833H

Features

- Miniature PCB baby sugar cube relay.
- General purpose application.
- 10A 277VAC, 15A 125VAC ratings.
- SPNO, SPNC, SPDT and sealed flux free & sealed type washable are available.
- Complies with RoHS-Directive 2011/65/EU.

Type List

Terminal style	Contact form	UL Insulation system approval	Designation (provided with)		
			Flux tight	Sealed type	Sealed type washable
PCB terminal	1A (SPNO)	---------	833H-1A-C	833H-1A-V	833H-1A-S
		F	833H-1A-F-C	833H-1A-F-V	833H-1A-F-S
	1C (SPDT)	---------	833H-1C-C	833H-1C-V	833H-1C-S
		F	833H-1C-F-C	833H-1C-F-V	833H-1C-F-S

Ordering Information

833H - 1A - □ - C □ □

1 2 3 4 5 6

1. 833H -- Basic series designation
2. 1A -- Single pole normally open
   1B -- Single pole normally closed
   1C -- Single pole double throw
3. Blank -- Standard type
   F -- Class F
4. C -- Flux tight
   V -- Sealed type
   S -- Sealed type washable
5. Blank -- Standard type
   E1 -- Comply with IEC 60335-1
6. □ -- Coil voltage (please refer to the coil rating data for the availability)

Contact Rating

Resistive load	NO:10A 125VAC, 7A 240VAC, 7A 30VDC ; 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
4	91	44				
5	72	70				
6	60	100				
9	40	225				

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
12	30	400	150 % of rated voltage	75 % of rated voltage	10 % of rated voltage	approx. 0.36W
24	15	1,600				
36	10	3,600				
48	9.4	5,120				approx. 0.45W

Specification

Contact material	AgSnO alloy	
Contact resistance (1)	100mΩ Max. (at 1A/6VDC by 4-wire resistance measurement)	
Operate time (1)	10ms Max.	
Release time (1)	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 1,200 ops./hr)
Operating ambient temperature	-40～+70°C (no freezing)(2)	
Weight	Approx. 10 g	

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

(2) Special version of high temperature 85°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.

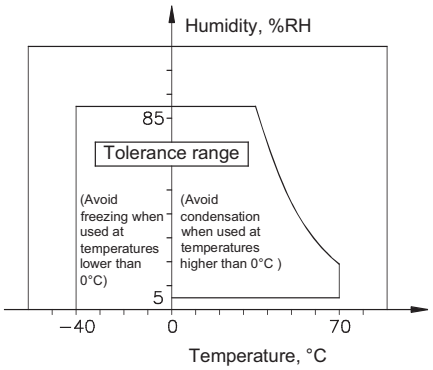
(8) Do not switch the contacts without any load as the contact resistance may become increased rapidly.

(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～+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.

833H



(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 750V , 50/60Hz 1 min.
	Between contact and coil	: AC 1500V , 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.

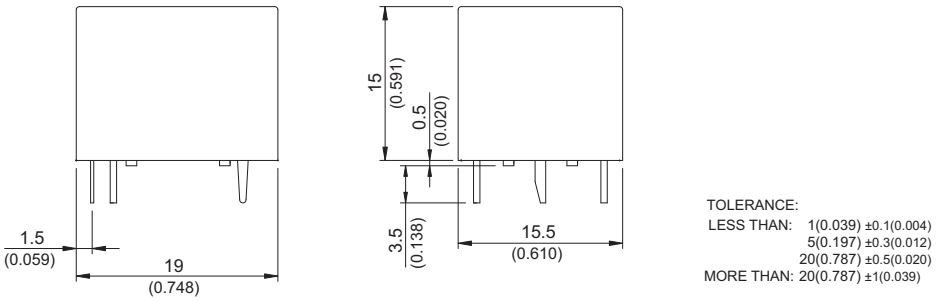
Safety Approval

Certified	UL / CUL	TUV
File No.	E88991	R3-09754206

Safety Approval Rating

UL / CUL	TUV
15A 125VAC	12A 125VAC
10A 277VAC	7A 250VAC
7A 30VDC	7A 30VDC
1/4HP 125/250VAC (NC)	4A 250VAC cosϕ0.3
1/3HP 125/250VAC (NO)	

Outline Dimensions

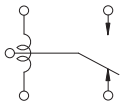


TOLERANCE:
LESS THAN: 1(0.039) ±0.1(0.004)
5(0.197) ±0.3(0.012)
20(0.787) ±0.5(0.020)
MORE THAN: 20(0.787) ±1(0.039)

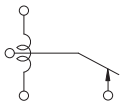
Wiring Diagram

BOTTOM VIEW

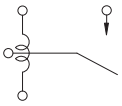
1C



1B



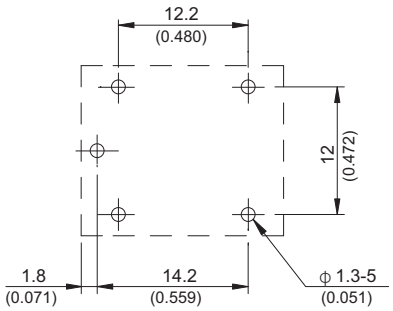
1A



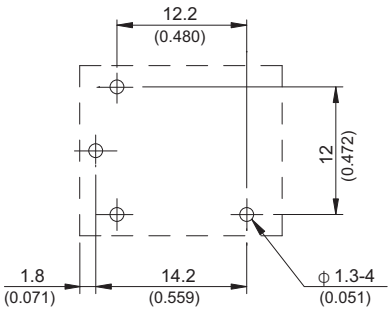
PC Board Layout

BOTTOM VIEW

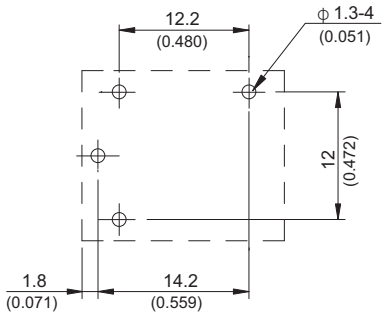
1C



1B

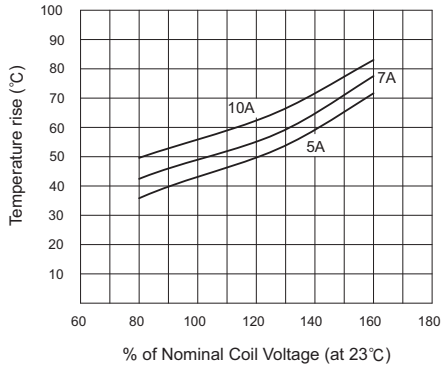


1A

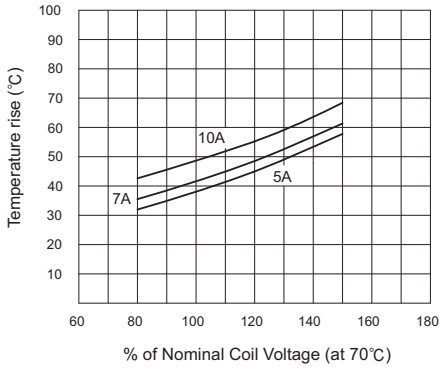


Engineering Data

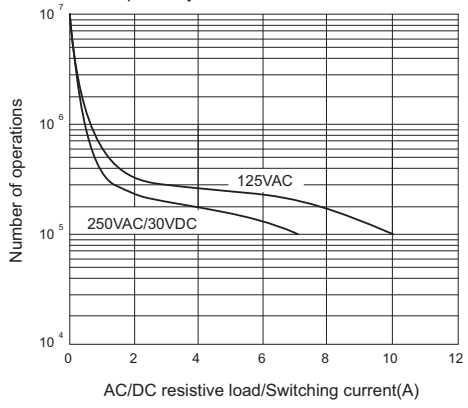
Coil temperature rise



Coil temperature rise



Life expectancy



Operate time/Release time