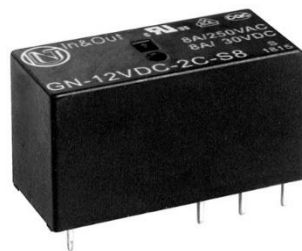


## ● Features

- 16A switching capability
- Low height: 15.7 mm
- 5kV dielectric strength (between coil and contacts)
- Plastic sealed and flux proofed types available
- UL insulation system: Class F available
- Environmental friendly product (RoHS compliant)
- Dimensions: 29.0 x 12.7 x 15.7 mm



## ● Application

- Household Electrical Appliance / Intelligent Home Solution / Automation System / Meter, etc.

## ● Contact Data

Contact Arrangement	1A, 1B, 1C	2A, 2B, 2C
Contact Material	Ag Alloy	
Contact Rating	12A,16A 250VAC (resistive) 1/2HP 250VAC / 125VAC	8A 250VAC (resistive)
Max. Switching Power	12A:3000VA 16A:4000VA	2000VA
Max. Switching Voltage	440VAC	
Max. Switching Current	12A / 16A	8A
Contact Resistance	$\leq 100\text{m}\Omega$	
Electrical Endurance	$1 \times 10^5$	
Mechanical Endurance	$1 \times 10^7$	

## ● Coil Parameter (at 23°C)

### Standard Type

Coil voltage (VDC)		Coil Resistance ( $\Omega \pm 10\%$ )	Pickup Voltage(max) (VDC)	Release Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
5	7.5	62	3.75	0.5	Approx. 0.40
6	9.0	90	4.50	0.6	
9	13.5	202	6.75	0.9	
12	18.0	360	9.00	1.2	
18	27.0	810	13.5	1.8	
24	36.0	1440	18.0	2.4	
48	72.0	5760(1 $\pm$ 15%)	36.0	4.8	
60	90.0	7500(1 $\pm$ 15%)	45.0	6.0	
110	165.0	25200(1 $\pm$ 15%)	82.5	11.0	

### Sensitive Type

Coil voltage (VDC)		Coil Resistance ( $\Omega \pm 10\%$ )	Pickup Voltage(max) (VDC)	Release Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
5	7.5	100	3.75	0.5	Approx. 0.25
6	9.0	144	4.50	0.6	
12	18.0	576	9.00	1.2	
18	27.0	1296	13.5	1.8	
24	36.0	2304	18.0	2.4	
48	72.0	9216(1 $\pm$ 15%)	36.0	4.8	
60	90.0	12857(1 $\pm$ 15%)	45.0	6.0	

## ● Operation Condition

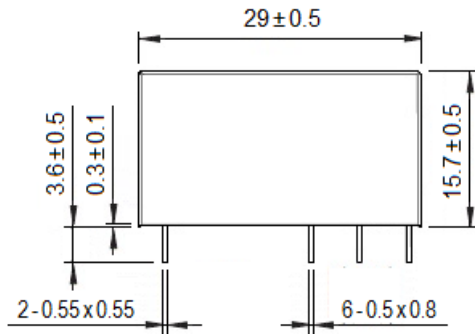
Insulation Resistance		1000MΩ min (at 500VDC)
Dielectric Strength	Between Open Contacts	1000VAC 1min
	Between Coil and Contact	5000VAC 1min
	Between Contact Sets	2500VAC 1min
Surge Voltage	Between Coil and Contact	10kV (1.2 / 50μs)
Shock Resistance	Functional	98m/s <sup>2</sup>
	Endurance	980m/s <sup>2</sup>
Vibration Resistance		10Hz to 150Hz 10g/5g
Ambient Temperature		-40 ~ +85°C
Operate Time		≤ 15ms
Release Time		≤ 8ms
Relative Humidity		5%~85%
Weight		Approx. 13.5g

## ● Ordering Information

	GN	-S	-12VDC	-1A	25	-S	16	(XXX)
<b>Model</b>								
<b>Version</b> (See Wiring Diagram Below)	Nil: 5.0mm S: 3.5mm							
<b>Coil Voltage</b>	5, 6, 9, 12, 18, 24, 48, 60, 110VDC							
<b>Contact Arrangement</b>	1A: 1 Form A	1B: 1 Form B	1C: 1 Form C					
	2A: 2 Form A	2B: 2 Form B	2C: 2 Form C					
<b>Coil Power</b>	Nil: 400mW	25: 250mW						
<b>Construction</b>	Nil: Flux tight	S: Sealed						
<b>Contact Current</b>	8: 8A (8A only for 2 pole 5mm)							
	12: 12A (only for 1 pole 3.5mm or 1 pole 5mm, single pinning)							
	16: 16A (only for 1 pole 5mm, double pinning)							
<b>Special Code</b>	Nil: Standard	XXX: Customer special requirement						

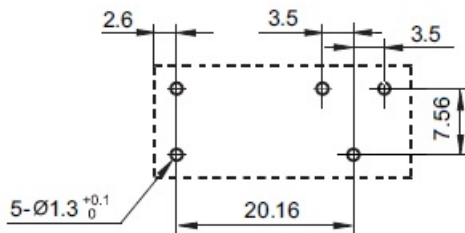
## ● Dimensions (UNIT: mm)

### Outline Dimensions

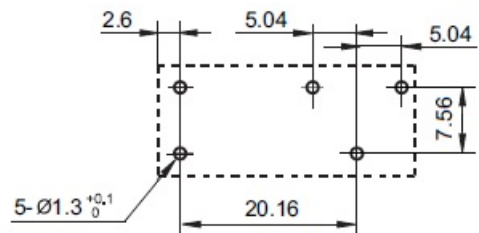


### Mounting (Bottom views)

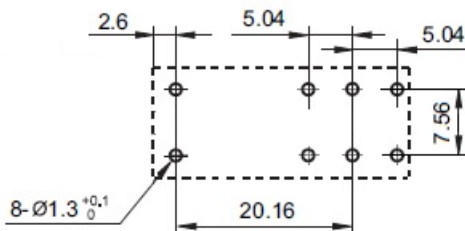
#### GNS 3.5mm 1Pole 12A



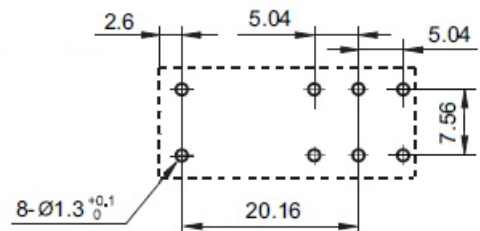
#### GN 5mm 1Pole 12A



#### GN 5mm 1Pole 16A



#### GN 5mm 2Pole 8A



## ● Dimensions (UNIT: mm)

Wiring Diagram (Bottom views)

GNS 3.5mm / GN 5mm, 1Pole 12A

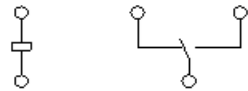
1 Form A



1 Form B

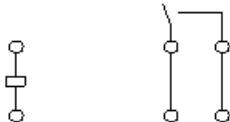


1 Form C

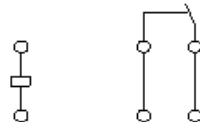


GN 5mm 1Pole 16A

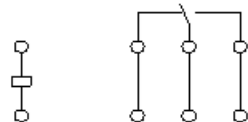
1 Form A



1 Form B

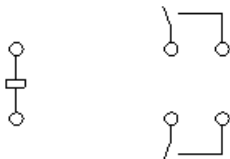


1 Form C

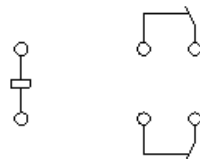


GN 5mm 2Pole 8A

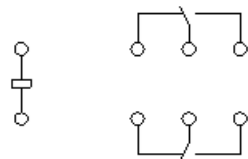
2 Form A



2 Form B



2 Form C



Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should be  $\pm 0.5\text{mm}$ .

2) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

### Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact IOEC for the technical service. However, it is the user's responsibility to determine which product should be used only.

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