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09/2021

› GN3 Series

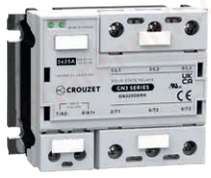
Classic Solid State Relays

Panel Mount – Three phase

- For frequent start/stop operation of Three-Phase Heaters or Motors
- A market favorite for many years
- 25 and 50 Amps
- 3 legs control
- Output overvoltage protection
- Zero Cross Turn-On and Instantaneous (Random)
- cRUus, CE and UKCA Recognized



Zero Cross Version
(Marking label 26532004 sold separately)



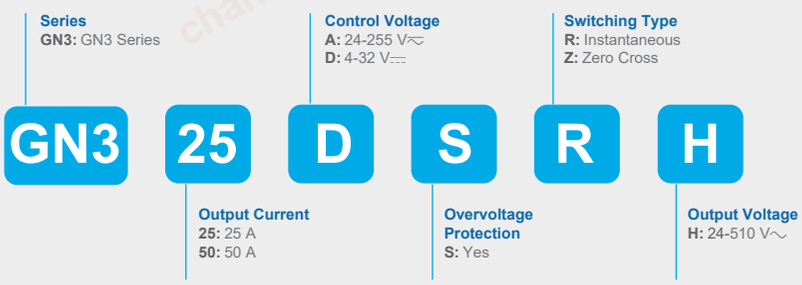
Instantaneous Version
(Marking label 26532004 sold separately)

Product Selection - Zero Cross (Resistive Loads)		
Rated Load Current	25 A	50 A
Output Voltage	24-510 V~	24-510 V~
Control Voltage		
4-32 V⎓	**GN325DSZH**	**GN350DSZH**
24-255 V~	**GN325ASZH**	**GN350ASZH**

Product Selection- Instantaneous (Random) (Inductive Loads)		
Rated Load Current	25 A	50 A
Output Voltage	24-510 V~	24-510 V~
Control Voltage		
4-32 V⎓	**GN325DSRH**	**GN350DSRH**

Part number system

GN3 Triphase



Do you need an adapted or customized solution? Contact us on **www.crouzet.com**

Description:

Crouzet Solid State Relays are designed to be used in almost any application, offering very long life expectancy and are easy to install, easy to use, robust and multipurpose.

For more information about Crouzet's Solid State relays, please visit **www.crouzet.com**.

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Accessories		
Type	**Description**	**Part-Number**
Heatsink	0.9 °C/W Thermal Resistance	**26532752N**
Heatsink	1.2 °C/W Thermal Resistance	**26532754N**
Adapter	For DIN Rail	**26532765N**
ID Tag	Marking label 16 x 8 x 1 mm	**26532004**
Thermal Grease	Thermal Grease for Heatsink mounting	**26532003**
Screws	Screw Mounting Kit	**26532002**

Output Characteristics (1)		
Description	25 A	50 A
Operating Voltage (47-440Hz) [Vrms] (4)	24-510 V~	
Load Current, General Use UL508 /AC51 @ 40 °C [Arms] (5)	3 x 25 @40°C	3 x 50 @40°C
Load Current, AC-53a @ 480 V~ [Arms] (5)	5A (2)	12A (2)
Minimum Load Current [mArms]	5	
Transient Overvoltage [Vpk]	1200 (1100)	1200 (950)
Maximum Surge Current (50/60 Hz (typ.@ 50 °C, 1 Cycle) [Apk]	320/_ (min) 420 (typ)	700/_ (min) 750 (typ)
Maximum I²t for Fusing (50/60 Hz 1/2 cycle) [A² sec]	512 (min) 880 (typ)	2450 (min) 2800 (typ)
1 second surge current (Apeak. Ta = 25 °C) 50/60 Hz	96	230
Minimum Off-State dv/dt @ Maximum Rated Voltage [V/µsec]	500	
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	1	
Maximum On-State Voltage Drop @ Rated Current [Vpk]	1.375	
Thermal Resistance Junction to Case (Rjc) [°C/W]	0.7	0.4
Minimum Heatsink for rated Current @ 40 °C [°C/W] (5)AC-51 AC-53	 0.82 5.2	 0.26 1.5
Minimum Power Factor (at Maximum load): GN325ASZH / GN350ASZH (6)GN325DSZH / GN350DSZH / GN325DSRH / GN350DSRH	 0.8 0.5	
HP Ratings at 120V / FLC [Arms] (2)	0.75 / 6.4	1.5 / 12
HP Ratings at 240V / FLC [Arms] (2)	1 / 4.2	3 / 9.6
HP Ratings at 480V / FLC [Arms] (2)	3 / 4.8	7.5 / 11

Input Characteristics (1)		
Description	4-32 V⎓	24-255 V~
Control Voltage Range	4-32 V⎓	24-255 V~
Minimum Turn-On Voltage	4 V⎓	24 V~
Must Turn-Off Voltage	1 V⎓	2 V~
Maximum Reverse Voltage	-32 V⎓	N/A
Minimum Input Current [mA]	20 mA	5 mA (AC) 4 mA (DC)
Maximum Input Current [mA]	25 mA	7 mArms
Nominal Input Impedance [Ohms]	Current Regulated	
Maximum Turn-On Time	1/2 Cycle	25 ms
Maximum Turn-Off Time	1/2 Cycle (3)	50 ms

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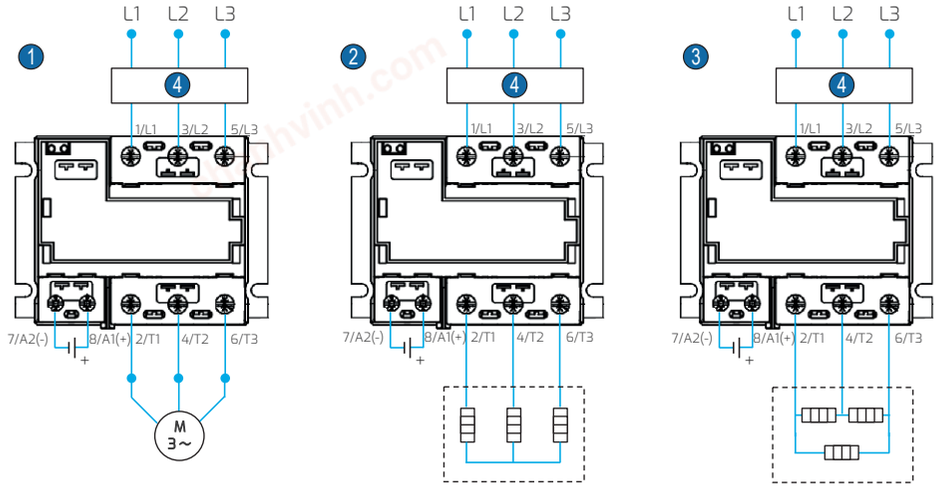
General Characteristics		
Description	25 A	50 A
Dielectric Strength 50/60 Hz (Vrms)	4000 (Input-Output-Case)	
Minimum Insulation Resistance (@ 500 V⎓)	$10^9\Omega$	
Maximum Capacitance, Input/Output	0.8 pF	
Ambient Operating Temperature Range	-40 °C to 80 °C	
Ambient Storage Temperature Range	-40 °C to 100 °C	
Housing Material	UL94 V-0	
Basplate Material	Aluminium	
Terminals	Screw Type	
Control wiring Screw Torque (in-lb/Nm)	11-18/ 1.2-2	
Power wiring screws Torque (in-lb/Nm)	18-26/ 2-3	
Humidity	85 % non-condensing	
Input Status Indicator	LED Green	
Weight (g)	200	
MTBF (Mean Time Before Failure)	63	

General Notes
(1)All parameters at 25 °C unless otherwise
(2) Only for Instantaneous (Random) Version
(3) For Instantaneous (Random) = <0.1
(4) For Instantaneous (Random) version, 63 hz max.
(5) Heatsink required, see derating curves
(6) 0.5 with external RC filter

Diagrams

Wiring

GN3



1. *Wiring to control a 3-phase motor*
2. *Wiring to control heaters connected in star*
3. *Wiring to control heaters connected in delta*
4. *Protection Equipment*

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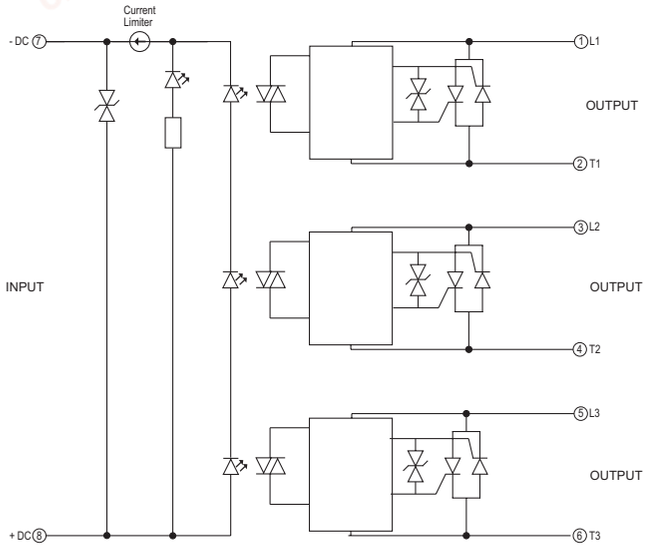
Recommended Wire Size

TERMINALS	WIRE SIZE		Terminal Screw Torque (N.m)
	SOLID	STRANDED	
Input	18..14 AWG (0.75..2.5 mm²) 2 x 18..14 AWG (0.75..2.5 mm²)	18..14 AWG (0.75..2.5 mm²) 2 x 18..14 AWG (0.75..2.5 mm²)	1.2 - 2
Output	8..16 AWG (1.5..10 mm²) 2 x 8..16 AWG (1.5..10 mm²)	10..16 AWG (1.5..6 mm²) 2 x 10..16 AWG (1.5..6 mm²)	2 - 3

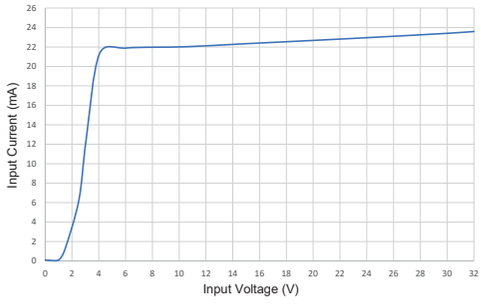
Diagrams

Equivalent Circuit Block

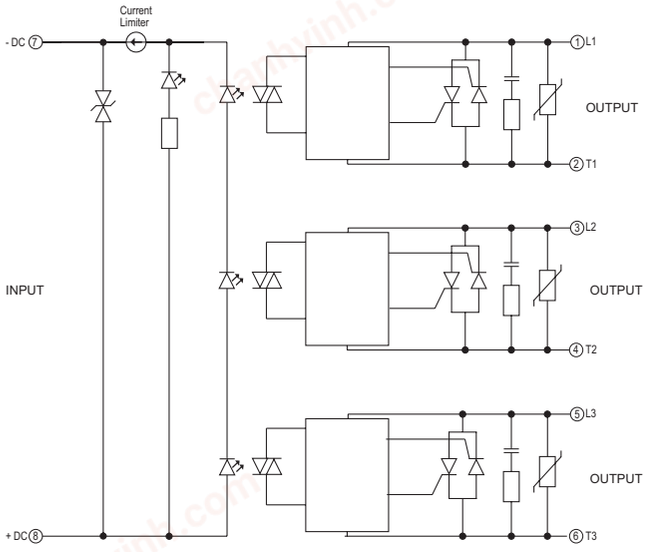
GN3 Series 4-32 V⎓ control Thyristors - 24-510 V∿ - Zero Cross - GN325DSZH, GN350DSZH



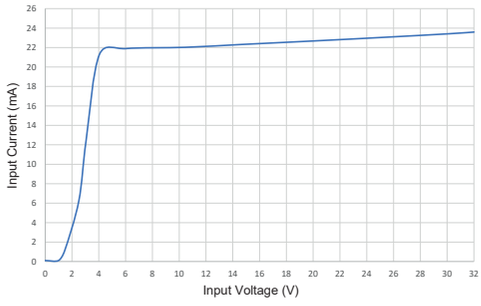
Input current vs Input Voltage
Standard Regulated DC inputs



GN3 Series 4-32 V⎓ control Thyristors - 24-510 V∿ - Instantaneous - GN325DSRH, GN350DSRH

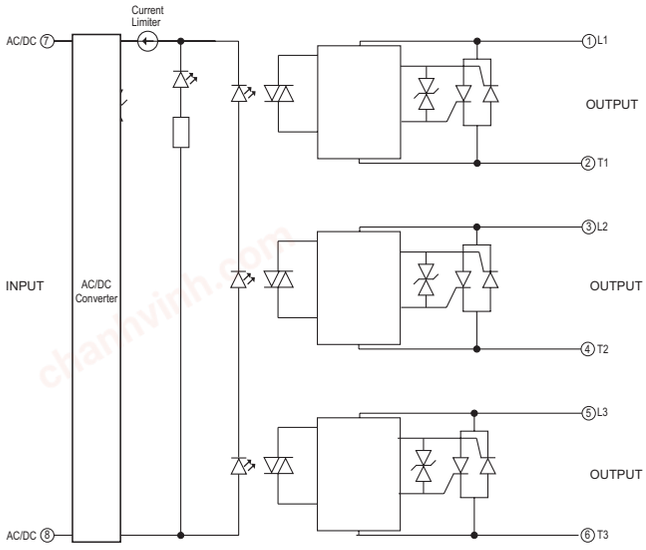


Input current vs Input Voltage
Standard Regulated DC inputs

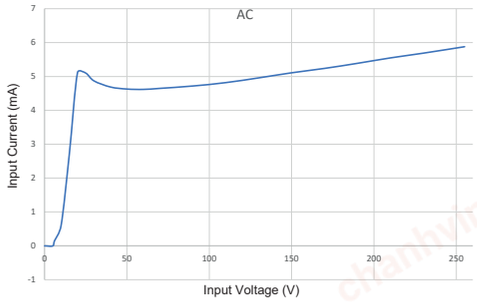


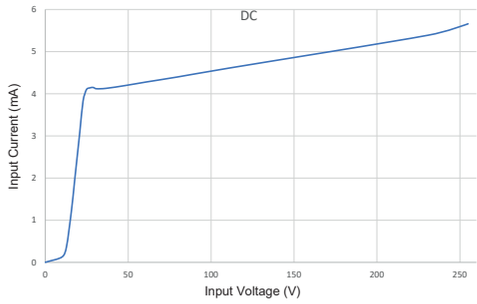
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GN3 Series 24-255 V⎓ control Thyristors - 24-510 V∿ - Zero Cross - GN325ASZH, GN350ASZH



Input current vs Input Voltage
Standard Regulated DC inputs

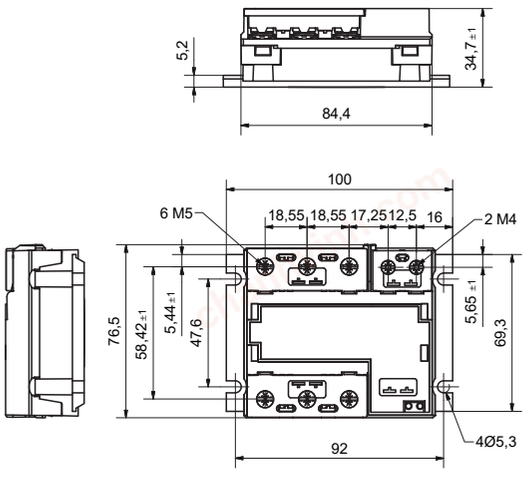




Diagrams

Dimensions (mm)

GN3

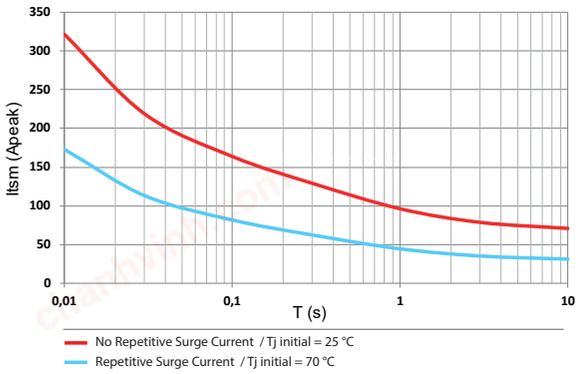


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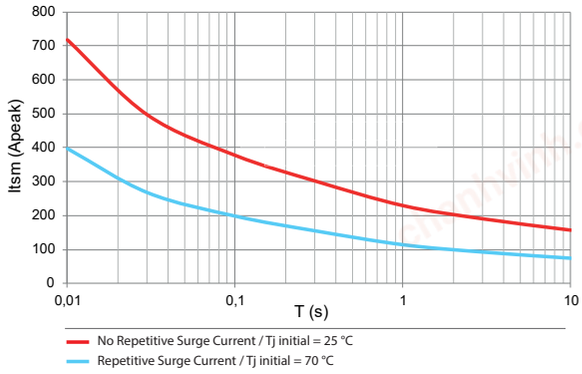
Curves

Surge Current Information

GN3 - 25 A



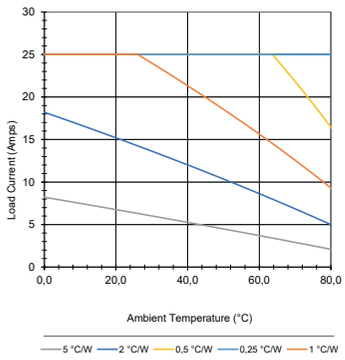
GN3 - 50 A



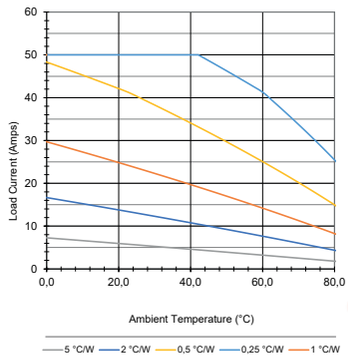
Curves

Thermal Derating Curves

GN3 - 25 A



GN3 - 50 A



Accessories

Heatsink

0.9 °C/W Thermal Resistance - **26532752N**



1.2 °C/W Thermal Resistance - **26532754N**



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Accessories

Others

ID Tag - **26532004**



Thermal Grease for Heatsink mounting - **26532003**



Assembly kit 3-phases - **26532002**



Standards & Electromagnetic Compatibility Specfification
IEC 60068-2-6 Vibration 35mm / Amplitude 10-55Hz
IEC 60068-2-27 Shock resistance 15G / 11ms
IEC 61000-4-2: Electrostatic Discharge immunity test 8kV air discharge Criterion A Level 3
IEC 1000-4-3: Radiated Electromagnetic Noise - Level 3
IEC 61000-4-4: Electrical fast transient/burst immunity test 1kV Line to Line Criterion B Level 3
IEC 61000-4-5: Surge immunity test 1kV Line to Line Criterion B Level 3

Standards

c UL us UL508 CE UKCA

Warning:

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