RR2KP Series Latch Relays

Self-maintained Latch Relays
DPDT — 10A contact capacity



The RR2KP 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.

- Enhanced self-holding functions, and vibration and shock resistance.
- The self-holding mechanism is not subject to wear unlike mechanical latch relays.
- Recognized by UL and certified by CSA

Part Number Selection

Contact	Model	Part Number Pin Terminal	Coil Voltage Code
DPDT 	Basic	RR2KP-U	AC6, AC12, AC24, AC110, AC120, AC220, AC240 DC6, DC12, DC24, DC48, DC110
	With Check Button	RR2KP-UC	

Ordering Information
When ordering, specify the Part No. and coil voltage code:
(example) **RR2KP-U** **AC120**
Part No. — Coil Voltage Code

Sockets

Relay	DIN Rail Mount	Finger-safe DIN Rail Mount	Panel Mount
RR2KP	SR3P-05 SR3P-06	SR3P-05C	SR3P-51
			

Springs & Clips (optional)	
Part Number	**Description**
SR3P-06F3	use with SR3P-05 SR3P-05C SR3P-06
SR3P-511F3	use with SR3P-51

Specifications

Contact Material	Silver	
Contact Resistance	30 mΩ maximum (initial value)	
Operate Time	25 ms maximum (at the rated voltage)	
Power Consumption (approx.)	AC: 2.4 VA (50 Hz), 2.2 VA (60 Hz) DC: 1.5W	
Insulation Resistance	100 MΩ minimum (500V DC megger)	
Dielectric Strength	Between live and dead parts: 1,500V AC, 1 minute Between contact and coil: 1,500V AC, 1 minute Between contacts of different poles: 1,500V AC, 1 minute Between contacts of the same pole: 1,000V 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/s² (maximum frequency: 55 Hz), Frequency: 5 to 55 Hz, Amplitude: 0.5 mm	
Shock Resistance	100 m/s² minimum	
Mechanical Life	5,000,000 operations minimum	
Electrical Life	500,000 operations minimum (110V AC, 10A)	
Operating Temperature	–5 to +40°C (no freezing)	
Operating Humidity	45 to 85% RH (no condensation)	
Weight (approx.)	170g	

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	467	429	3.5	110%	80% maximum
	12	200	184	23.8		
	24	100	92	95		
	110	23	21	1,900		
	120	24	22	2,200		
	220	10.9	10	7,740		
	240	11.5	10.6	9,190		
DC	6	240		25	110%	80% maximum
	12	120		100		
	24	60		400		
	48	30		1,600		
	110	13.8		7,960		

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	10A	1650VA AC 300W DC	1100VA AC 225W DC	110 AC	10A	7.5A
				220 AC	7.5A	5A
				30 DC	10A	5A
				100V DC	0.5A	0.3A

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

UL Ratings

Voltage	Resistive	General use	Motor Load
240V AC	10A	7A	1/3 HP
120V AC	10A	7.5A	1/4 HP
30V DC	10A	7A	—

CSA Ratings

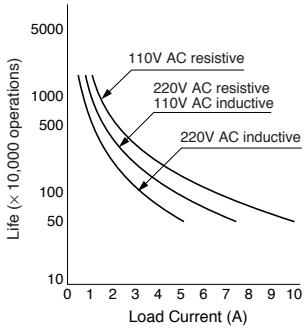
Voltage	Resistive	General use	Motor Load
240V AC	10A	7A	1/3 HP
120V AC	10A	7.5A	1/4 HP
100V DC	—	0.5A	—
30V DC	10A	7.5A	—

Socket Specifications

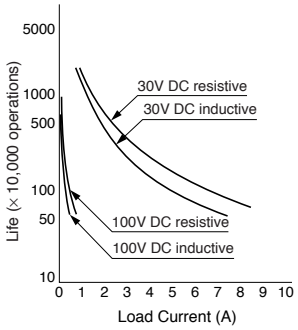
	Relays	Terminal	Electrical Rating	Wire Size	Torque
DIN Rail Mount Sockets	SR3P-05	M3 screw with captive wire clamp	300V, 10A	2–#12AWG	9 - 11.5 in•lbs
	SR3P-05C	M3 screw with captive wire clamp, fingersafe	300V, 10A	2–#12AWG	9 - 11.5 in•lbs
	SR3P-06	M3 screw with captive wire clamp	300V, 10A	2–#12AWG	9 - 11.5 in•lbs
Through Panel Mount Socket	SR3P-51	Solder	300V, 10A	—	—

Electrical Life Curve

AC Load

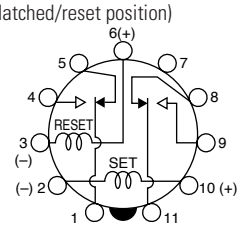


DC Load



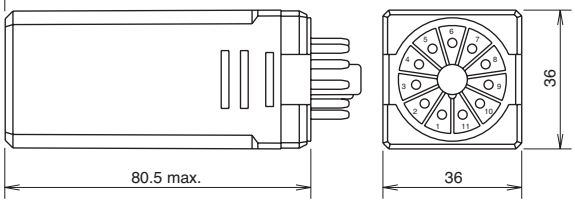
Internal Connection (View from Bottom)

(Shown in unlatched/reset position)



Dimensions (mm)

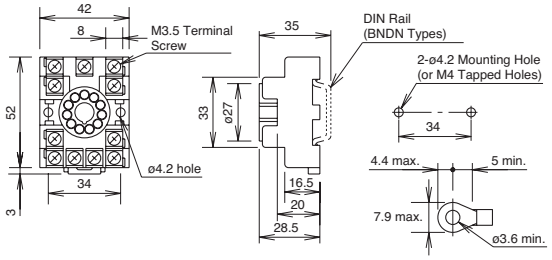
Total length from panel surface including relay socket
SR3P-05: 105 (108.5) max., SR3P-51: 87.5 (92) max.



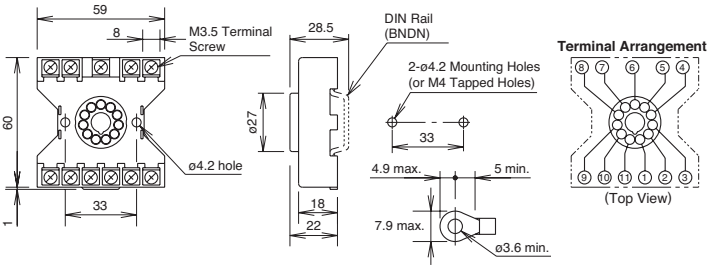
Dimensions in the ( ) include a hold-down spring.

Standard DIN Rail Mount Sockets

SR3P-05

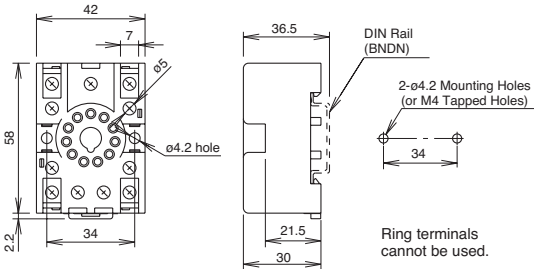


SR3P-06



Finger-safe DIN Rail Mount Sockets

SR3P-05C



Through Panel Mount Socket

SR3P-51

