GNR SERIES 45MM RELAY

GNR35DCZ
DIN Rail SSR 45mm 600V ac 35A, 4-32V dc In, ZC

Sensata Technologies
Crydom



- Load current 35A and 45A
- Operating Voltage 48-600 VAC
- Control Voltage 4-32 VDC, 90-140 VAC and 180-260 VAC
- Broad range of power ratings

PRODUCT DESCRIPTION

These relays offer a broad range of power ratings which makes them suitable for diverse applications. Their high reliability and efficient design have made of them a market favorite for many years.

- Current ratings of 35 and 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 or Instantaneous turn-on output

TECHNICAL DATA

Output Specifications (1)

Description	GNR35	GNR45
Operating Voltage (47-440Hz) [Vrms]	48-600	48-600
Transient Overvoltage [Vpk, t=1 min.]	1100	1100
Maximum Load Current [Arms]	35	45
Minimum Load Current [Arms]	0.1	0.1
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.25	0.25
Static Off-State dv/dt (V/µsec, Ta=25°C) (2)	500	500
1 Second Surge Current (Apk Ta=25°C) 50/60 Hz	130	150
Forward Voltage Drop (Vpk @ max, Ta=25°C)	1.35	1.35
Maximum Surge Current (50/60 Hz, 1 cycle) [Apk]	668/700	716/750

Maximum I² t for Fusing (50/60Hz, 1/2 cycle) [A² sec]	2230/2020	2562/2334
HP Ratings at 120V / FLC [Arms]	1.5/20	1.5/20
HP Ratings at 240V / FLC [Arms]	3/17	3/17
HP Ratings at 480V / FLC [Arms]	5/14	5/14
Min/Max stranded wire	16/8 AWG	16/8 AWG
Min/Max solid wire	16/10 AWG	16/10 AWG

Input Specifications (1)

Description	GNRxxDx	GNRxxBx	GNRxxAx
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)	16 mA	5 mArms	6 mA
Maximum Input Current	19 mA	6 mArma	8 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)	14.1 oz (400g)

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

Mechanical Specifications (1)
Tolerances: ±0.02 in / 0.5 mm
All dimensions are in: inches [millimeters]

Contactor Configuration	Relay Configuration

Wiring Diagram

Thermal Derate Information

Agency Approvals
Designed in accordance with the requirements of IEC 62314
cRU UK E79183 SA LR 38595 TDV (5) CE RoSH

EMC Compatibility
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

PART NUMBERS

Product Selection

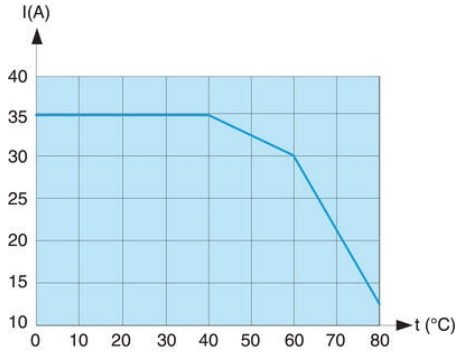
Control Voltage	35A	45A
4-32 VDC	GNR35DHZ	GNR45DHZ
90-140 VAC	GNR35BHZ	GNR45BHZ
180-280 VAC	GNR35AHZ	GNR45AHZ

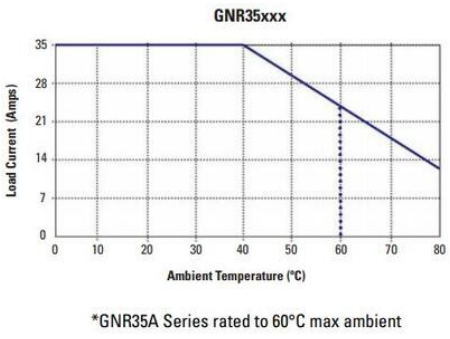
Different options available on request.

SPECIFICATIONS

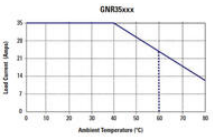
2421_Peak current (A)	130
Activation	0 V
Approvals	CE, CSA, EMC, UL
Connection Thread	Screw terminal
Control voltage	4-32V dc
Depth	120.7 mm
Height	88.1 mm
I2t Value	2230 A²s

Insulation voltage in/out	4000 V
IP Class	IP20
Leakage Current At V Max, T = 25 ° C Max	1 mA
Load Voltage	ac
Number of poles	1
Output current	35 A
Output voltage (String)	48-600V ac
Peak Voltage	1100 V
Power Consumption max	19 mA
Power Consumption min	16 mA
Release Time	10 ms
Response Time	10 ms
Temperature range bearing, from	-40 °C
Temperature range bearing, to	100 °C
Temperature range from	-20 °C
Temperature range to	80 °C
Tripping voltage	1 V
Voltage Drop Over The Semi-Conductor at Imax	1.35 V
Weight	400 g
Width	45 mm

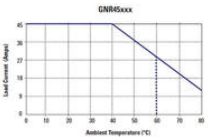




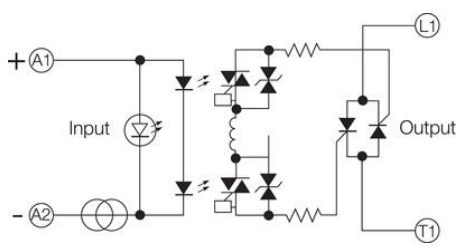
*GNR35A Series rated to 60°C max ambient

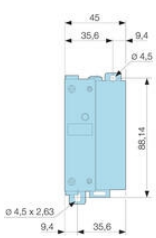


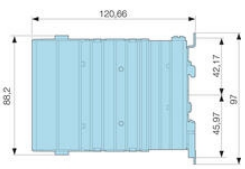
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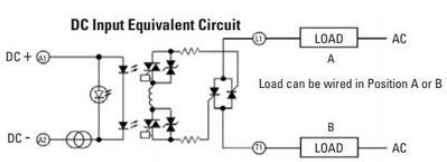


*GNR45A Series rated to 60°C max ambient

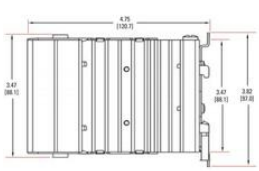


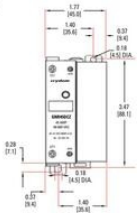


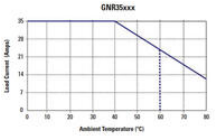




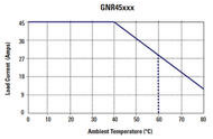
Contactor Configuration







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