

# 812H



### »» Features

- Miniature PCB Power Relays 10A 250VAC.
- High CTI 250 material or product comply with IEC 60335-1 are available.
- UL Insulation Class F.
- VDE, UL/CUL, TUV, CSA/CUS approved.
- Complies with RoHS-Directive 2011/65/EU.
- Optional for halogen free version.

### »» Type List

#### ◆ 812H

Terminal style	Contact form	UL Insulation system approval	Designation (provided with)		
			Flux tight	Sealed type	Sealed type washable
PCB terminal	1C (SPDT)	-----	812H-1C-C	812H-1C-V	812H-1C-S
		F	812H-1C-C F	812H-1C-V F	812H-1C-S F
	1A (SPNO)	-----	812H-1A-C	812H-1A-V	812H-1A-S
		F	812H-1A-C F	812H-1A-V F	812H-1A-S F
	1B (SPNC)	-----	812H-1B-C	812H-1B-V	812H-1B-S
		F	812H-1B-C F	812H-1B-V F	812H-1B-S F

#### ◆ 812BH

Terminal style	Contact form	UL Insulation system approval	Designation (provided with)		
			Flux tight	Sealed type	Sealed type washable
PCB terminal	1C (SPDT)	-----	812BH-1C-C	812BH-1C-V	812BH-1C-S
		F	812BH-1C-C F	812BH-1C-V F	812BH-1C-S F
	1A (SPNO)	-----	812BH-1A-C	812BH-1A-V	812BH-1A-S
		F	812BH-1A-C F	812BH-1A-V F	812BH-1A-S F

### »» Ordering Information

812 H - 1A - C   XXVDC  
 1 2 3 4 5 6 7

- |  |  |
|--|--|
| 1. 812 -- Basic series designation               | 5. Blank -- Standard type  |
| 2. BH -- High power type with insulation barrier | E1 -- Comply with IEC 60335-1  |
| H -- High power type                             | 6. Blank -- Standard type  |
| 3. 1A -- Single pole normally open               | F -- Class F   |
| 1B -- Single pole normally closed                | 7. XXVDC -- Coil voltage (please refer to the coil rating data for the availability) |
| 1C -- Single pole double throw                   |  |
| 4. C -- Flux tight                               |  |
| V -- Sealed type                                 |  |
| S -- Sealed type washable                        |  |

## »» Contact Rating

Resistive load	NO: 10A 240VAC, 12A 120VAC ; NC: 8A 240VAC, 10A 120VAC
Max. switching current	20A
Max. switching voltage	277VAC
Max. switching capacity	2400VA

## »» Coil Rating (DC)

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Max. continuous voltage at 85°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
3	120	25	160 % of rated voltage	75 % of rated voltage	10 % of rated voltage	approx. 0.36W
5	73	69				
6	60	100				
9	40	225				
12	30	400				
18	20	900				
24	15	1,600				
48	7.5	6,400				

## »» Specification

Contact material	AgSnO alloy	
Contact resistance <sup>(1)</sup>	100mΩ Max. (at 1A/6VDC by 4-wire resistance measurement)	
Operate time <sup>(1)</sup>	15ms Max.	
Release time <sup>(1)</sup>	5ms Max.	
Vibration resistance	Operating extremes	10~50Hz , amplitude 1.0 mm
	Damage limits	10~50Hz , amplitude 1.0 mm
Shock resistance	Operating extremes	10G
	Damage limits	100G
Life expectancy	Mechanical	10,000,000 ops. (frequency 18,000 ops./hr)
	Electrical	100,000 ops. (frequency 900 ops./hr)
Operating ambient temperature	-40~+85°C (no freezing) <sup>(2)</sup>	
Weight	Approx. 9 g	

Note : (1) Initial value. Operate and release time excluding contact bounce.

(2) Special version of high temperature 105°C can be selected.

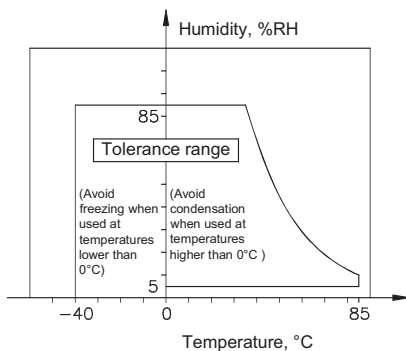
(3) Unless otherwise specified, all tests are under room temperature and humidity.

(4) Consider the heat of PCB is necessary, please check the actual condition of PCB.

(5) Applying no diode to this relay. The life expectancy will be lower when a diode is used. To use a varistor (ZNR) could absorb the coil surge of relay that is recommended.

## 812H

- (6) Do not use the relay exceeding the coil rating, contact rating and life expectancy, or this may cause the risk of overheating.
- (7) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.
- (8) Do not switch the contacts without any load as the contact resistance may become increased rapidly.
- (9) Flux tight version is recommended. If there is cleaning process and sealed type is selected, the vent-hole should be removed after the process.
- (10) Usage, transport and storage conditions
- 1. Temperature:  $-40 \sim +85^{\circ}\text{C}$
  - 2. Humidity: 5 to 85% R.H.
  - 3. Pressure: 86 to 106 kPa
  - Furthermore, the humidity range varies with the temperature. So, use relays within the range indicated in the graph below.



- (11) Please contact Song Chuan for the detailed information.

### »» Insulation Data

Insulation resistance <sup>(1)</sup>	100MΩ Min. (DC 500V)		
Dielectric strength <sup>(1)</sup>	Between open contact	: AC 750V , 50/60Hz 1 min.	(for 812H)
		: AC 1000V , 50/60Hz 1 min.	(for 812BH)
	Between contact and coil	: AC 1500V , 50/60Hz 1 min.	(for 812H)
		: AC 2000V , 50/60Hz 1 min.	(for 812BH)
Insulation of IEC 61810-1			
Clearance / creepage distances	Between coil to contact	: Basic, $\geq 1.5\text{mm}$ / $\geq 2.5\text{mm}$	
	Between open contact	: Functional	
Rated insulation voltage	250V		
Rated impulse withstand voltage	2500V		
Pollution degree	2		
Rated voltage	230 / 400V		
Overvoltage category	II		

Note : (1) Initial value.

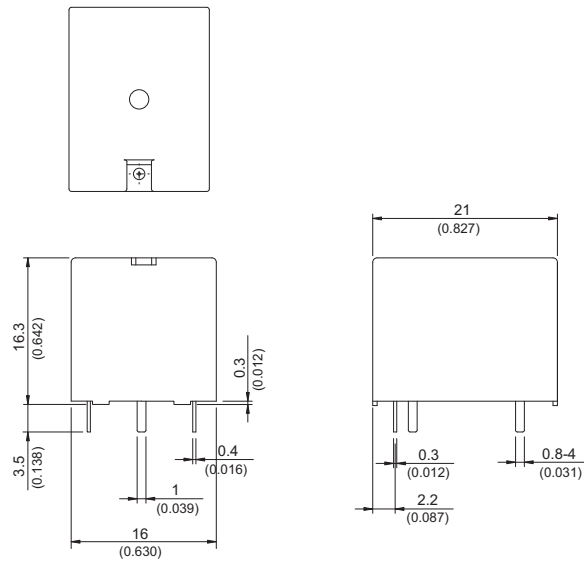
### »» Safety Approval

Certified	UL / CUL	CSA / CUS	VDE	TUV
File No.	E88991	1129068	122905	R50041911

## »» Safety Approval Rating

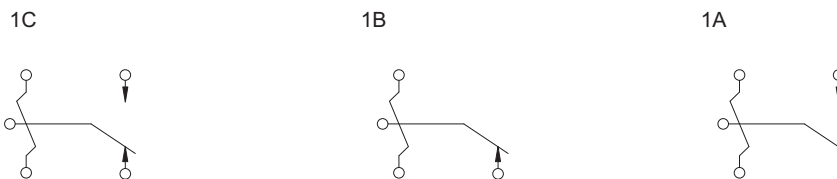
UL / CUL, CSA		VDE	TUV
NO	NC		
20A 125VAC	20A 125VAC	12A 250VAC T85	7A 250VAC
16A 277VAC	12A 277VAC	10A 250VAC T105	10A 125VAC
1/2 HP 125VAC	1/2HP 125VAC		7A 30VDC
1HP 250VAC	1HP 250VAC		
10A 30VDC	7A 30VDC		
TV 8			

## »» Outline Dimensions



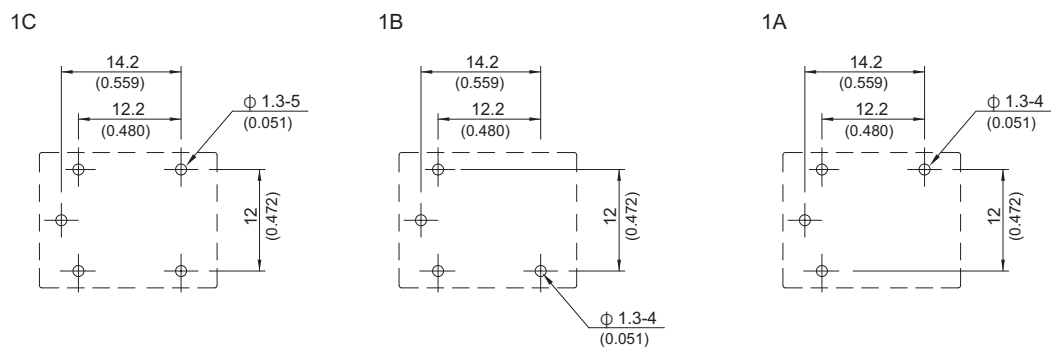
## »» Wiring Diagram

BOTTOM VIEW



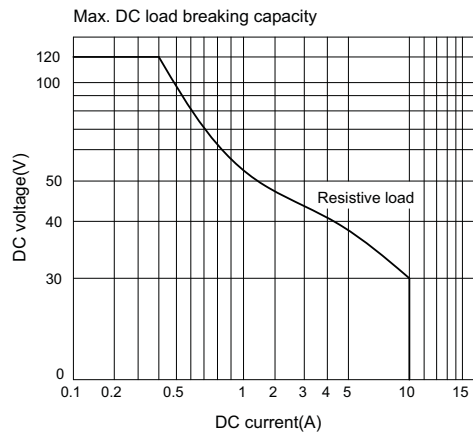
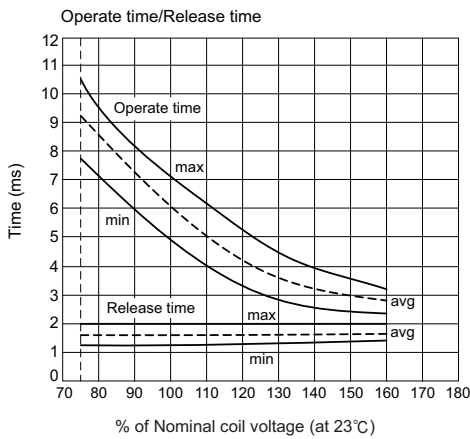
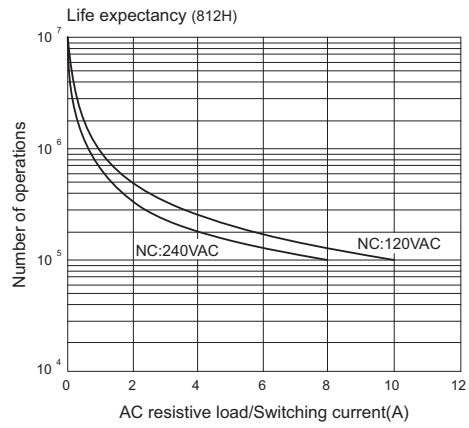
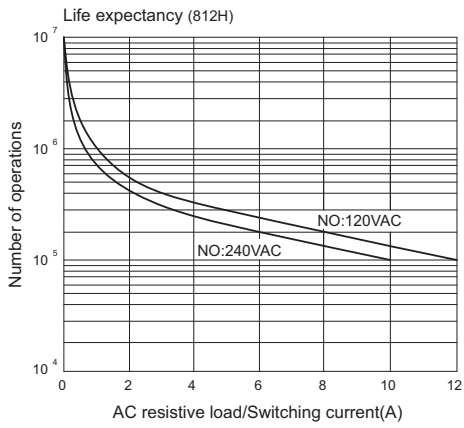
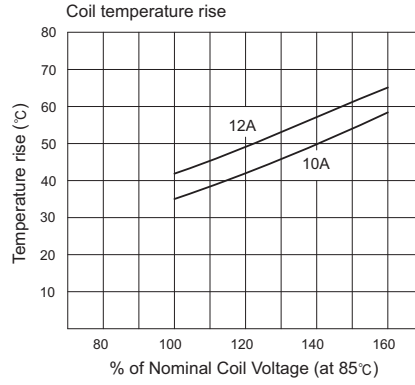
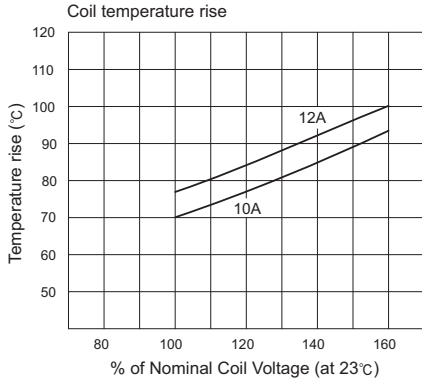
## »» PC Board Layout

BOTTOM VIEW



# 812H

## »» Engineering Data



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