

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 | Coil Voltage Code |
|---|-------------------|--------------|---|
| | | Pin Terminal | |
|  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-51F3 | use with SR3P-51 |

Switches & Pilot Lights

Display Lights

Relays & Sockets

Timers

Terminal Blocks

Circuit Breakers

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/s ² (maximum frequency: 55 Hz), Frequency: 5 to 55 Hz, Amplitude: 0.5 mm |
| Shock Resistance | 100 m/s ² 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 | 110% | 80% maximum |
| | 12 | 200 | 184 | | |
| | 24 | 100 | 92 | | |
| | 110 | 23 | 21 | | |
| | 120 | 24 | 22 | | |
| | 220 | 10.9 | 10 | | |
| | 240 | 11.5 | 10.6 | | |
| DC | 6 | 240 | | 110% | 80% maximum |
| | 12 | 120 | | | |
| | 24 | 60 | | | |
| | 48 | 30 | | | |
| | 110 | 13.8 | | | |

Contact Ratings

| Switching Voltage | Continuous Current | Maximum Contact Capacity | | | | |
|--------------------|--------------------|--------------------------|----------------------|-------------|-----------|-----------|
| | | 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 φ = 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 | — |

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Timers

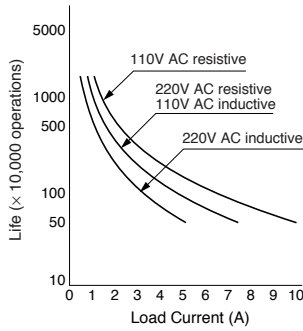
Terminal Blocks

Circuit Breakers

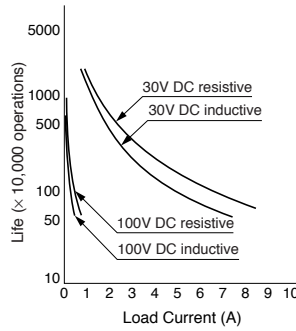
Socket Specifications

| | 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 | — | — |

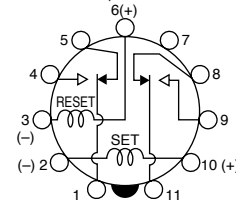
**Electrical Life Curve
AC Load**



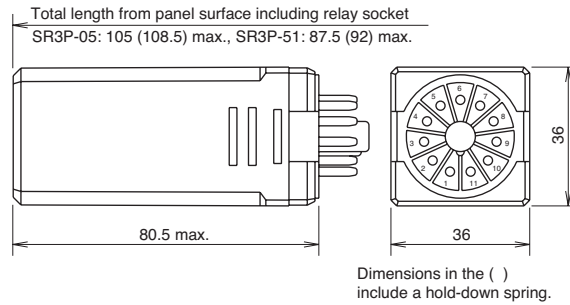
DC Load



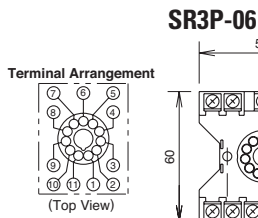
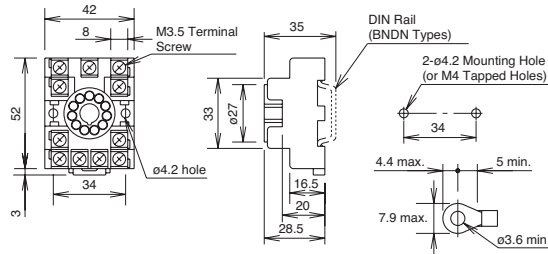
Internal Connection (View from Bottom)
(Shown in unlatched/reset position)



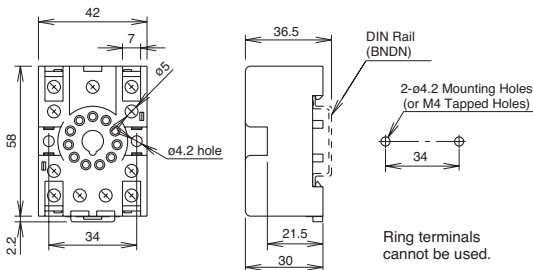
Dimensions (mm)



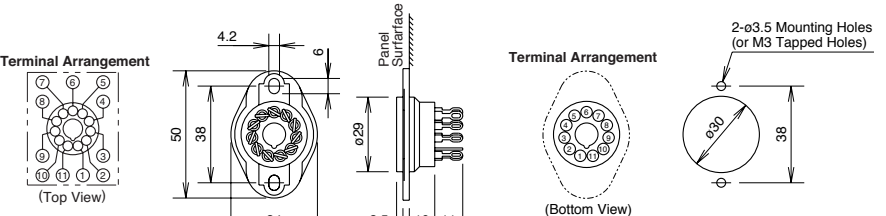
**Standard DIN Rail Mount Sockets
SR3P-05**



**Finger-safe DIN Rail Mount Sockets
SR3P-05C**



**Through Panel Mount Socket
SR3P-51**



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