



»» Features

- High performance sugar cube power relay.
- Contact gap can be greater than 2.1 mm.
- Complies with RoHS-Directive 2011/65/EU.



»» Type List

Terminal style	Contact form	Designation (provided with)		
		Flux tight	Sealed type	Sealed type washable
PCB terminal	1A (SPNO)	MV001HA-1AH-F-C	MV001HA-1AH-F-V	MV001HA-1AH-F-S

»» Ordering Information

MV001 - 1A H - - C

1 2 3 4 5 6 7 8

- | | |
|--|---|
| <p>1. MV001 -- Basic series designation</p> <p>2. Blank -- Standard type
H -- High power type</p> <p>3. Blank -- Standard type
A -- Double pin type</p> <p>4. 1A -- Single pole normally open</p> <p>5. H -- Contact material Ag alloy</p> | <p>6. Blank -- Standard type
F -- Class F</p> <p>7. C -- Flux tight
V -- Sealed type
S -- Sealed type washable</p> <p>8. <input type="checkbox"/> -- Coil voltage (please refer to the coil rating data for the availability)</p> |
|--|---|

»» Contact Rating

Resistive load	10A 60VDC
	15A 48VDC

»» Coil Rating (DC)

Rated voltage (V)	Rated current ±10 % at 23°C (mA)	Coil resistance ±10 % at 23°C (Ω)	Pick up voltage (Max.) at 23°C	Drop out voltage (Min.) at 23°C	Max. continuous voltage at 23°C ⁽¹⁾	Power consumption at rated voltage
12	167	72	75 % of rated voltage	5 % of rated voltage	120 % of rated voltage	approx. 2W
24	88	288				
48	41.7	1152				

Notes : (1) Without continuous contact current.

»» Specification

Contact material	Ag alloy	
Voltage drop ⁽¹⁾	Max.50mV at 5A	
Operate time ⁽¹⁾	20ms Max.	
Release time ⁽¹⁾	20ms Max.	
Vibration resistance	Operating extremes	10~500Hz, 5.0G
	Damage limits	10~500Hz, 5.0G
Shock resistance	Operating extremes	10G
	Damage limits	100G



MV001

Life expectancy	Mechanical	200,000 ops. (frequency 9,000 ops./hr)
	Electrical	30,000 ops. (frequency 900 ops./hr)
Operating ambient temperature	-40~+85°C (no freezing)	
Weight	Approx.15 g	

- Notes :
- (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) Please contact Song Chuan for the detailed information.

»» Insulation Data

Insulation resistance ⁽¹⁾	20MΩ Min. (DC 500V)	
Dielectric strength ⁽¹⁾	Between open contact	: AC 750V, 50/60Hz 1 min.
	Between contact and coil	: AC 750V, 50/60Hz 1 min.
Insulation of IEC 61810-1		
Clearance / creepage distances	Between coil to contact	: Basic, ≥1.5mm / ≥2.5mm
	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	TUV
File No.	E88991	R50334650

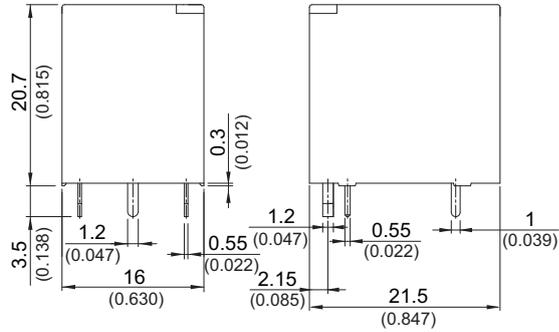
»» Safety Approval Rating

UL / CUL	TUV
15A 48VDC	15A 48VDC
13A 54VDC	10A 60VDC

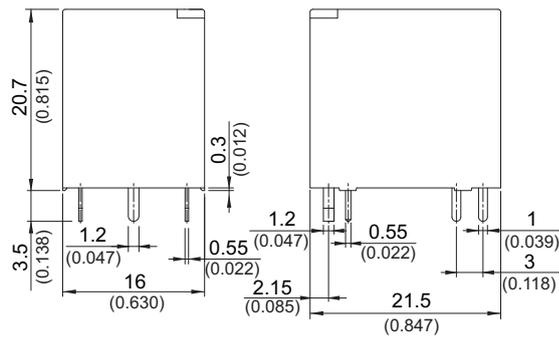
Notes : Flux tight version is recommended in high temperature. If production includes a cleaning process and sealed type is selected, the vent-nib should be removed after the process is completed.

Outline Dimensions

◆ MV001, MV001H



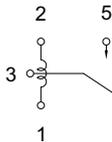
◆ MV001A, MV001HA



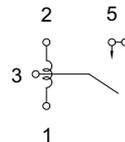
TOLERANCE:
 LESS THAN: 1(0.039) ±0.1(0.004)
 5(0.197) ±0.3(0.012)
 20(0.787) ±0.5(0.020)
 MORE THAN: 20(0.787) ±1(0.039)

Wiring Diagram (Bottom view)

◆ MV001, MV001H

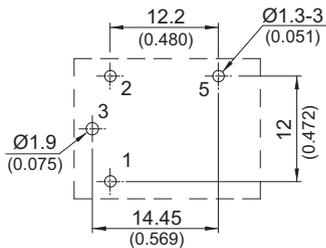


◆ MV001A, MV001HA



PC Board Layout (Bottom view)

◆ MV001, MV001H



◆ MV001A, MV001HA

