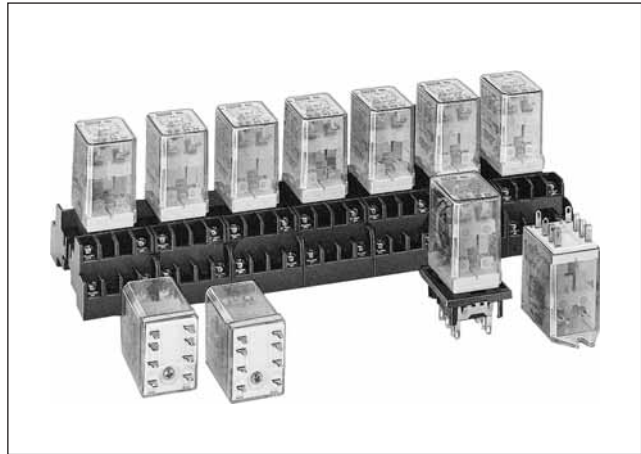


RM series Miniature Relays

DPDT contacts (5A) Plug-in and PC board terminal styles

- Compact miniature size saves space
- Options include indicators and check buttons.



Types

Type	Plug-in Terminal		PC Board Terminal	
	Type No.	Coil Voltage Code *	Type No.	Coil Voltage Code *
Basic	RM2S-U* ★	AC6, AC12, AC24, AC50, AC100-110, AC110-120, AC200-220, AC220-240 DC6, DC12, DC24, DC48, DC100-110	RM2V-U* ★	AC6, AC12, AC24, AC50, AC100-110, AC110-120, AC200-220, AC220-240 DC6, DC12, DC24, DC48, DC100-110
With Indicator	RM2S-UL* ★		RM2V-UL* ★	
With Check Button	RM2S-UC* ★		—	—
Top Bracket Mounting Type	RM2S-UT* ★		—	—
With Diode (DC coil only)	RM2S-UD* ★	DC6, DC12, DC24, DC48, DC100-110	—	—
With Indicator and Diode (DC coil only)	RM2S-ULD* ★		—	—

Type numbers marked with ★ in the table above are UL-recognized, CSA-certified, and TÜV-approved.

Ordering Information

When ordering, specify the Type No. and coil voltage code.

(Example) **RM2S-U** **AC100-110**
 Type No. Coil Voltage Code

Coil Ratings

Rated Voltage (V)	Rated Current (mA) ±15% at 20°C		Coil Resistance (Ω) ±10% at 20°C	Operation Characteristics (against rated values at 20°C)		
	50Hz	60Hz		Max. Continuous Applied Voltage	Min. Pickup Voltage	Dropout Voltage
AC (50/60Hz)	6	240	200	110%	80% maximum	30% minimum
	12	121	100			
	24	60.5	50			
	50	28.9	24			
	100-110	10.3-11.8	9.1-10.0			
	110-120	9.4-10.8	8.2-9.2			
	200-220	5.1-5.9	4.3-5.0			
	220-240	4.7-5.4	4.0-4.6			
DC	6	150		110%	80% maximum	10% minimum
	12	75				
	24	36.9				
	48	18.5				
	100-110	8.2-9.0				

RM Series Miniature Relays

Contact Ratings

Maximum Contact Capacity					
Continuous Current	Allowable Contact Power		Rated Load		
	Resistive Load	Inductive Load	Voltage	Res. Load	Ind. Load
5A	1100VA AC 150W DC	440VA AC 75W DC	110V AC	5A	2.5A
			220V AC	5A	2A
			30V DC	5A	2.5A

Note: Inductive load for the rated load — $\cos \phi = 0.3$, L/R = 7 ms

• UL Ratings

Voltage	Resistive	General use
240V AC	5A	2A
120V AC	—	2.5A
100V DC	0.4A	—
30V DC	5A	—

• CSA Ratings

Voltage	Resistive	General use
240V AC	5A	2A
120V AC	5A	2.5A
100V DC	—	0.4A
30V DC	5A	2.5A

• TÜV Ratings

240V AC	5A
30V DC	5A

AC: $\cos \phi = 1.0$, DC: L/R = 0 ms

Specifications

Contact Material	Silver
Contact Resistance	30 mΩ maximum *1
Minimum Applicable Load	24V DC, 10 mA; 5V DC, 20 mA (reference value)
Operate Time	20 ms maximum *2
Release Time	20 ms maximum *2
Power Consumption (approx.)	AC: 1.4 VA (50 Hz), 1.2 VA (60 Hz) DC: 0.9W
Insulation Resistance	100 MΩ minimum (500V DC megger)
Dielectric Strength	Between live and dead parts: 2000V AC, 1 minute *3
	Between contact and coil: 2000V AC, 1 minute
	Between contacts of different poles: 2000V AC, 1 minute
	Between contacts of the same pole: 1000V AC, 1 minute
Operating Frequency	Electrical: 1800 operations/h maximum Mechanical: 18,000 operations/h maximum
	Temperature Rise
Vibration Resistance	Damage limits: 10 to 55 Hz, amplitude 0.5 mm Operating extremes: 10 to 55 Hz, amplitude 0.5 mm
	Shock Resistance
Mechanical Life	
Electrical Life	500,000 operations (220V AC, 5A)
Operating Temperature	-25 to +45°C (no freezing) *4
Operating Humidity	45 to 85% RH (no condensation)
Weight (approx.)	35g

Note: Above values are initial values.

*1: Measured using 5V DC, 1A voltage drop method

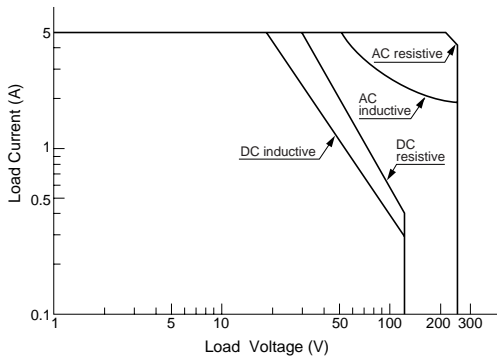
*2: Measured at the rated voltage (at 20°C), excluding contact bouncing
Release time of relays with diode: 40 ms maximum

*3: Relays with indicator or diode: 1000V AC, 1 minute

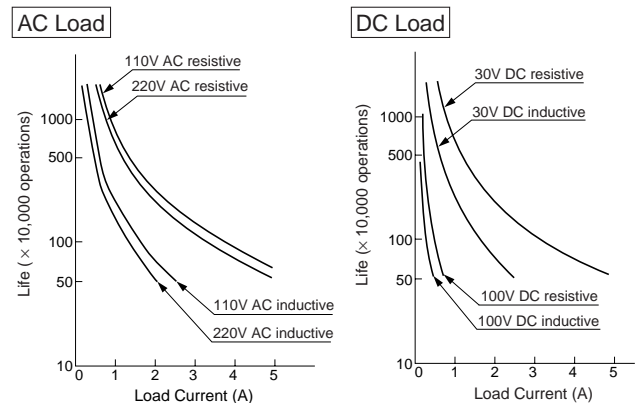
*4: For use under different temperature conditions, refer to Continuous Load Current vs. Operating Temperature Curve. The operating temperature range of relays with indicator or diode is -25 to +40°C.

Characteristics (Reference Data)

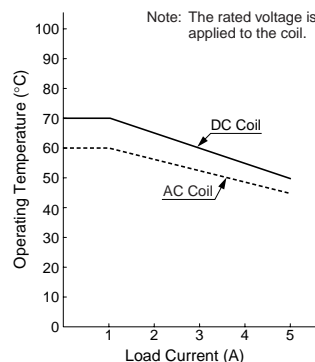
• Maximum Switching Capacity



• Electrical Life Curve



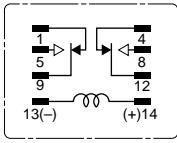
• Continuous Load Current vs. Operating Temperature Curve (Basic Type, With Check Button, and Top Bracket Mounting Type)



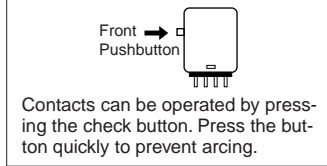
RM Series Miniature Relays

Internal Connection (Bottom View)

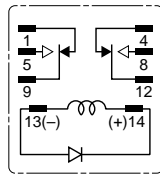
• Basic Type



• With Check Button



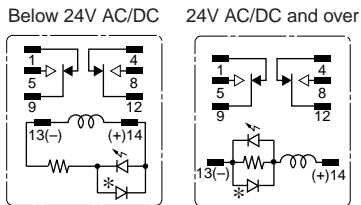
• With Diode (-D type)



This type contains a diode to absorb the counter emf generated when the coil is deenergized. The release time is slightly longer.

- Diode Characteristics
Reverse withstand voltage: 1,000V
Forward current: 1A

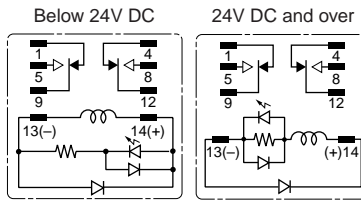
• With Indicator (-L type)



When the coil is energized, the indicator goes on.

* The LED protection diode is not contained in DPDT relays for below 100V DC.

• With Indicator and Diode (-LD type)



This type contains an operation indicator and a surge absorber, and has the same height as the basic type.

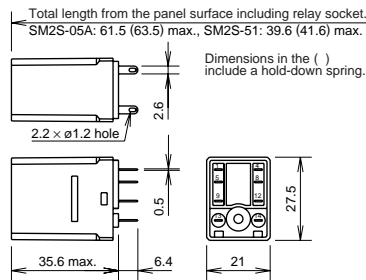
Dimensions

• Plug-in Type (Solder Terminal)

RM2S-U/RM2S-UL
RM2S-UD/RM2S-ULD



(Photo: RM2S-U)



• Applicable Socket and Hold-down Spring

Socket		Hold-down Spring
Mounting Style	Type No.	
DIN Rail Mount Socket	SM2S-05A	SY4S-02F1 SFA-101 SFA-202
	SM2S-05C	
	SM2S-05D	SFA-502
	SM2S-05DF	
Panel Mount Socket	SM2S-51	SY4S-51F1 (SY4S-02F1)
PC Board Mount Socket	SM2S-61	SFA-301 SFA-302
	SM2S-62	SY4S-51F1 (SY4S-02F1)

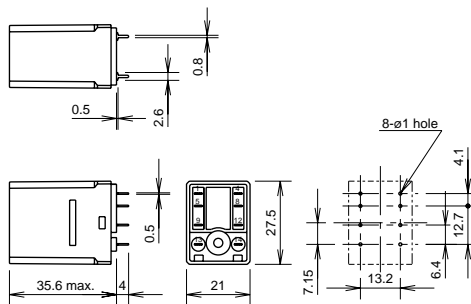
Note: (SY4S-02F1) is for the relay with check button.

• PC Board Terminal Type

RM2V-U/RM2V-UL

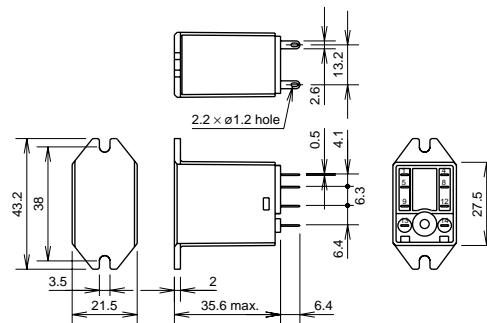


(Photo: RM2V-U)



• Top Bracket Mounting Type (Solder Terminal)

RM2S-UT



All dimensions in mm.