

● Features

- High Temperature Resistance: 105°C
- Small size, light weight, low height
- Dielectric strength 5kV
- Creepage distance: 10mm
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Dimensions: 29.0 x 12.7 x 15.7 mm



● Certificate

- UL E197803, TUV 50626912, CQC 11002061906

● Application

- Household Electrical Appliance / Automation System / Electrical Equipment / Instrument / Meter / Telecommunication Facilities / Remote Control System / Security System

● Contact Data

Contact Arrangement	1A, 1C	2A, 2C
Contact Material	Ag Alloy	
Contact Rating	GNT: 16A 250VAC GNT(H): 12A 250VAC	8A 250VAC
Max. Switching Power	GNT: 4000VA GNT(H): 3000VA	2000VA
Max. Switching Voltage	440VAC / 300VDC	
Max. Switching Current	GNT: 16A GNT(H): 12A	8A
Contact Resistance	≤ 100mΩ	
Electrical Endurance	5 x 10 ⁴ OPS (1A: 16A 250VAC, Resistive load, 105 °C, 1s on 9s off) 5 x 10 ⁴ OPS (2A: 8A 250VAC, Resistive load, 105 °C, 1s on 9s off)	
Mechanical Endurance	1x10 ⁷	

● Coil Parameter (at 23°C)

Standard Type (GNT)

Coil Voltage (VDC)		Coil Resistance ($\Omega \pm 10\%$)	Pickup Voltage(max) (VDC)	Release Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
5	6.5	62	3.50	0.5	0.40
9	11.7	202	6.30	0.9	
12	15.6	360	8.40	1.2	
18	23.4	810	12.6	1.8	
24	31.2	1440	16.8	2.4	
48	62.4	5760(1 $\pm$ 15%)	33.6	4.8	
60	78.0	7500(1 $\pm$ 15%)	42.0	6.0	

High 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	6.5	100	3.75	0.5	0.25
9	11.7	324	6.75	0.9	
12	15.6	576	9.00	1.2	
18	23.4	1296	13.5	1.8	
24	31.2	2304	18.0	2.4	
48	62.4	9216(1 $\pm$ 15%)	36.0	4.8	
60	78.0	12857(1 $\pm$ 15%)	45.0	6.0	

Notes: 1) The data shown above are initial values.

2) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

3) For products with rated voltage $\geq 48V$, measures should be taken to prevent coil overvoltage in order to protect coil in test and application (eg. Connect diodes in parallel).

● Operation Condition

Insulation Resistance		1000MΩ min (at 500VDC)
Dielectric Strength	Between Contacts	1000V
	Between Contact and Coil	5000V
Shock Resistance	Functional	98m/s ²
	Endurance	980m/s ²
Vibration Resistance		10~55Hz double amplitude 1.5mm
Ambient Temperature		-40 ~ +105℃
Operate Time		≤ 15ms
Release Time		≤ 8ms
Relative Humidity		5%~85%
Weight		Approx. 13.5g

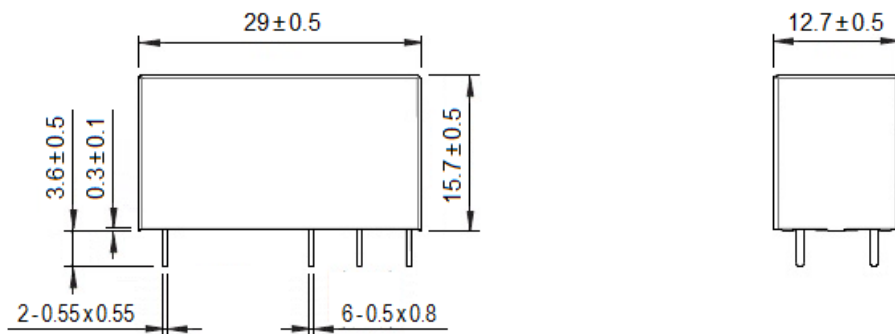
● Ordering Information

	GNT	-12D	-A	16	-S	(XXX)
Model	GNT: Standard					
Coil Voltage	5, 9, 12, 18, 24, 48, 60VDC					
Contact	A: 1 Form A C: 1 Form C					
Arrangement	2A: 2 Form A 2C: 2 Form C					
	8: 8A (only for 2 pole 5mm)					
Contact Current	12: 12A (only for 1 pole 5mm, double pinning 0.25W)					
	16: 16A (only for 1 pole 5mm, double pinning)					
Construction	Nil: Flux tight S: Sealed					
Special Code	Nil: Standard XXX: Customer special requirement					

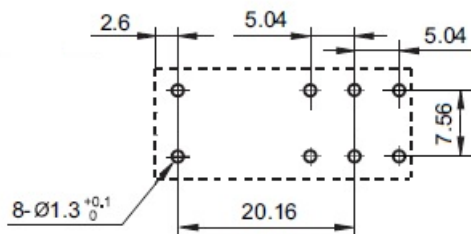
Notes: The customer special requirement express as special code after evaluating by In&Out e.g. (H) indicates that Coil Power Consumption 0.25W, GNT H 1 pole only.

● Dimensions (UNIT: mm)

Outline Dimensions

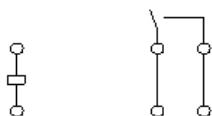


Mounting (Bottom views)

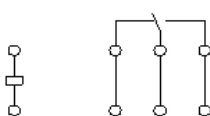


Wiring Diagram (Bottom views)

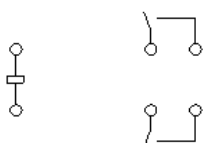
1 Form A



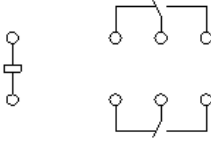
1 Form C



2 Form A



2 Form C



Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤ 1 mm, tolerance should be ± 0.2 mm; outline dimension > 1 mm and ≤ 5 mm, tolerance should be ± 0.3 mm; outline dimension > 5 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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