GNR SERIES 22.5MM RELAY

GNR10DCZ
SSR 10A 4-32VDC:24-280VAC



- Load current 10, 20 and 30A
- Operating voltage 24-280 VAC and 48-600 VAC
- Control voltage 4-32 VDC, 90-140 VAC and 180-280 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 10, 20 and 30 amps
- Output voltage ratings: 24-280 and 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	GNR10	GNR20	GNR30
Operating Voltage (47-440Hz) [Vrms]	24-280	48-600	48-600
Transient Overvoltage [Vpk, t=1 min.]	600	1100	1100
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	0.1	0.1	0.1
Static Off-State dv/dt (V/µsec, Ta=25°C) (2)	500	500	500
Maximum Load Current [Arms]	10	20	30
Minimum Load Current [Arms]	100	100	100
Maximum Surge Current (50/60 Hz, 1 cycle) [Apk]	190/200	286/300	716/750
1 Second Surge Current (Apk Ta=25°C) 50/60 Hz	65	85	150
Forward Voltage Drop (Vpk @ max, Ta=25°C)	1.5	1.35	1.35
Maximum I^2t for Fusing (50/60Hz, 1/2 cycle) [A^2 sec]	182/166	410/374	2562/2334

HP Ratings at 120V / FLC [Arms]	-	1.2/9.8	3/4 /13.8
HP Ratings at 240V / FLC [Arms]	-	1/8	2/12
Min/Max stranded wire	16/8 AWG	16/8 AWG	16/8 AWG
Min/Max solid wire	16/10 AWG	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	23 mArma	2 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)	7.94 oz (225g)

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

Therman Derate Information

Agency Approvals
Designed in accordance with the requirements of IEC 62314
cRU US 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	10A	20A	30A
4-32 VDC	GNR10DHZ	GNR20DHZ	GNR30DHZ
90-140 VAC	GNR10BHZ	GNR20BHZ	GNR30BHZ
180-280 VAC	GNR10AHZ	GNR20AHZ	GNR30AHZ

Different configurations available on request.

SPECIFICATIONS

2421_Peak current (A)	190
Activation	0 V
Approvals	CE, CSA, EMC, UL
Control voltage	4-32V dc
Depth	120.8 mm
Height	89.8 mm
I2t Value	182 A²s
Insulation voltage in/out	2500 V
IP Class	IP20
Load Voltage	ac
Number of poles	1
Output current	10 A

Output voltage (String)	24-280V ac
Power Consumption max	10 mA
Power Consumption min	6 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	1.5 V
Weight	225 g
Width	22.5 mm







