


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.



Part Number Selection





Contact	Model	Part Number	
		Blade Terminal	Coil Voltage Code
DPDT 	Basic	RY2KS-U*	AC6, AC12, AC24, AC110 DC6, DC12, DC24, DC48, DC110
	With Check Button	RY2KS-UC*	

Ordering Information


When ordering, specify the Part No. and coil voltage code:

(example) **RY2KS-U** **AC120**
Part No. Coil Voltage Code

Sockets

Relay	DIN Rail Mount	Finger-safe DIN Rail Mount	Panel Mount	PCB Mount
RY2KS	SY4S-05	SY4S-05C	SY4S-51	SY4S-61 SY4S-62
   				

Springs & Clips (optional)	
Part Number	Description
SFA-202	use with SY4S-05 SY4S-05C
SY4S-51F1 (SY4S-02F3) SFA-302	use with SY4S-51 SY4S-61
SY4S-51F3 SY4S-02F3	use with SY4S-62

-  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.
 - Use the hold-down springs in environments where the relays are subject to vibrations or shocks.

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 ² (maximum frequency: 55 Hz), Frequency: 5 to 55 Hz, Amplitude: 0.5 mm
Shock Resistance	200 m/s ² 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

Coil Ratings

Rated Voltage (V)		Rated Current (mA) ±15% at 20°C		Coil Resistance (Ω) ±10% at 20°C	Operation Characteristics (values at 20°C)	
		50Hz	60Hz		Maximum Continuous Applied Voltage	Set and Reset Voltage
AC (50/60Hz)	6	260	250	6.3	110%	80% maximum
	12	120	115	30.3		
	24	58	56	132		
	120	11.2	10.8	3,840		
DC	6	200		30	110%	80% maximum
	12	100		120		
	24	50		480		
	48	25		1,920		
	110	11		10,000		

Contact Ratings

Maximum Contact Capacity						
Switching Voltage	Continuous Current	Allowable Contact Power		Rated Load		
		Resistive Load	Inductive Load	Voltage (V)	Res. Load	Ind. Load
250V AC 125V DC	3A	600VA AC 90W DC	176VA AC 45W DC	110 AC	3A	1.5A
				220 AC	3A	0.8A
				30 DC	3A	1.5A
				100V DC	0.2A	0.12A

 Note: Inductive load for the 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

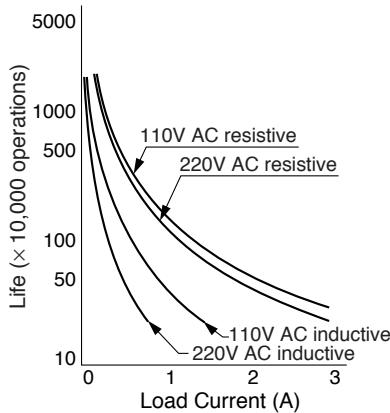
Voltage	Resistive	General use
240V AC	3A	0.8A
120V AC	3A	1.5A
30V DC	3A	1.5A

Socket Specifications

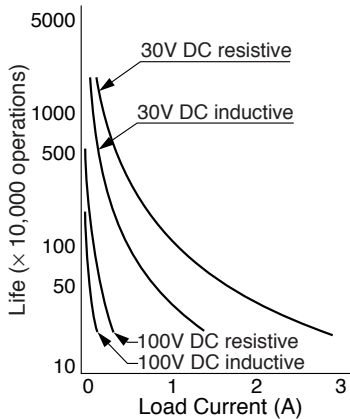
	Sockets	Terminal	Electrical Rating	Wire Size	Torque
DIN Rail Mount Sockets	SY4S-05	M3 screw with captive wire clamp	300V, 7A	Maximum up to 2-#14AWG	5.5 - 9 in•lbs
	SY4S-05C	M3 screw with captive wire clamp, fingersafe	300V, 7A	Maximum up to 2-#14AWG	5.5 - 9 in•lbs
Through Panel Mount Socket	SY4S-51	Solder	300V, 7A	—	—
PCB Mount Sockets	SY4S-61	Solder/PCB Mount	300V, 7A	—	—
	SY4S-62	Solder/PCB Mount	250V, 7A	—	—

Electrical Life Curve

AC Load

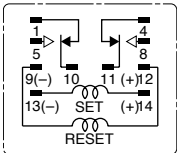


DC Load

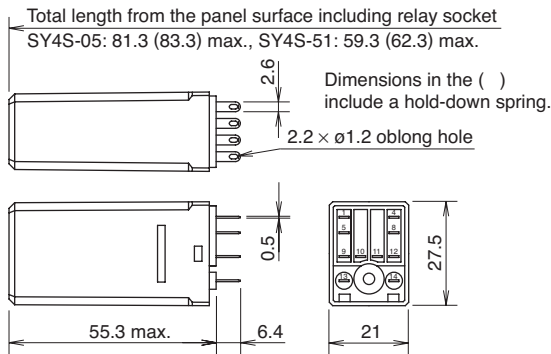


Internal Connection (View from Bottom)

(Shown in unlatched/reset position)

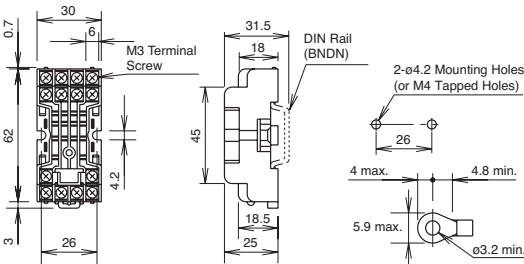


Dimensions (mm)



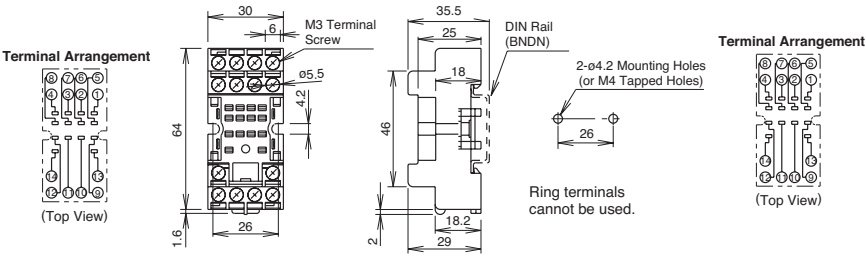
Standard DIN Rail Mount Socket

SY4S-05



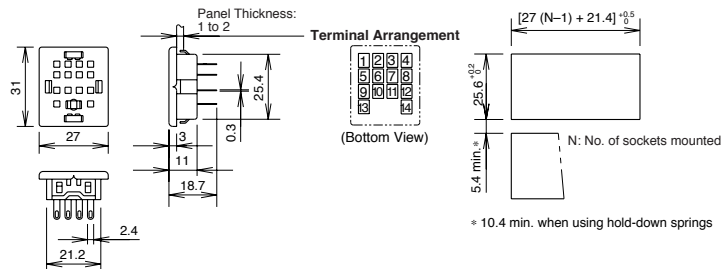
Finger-safe DIN Rail Mount Socket

SY4S-05C



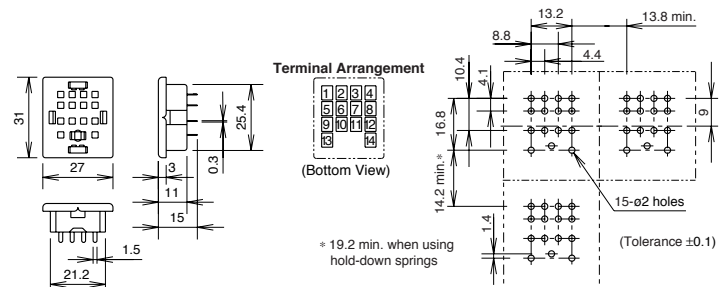
Through Panel Mount Socket

SY4S-51

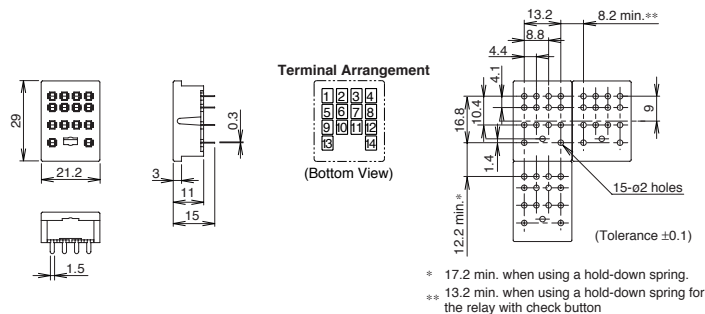


PCB Mount Sockets

SY4S-61



SY4S-62



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