

## ● Features

- 10A switching capability
- Low height: 12.5 mm
- 5kV dielectric strength (between coil and contacts)
- Creepage distance >8mm
- UL insulation system: Class F available
- Plastic sealed and flux proofed types available
- Environmental friendly product (RoHS compliant)
- Dimensions: 28.5 x 10.1 x 12.5 mm



## ● Application

- Home Appliances / Smart Home Solution / Temperature Control, etc.

## ● Contact Data

Contact Arrangement	1A, 1B, 1C
Contact Material	Ag Alloy
Contact Rating	10A 250VAC / 30VDC
Max. Switching Power	2500VA / 300W
Max. Switching Voltage	440VAC / 125VDC
Max. Switching Current	10A
Contact Resistance	$\leq 100\text{m}\Omega$
Electrical Endurance	$1 \times 10^5$
Mechanical Endurance	$1 \times 10^7$

### ● Coil Parameter (at 23°C)

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	113	3.50	0.50	Approx. 0.22W to 0.29W
6	9.0	164	4.20	0.60	
9	13.5	360	6.30	0.90	
12	18.0	620	8.40	1.20	
18	27.0	1295	12.60	1.80	
24	36.0	2350(1 $\pm$ 15%)	16.80	2.40	
48	72.0	8000(1 $\pm$ 15%)	33.60	4.80	
60	90.0	12500(1 $\pm$ 15%)	42.00	6.00	

### ● Operation Condition

Insulation resistance		1000M $\Omega$ min (at 500VDC)
Dielectric strength	Between contacts	1000V
	Between contact and coil	5000V
Surge voltage (between coil and contacts)		10kV (1.2 / 50 $\mu$ s)
Shock resistance	Functional	NC: 49m/s <sup>2</sup> NO: 98m/s <sup>2</sup>
	Endurance	980m/s <sup>2</sup>
Vibration resistance	NC (no coil voltage)	10~55Hz double amplitude 0.8mm
	NO	10~55Hz double amplitude 1.65mm
Ambient temperature		-40~85°C
Operate time		$\leq 10$ ms
Release time		$\leq 5$ ms
Relative Humidity		5%~85%
Weight		Approx. 8g

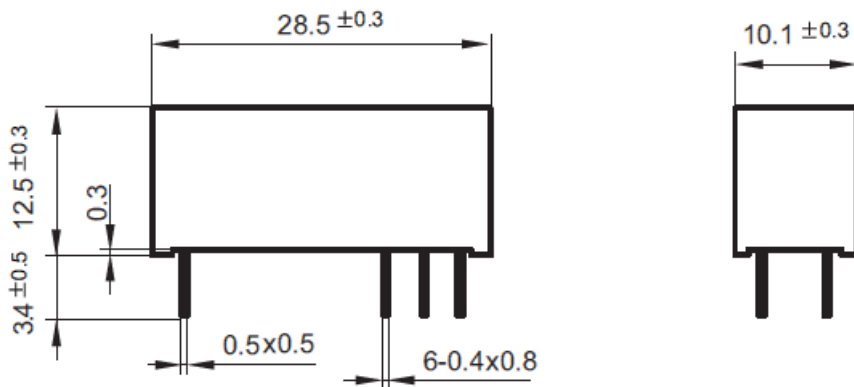
## ● Ordering Information

	GI	S	-12D	-A	F	1	- S	(XXX)
Model								
Version(See Wiring Diagram Below)	S: 1 Form C, Double pinning							
Coil Voltage	5, 6, 9, 12, 18, 24, 48, 60 VDC							
Contact	A: 1 Form A    B: 1 Form B							
Arrangement	C: 1 Form C							
Contact Material	Nil: AgSnO2    F: AgNi							
Contact Plating	Nil: No gold plated    1: Gold plated							
Construction	Nil: Flux tight    S: Sealed							
Special Code	Nil: Standard    XXX: Customer special requirement							

## ● Dimensions (UNIT: mm)

### Outline Dimensions

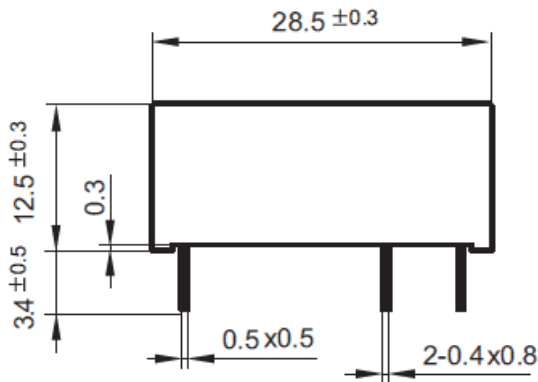
3.2mm pinning for 1 Form C



## ● Dimensions (UNIT: mm)

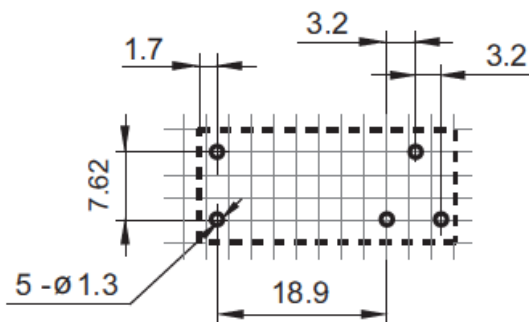
### Outline Dimensions

5mm pinning for 1 Form A and 1 Form B

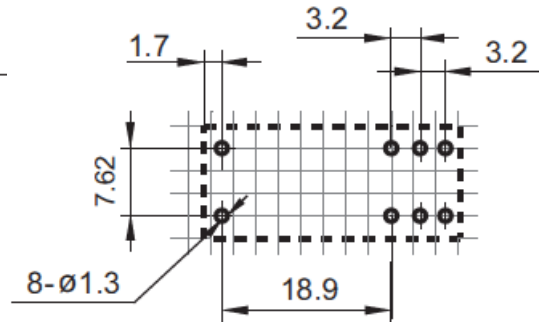


### Mounting (Bottom views)

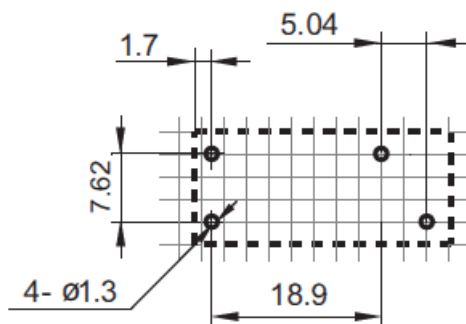
3.2mm pinning for 1 Form C



3.2mm, double pinning for 1 Form C



5mm pinning for 1 Form A and 1 Form B



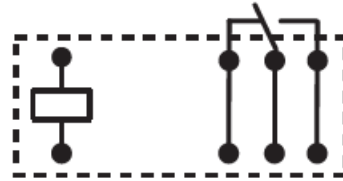
- Dimensions (UNIT: mm)

Wiring Diagram (Bottom views)

3.2mm pinning for 1 Form C



3.2mm, double pinning for 1 Form C



5mm pinning for 1 Form A



5mm pinning for 1 Form B



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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