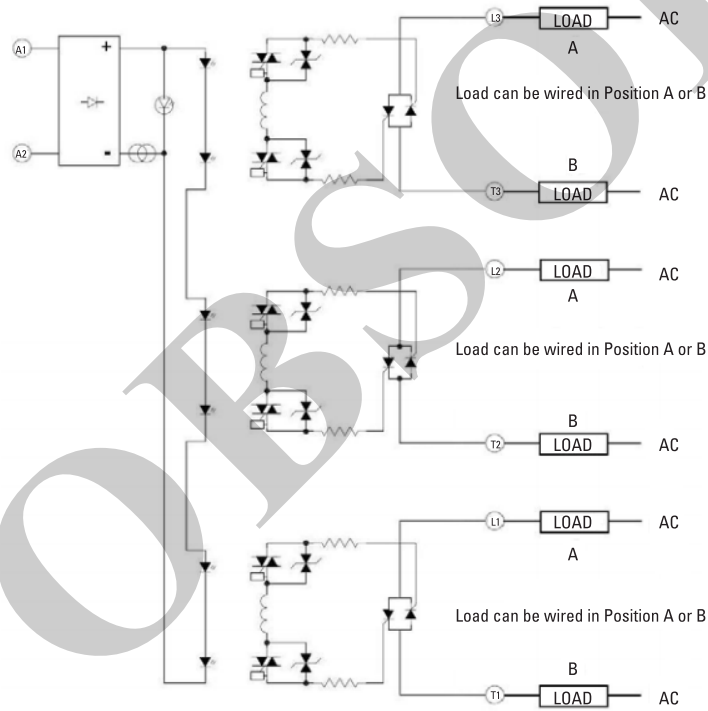
MECHANICAL SPECIFICATIONS (1)

Tolerance: ± 0.02 in / 0.5 mm

All dimensions are in: inches [millimeters]



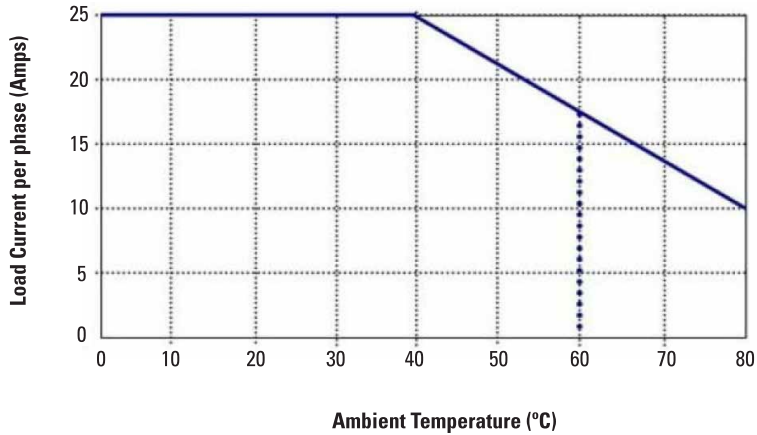
WIRING DIAGRAM





THERMAL DERATE INFORMATION

GNR25xxx



*GNR25A Series rated to 60°C max ambient



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) Turn-on time for Instantaneous version (R suffix) is 0.1 msec (for DC control only).
- (5) TUV Certification according to EN 60950-1/A1:2010

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



AGENCY APPROVALS & CERTIFICATIONS



Designed in accordance with the requirements of IEC 62314
 IEC 60068-2-6 35mm/10-55Hz
 IEC 62314
 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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