

› GN Mini Series

Mini Puck Solid State Relays

Panel Mount – Single channel

- › 20 A in a miniature package for space-demanding applications
- › Zero Cross Turn-On
- › Easy-to-use: Fast-on connection
- › cRUus, CE and UKCA Recognized



84132010N

Product Selection - Zero Cross (Resistive Loads)

Rated Load Current	20 A
Output Voltage	24-280 V~
Control Voltage	
4-30 V---	84132010N

Part number system

GN Mini

Serie
8413: Single Phase

Switching Type
0: Zero Cross

Control Voltage
0: 4-30 V---

8413

2

0

1

0

N

Layout
2: Mini Puck

Output Current
1: 20 A

Generation
N: New Generation

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.

Accessories		
Type	Description	Part-Number
Thermal Grease	Thermal Grease for Heatsink mounting	26532003

Output Characteristics ⁽¹⁾	
Description	20 A
Operating Voltage (47-63 Hz) [Vrms]	24-280
Maximum Load Current [mArms] ⁽²⁾	20 @ 40 °C
Minimum Load Current [mArms]	5
Transient Overvoltage [Vpk]	600
Maximum Surge Current (50/60 Hz (Typ.@ 50 Hz), 1 Cycle) [Apk]	250/260 (min) 340 (typ)
Maximum I ² t for Fusing (50/60 Hz 1/2 cycle) [A ² sec]	340 (min) 600 (typ)
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 [Vrms]	1.25
Thermal Resistance Junction to Case (Rjc) [°C/W]	1.7
Minimum Heatsink for Rated Current @ 40 °C [°C/W] ⁽²⁾	2.1
Minimum Power factor (at maximum load)	0.45 (protection required)

Input Characteristics ⁽¹⁾	
Description	4-30 V _{DC}
Control Voltage Range	4-30 V _{DC}
Minimum Turn-On Voltage	4 V _{DC}
Must Turn-Off Voltage	1 V _{DC}
Maximum Reverse Voltage	-30 V _{DC}
Minimum Input Current	3 mA
Maximum Input Current	29 mA
Nominal Input Impedance	1000 Ω
Maximum Turn-On Time	½ Cycle
Maximum Turn-Off Time	½ Cycle

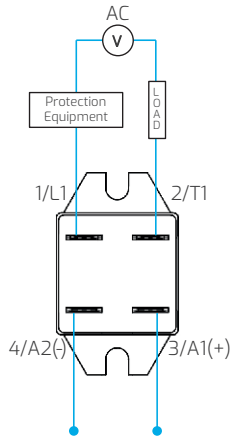
General Characteristics	
Description	20 A
Dielectric Strength (Vrms)	4000 (Input-Output) 2500 (Output-Case)
Minimum Insulation Resistance (@ 500 V _{DC})	10 ⁹ Ω
Maximum Capacitance, Input/Output	0.8 pF
Ambient Operating Temperature Range	-40 to 80 °C
Ambient Storage Temperature Range	-40 to 100 °C
Housing Material	UL94 V-0
Basplate Material	Aluminium
Terminals	Fast-on (0.25" / 6.3 mm for output terminals and 0.19" / 4.8 mm for control terminals)
Screw Mounting Torque (in-lb/Nm)	11-16/1.2-1.8
Humidity (IEC60068-2-78)	85 % non-condensing
Input Status Indicator	No LED
Weight (g)	10
MTBF (Mean Time Between Failures) @ 40 °C (years)	163

General Notes	
(1)	All parameters at 25 °C unless otherwise
(2)	Heatsink required, see derating curves

Diagrams

Wiring

GN Mini Series



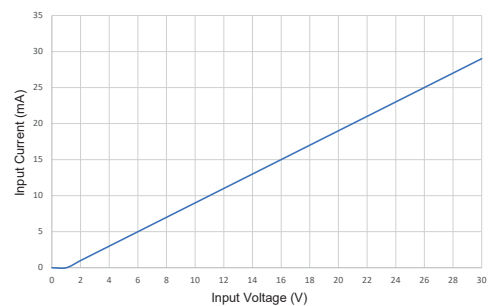
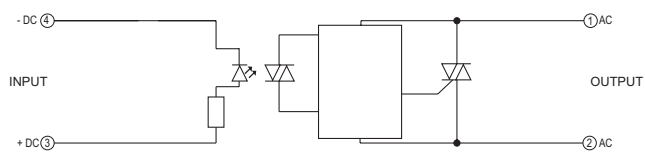
It's recommended to use external overvoltage protection (Varistor / TVS Diode) and short-circuit protection (fuse / circuit breaker), if they are not already integrated

Diagrams

Equivalent Circuit Block

GN Mini Series 4-30 V_{DC} control Triac - 24-280 V_{AC} - Zero Cross - 84132010N

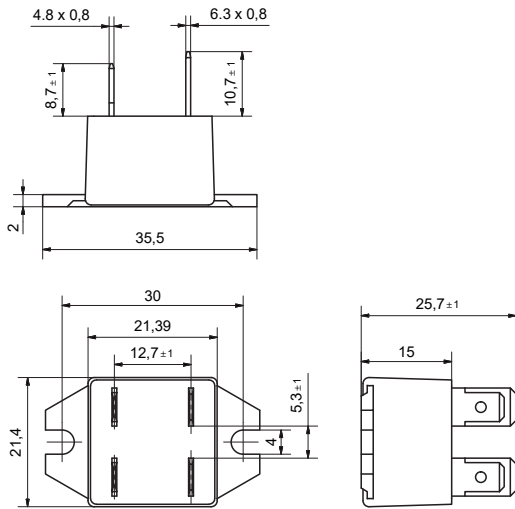
Input current vs Input Voltage
Standard Regulated DC inputs



Diagrams

Dimensions (mm)

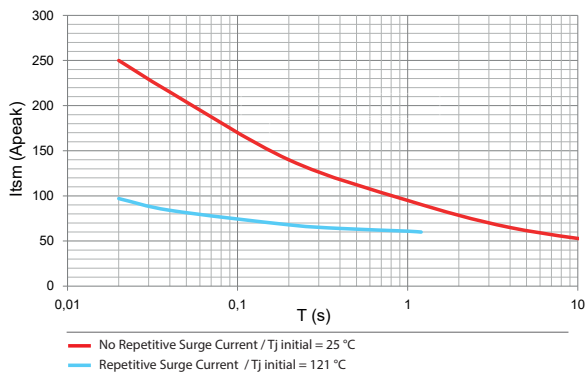
GN Mini Series



Curves

Surge Current Information

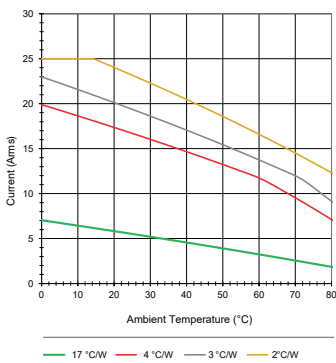
GN Mini - 20 A



Curves

Thermal Derating Curves

GN Mini- 20 A



Accessories**Others**

Thermal Grease for Heatsink mounting - **26532003**

**Standards & Electromagnetic Compatibility Specification**

IEC 61000-6-2
Immunity for Industrial Environments
IEC 61000-4-2 Electrostatic Discharge 8 kV air discharge Criterion A – Level 3
IEC 61000-4-2 Electrostatic Discharge 6 kV contact discharge Criterion A – Level 3
IEC 61000-4-4 Surge Output 1 kV Line to Line Criterion B – Level 3
IEC 61000-4-4 Fast transients (burst) Input 5 kHz Criterion B – Level 3
IEC 61000-4-5 Surge Output 1 kV Line to Line Criterion B – Level 3
IEC 61000-4-5 Surge Output 2 kV line to Earth Criterion B – Level 3

Standards**Warning:**

The product information contained in this catalogue is given purely as information and does not constitute a representation, warranty or any form of contractual commitment. Crouzet and its subsidiaries reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate tests, that the product is suitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.