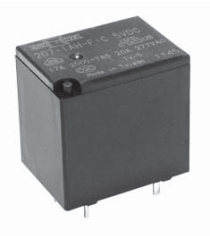
207



Features

- ☐ Heavy duty sugar cube relay with 20A 120VAC, 16A 240VAC, TV-8 rating.
- ☐ UL & VDE safety approval.
- ☐ Optional for flux free, sealed type and sealed type washable cover, SPNO, SPDT contact configuration.
- ☐ High CTI 250 material or product comply with IEC 60335-1 are available.
- ☐ High performance PCB power relay for motor control, compressor control, home appliances.
- ☐ Complies with RoHS-Directive 2011/65/EU.
- ☐ Optional for halogen free version.

Type List

◆ Standard Type

Terminal style	Contact form	Insulation system	Designation (provided with)		
			Flux tight	Sealed type	Sealed type washable
PCB terminal	1A (SPNO)	----------	207-1AH-C	207-1AH-V	207-1AH-S
		F	207-1AH-F-C	207-1AH-F-V	207-1AH-F-S

◆ High Power Type

PCB terminal	1A (SPNO)	----------	207H-1AC-C	207H-1AC-V	207H-1AC-S
		F	207H-1AC-F-C	207H-1AC-F-V	207H-1AC-F-S

Ordering Information

207 ☐ ☐ - 1A H - ☐ - C ☐ ☐

1 2 3 4 5 6 7 8 9

1. 207 -- Basic series designation
2. Blank -- Standard type
   H -- High power type
3. Blank -- Standard type
   A -- Double pin type
4. 1A -- Single pole normally open
   1C -- Single pole double throw
5. C -- Contact material AgNi
   H -- Contact material AgSnO
6. Blank -- Standard type
   F -- Class F
7. C -- Flux tight
   V -- Sealed type
   S -- Sealed type washable
8. Blank -- Standard type
   E1 -- Comply with IEC 60335-1
9. ☐ -- Coil voltage (please refer to the coil rating data for the availability)

Contact Rating

◆ 207

Resistive load	NO: 17A 240VAC 100K ops. 10A 240VAC at 105°C 300K ops. (B10 value) NC: 10A 240VAC 100K ops.
Max. switching current	20A
Max. switching voltage	277VAC
Max. switching capacity	4080VA

◆ 207H

Resistive load	NO: 17A 240VAC 100K ops. 16A 240VAC at 105°C 100K ops. 10A 240VAC at 105°C 300K ops. NC: 10A 240VAC 100K ops.
Max. switching current	20A
Max. switching voltage	277VAC
Max. switching capacity	4080VA

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	130	23	150 % of rated voltage	75 % of rated voltage	5 % of rated voltage	approx. 0.4W
5	79	63				
6	67	90				
9	44	203				
12	33	360				
18	22	810				
24	17	1,440				
36	11	3,240				
48	8	5,760				

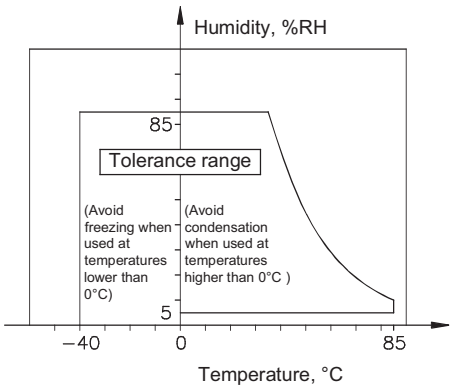
Specification

Contact material	AgSnO / AgNi alloy	
Contact resistance (1)	100mΩ Max. (at 1A/6VDC by 4-wire resistance measurement)	
Operate time (1)	15ms Max.	
Release time (1)	10ms 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	See contact rating. (frequency 360 ops./hr)
Operating ambient temperature	-40～+85°C (no freezing) (2)	
Weight	Approx. 15 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.
(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～+85°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 (1)	100 MΩ Min. (DC 500V)	
Dielectric strength (1)	Between open contact	: AC 1000V, 50/60Hz 1 min.
	Between contact and coil	: AC 2500V, 50/60Hz 1 min.
Insulation of IEC 61810-1		
Clearance / creepage distances	Between coil to contact	: Basic, ≧ 1.5mm / ≧ 2.5mm
	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

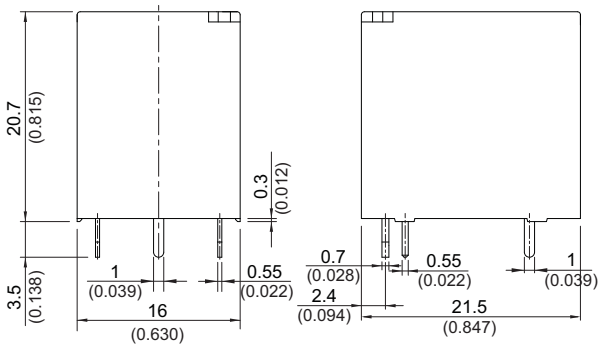
Certified	UL / CUL	VDE
File No.	E88991	40025801

Safety Approval Rating

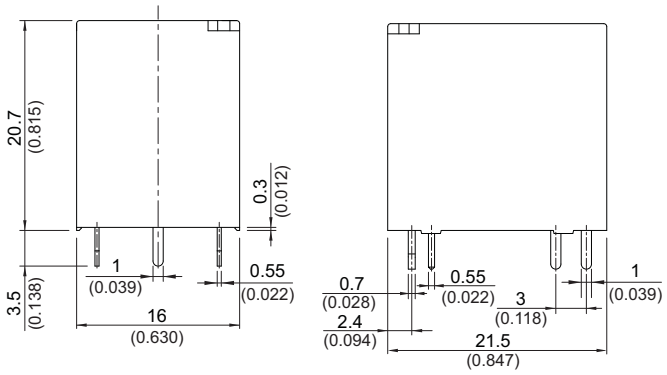
UL / CUL				VDE
207		207H		
NO	NC	NO	NC	
20A 277VAC 1HP 125VAC TV-5 (for AgSnO contact)	16A 277VAC 1/3HP 7.2A/125VAC 1/2HP 4.9A/250VAC 1/2HP 9.8A/125VAC (for AgSnO contact)	20A 277VAC 1HP 125VAC TV-8 (for AgSnO contact)	16A 277VAC 1/3HP 7.2A/125VAC 1/2HP 4.9A/250VAC 1/2HP 9.8A/125VAC (for AgSnO contact)	NO：17A 250VAC T105 NC：10A 250VAC T85

Outline Dimensions

◆207,207H



◆207A,207HA



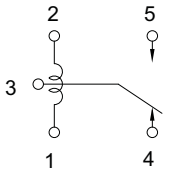
TOLERANCE:
LESS THAN: 1(0.039) ±0.1(0.004)
5(0.197) ±0.3(0.012)
20(0.787) ±0.5(0.020)
MORE THAN: 20(0.787) ±1(0.039)

Wiring Diagram

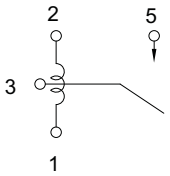
BOTTOM VIEW

◆207,207H

1C

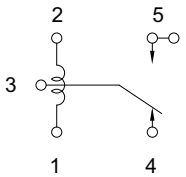


1A

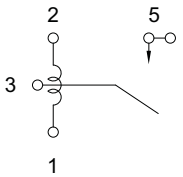


◆207A,207HA

1C



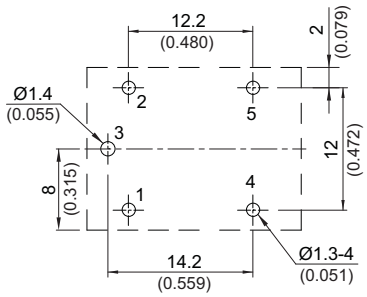
1A



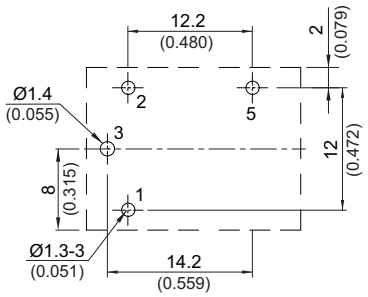
PC Board Layout

BOTTOM VIEW

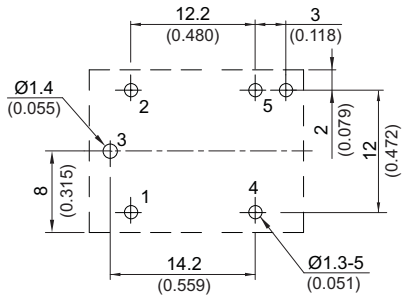
◆207,207H 1C



1A



◆207A,207HA 1C



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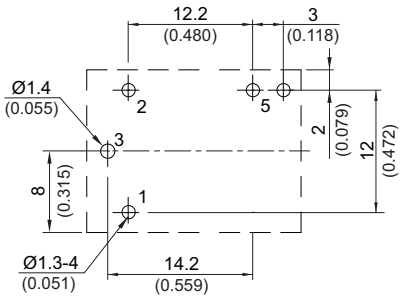
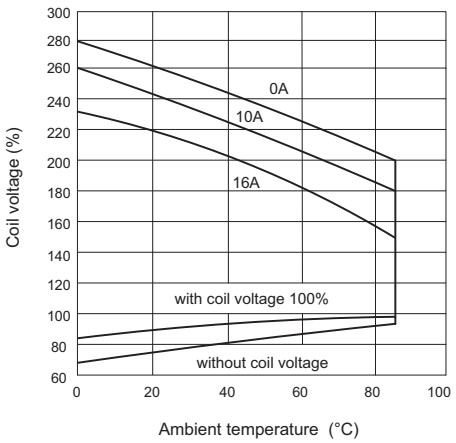
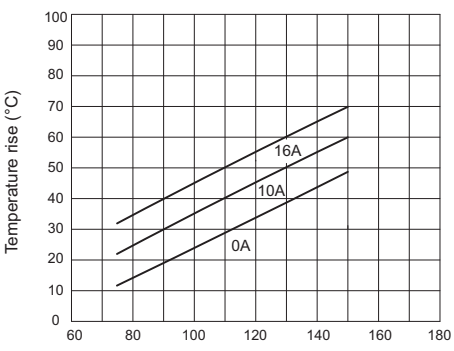


Engineering Data

Coil operating range



Coil temperature rise



Coil temperature rise