833HM

Features

- ☐ Sugar cube automotive relay.
- ☐ General purpose applications for automotive & car alarm system.
- ☐ Optional for flux-free or sealed washable type.
- ☐ Complies with RoHS-Directive 2011/65/EU, and ELV-Directive 2000/53/EC.

Type List

Terminal style	Contact form	Designation		
		Flux tight	Sealed type	Sealed type washable
PCB terminal	1C (SPDT)	833HM-1C-C	833HM-1C-V	833HM-1C-S
	1A (SPNO)	833HM-1A-C	833HM-1A-V	833HM-1A-S
	1B (SPNC)	833HM-1B-C	833HM-1B-V	833HM-1B-S

Ordering Information

833	H	M	-	1C	-	C	☐
1	2	3		4		5	6

1. 833 -- Basic series designation
2. H -- High power type
3. M -- Automotive relay
4. 1A -- Single pole normally open
   1B -- Single pole normally close
   1C -- Single pole double throw
5. C -- Flux tight
   V -- Sealed type
   S -- Sealed type washable
6. ☐ -- Coil voltage (please refer to the coil rating data for the availability)

Contact Rating

Resistive load	15A 14VDC

Coil Rating (DC)

Rated voltage (V)	Rated current ±10 %at 23℃ (mA)	Coil resistance ±10 %at 23℃ (Ω)	Max. continuous voltage at 85℃(1)	Pick up voltage(Max.) at 23℃	Drop out voltage(Min.) at 23℃	Power consumption at rated voltage
9	50.0	180	133 % of rated voltage	75 % of rated voltage	10 % of rated voltage	approx. : 0.45W
12	37.5	320				
24	18.8	1,280				

Note：(1) With continuous contact current 10A.

Specification

Contact material	AgSnO alloy	
Contact voltage drop (1)	Typ. 100mV at 10A	
Operate time (1)	10ms Max.	
Release time (1)	5ms Max.	
Insulation resistance (1)	100MΩ Min. (DC 500V)	
Dielectric strength (1)	Between open contact : AC 500V , 50/60Hz 1 minute.	
	Between contact and coil : AC 500V , 50/60Hz 1 minute.	
Vibration resistance	Operating extremes	10～500Hz , 4.4G
	Damage limits	10～500Hz , 4.4G
Shock resistance	Operating extremes	10G
	Damage limits	100G
Life expectancy	Mechanical	10,000,000 ops. (frequency 18,000 ops./hr)
	Electrical	30,000 ops. (frequency 1,200 ops./hr)
Operating ambient temperature	-40～+85℃ (no freezing)	
Weight	approx. 10g	

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

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

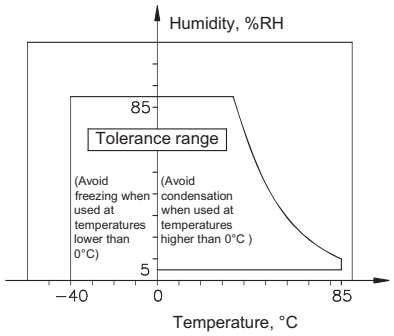
(6) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.

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

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

(9) Usage, transport and storage conditions

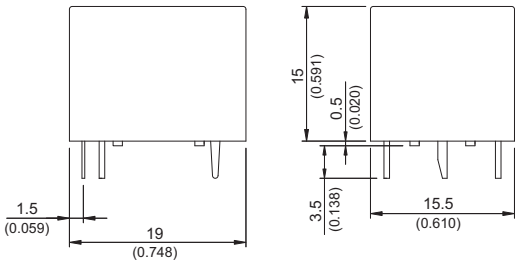
- 1. Temperature: -40～+85°C
- 2. Humidity: 5 to 85% R.H.
- 3. Pressure: 86 to 106 kPa
- Furthermore, the humidity range varies with the temperature. So, use relays within the range indicated in the graph below.



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

833HM

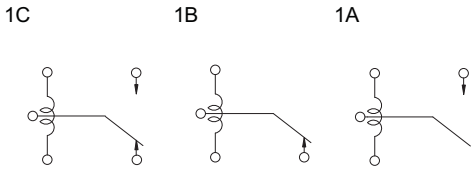
Outline Dimensions



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)

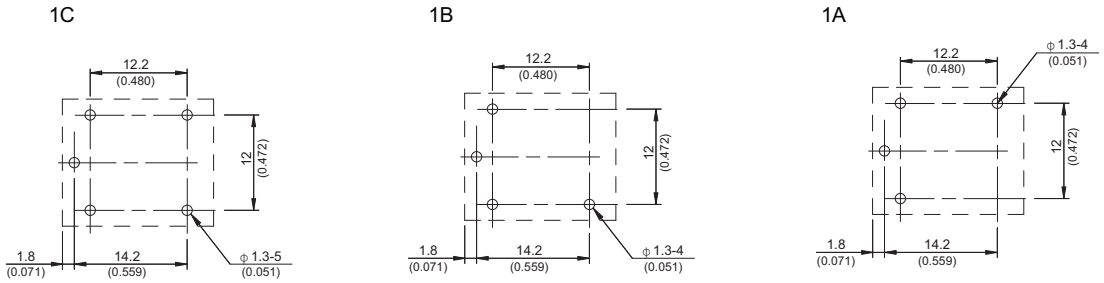
Wiring Diagram

BOTTOM VIEW



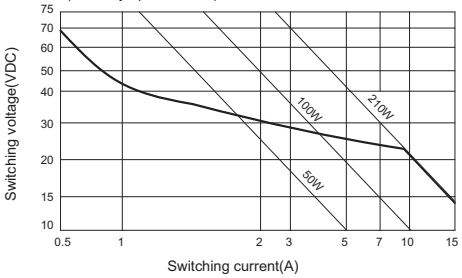
PC Board Layout

BOTTOM VIEW

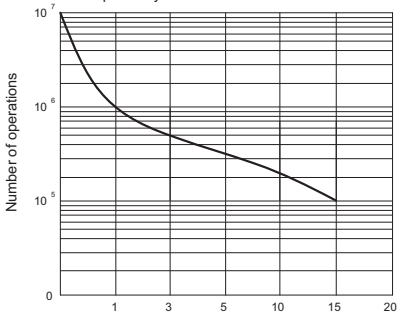


Engineering Data

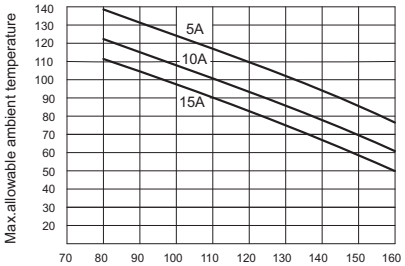
Safe breaking,arc extinguished
(normally open contact) for resistive loads.



Life expectancy

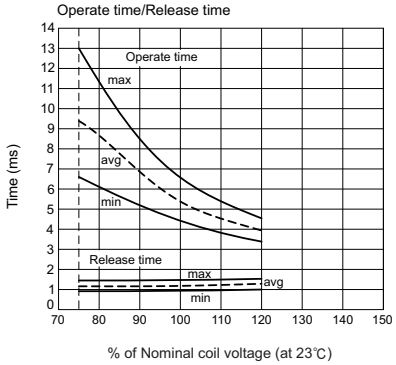


Ambient temperature vs coil voltage for continuous contact load



Maximum mean coil temperature=155℃

Operate time/Release time



Max. DC load breaking capacity