

# › GND Series

## Classic Solid State Relays

### Panel Mount - DC Output

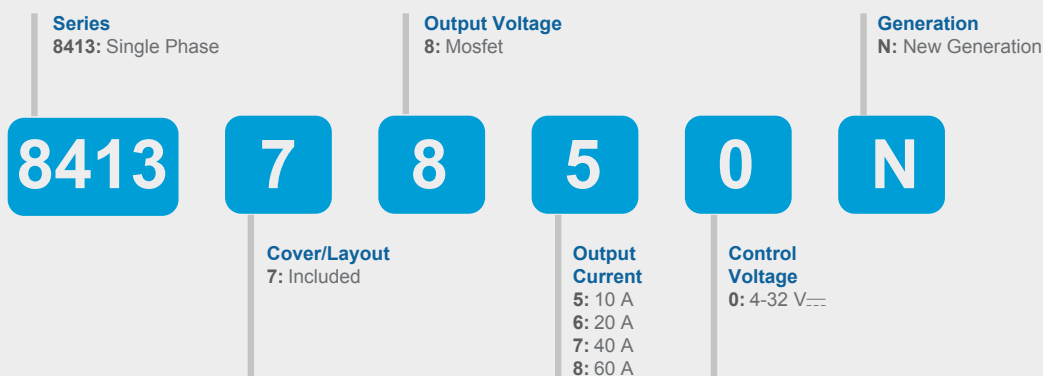
- › Output current of 10 and 40 Amps
- › Output Voltage of 5-60 V<sub>DC</sub> and 5-200 V<sub>DC</sub>
- › Control voltage of 4-32 V<sub>DC</sub>
- › DC switching (DC loads)
- › Integrated IP20 touch-safe removable covers
- › Built-in overvoltage protection
- › LED input status indicator



DC Switching  
Version

| Product Selection - DC switching (DC loads) |                       |                      |
|---------------------------------------------|-----------------------|----------------------|
| Rated Load Current                          | 10A                   | 40A                  |
| Output Voltage                              | 5-200 V <sub>DC</sub> | 5-60 V <sub>DC</sub> |
| Control Voltage                             |                       |                      |
| 4-32 V <sub>DC</sub>                        | 84137850N             | 84137870N            |

## PART NUMBERING SYSTEM



Do you need an adapted or customized solution? Contact us on [www.crouzet.com](http://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](http://www.crouzet.com).

| 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 <sup>(1)</sup>                      |                        |                       |
|-----------------------------------------------------------|------------------------|-----------------------|
| Description                                               | 10A                    | 40A                   |
| Maximum Load Current [Arms] <sup>(3)</sup>                | 20                     | 40                    |
| Minimum Load Current [mArms]                              | 5                      |                       |
| Typical Operating Voltage [Vrms]                          | 5-110 V <sub>---</sub> | 5-60 V <sub>---</sub> |
| Min / Max Operating Voltage [Vrms]                        | 5-200 V <sub>---</sub> | 5-60 V <sub>---</sub> |
| 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 <sub>---</sub>                |
| Input Voltage Range                  | 4-32 V <sub>---</sub> <sup>(4)</sup> |
| Maximum Reverse Voltage              | -32 V <sub>---</sub>                 |
| Minimum Turn-On Voltage              | 3.5 V <sub>---</sub>                 |
| Must Turn-Off Voltage                | 1 V <sub>---</sub>                   |
| 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 <sub>---</sub> ) | 10 <sup>9</sup> Ω |     |
| Maximum Capacitance, Input/Output                       | 8pf               |     |
| Ambient Operating Temperature Range                     | -25 to 90 °C      |     |
| Ambient Storage Temperature Range                       | -40 to 100 °C     |     |
| Weight (typical)                                        | 80 g              |     |

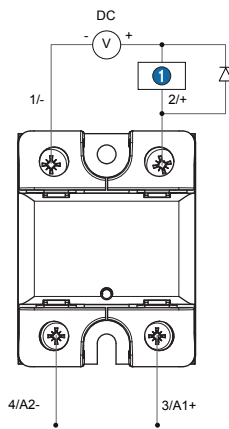
| General Specifications                                                        |                 |     |
|-------------------------------------------------------------------------------|-----------------|-----|
| Description                                                                   | 10A             | 40A |
| 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 <sup>(5)</sup> | 25              |     |
| MTBF (Mean Time Between Failures) at 60 °C ambient temperature <sup>(5)</sup> | 17              |     |

| General Notes                                                                                                      |  |
|--------------------------------------------------------------------------------------------------------------------|--|
| <sup>(1)</sup> All parameters at 25 °C unless otherwise specified                                                  |  |
| <sup>(3)</sup> Heat sinking required, see derating curves                                                          |  |
| <sup>(4)</sup> Increase minimum voltage by 1 V for operations from -20 to -40 °C                                   |  |
| <sup>(5)</sup> 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 mm <sup>2</sup> )<br>2 x 18..14 AWG (0.75..2.5 mm <sup>2</sup> ) | 18..14 AWG (0.75..2.5 mm <sup>2</sup> )<br>2 x 18..14 AWG (0.75..2.5 mm <sup>2</sup> ) | 1.2 - 2                     |
| Output    | 16..8 AWG (1.5..10 mm <sup>2</sup> )<br>2 x 16..8 AWG (1.5..10 mm <sup>2</sup> )       | 16..8 AWG (1.5..6 mm <sup>2</sup> )<br>2 x 16..10 AWG (1.5..6 mm <sup>2</sup> )        | 2 - 3                       |

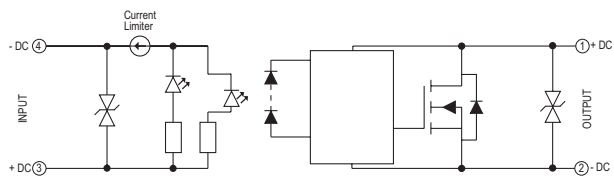
GND

① Load

## Diagrams

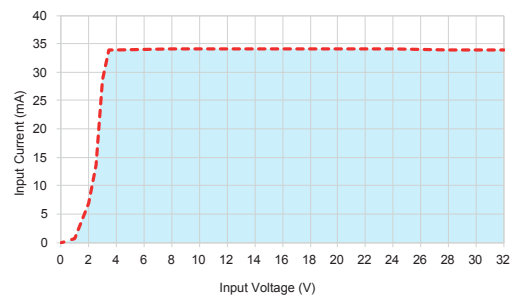
### Equivalent Circuit Block

GND Series DC control without output protection



Input current vs Input Voltage

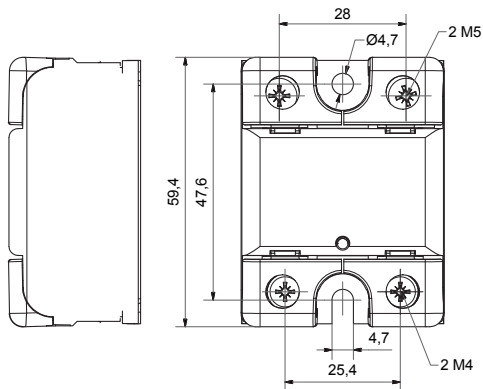
Standard Regulated DC inputs



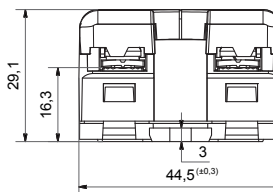
## Diagrams

### Dimensions (mm)

GND front view



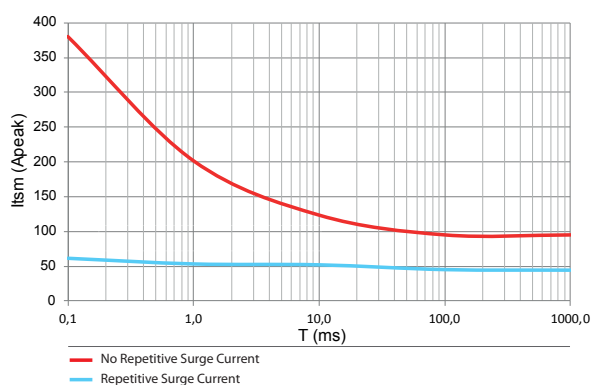
GND side view



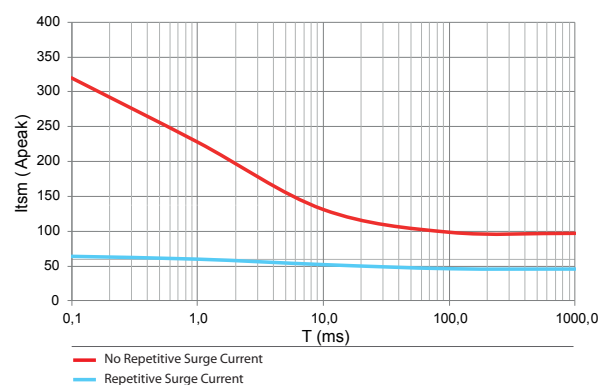
## Curves

### Surge Current Information

GND - 10 A



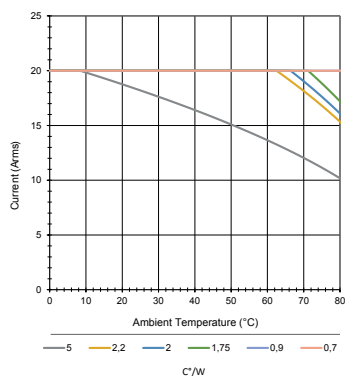
GND - 40 A



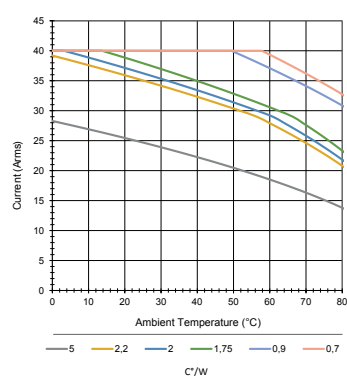
## Curves

## Thermal Derating Curves

GND - 10 A



GND - 40 A



## Warning:

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