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03/2022

› GND Series
Classic Solid State Relays
Panel Mount - DC Output

- › Output current of 10 and 40 Amps
- › Output Voltage of 5-60 V⎓ and 5-200 V⎓
- › Control voltage of 4-32 V⎓
- › DC switching (DC loads)
- › Integrated IP20 touch-safe removable covers
- › Built-in overvoltage protection
- › LED input status indicator



DC Switching Version

Product Selection - DC switching (DC loads)		
Rated Load Current	10A	40A
Output Voltage	5-200 V⎓	5-60 V⎓
Control Voltage		
4-32 V⎓	**84137850N**	**84137870N**

PART NUMBERING SYSTEM

Series
8413: Single Phase

Output Voltage
8: Mosfet

Generation
N: New Generation

8413	7	8	5	0	N

Cover/Layout
7: Included

Output Current
5: 10 A
7: 40 A

Control Voltage
0: 4-32 V⎓

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	1.1 °C/W Thermal Resistance	**26532753N**
Heatsink	1.2 °C/W Thermal Resistance	**26532754N**
Heatsink	1.75 °C/W Thermal Resistance	**26532755N**
Heatsink	2.2 °C/W Thermal Resistance	**26532756N**
Adapter	DIN Rail	**26532764N**
Thermal Pad	Self-Adhesive Thermal Pad	**26532722N**
Screws	Screw Mounting Kit	**26532001**
Thermal Grease	Thermal Grease for Heatsink mounting	**26532003**

Output Specifications(1)		
Description	10A	40A
Maximum Load Current [Arms](3)	20	40
Minimum Load Current [mArms]	5	
Typical Operating Voltage [Vrms]	5-110 V⎓	5-60 V⎓
Min / Max Operating Voltage [Vrms]	5-200 V⎓	5-60 V⎓
Transient Voltage [Vpk]	200	100
Maximum Off-State Leakage Current @ Rated Voltage [mArms]	3	
Minimum Off-State dV/dt @ Maximum Rated Voltage [V/µsec]	N/A	
Non-repetitive peak overload current @ 100 ms [Apeak]	380 @t=0.1 ms	320 @t=0.1 ms
Maximum On-State Voltage Drop @ Rated Current [Vpeak]	0.97	1.05
Thermal Resistance Junction to Case (Rjc) [°C/W]	0.66	0.9
Minimum Heat Sink for Rated Current @ 40 °C [°C/W]	3.4	1.15

Input Specifications	
Description	4-32 V⎓
Input Voltage Range	4-32 V⎓(4)
Maximum Reverse Voltage	-32 V⎓
Minimum Turn-On Voltage	3.5 V⎓
Must Turn-Off Voltage	1 V⎓
Minimum Input Current (for on-state)	34 mA
Maximum Input Current [mA]	35 mA
Nominal Input Impedance [Ohms]	Current Limited
Maximum Turn-On Time [msec]	0.02
Maximum Turn-Off Time [msec]	0.02

General Specifications		
Description	10A	40A
Dielectric Strength, Input/Output to Ground (50/60 Hz)	2500 V	
Minimum Insulation Resistance (@ 500 V⎓)	$10^9\Omega$	
Maximum Capacitance, Input/Output	8pf	
Ambient Operating Temperature Range	-25 to 90 °C	
Ambient Storage Temperature Range	-40 to 100 °C	

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General Specifications

Description	10A	40A
Weight (typical)	80 g	
Housing Material	UL94 V-0	
Baseplate Material	Aluminium	
Input Terminal Screw Torque Range (in-lb/Nm)	11-18 /1.2-2.0	
Load Terminal Screw Torque Range (in-lb/Nm)	18-26 / 2-3	
SSR Mounting Screw Torque Range (in-lb/Nm)	11-16 /1.2-1.8	
Humidity per IEC60068-2-78	40-85 %	
LED Input Status Indicator	Green	
MTBF (Mean Time Between Failures) at 40 °C ambient temperature[5]	25	
MTBF (Mean Time Between Failures) at 60 °C ambient temperature[5]	17	

General Notes

[1]All parameters at 25 °C unless otherwise specified

[3]Heat sinking required, see derating curves

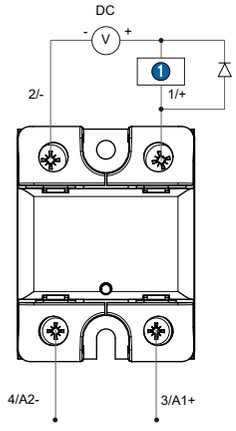
[4]Increase minimum voltage by 1 V for operations from -20 to -40 °C

[5]All parameters at 50 % power rating and 100 % duty cycle (contact tech support for detailed report)

Diagrams

Wiring

GND -



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	16..8 AWG (1.5..10 mm²) 2 x 16..8 AWG (1.5..10 mm²)	16..8 AWG (1.5..6 mm²) 2 x 16..10 AWG (1.5..6 mm²)	2 - 3

GND

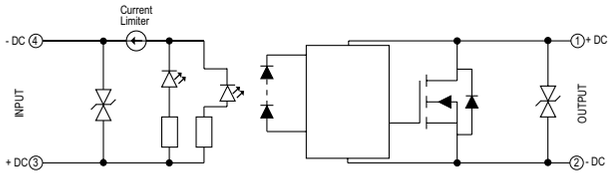
1 *Load*

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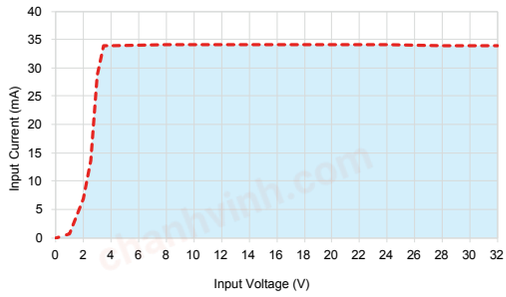
Diagrams

Equivalent Circuit Block

GND Series DC control without ouput protection



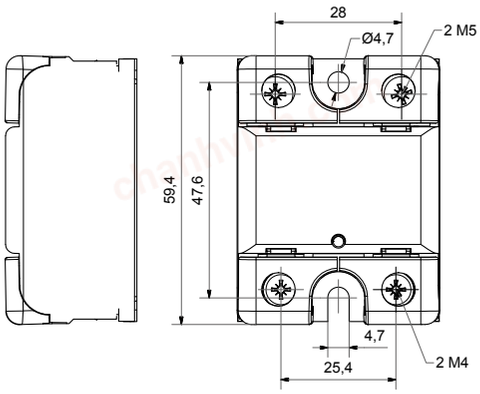
Input current vs Input Voltage
Standard Regulated DC inputs



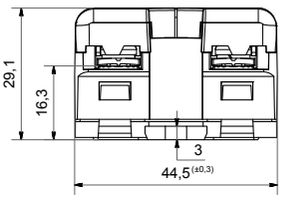
Diagrams

Dimensions (mm)

GND front view



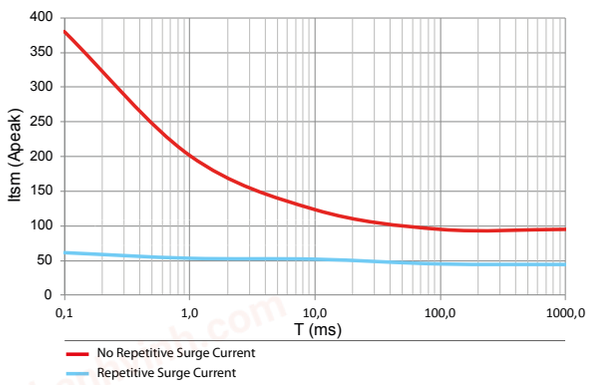
GND side view



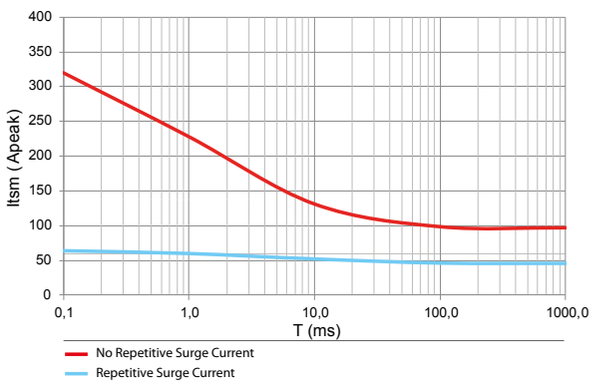
Curves

Surge Current Information

GND - 10 A



GND - 40 A

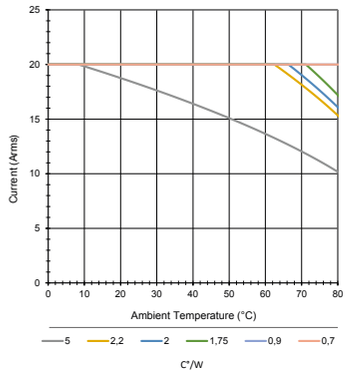


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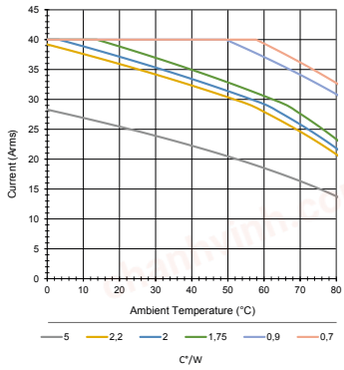
Curves

Thermal Derating Curves

GND - 10 A



GND - 40 A



Standards Specifications

IEC/EN61000-4-4 (bursts)	4 kv crit B
IEC/EN61000-4-5 (surge)	1 kv crit B
VIBRATION resistance IEC 60068-2-6	10 g
SHOCK resistance IEC 60068-2-27	50 G (11 ms)

c US ES16951

CE

Warning:

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