



### »» Features



- Baby Sugar Cube Relay.
- 10A 277VAC ; 15A 125VAC ; UL/CUL, VDE Approvals.
- High Insulation up to 2000V ( 899B type ).
- High CTI 250 material or product comply with IEC 60335-1 are available.
- Complies with RoHS-Directive 2011/65/EU.
- Optional for halogen free version.
- Optional for explosion-proof version.

### »» Type List

Terminal style	Contact form	UL Insulation system approval	Designation (provided with)		
			Flux tight	Sealed type	Sealed type washable
PCB terminal	1A (SPNO)	-----	899-1A-C	899-1A-V	899-1A-S
		F	899-1A-F-C	899-1A-F-V	899-1A-F-S
	1B (SPNC)	-----	899-1B-C	899-1B-V	899-1B-S
		F	899-1B-F-C	899-1B-F-V	899-1B-F-S
	1C (SPDT)	-----	899-1C-C	899-1C-V	899-1C-S
		F	899-1C-F-C	899-1C-F-V	899-1C-F-S

### »» Ordering Information

899 - 1A -  - C    
 1 2 3 4 5 6

- |  |   |                           |
|--|---|---------------------------|
| 1. 899 -- Basic series designation                       | 4. C -- Flux tight  |                           |
| 899B -- Basic series designation with insulation barrier | V -- Sealed type  | S -- Sealed type washable |
| 2. 1A -- Single pole normally open                       | 5. Blank -- Standard type   |                           |
| 1B -- Single pole normally closed                        | E1 -- Comply with IEC 60335-1   |                           |
| 1C -- Single pole double throw                           |   |                           |
| 3. Blank -- Standard type                                | 6. <input type="checkbox"/> -- Coil voltage (please refer to the coil rating data for the availability) |                           |
| F -- Class F   |   |                           |

### »» Contact Rating

Resistive load	NO : 7A 240VAC , 10A 120VAC ; NC : 7A 240VAC
Max. switching current	15A
Max. switching voltage	277VAC
Max. switching capacity	1680VA

### »» Coil Rating (DC)

Rated voltage (V)	Rated current 10 % at 23°C (mA)	Coil resistance 10 % at 23°C (Ω)	Max. continuous voltage at 70°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
3	120	25	150 % of rated voltage	75 % of rated voltage	10 % of rated voltage	approx. 0.36W
5	72	70				
6	60	100				
9	40	225				
12	30	400				
15	24	625				
18	20	900				
24	15	1,600				
36	10	3,600				
48	7.5	6,400				

### »» Specification

Contact material	AgNi alloy <sup>(2)</sup>	
Contact resistance <sup>(1)</sup>	100mΩ Max. (at 1A/6VDC by 4-wire resistance measurement)	
Operate time <sup>(1)</sup>	10ms Max.	
Release time <sup>(1)</sup>	5ms Max.	
Vibration resistance	Operating extremes	10~50Hz , amplitude 1.5 mm
	Damage limits	10~50Hz , amplitude 1.5 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 360 ops./hr)
Operating ambient temperature	-40~+70°C (no freezing) <sup>(3)</sup>	
Weight	Approx. 10 g	

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

(2) AgSnO alloy contact material is available.

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

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

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

(6) 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.

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

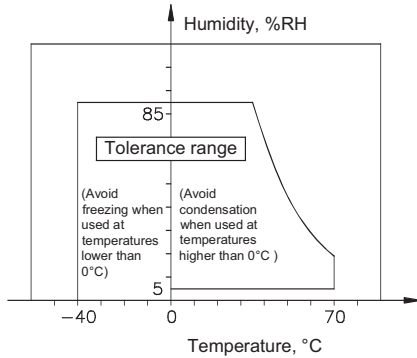
(8) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.

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

(10) Flux tight version is recommended. If there is cleaning process and sealed type is selected, the vent-hole should be removed after the process.

(11) Usage, transport and storage conditions

- 1. Temperature: -40~+70°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.



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

### »» Insulation Data

Insulation resistance <sup>(1)</sup>	100 MΩ Min. (DC 500V)
Dielectric strength <sup>(1)</sup>	Between open contact : AC 750V , 50/60Hz 1 min. : AC 1000V , 50/60Hz 1 min. (for 899B type)
	Between contact and coil : AC 1500V , 50/60Hz 1 min. : AC 2000V , 50/60Hz 1 min. (for 899B type)
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.

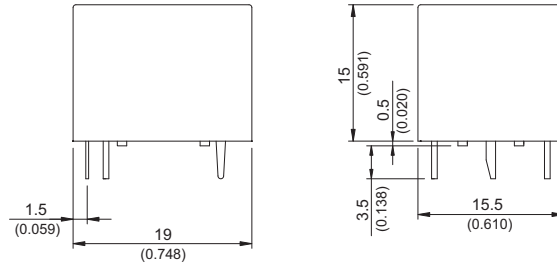
### »» Safety Approval

Certified	UL / CUL	VDE
File No.	E88991	40012174

### »» Safety Approval Rating

UL / CUL	VDE	
	NO	NC
15A 125VAC 10A 277VAC 1/3HP 125/250VAC (NO) 1/4HP 125/250VAC (NC)	10A 250VAC T85 6A 250VAC T105	6A 250VAC T85

### »» Outline Dimensions

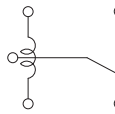


TOLERANCE:  
 LESS THAN: 1(0.039) ±0.1(0.004)  
 5(0.197) ±0.3(0.012)  
 20(0.787) ±0.5(0.020)  
 MORE THAN: 20(0.787) ±1(0.039)

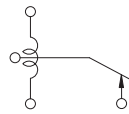
### »» Wiring Diagram

BOTTOM VIEW

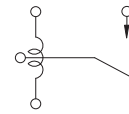
1C



1B



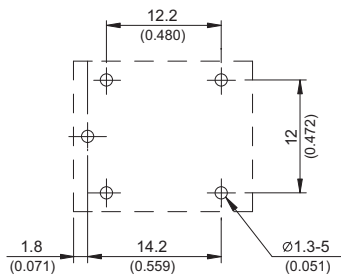
1A



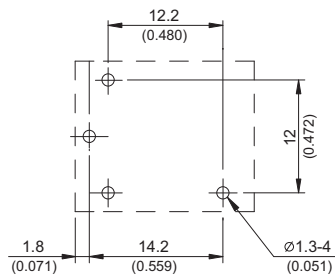
### »» PC Board Layout

BOTTOM VIEW

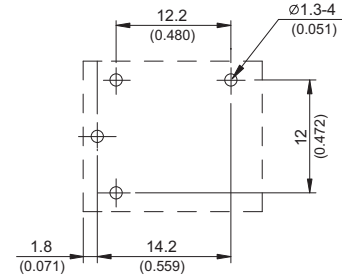
1C



1B



1A



### »» Engineering Data

