

# RY2KS series Latch Relays

## Self-maintained Latch Relays DPDT — 3A contact capacity

The RY2KS series latch relays have a self-holding function using permanent magnets in the magnetic circuit. Applying a voltage on the set (or reset) coil operates the armature and retains the contacts in that position until the opposite coil is energized, hence the latch relays are ideal for memory and flip-flop circuit applications.

- Mountable in the same space as other miniature relays using the same sockets.
- Recognized by UL and certified by CSA.



## Types

Terminal Style	Type	Type No.	Coil Voltage Code *
Plug-in Terminal	Basic	RY2KS-U*	AC6, AC12, AC24, AC50, AC100, AC120
	With Check Button	RY2KS-UC*	DC6, DC12, DC24, DC48, DC100, DC110

## Ordering Information

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

(Example) **RY2KS-U** **AC120**  
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		Maximum Continuous Applied Voltage	Set and Reset Voltage
AC (50/60Hz)	6	260	250	110%	80% maximum
	12	120	115		
	24	58	56		
	50	27	26		
	100	13.5	13		
	120	11.2	10.8		
DC	6	200		110%	80% maximum
	12	100			
	24	50			
	48	25			
	100	12			
	110	11			

## Contact Ratings

Maximum Contact Capacity						
Switching Voltage	Continuous Current	Allowable Contact Power		Rated Load		
		Resistive Load	Inductive Load	Voltage	Res. Load	Ind. Load
250V AC 125V DC	3A	660VA AC 90W DC	176VA AC 45W DC	110V AC	3A	1.5A
				220V AC	3A	0.8A
				30V DC	3A	1.5
				100V DC	0.2A	0.12A

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

### • UL Ratings

Voltage	Resistive	General Use
240V AC	3A	0.8A
120V AC	3A	1.5A
30V DC	3A	—

### • CSA Ratings

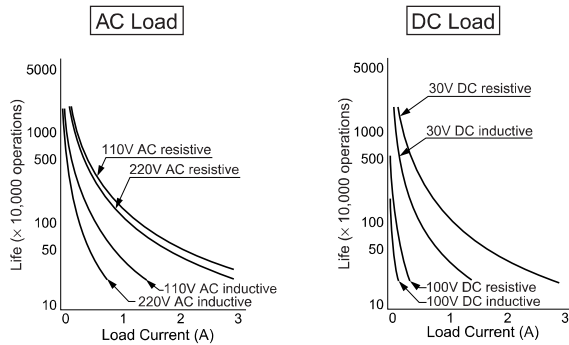
Voltage	Resistive	General Use
240V AC	3A	0.8A
120V AC	3A	1.5A
100V DC	—	0.2A
30V DC	3A	1.5A

## Specifications

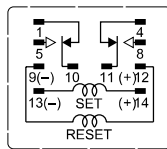
Contact Material	Gold-plated silver
Contact Resistance	50 mΩ maximum (initial value)
Set Time	25 ms maximum (at the rated voltage)
Reset Time	25 ms maximum (at the rated voltage)
Power Consumption (approx.)	AC: 1.6 VA (50 Hz), 1.5 VA (60 Hz) DC: 1.2W
Insulation Resistance	100 MΩ minimum (500V DC megger)
Dielectric Strength	Between live and dead parts: 1,500V AC, 1 minute Between contact and coil: 1,000V AC, 1 minute Between contacts of different poles: 1,000V AC, 1 minute Between contacts of the same pole: 700V AC, 1 minute
Operating Frequency	Electrical: 1800 operations/h maximum Mechanical: 18,000 operations/h maximum
Temperature Rise	Coil: 85°C maximum, Contact: 65°C maximum
Vibration Resistance	0 to 60 m/s <sup>2</sup> (maximum frequency: 55 Hz), Frequency: 5 to 55 Hz, Amplitude: 0.5 mm
Shock Resistance	200 m/s <sup>2</sup> minimum
Mechanical Life	5,000,000 operations minimum
Electrical Life	200,000 operations minimum
Operating Temperature	-5 to +40°C (no freezing)
Weight (approx.)	67g

## Characteristics (Reference Data)

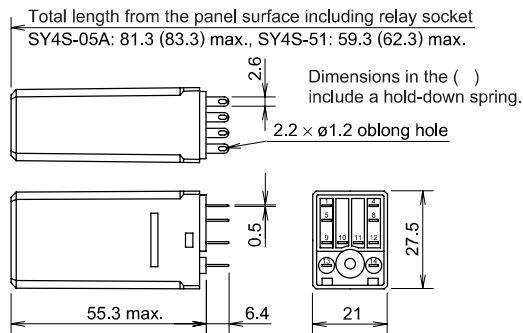
### • Electrical Life Curve



## Internal Connection (Bottom View)



## Dimensions



All dimensions in mm.

### • Applicable Socket and Hold-down Spring

Socket		Hold-down Spring
Mounting Style	Type No.	
DIN Rail Mount Socket	SY4S-05A	SFA-202
	SY4S-05C	
Panel Mount Socket	SY4S-51	SY4S-51F3 (SY4S-02F3)
PC Board Mount Socket	SY4S-61	SFA-302
	SY4S-62	SY4S-51F3 (SY4S-02F3)

Notes:

- For the relays with check button, use the parenthesized hold-down springs shown in the above table. When the spring is used, sockets cannot be mounted closely side by side.
- Leaf springs come in pairs.
- Use the hold-down springs in environments where the relays are subject to vibrations or shocks.

For details about sockets and hold-down springs, see page 386.