



»» Features

- High duty sugar cube relay with 32A 277VAC.
- Coil holding voltage can be reduced to 32~34%V of the nominal coil voltage for saving energy.
- High performance PCB power relay for motor control, compressor control, home appliances.
- High CTI 250 material or product comply with IEC 60335-1 are available.
- Complies with RoHS-Directive 2011/65/EU.



»» Type List

◆ Standard type

Terminal style	Contact form	Insulation system	Designation (provided with)
			Flux tight
PCB terminal	1A (SPNO)	F	207X-1AH1-F-C

◆ High sensitivity type

PCB terminal	1A (SPNO)	F	207XN-1AH-F-C
	1C (SPDT)	F	207XN-1CH-F-C

»» Ordering Information

207X - 1A H - F - C
 1 2 3 4 5 6 7 8

- | | |
|--|--|
| <p>1. 207X -- Basic series designation
207BX -- With insulation barrier</p> <p>2. Blank -- Standard type
N -- High sensitivity type</p> <p>3. 1A -- Single pole normally open
1C -- Single pole double throw
(only for High sensitivity type)</p> <p>4. H -- Contact material Ag alloy</p> | <p>5. Blank -- Standard type (only for High sensitivity type)
1 -- Enlarge contact gap</p> <p>6. F -- Class F</p> <p>7. C -- Flux tight</p> <p>8. <input type="checkbox"/> -- Coil voltage (please refer to the coil rating data for the availability)</p> |
|--|--|

»» Contact Rating

◆ Standard type

Resistive load	NO: 25A 240VAC, On 1s /Off 9s, at 105°C, 10K ops.
	NO: 32A 240VAC, On 1s /Off 9s, at 85°C, 10K ops.
	NO: 35A 240VAC, On 1s /Off 9s, at 70°C, 10K ops.

◆ High sensitivity type

Resistive load	NO: 25A 240VAC, On 1s /Off 9s, at 105°C, 10K ops.
	NO: 32A 240VAC, On 1s /Off 9s, at 85°C, 10K ops.
	NO: 35A 240VAC, On 1s /Off 9s, at 70°C, 10K ops.
	NC: Making 8A, Carrying 32A, Breaking 8A / 240VAC, On 3s /Off 3s, at 85°C, 10K ops.



207X/207BX

Coil Rating (DC)

◆ Standard type

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Pick up voltage (Max.) at 23°C ⁽¹⁾	Drop out voltage (Min.) at 23°C	Continuous voltage at 85°C ⁽²⁾	Power consumption at rated / holding voltage
12	233	51	80 % of rated voltage	5 % of rated voltage	32~34 % of rated voltage	approx. 2.8W / 0.29W ⁽²⁾
24	117	206				

◆ High sensitivity type

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Pick up voltage (Max.) at 23°C ⁽¹⁾	Drop out voltage (Min.) at 23°C	Continuous voltage at 85°C ⁽²⁾	Power consumption at rated / holding voltage
12	140	86	80 % of rated voltage	5 % of rated voltage	32~34 % of rated voltage	approx. 1.67W / 0.19W ⁽²⁾
24	70	345				

Notes : (1) To energize relay properly apply 100%~120% nominal coil voltage for 200ms.

(2) Coil holding voltage is 32~34% of nominal voltage after applying nominal voltage for 200ms.

Specification

Contact material	Ag alloy	
Contact resistance ⁽¹⁾	100mΩ Max. (at 1A/6VDC by 4-wire resistance measurement) 6 mΩ Max. (By voltage drop 10A)	
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	100,000 ops. (frequency 9,000 ops./hr)
Operating ambient temperature	-40~+105°C (no freezing) for 25A 240VAC -40~+85°C (no freezing) for 32A 240VAC -40~+70°C (no freezing) for 35A 240VAC	
Weight	Approx. 15 g	

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

(2) All tests are conducted under room temperature and room humidity.

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

(4) 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.

(5) Do not use the relay exceeding the coil rating, contact rating and life expectancy, or this may cause the risk of overheating.

(6) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.

(7) Do not switch the contacts without any load as the contact resistance may become increased rapidly.

(8) Please contact Song Chuan for the detailed information.

»» Insulation Data

Insulation resistance ⁽¹⁾	100MΩ Min. (DC 500V)	
Dielectric strength ⁽¹⁾	Between open contact	: AC 1000V, 50/60Hz 1 min. : AC 1500V, 50/60Hz 1 min. (for enlarge contact gap type)
	Between contact and coil	: AC 2500V, 50/60Hz 1 min. : AC 4000V, 50/60Hz 1 min. (with insulation barrier type)
Insulation of IEC 61810-1 [For enlarge contact gap type]		
Clearance / creepage distances	Between coil to contact	: Basic, ≥1.5mm / ≥2.5mm : Double, Reinforce ≥3 mm / ≥5 mm (for with insulation barrier type)
	Between open contact	: Basic, ≥1.5mm / ≥2.5mm
Rated insulation voltage	250V	
Rated impulse withstand voltage	2500V	
Pollution degree	2	
Rated voltage	230 / 400V	
Overvoltage category	II	

Notes : (1) Initial value.

»» Safety Approval

Certified	UL / CUL	VDE
File No.	E88991	40025801

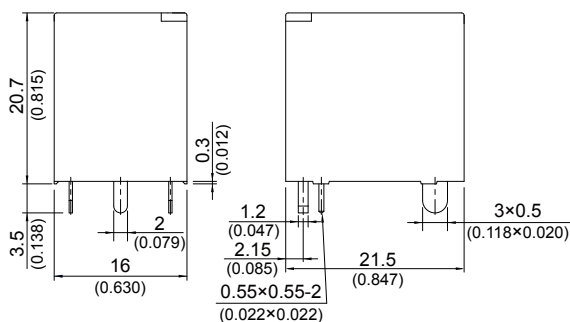
»» Safety Approval Rating

UL / CUL	VDE
NO : 35A 277VAC ⁽¹⁾	NO : 35A 250VAC

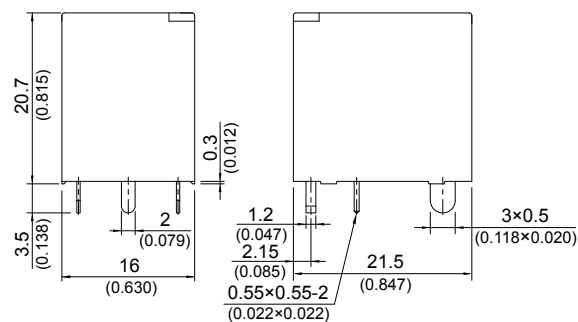
Notes : (1) For Non-Industrial application use only.

»» Outline Dimensions

◆ 270X



◆ 270BX



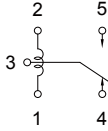
TOLERANCE:
 LESS THAN: 1(0.039) ±0.1(0.004)
 5(0.197) ±0.3(0.012)
 20(0.787) ±0.5(0.020)
 MORE THAN: 20(0.787) ±1(0.039)

207X/207BX

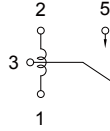
Wiring Diagram (Bottom view)

◆ 270X

1C

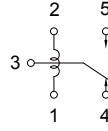


1A

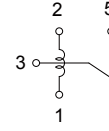


◆ 270BX

1C



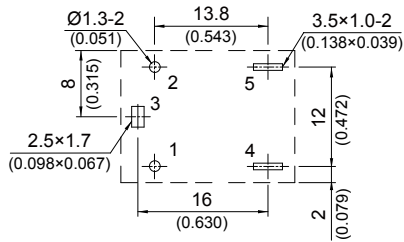
1A



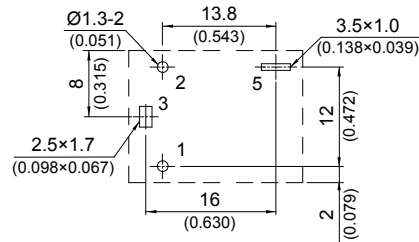
PC Board Layout (Bottom view)

◆ 270X

1C

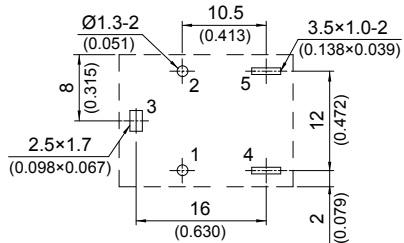


1A



◆ 270BX

1C



1A

