



>>>> Features

□ High temperature resistance relay for Charging application.

□ RoHS Compliant.

>>>> Type List

Terminal style	Contact form	Designation (provided with)	
		Flanged cover (Dust cover)	
PCB terminal	2A (DPNO)	MRC-2AH-F-D1	

>>>> Ordering Information

•									
MRC	-	2A	Н	-	F	-	D1		
1		2	3		4		5	6	
1. MRC	Modu	ule relay						4. F	Class F
2. 2A	Dual	relay- Sir	ngle pole	e norm	ally op	en		5. D1	Flanged cover (dust cover)
3. H	Cont	act mater	ial Ag al	loy				6. 🗌	Coil voltage (please refer to the coil rating data for the availability)

>>>> Contact Rating

Making 0A, Carrying 32A, Breaking 32A / 240VAC, On 1s/ Off 9s, at 85°C, 50K ops.

Rated load (Resistive)

Making 0A, Carrying 32A, Breaking 0A / 240VAC, On 1s/ Off 9s, at 85°C, 100K ops.

>>>> Coil Rating (DC) Single coil

Rated voltage (V)	Rated current ±10 % at 23°C (A)	Coil resistance ±8 % at 23°C(Ω)	Pick up voltage (Max.) at 23°C ⁽¹⁾	Drop out voltage (Min.) at 23°C	Continuous voltage at 85°C ⁽²⁾	Power consumption at rated / holding voltage
24	158.9	151	80 % of rated voltage	5% of rated voltage	40% of rated voltage	approx. 3.8W / 0.61W ⁽²⁾

Notes : (1) To energize relay properly apply 100%~125% nominal coil voltage for 100~200ms.

(2) Coil holding voltage is 40% of nominal voltage after applying nominal voltage for 100~200ms.



>>>> Specification

Contact material	Ag alloy		
Contact resistance (1)	50m Ω Max. (at 1A/6VDC by 4-wire resistance measurement) 10m Ω Max. (By voltage drop 32A/14VDC)		
Operate time (1)	Typ. 10ms		
Release time (1) (2)	Typ. 2ms		
Vibration registance	Operating extremes	10~50Hz , amplitude 1.65 mm	
VIDIATION TESISTATICE	Damage limits	10~50Hz , amplitude 2.0 mm	
Shock registeres	Operating extremes	10G	
Shock resistance	Damage limits	100G	
Short circuit	Comply with 2kA short circuit test using K5 40A fuse (UL2231-2 clause		
Operating ambient temperature	-40~+85°C (no freezing)		
Weight	Approx. 100 g (excluding GFCI Coil)		

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

- (2) Without suppression circuit.
- (3) Unless otherwise specified, all tests are under room temperature and humidity.
- (4) Application of diode across the relay coil is not recommended. The life expectancy will be lower when a diode is used. A varistor (ZNR) to absorb the coil surge of relay is recommended.
- (5) To avoid distortion of the terminals and the mount tabs, when tightening a screw, use flat washers. In addition, to avoid loosening of the screw, when tightening a screw, use spring washers. These will ensure there is sufficient thickness and strength to prevent distortion of the terminals and mount tabs.

To avoid unexpected damage, tighten screw to within the specified torque range shown below: M4 screw: $1.2 \sim 1.4$ N.m

- (6) Please pay attention to the phenomenon of freezing in the low temperature environment below 0°C. Please evaluate the actual use of the environment.
- (7) 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.



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

>>> Insulation Data

MRC

Insulation resistance (1)	1000MΩ Min. (DC 500V)			
	Between coil and contact	: AC 2500V, 50/60Hz 1 min.		
Dielectric strength (1)	Between open contacts	: AC 1500V, 50/60Hz 1 min.		
	Between contact circuits	: AC 2500V, 50/60Hz 1 min.		
Compliant with IEC 61810-1				
	Between coil and contact	: Basic, ≥ 4.6mm / ≥ 4.6mm		
Clearance / creepage distances				
Clearance / creepage distances	Between open contacts	: Basic, ≥ 1.5mm / ≥ 6.0mm		
Clearance / creepage distances	Between open contacts Between contact circuits	: Basic, ≥ 1.5mm / ≥ 6.0mm : Basic, ≥ 3.0mm / ≥ 6.3mm		
Clearance / creepage distances Rated voltage	Between open contacts Between contact circuits 250V	: Basic, ≥ 1.5mm / ≥ 6.0mm : Basic, ≥ 3.0mm / ≥ 6.3mm		
Clearance / creepage distances Rated voltage Rated impulse withstand voltage	Between open contacts Between contact circuits 250V 2500V	: Basic, ≥ 1.5mm / ≥ 6.0mm : Basic, ≥ 3.0mm / ≥ 6.3mm		
Clearance / creepage distances Rated voltage Rated impulse withstand voltage Pollution degree	Between open contacts Between contact circuits 250V 2500V 2	: Basic, ≥ 1.5mm / ≥ 6.0mm : Basic, ≥ 3.0mm / ≥ 6.3mm		
Clearance / creepage distances Rated voltage Rated impulse withstand voltage Pollution degree Overvoltage category	Between open contacts Between contact circuits 250V 2500V 2 II	: Basic, ≥ 1.5mm / ≥ 6.0mm : Basic, ≥ 3.0mm / ≥ 6.3mm		

Notes : (1) Initial value.

>>>> Safety Approval

Certified	UL / CUL	TUV
File No.	E88991	R50367170

>>>> Safety Approval Rating

UL / CUL	TUV
35A 277VAC ⁽¹⁾	35A 250VAC ⁽¹⁾
20A 277VAC, Resistive, Carrying Current 40A ⁽¹⁾	Making 20A, Carrying 40A, Breaking 20A / 250VAC ⁽¹⁾

Notes : (1) With 40% modulation of nominal coil voltage.





>>>> Outline Dimensions





4.5 11.5 (0.453)

245)

<u>1.25 -0 × 0.85 -0 -4</u> ♦ (0.049 X 0.033)

<u>1.25 -0 X 1.05 -0 -4</u>● (0.049 X 0.041)



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)

TOLERANCE:

NOTE:

0<u>10.3</u>

1.*AFTER PRE-SOLDERING 2. MEL SURE©AND©DIMENSIONS FROM THE BOTTOM OF THE TERMINAL (DATUM B) 3.★THE NAKED COPPER RANGE AFTER PRE-SOLDERING 4. GFCI Coil Supplier MMC, Part number: A08-3672SP

>>>> Wiring Diagram

(Top view)

B







- All specifications subject to change. Please contact Song Chuan for update. -