

RR Series — General Purpose Power Relays

Key features of the RR series include:

- High reliability and long service life
- Available in octal (8- and 11-pin) or square (11-blade) base
- Options include check button for test operation, indicator light, and side flange (contact IDEC for diodes)
- DIN rail, surface and panel type sockets available for a wide range of mounting applications



UL Recognized
File No. E66043



CSA Certified
File No. LR35144



File No. B020813332452*
* Pin Style Only
(does not apply to blade style)



* Pin Style Only

| | |
|---|--|
| Contact Material | Silver |
| Contact Resistance | 30mΩ maximum (initial value) |
| Minimum Applicable Load | 24V DC/10mA, 5V DC/20mA (reference value) |
| Operating Time | 25ms maximum |
| Release Time | 25ms maximum |
| Maximum Continuous Applied Voltage (AC/DC) at 20°C | 110% of the rated voltage |
| Minimum Operating Voltage (AC/DC) at 20°C | 80% of the rated voltage |
| Drop-Out Voltage (AC) at 20°C | 30% of the rated voltage |
| Drop-Out Voltage (DC) at 20°C | 15% of the rated voltage |
| Power Consumption | AC: approximately 3VA (50Hz), 2.5VA (60Hz) DC: approximately 1.5W |
| Insulation Resistance | 100MΩ minimum (measured with 500V DC megger) |
| Dielectric Strength | <p>Pin (RR2P, RR3PA) Between live and dead parts: 1,500V AC, 1 minute Between contact circuit and operating coil: 1,500V AC, 1 minute Between contact circuits: 1,500V AC, 1 minute (1,000V AC between NO-NC contacts)</p> <p>Blade (RR1BA, RR2BA, RR3B) Between live and dead parts: 2,000V AC, 1 minute Between contact circuit and operating coil: 2,000V AC, 1 minute Between contact circuits: 2,000V AC, 1 minute Between contacts of same polarity: 1,000V AC, 1 minute</p> |
| Frequency Response | 1,800 operations/hour |
| Temperature Rise | Coil: 85°C maximum Contact: 65°C maximum |
| Vibration Resistance | 0 to 6G (55Hz maximum) |
| Shock Resistance | 100N (approximately 10G) |
| Life Expectancy | Electrical: over 500,000 operations (120V, 50/60Hz, 10A) Mechanical: over 10,000,000 operations |
| Operating Temperature | -30 to +70°C |
| Weight | RR2P: 90g, RR3PA: 96g (approximately) RR1BA/RR2BA/RR3B: 82g (approximately) |

Ordering Information

Order standard voltages for fastest delivery. Allow extra delivery time for non-standard voltages.

Basic Part No.

RR3PA-U

Coil Voltage:

AC120V

Part Numbers

Part Numbers: RR Series with Options

| Termination | Contact Configuration | Basic Part No. | Indicator Light | Check Button | Light and Check Button | Side Flange |
|------------------|-----------------------|----------------|-----------------|--------------|------------------------|-------------|
| P, PA (pin) | DPDT | RR2P-U | RR2P-UL | RR2P-UC | RR2P-ULC | — |
| | 3PDT | RR3PA-U | RR3PA-UL | RR3PA-UC | RR3PA-ULC | — |
| B, BA (blade) | SPDT | RR1BA-U | RR1BA-UL | RR1BA-UC | RR1BA-ULC | RR1BA-US |
| | DPDT | RR2BA-U | RR2BA-UL | RR2BA-UC | RR2BA-ULC | RR2BA-US |
| | 3PDT | RR3B-U | RR3B-UL | RR3B-UC | RR3B-ULC | RR3B-US |



1. RR1BA, RR2BA, and RR3PA are U.S. standard terminal arrangements.
2. For diode option on DC coils please consult factory.

Ratings

Coil Ratings

| Rated Voltage | Rated Current ±15% at 20°C | | Coil Resistance ±10% at 20°C | Inrush Current | Inductance | | |
|---------------|----------------------------|--------|------------------------------|----------------|------------|---------------|-------|
| | 60Hz | 50Hz | | | Energizing | De-Energizing | |
| AC | 6V | 420mA | 490mA | 4.9Ω | 720mA | 0.04H | 0.02H |
| | 12V | 210mA | 245mA | 18Ω | 365mA | 0.15H | 0.08H |
| | 24V | 105mA | 121mA | 79Ω | 182mA | 0.57H | 0.32H |
| | 120V | 20.5mA | 24mA | 2100Ω | 35mA | 15H | 8.2H |
| | 240V | 10.5mA | 12.1mA | 8330Ω | 18mA | 57H | 32H |
| DC | 6V | 240mA | | 25Ω | N/A | | |
| | 12V | 120mA | | 100Ω | | | |
| | 24V | 60mA | | 400Ω | | | |
| | 48V | 30mA | | 1600Ω | | | |
| | 110V | 13mA | | 8460Ω | | | |

Contact Ratings

| Voltage | Resistive | | | Inductive | | | Motor Load |
|---------|-----------|-----|-----|-----------|------|------|------------|
| | Nominal | UL | CSA | Nominal | UL | CSA | UL |
| 30V DC | 10A | 10A | 10A | 7.5A | 7A | 7.5A | — |
| 110V DC | 0.5A | — | — | 0.3A | — | 0.5A | — |
| 120V AC | 10A | 10A | 10A | 7.5A | 7.5A | 7.5A | 1/4 hp |
| 240V AC | 7.5A | 10A | 10A | 5A | 7A | 7A | 1/3 hp |



Inductive load:
 $\cos \phi = 0.3, L/R = 7ms.$

Applicable Sockets

Part Numbers: Sockets

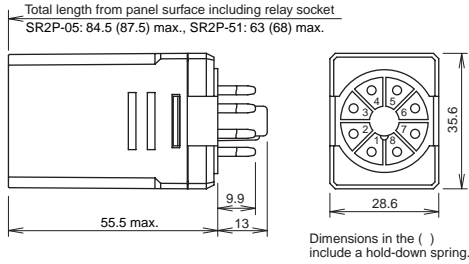
| Relays | Standard DIN Rail Mount | Finger-Safe DIN Rail Mount | Panel Mount | Springs & Clips (optional) | |
|------------------------|-------------------------|----------------------------|-------------|----------------------------|------------------------------------|
| | | | | Part Numbers | Use With Socket |
| RR2P | SR2P-05 SR2P-06 | SR2P-05C | SR2P-51 | SR2B-02F1 | SR2P-05, -05C, -06 |
| | | | | SR3P-01F1 | SR2P-51, SR3P-51 |
| RR3PA | SR3P-05 SR3P-06 | SR3P-05C | SR3P-51 | SR3B-02F1 | SR3P-05, -05C, -06 SR3B-05, -51 |
| | | | | SR3P-01F1 | SR3P-51 |
| RR1BA RR2BA RR3B | SR3B-05 | — | SR3B-51 | SR3B-02F1 | SR3B-05 SR3B-51 |



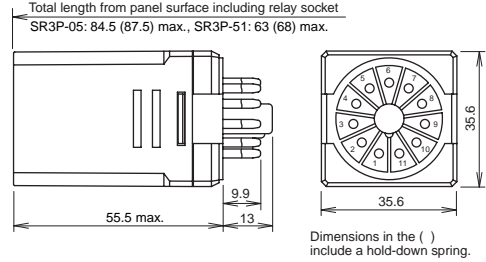
See Section F for details on sockets. All DIN rail mount sockets listed can be mounted using DIN rail BNDN1000.

Dimensions

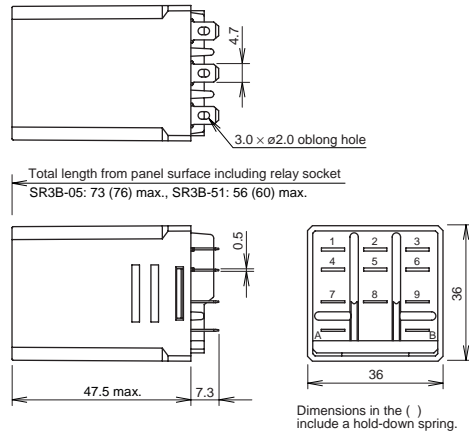
8-Pin RR2P



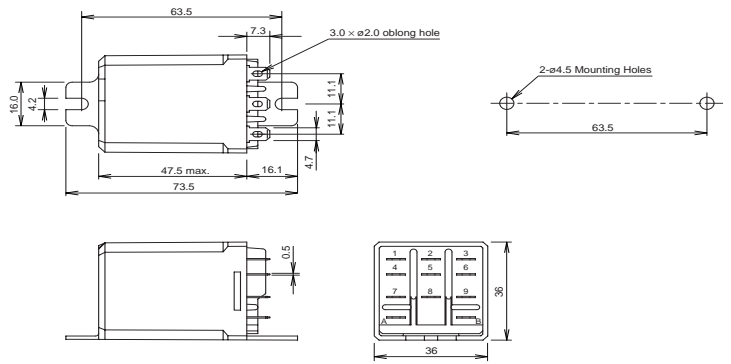
11-Pin RR3PA



Blade RR1BA, RR2BA, RR3B



Side Flange RR1BA-US, RR2BA-US, RR3B-US



Note: Dimensions in [] include hold-down spring.

All dimensions in mm.