

GN0 Series 3 Phase Solid State Relay - DC Input



- ▶ Epoxy-Free Design Reduces Internal Component Stress
- ▶ DBC Substrate for Superior Thermal Performance
- ▶ 100k-cycle UL508 Endurance Rating for Enhanced Reliability
- ▶ Back-to-Back Dual SCR Output
- ▶ No External Transient Protection Required (Internal TVS)
- ▶ UL / CSA / TUV Approved, CE Compliant
- ▶ EMC Compliant for Reliable Operation in Harsh Environments
- ▶ RoHS Compliant

Output Specifications

| Parameter | 48-530Vac | 48-530Vac |
|--------------------------------------------------|-----------|-----------|
| Voltage range (Vrms) | 48-530Vac | 48-530Vac |
| Output Current (40°C) | 25 | 50 |
| Peak Voltage (Vpk, t = 1 min.) | 1100 | 1100 |
| Off-state leakage mArms | 3 | 3 |
| Minimum Current (mArms) | 100 | 100 |
| 1 cycle surge current 50-60 Hz (Apk, Ta = 25°C) | 475-500 | 710-750 |
| 1 second surge current 50/60 Hz (Apk, Ta = 25°C) | 100 | 150 |
| Forward voltage drop (Vpk @ Imax, Ta = 40°C) | 1.35 | 1.35 |
| I ² T (50-60Hz, ½ cycle) | 1130-1030 | 2520-2320 |
| Rjb (thermal res. Junction to baseplate, °C/W) | 0.26 | 0.25 |
| Static off-state dv/dt (Vus, Ta = 25°C) | 500 | 500 |
| HP Ratings at 120V | 0.75 | 1.5 |
| HP Ratings at 240V | 1 | 3 |
| HP Ratings at 480V | 3 | 7.5 |
| Min/Max wire size | 16/8 AWG | 16/8 AWG |
| Torque (N-m) | 2.4 | |

Input Specifications

| | |
|-----------------------------------|-------------------|
| Input voltage | 4-32Vdc |
| Drop out voltage | 1Vdc |
| Min. input current (for on-state) | 17mA |
| Maximum input current | 25mA |
| Input Resistance (Ohms) | Current Regulated |
| Maximum Turn-on time | 150 msec |
| Maximum Turn-off time | 8.33msec |
| Min/Max stranded/solid wire | 24/14 AWG |
| Torque (N-m) | 1.9 |
| Interlocking Time | 100msec |

General Characteristics

| | |
|----------------------------------|------------------------------|
| Operating Temperature (°C) | -40 to + 80 |
| Storage Temperature (°C) | -40 to + 100 |
| Input to output isolation | 4000Vrms |
| Input/output to ground isolation | 2500Vrms |
| Input to output capacitance | 8pF (typical) |
| Operating Frequency | 47 to 63 Hz |
| Housing Material | UL 94V0 (self extinguishing) |
| Weight (grams) | 370 |

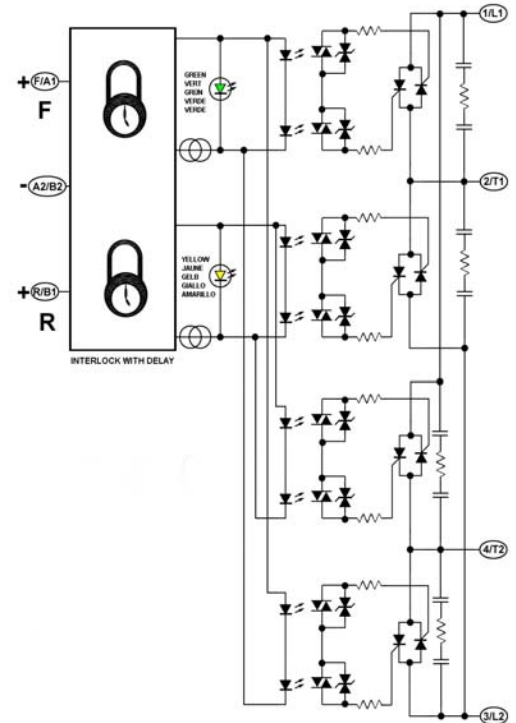
Standards of Compliance

| | |
|--------------------------------------------------|----------------------------------------------------------|
| CE Compliant with the LVD 73/23/EEC | |
| UL Recognized per UL 508 and CSA C22.2 no. 14-95 | |
| TUV Certified per EN 60950 | |
| 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 |

Part Numbers

| Rating | Output | Input | Part Number |
|--------|-----------|---------|-------------|
| 25 Amp | 48-530Vac | 4-32Vdc | GN025DSR |
| 50 Amp | 48-530Vac | 4-32Vdc | GN050DSR |

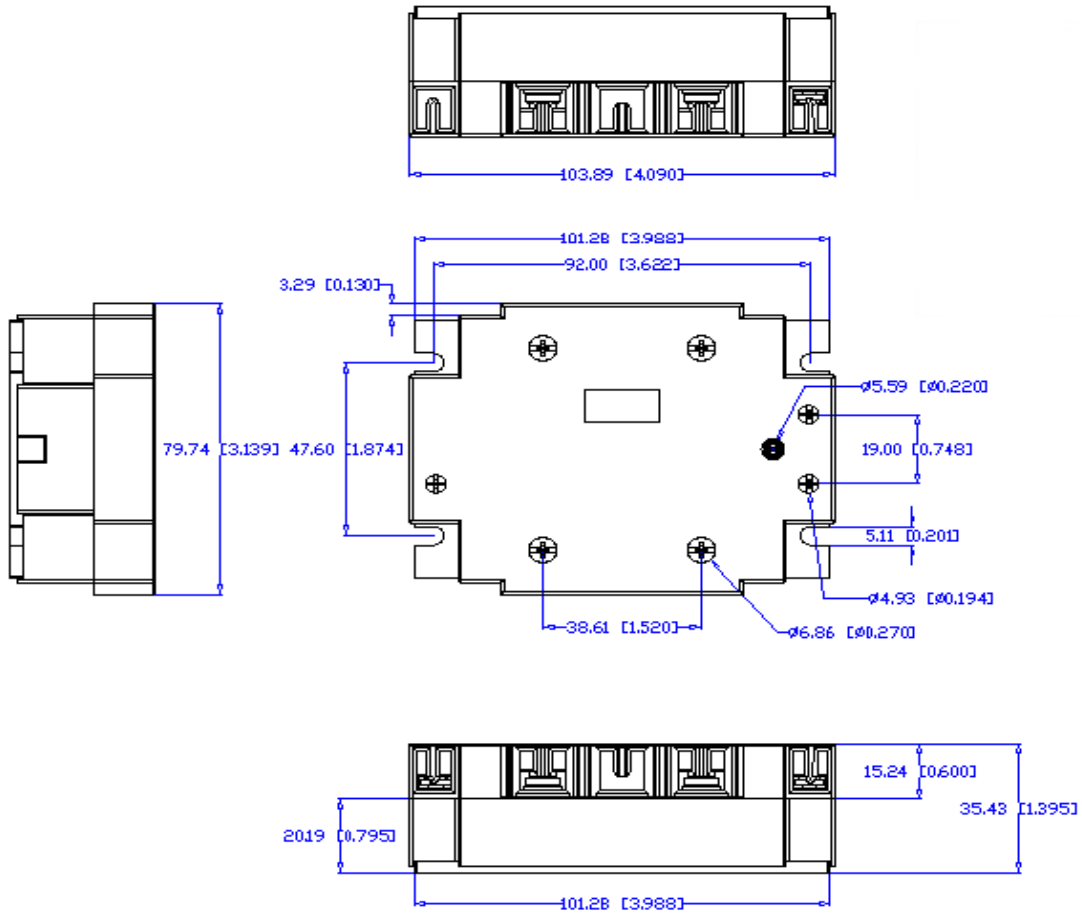
Equivalent Circuit



Dimensional Drawings For GN0

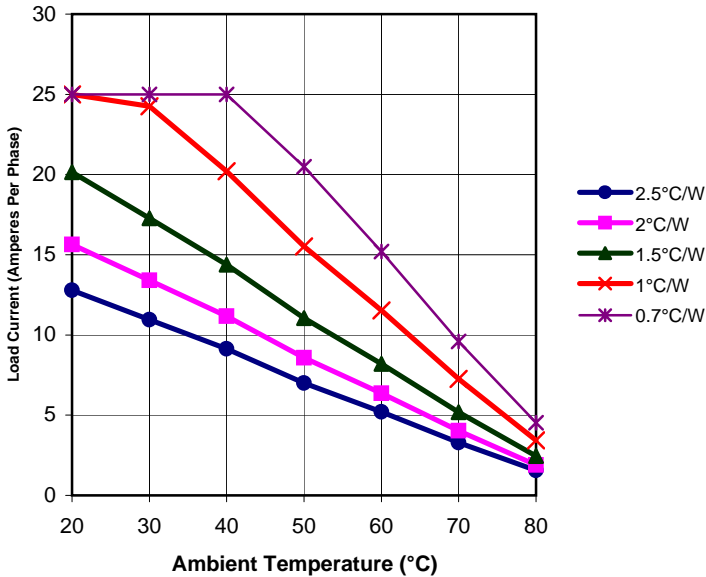


Dimensions mm (inches)



GN0 Derating Curves

DERATING CURVES:
GN0 - 25AMP



DERATING CURVES:
GN0 - 50AMPS

