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› GNRS Smart Module Series

Solid State Relays

DIN Rail - Module for GNR/GNR+

- › Current range from 2 to 40 A
- › Open Loads, Mains detection (and Partial Load break)
- › Under and Over current detection
- › Current teaching function
- › 3 LED Status indicator
- › IP20 touch-safe housing
- › Spring Connector (84050043N)



84050040N
Current Monitoring



84050043N
Current Detection & Diagnostic

Product Selection		
Rated Load Current	40A	
	32 V⎓	24-45 V⎓
Control Voltage		
4-32 V⎓	**84050040N**	
24-45 V⎓		**84050043N**

PART NUMBERING SYSTEM

840	5	0	0	4	1	N
Series **840:** Single Phase	**Mounting Type** **5:** DIN Rail	**Default** **0:** N/A	**Default** **0:** N/A	**Output Current** **4:** 40 A	**Input Voltage** **0:** 4-32 V⎓ **3:** 24-45 V⎓	**Generation** **N:** New Generation



GNR Smart Module

- Applications where loads are switched frequently (ex: thermoset molding)
- **To detect** load failures, blown fuses, heat zones status, as well as damaged and interrupted SSRs

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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Power Supply Specifications		
Description	40A	
Supply voltage range	8-30 V⎓	24-45 V⎓
Nominal Supply current	20 mA	

Input Specifications		
Description	4-32 V⎓	24-45 V⎓
Minimum Input Current	0.3 mA	1 mA
Maximum Input Current	20 mA	
Maximum Turn-On Time (Ton)	15 ms	
Maximum Turn-Off Time (Toff)	15 ms	

External Teach Specification		
Description	40A	
External Teach Voltage Range	4-32 V⎓	24-45 V⎓
Minimum Input Current	0.3 mA	1.4 mA
Maximum Input Current	3 mA	3.7 mA

Current sensing Specifications	
Description	40A
Maximum Teach Current	40 A
Minimum Teach Current	2 A
Undercurrent Detection	Teach Current * 0.84 Arms
Overcurrent Detection (84050043N)	Teach Current * 1.16 Arms
Load Voltage Frequency Range	15-200 Hz
Load Voltage Range	Din Rail SSR voltage range
Number of Loads	1 to 5

General Specifications	
Description	40A
Max. Turn Off time @ 50 Hz	15 ms
Max. Turn On time @ 50 Hz	15 ms
Ambient Operating Temperature Range	-40 °C to +80 °C
Ambient Storage Temperature Range	-40 °C to +100 °C
Weight (typical)	75 g
Housing Material	UL94 V-0
Humidity	40 to 85 %
LED Input Status Indicator	See LED Chart

Alarm Specifications		
Description	40A	
Output Voltage Range	4-32 V⎓	24-45 V⎓
Typical ON-state resistance	1 Ω	
Maximum Ouput Current	100 mA	
Minimum Output Current	3 mA	
Maximum Number of Outputs Connected in Parallel	Up to 5	
Alarm Delay	SeeLED Statut chart	
No Mains Voltage/Open Load	40 ms	
Detection Current Min/Max	0.5 A	

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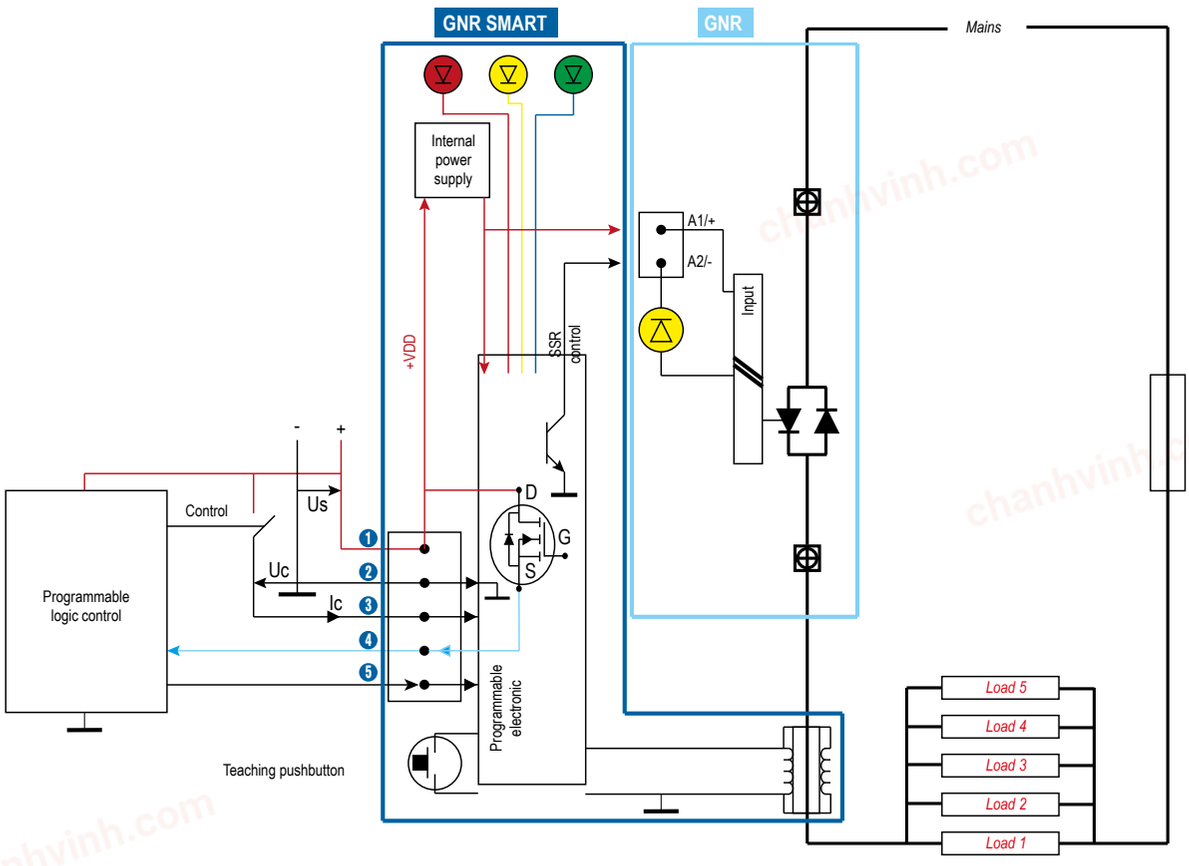
General Notes

(1)All parameters at 25 °C unless otherwise specified

Diagrams

Wiring

GNRS Smart



GNRS

1. *Supply +*
2. *Supply -*
3. *Control input*
4. *Diagnostic output*
5. *External teach input*

Diagrams

Status Chart

LED Status 84050040N

	LED INDICATOR				
STATUS	Alarm	ON	INPUT	Load Current	Diagnostic OUTPUT
No power				0A	Open (0V)
Normal Operation				=Iteach	Open (0V)
Open Mains / Load Blowed fuses				0A	Ton=100 ms Toff=100 ms
Short Circuit				0A	Closed (+VDD)
Partial Load Break				<Iteach*0.84	Closed (+VDD) Ton=1 s Toff=1s
Test / Teach Mode					
Teach Value Storing					

LED Status 84050043N

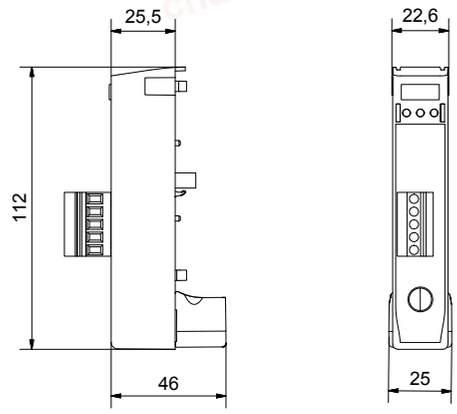
	LED INDICATOR				
STATUS	Alarm	ON	Input	Load Current	Diagnostic Output
No power				0A	Closed (+VDD)
Normal Operation				=Iteach	Closed (+VDD)
Open Mains / Load Blowed fuses				0A	Ton=2s Toff=1s
Short Circuit SSR				0A	Ton=1s Toff=1s
Over Load				>Iteach*1.16	Ton=200ms Toff=200ms
Partial Load Break				<Iteach*0.84	Ton=200ms Toff=2s
Test / Teach Mode					
Teach Value Storing					

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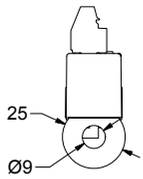
Diagrams

Dimensions (mm)

GNR Smart module front view



GNR Smart module side view

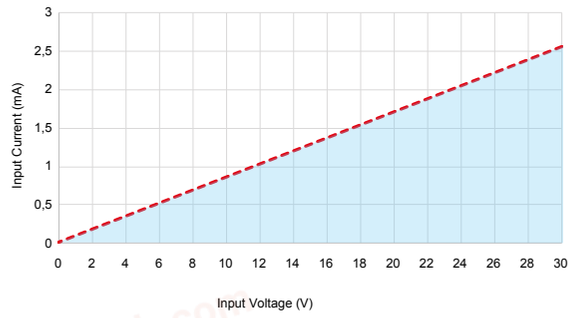


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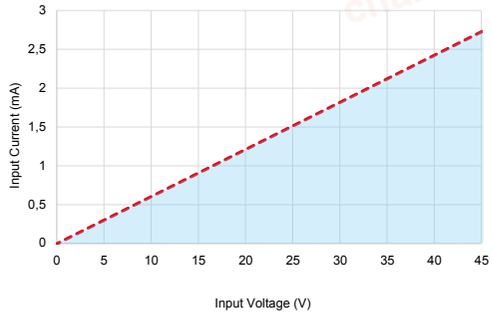
Curves

Standard regulated input current vs Input Voltage

GNR Smart - 84050040N



GNR Smart - 84050043N



Standard Specifications

84050040N

IEC/EN61000-4-4 (bursts)	1 kv
IEC/EN61000-4-5 (surge)	1 kv
VIBRATION resistance IEC 60068-2-6	2 g, 10/55 Hz
SHOCK resistance IEC 60068-2-27	15 G (11 ms)

84050043N

IEC/EN61000-4-4 (bursts)	1 kv
IEC/EN61000-4-5 (surge)	1 kv
VIBRATION resistance IEC 60068-2-6	2 g, 10/55 Hz
SHOCK resistance IEC 60068-2-27	10 G (11 ms)

CE

Warning:

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