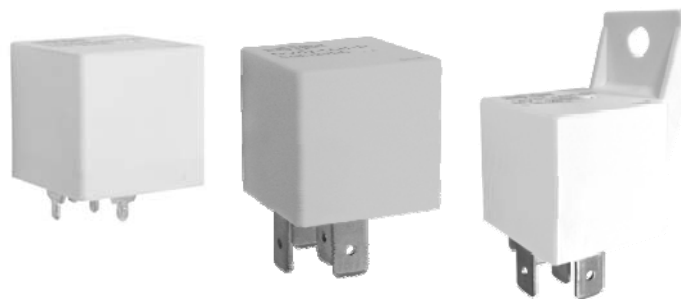


# TYPE : MV002 Series Relay

Revised : 2015-01-24  
 Issued : 2012-08-22



## ■ Type List

Terminal style	Contact form	Designation (provided with)		
		Dust cover	Flux tight	Flanged cover (Dust cover)
Plug-in terminal	1A (SPDM)	MV002-1AH-F-D	-----	MV002-1AH-F-D1
		MV002H-1AH-F-D		MV002H-1AH-F-D1
PCB terminal		-----	MV002P-1AH-F-C	-----
			MV002HP-1AH-F-C	

## ■ Ordering Information

MV002 H P - 1A H - F - C - R1 XXX  
 1 2 3 4 5 6 7 8 9

- |          |                                    |          |  |
|----------|------------------------------------|----------|--|
| 1. MV002 | -- Basic series designation        | S        | -- Sealed type washable                          |
| 2. Blank | -- Standard                        | D1       | -- Flanged cover (Dust cover)                    |
| H        | -- High power type                 | C1       | -- Flanged cover (Flux tight)                    |
| 3. Blank | -- Socket terminal                 | S1       | -- Flanged cover (Sealed type washable)          |
| P        | -- PCB terminal                    | D1SW     | -- Steel bracket (dust cover with weather proof) |
| 4. 1A    | -- Single-pole, double-make (SPDM) | D1SF     | -- Steel bracket (dust cover with shroud)        |
| 5. H     | -- Contact material Ag alloy       | D1S      | -- Steel bracket (dust cover)                    |
| 6. Blank | -- Standard type                   | C1S      | -- Steel bracket (flux tight)                    |
| F        | -- Class F                         | S1S      | -- Steel bracket (sealed type washable)          |
| 7. D     | -- Dust cover                      | 8. Blank | -- Standard type                                 |
| C        | -- Flux tight                      | R1       | -- Coil parallel with resistor 1/2W for 12V 680Ω |
|          |                                    | 9. XXX   | -- Special feature code                          |

## ■ Contact Rating

Type	Standard	High power type
Rated load (Resistive)	30A 60VDC	40A 60VDC
	20A 72VDC	
Max. Switching Capacity	1800W	2400W

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### ■ Coil Rating (DC)

Rated voltage (V)	Rated current $\pm 10\%$ at 23°C (mA)	Coil resistance $\pm 10\%$ at 23°C ( $\Omega$ )	Pick up Voltage (Max) at 23°C	Drop out Voltage (Min) at 23°C	Max. continuous voltage at 23°C <sup>(1)</sup>	Power consumption at rated voltage
12	133.3	90	75% of rated voltage	5% of rated voltage	130% of rated voltage	approx. 1.6W
24	66.7	360				
48	33.3	1440				

Notes : (1) Without contact load.

### ■ Specification

Contact material	Ag alloy	
Voltage drop <sup>(1)</sup>	Typ.50 mV at 10A	
Operate time <sup>(1)</sup>	20ms Max.	
Release time <sup>(1)</sup>	20ms Max.	
Insulation resistance <sup>(1)</sup>	20M $\Omega$ Min. (DC 500V)	
Dielectric strength <sup>(1)</sup>	Between open contact	: AC 750V, 50/60Hz 1 min.
	Between contact and coil	: AC 750V, 50/60Hz 1 min.
Vibration resistance	Operating extremes	10~500Hz, 5.0G
	Damage limits	10~500Hz, 5.0G
Shock resistance	Operating extremes	10G
	Damage limits	100G
Life expectancy	Mechanical	1000,000 operations (frequency 9,000 operations/hr)
	Electrical	10,000 operations (frequency 600 operations/hr)
Operating ambient temperature	-40~+85°C (no freezing)	
Weight	Approx. 40 g	

Note : (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) If it includes ripple, the ripple factor should be less than 5%. And do not have a parallel connection with diode for the purpose of coil surge instead of diode, a varistor (ZNR) is recommend for the absorber.
- (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.