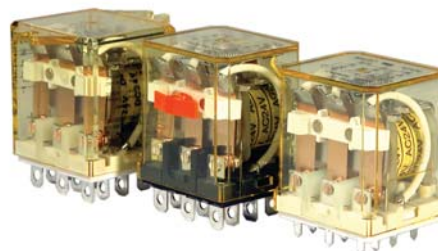


RH Series Compact Power Relays

SPDT through 4PDT, 10A contacts
Compact power type relays

The RH series are miniature power relays with a large capacity. The RH relays feature 10A contact capacity as large as the RR series but in a miniature package. The compact size saves space.



Part Number Selection

| Contact | Model | Part Number | | Coil Voltage Code (Standard Stock in bold) |
|---|---|----------------|--------------|---|
| | | Blade Terminal | PCB Terminal | |
|  SPDT | Basic | RH1B-U | RH1V2-U | |
| | With Indicator | RH1B-UL | — | |
| | With Check Button | RH1B-UC | — | AC6V, AC12V, AC24V , AC110V, AC120V , AC220V, AC240V DC6V, DC12V , DC24V , DC48V, DC110V |
| | With Indicator and Check Button | RH1B-ULC | — | |
| | Top Bracket Mounting | RH1B-UT | — | |
| | With Diode (DC coil only) | RH1B-UD | RH1V2-UD | DC6V, DC12V , DC24V , DC48V, DC110V |
| | With Indicator and Diode (DC coil only) | RH1B-ULD | — | DC12V , DC24V , DC48V, DC110V |
|  DPDT | Basic | RH2B-U | RH2V2-U | |
| | With Indicator | RH2B-UL | RH2V2-UL | AC6V, AC12V, AC24V , AC110-120V , AC220-240V |
| | With Check Button | RH2B-UC | — | DC6V, DC12V , DC24V , DC48V, DC100-110V |
| | With Indicator and Check Button | RH2B-ULC | — | |
| | Top Bracket Mounting | RH2B-UT | — | |
| | With Diode (DC coil only) | RH2B-UD | RH2V2-UD | DC6V, DC12V , DC24V , DC48V, DC100-110V |
| | With Indicator and Diode (DC coil only) | RH2B-ULD | — | |
|  3PDT | Basic | RH3B-U | RH3V2-U | |
| | With Indicator | RH3B-UL | RH3V2-UL | AC6V, AC12V, AC24V , AC110V, AC120V , AC220V, AC240V DC6V, DC12V , DC24V , DC48V, DC110V |
| | With Check Button | RH3B-UC | — | |
| | With Indicator and Check Button | RH3B-ULC | — | |
| | Top Bracket Mounting | RH3B-UT | — | |
| | With Diode (DC coil only) | RH3B-D* | RH3V2-D* | DC6V, DC12V, DC24V, DC48V, DC110V |
| | With Indicator and Diode (DC coil only) | RH3B-LD* | — | |
|  4PDT | Basic | RH4B-U | RH4V2-U | |
| | With Indicator | RH4B-UL | RH4V2-UL | AC6V, AC12V, AC24V , AC110V, AC120V , AC220V, AC240V DC6V, DC12V , DC24V , DC48V, DC110V |
| | With Check Button | RH4B-UC | — | |
| | With Indicator and Check Button | RH4B-ULC | — | |
| | Top Bracket Mounting | RH4B-UT | — | |
| | With Diode (DC coil only) | RH4B-UD | RH4V2-UD | DC6V, DC12V, DC24V, DC48V, DC110V |
| | With Indicator and Diode (DC coil only) | RH4B-LD* | — | |

- 1. *Carries no UL recognition mark.
- 2. PCB terminal relays are designed to mount directly to a circuit board without any socket.

Ordering Information

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

(example) **RH3B-U** **AC120V**
 Part No. Coil Voltage Code

Switches & Pilot Lights

Display Lights

Relays & Sockets





Timers

Terminal Blocks

Circuit Breakers




Sockets (for Blade Terminal Models)


| Relays | Standard DIN Rail Mount ¹ | Finger-safe DIN Rail Mount ¹ | Through Panel Mount | PCB Mount |
|--------|--------------------------------------|---|---------------------|-----------|
| RH1B | SH1B-05 | SH1B-05C | SH1B-51 | SH1B-62 |
| RH2B | SH2B-05 | SH2B-05C | SH2B-51 | SH2B-62 |
| RH3B | SH3B-05 | SH3B-05C | SH3B-51 | SH3B-62 |
| RH4B | SH4B-05 | SH4B-05C | SH4B-51 | SH4B-62 |

-  1. DIN Rail mount socket comes with two horseshoe clips. Do not use unless you plan to insert pullover wire spring. Replacement horseshoe clip part number is Y778-011.

Hold Down Springs & Clips

| Appearance | Description | Relay | For DIN Mount Socket | For Through Panel & PCB Mount Socket | Min Order Qty |
|---|--------------------------|------------------------|------------------------|--------------------------------------|---------------|
|  | Pullover Wire Spring | RH1B | SY2S-02F1 ² | SY4S-51F1 | 10 |
| | | RH2B | SY4S-02F1 ² | | |
| | | RH3B | SH3B-05F1 ² | | |
| | | RH4B | SH4B-02F1 ² | | |
|  | Leaf Spring (side latch) | RH1B, RH2B, RH3B, RH4B | SFA-202 ³ | SFA-302 ³ | 20 |
| | | RH1B, RH2B, RH3B, RH4B | SFA-101 ³ | SFA-301 ³ | |
|  | Leaf Spring (top latch) | RH1B, RH2B, RH3B, RH4B | SFA-101 ³ | SFA-301 ³ | |

-  2. Must use horseshoe clip when mounting in DIN mount socket. Replacement horseshoe clip part number is Y778-011.
3. Two required per relay.

AC Coil Ratings

| Voltage (V) | Rated Current (mA) ±15% at 20°C | | | | | | | | Coil Resistance (Ω) ±10% at 20°C | | | | Operation Characteristics (against rated values at 20°C) | | |
|----------------|---------------------------------|----------|------|------|---------|---------|------|------|----------------------------------|--------|--------|-------|--|----------------|-----------------|
| | AC 50Hz | | | | AC 60Hz | | | | SPDT | DPDT | 3PDT | 4PDT | Max. Continuous Applied Voltage | Pickup Voltage | Dropout Voltage |
| | SPDT | DPDT | 3PDT | 4PDT | SPDT | DPDT | 3PDT | 4PDT | | | | | | | |
| 6 | 170 | 240 | 330 | 387 | 150 | 200 | 280 | 330 | 330 | 9.4 | 6.4 | 5.4 | | | |
| 12 | 86 | 121 | 165 | 196 | 75 | 100 | 140 | 165 | 165 | 39.3 | 25.3 | 21.2 | | | |
| 24 | 42 | 60.5 | 81 | 98 | 37 | 50 | 70 | 83 | 83 | 153 | 103 | 84.5 | | | |
| 110 | 9.6 | — | 18.1 | 21.6 | 8.4 | — | 15.5 | 18.2 | 18.2 | — | 2,200 | 1,800 | | | |
| 110-120 | — | 9.4-10.8 | — | — | — | 8.0-9.2 | — | — | — | — | — | — | | | |
| 120 | 8.6 | — | 16.4 | 19.5 | 7.5 | — | 14.2 | 16.5 | 16.5 | — | 10,800 | 7,360 | | | |
| 220 | 4.7 | — | 8.8 | 10.7 | 4.1 | — | 7.7 | 9.1 | 9.1 | — | 10,800 | 7,360 | | | |
| 220-240 | — | 4.7-5.4 | — | — | — | 4.0-4.6 | — | — | — | 18,820 | — | — | | | |
| 240 | 4.9 | — | 8.2 | 9.8 | 4.3 | — | 7.1 | 8.3 | 8.3 | — | 12,100 | 9,120 | | | |

DC Coil Ratings

| Voltage (V) | Rated Current (mA) ±15% at 20°C | | | | Coil Resistance (Ω) ±10% at 20°C | | | | Operation Characteristics (against rated values at 20°C) | | |
|-------------|---------------------------------|---------|------|------|----------------------------------|--------|-------|-------|--|----------------|-----------------|
| | SPDT | DPDT | 3PDT | 4PDT | SPDT | DPDT | 3PDT | 4PDT | Max. Continuous Applied Voltage | Pickup Voltage | Dropout Voltage |
| 6 | 128 | 150 | 240 | 250 | 47 | 40 | 25 | 24 | 110% | 80% maximum | 10% minimum |
| 12 | 64 | 75 | 120 | 125 | 188 | 160 | 100 | 96 | | | |
| 24 | 32 | 36.9 | 60 | 62 | 750 | 650 | 400 | 388 | | | |
| 48 | 18 | 18.5 | 30 | 31 | 2,660 | 2,600 | 1,600 | 1,550 | | | |
| 100-110 | — | 8.2-9.0 | — | — | — | 12,250 | — | — | | | |
| 110 | 8 | — | 12.8 | 15 | 13,800 | — | 8,600 | 7,340 | | | |

-  Standard coil voltages are in **BOLD**.

Contact Ratings

| Maximum Contact Capacity | | | | | | |
|--------------------------|--------------------|-------------------------|----------------|-------------|-----------|-----------|
| Model | Continuous Current | Allowable Contact Power | | Rated Load | | |
| | | Resistive Load | Inductive Load | Voltage (V) | Res. Load | Ind. Load |
| SPDT | 10A | 1540VA 300W | 990VA 210W | 110 AC | 10A | 7A |
| | | | | 220 AC | 7A | 4.5A |
| | | | | 30 DC | 10A | 7A |
| DPDT 3PDT 4PDT | 10A | 1650VA 300W | 1100VA 225W | 110 AC | 10A | 7.5A |
| | | | | 220 AC | 7.5A | 5A |
| | | | | 30 DC | 10A | 7.5A |

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



TÜV Ratings

| Voltage | RH1 | RH2 | RH3 | RH4 |
|---------|-----|-----|------|------|
| 240V AC | 10A | 10A | 7.5A | 7.5A |
| 30V DC | 10A | 10A | 10A | 10A |

AC: $\cos \phi = 1.0$, DC: L/R = 0 ms



UL Ratings

| Voltage | Resistive | | | General Use | | | Horse Power Rating | | |
|---------|------------|------|------|-------------|------|------|--------------------|--------|-----|
| | RH1 RH2 | RH3 | RH4 | RH1 RH2 | RH3 | RH4 | RH1 RH2 | RH3 | RH4 |
| 240V AC | 10A | 7.5A | 7.5A | 7A | 6.5A | 5A | 1/3 HP | 1/3 HP | — |
| 120V AC | — | 10A | 10A | — | 7.5A | 7.5A | 1/6 HP | 1/6 HP | — |
| 30V DC | 10A | 10A | — | 7A | — | — | — | — | — |
| 28V DC | — | — | 10A | — | — | — | — | — | — |

CSA Ratings

| Voltage | Resistive | | | | General Use | | | | Horse Power Rating |
|---------|-----------|-----|-----|------|-------------|------|-----|------|--------------------|
| | RH1 | RH2 | RH3 | RH4 | RH1 | RH2 | RH3 | RH4 | RH1, 2, 3 |
| 240V AC | 10A | 10A | — | 7.5A | 7A | 7A | 7A | 5A | 1/3 HP |
| 120V AC | 10A | 10A | 10A | 10A | 7.5A | 7.5A | — | 7.5A | 1/6 HP |
| 30V DC | 10A | 10A | 10A | 10A | 7A | 7.5A | — | — | — |

Socket Specifications

| | Sockets | Terminal | Electrical Rating | Wire Size | Torque | |
|-----------------------------------|--|---|---|------------------------|-----------------------------------|-----------------------------------|
| DIN Rail Mount Sockets | SH1B-05 | (Coil) M3 screws (contact) M3.5 screws with captive wire clamp | 250V, 10A | Maximum up to 2-#12AWG | 5.5 - 9 in•lbs 9 - 11.5 in•lbs | |
| | SH2B-05 SH3B-05 SH4B-05 | M3.5 screws with captive wire clamp | 300V, 10A | Maximum up to 2-#12AWG | 9 - 11.5 in•lbs | |
| | Finger-safe DIN Rail Mount | SH1B-05C | (coil) M3 screws (contact) M3.5 screws with captive wire clamp, fingersafe | 250V, 10A | Maximum up to 2-#12AWG | 5.5 - 9 in•lbs 9 - 11.5 in•lbs |
| | | SH2B-05C SH3B-05C SH4B-05C | M3.5 screws with captive wire clamp, fingersafe | 300V, 10A | Maximum up to 2-#12AWG | 9 - 11.5 in•lbs |
| Through Panel Mount Socket | SH1B-51 SH2B-51 SH3B-51 SH4B-51 | Solder | 300V, 10A | — | — | |
| PCB Mount Socket | SH1B-62 | PCB mount | 250V, 10A | — | — | |
| | SH2B-62 SH3B-62 SH4B-62 | PCB mount | 300V, 10A | — | — | |

Accessories

| Description | Appearance | Use with | Part No. | Remarks |
|-------------------------------------|------------|--|----------|--|
| Aluminum DIN Rail (1 meter length) | | All DIN rail sockets | BNDN1000 | IDEC offers a low-profile DIN rail (BNDN1000). The BNDN1000 is designed to accommodate DIN mount sockets. Made of durable extruded aluminum, the BNDN1000 measures 0.413 (10.5mm) in height and 1.37 (35mm) in width (DIN standard). Standard length is 39" (1,000mm). |
| DIN Rail End Stop | | DIN rail | BNL5 | 9.1 mm wide. |
| Replacement Hold-Down Spring Anchor | | DIN mount sockets and hold down springs. | Y778-011 | For use on DIN rail mount socket when using pullover wire hold down spring. 2 pieces included with each socket. |

Specifications

| | | | |
|---|--------------------------------------|--|--|
| Contact Material | | Silver cadmium oxide | |
| Contact Resistance ¹ | | 50mΩ maximum | |
| Minimum Applicable Load | | 24V DC, 30 mA; 5V DC, 100 mA (reference value) | |
| Operate Time ² | SPDT DPDT | 20ms maximum | |
| | 3PDT 4PDT | 25ms maximum | |
| Release Time ² | SPDT DPDT | 20ms maximum | |
| | 3PDT 4PDT | 25ms maximum | |
| Power Consumption (approx.) | SPDT | AC: 1.1VA (50Hz), 1VA (60Hz) | DC: 0.8W |
| | DPDT | AC: 1.4VA (50Hz), 1.2VA (60Hz) | DC: 0.9W |
| | 3PDT | AC: 2VA (50Hz), 1.7VA (60Hz) | DC: 1.5W |
| | 4PDT | AC: 2.5VA (50Hz), 2VA (60Hz) | DC: 1.5W |
| Insulation Resistance | | 100MΩ minimum (500V DC megger) | |
| Dielectric Strength ³ | SPDT | Between live and dead parts: | 2,000V AC, 1 minute |
| | | Between contact and coil: | 2,000V AC, 1 minute |
| | | Between contacts of the same pole: | 1,000V AC, 1 minute |
| | DPDT 3PDT 4PDT | Between live and dead parts: | 2,000V AC, 1 minute |
| | Between contact and coil: | 2,000V AC, 1 minute | |
| | Between contacts of different poles: | 2,000V AC, 1 minute | |
| | Between contacts of the same pole: | 1,000V AC, 1 minute | |
| Operating Frequency | | Electrical: | 1,800 operations/hour maximum |
| | | Mechanical: | 18,000 operations/hour maximum |
| Vibration Resistance | | Damage limits: | 10 to 55Hz, amplitude 0.5 mm |
| | | Operating extremes: | 10 to 55Hz, amplitude 0.5 mm |
| Shock Resistance | | Damage limits: | 1,000m/s ² (100G) |
| | | Operating extremes: | 200m/s ² (20G - SPDT, DPDT) 100m/s ² (10G - 3PDT, 4PDT) |
| Mechanical Life | | 50,000,000 operations minimum | |
| Electrical Life | DPDT | 500,000 operations minimum (120V AC, 10A) | |
| | SPDT 3PDT 4PDT | 200,000 operations minimum (120V AC, 10A) | |
| | SPDT | -25 to +50°C (no freezing) | |
| | DPDT 3PDT 4PDT | -25 to +40°C (no freezing) | |
| Operating Humidity | | 45 to 85% RH (no condensation) | |
| Weight (approx.) | | SPDT: 24g, DPDT: 37g, 3PDT: 50g, 4PDT: 74g | |



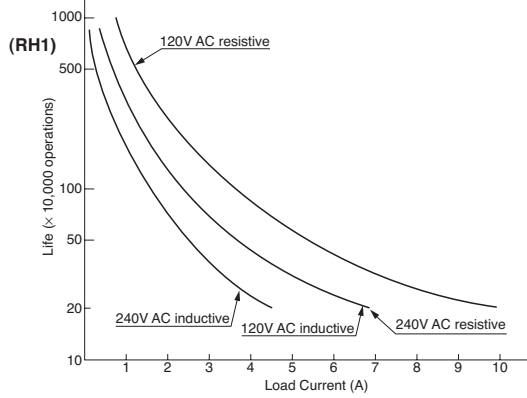
Note: Above values are initial values.

1. Measured using 5V DC, 1A voltage drop method
2. Measured at the rated voltage (at 20°C), excluding contact bouncing
Release time of relays with diode: 40 ms maximum
3. Relays with indicator or diode: 1000V AC, 1 minute
4. For use under different temperature conditions, refer to Continuous Load Current vs. Operating Temperature Curve. The operating temperature range of relays with indicator or diode is -25 to +40°C.

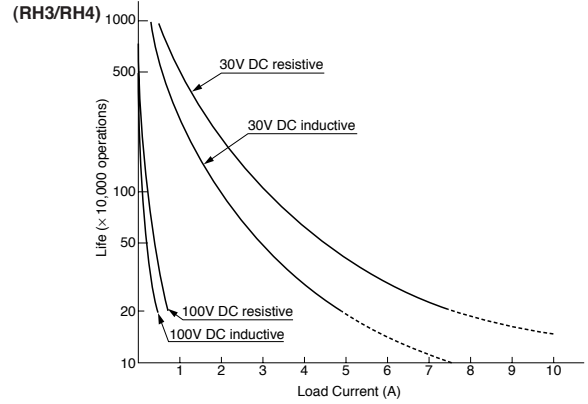
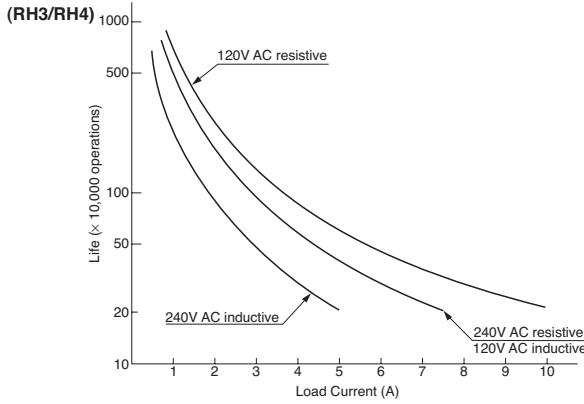
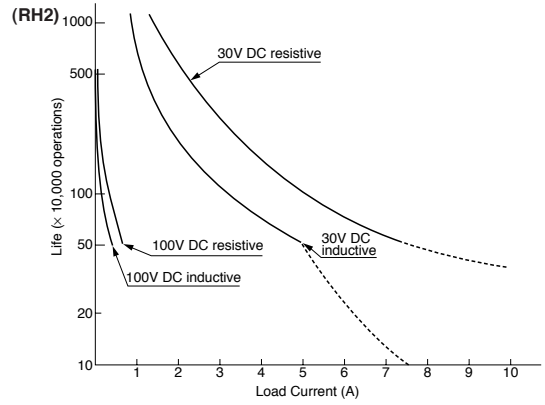
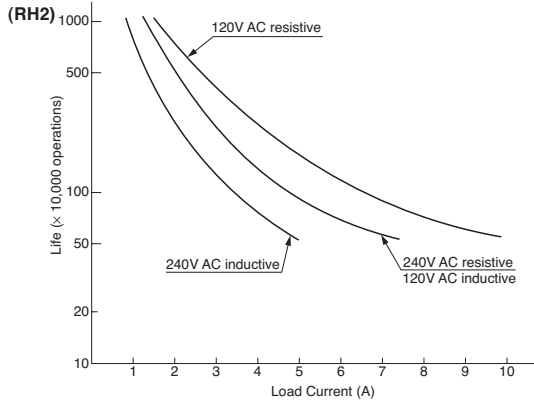
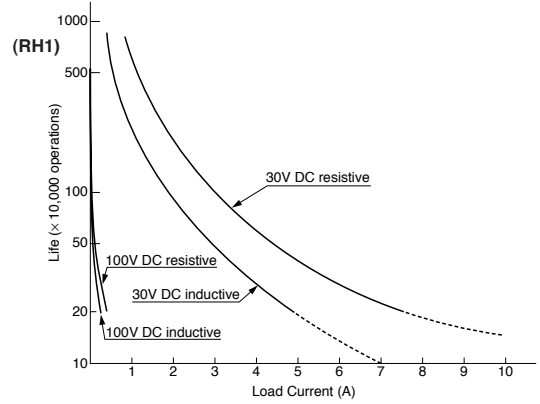
Characteristics (Reference Data)

Electrical Life Curves

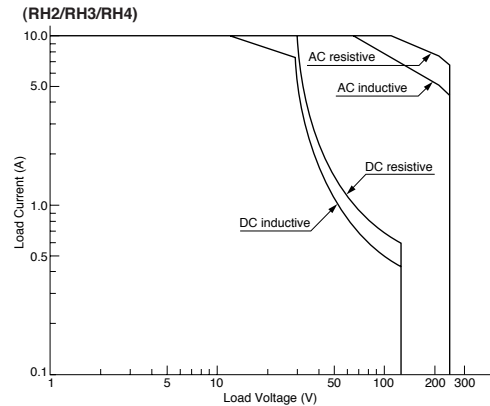
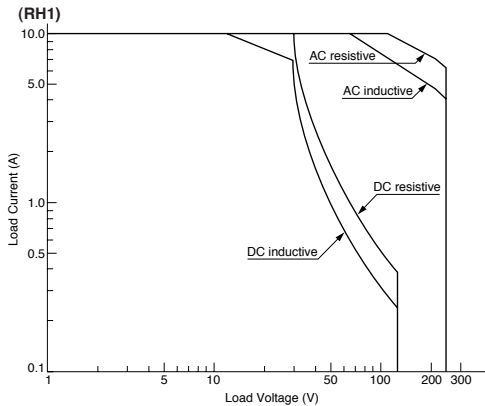
AC Load



DC Load



Maximum Switching Capacity



Switches & Pilot Lights

Display Lights

Relays & Sockets

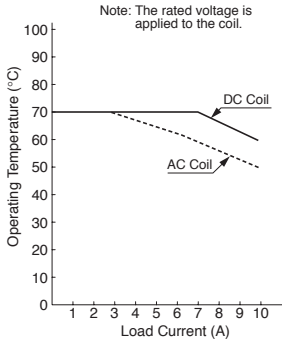
Timers

Terminal Blocks

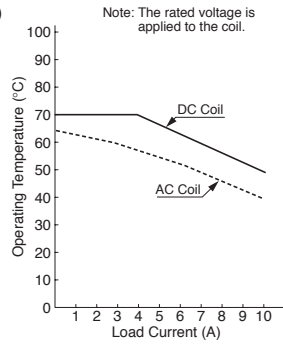
Circuit Breakers

Continuous Load Current vs. Operating Temperature Curve (Basic Type, With Check Button, and Top Bracket Mounting Type)

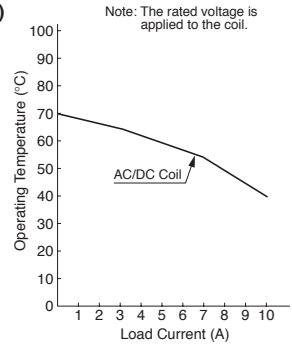
(RH1)



(RH2)

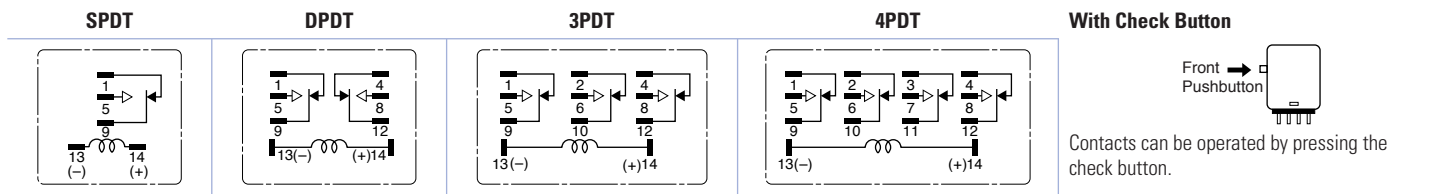


(RH3/RH4)

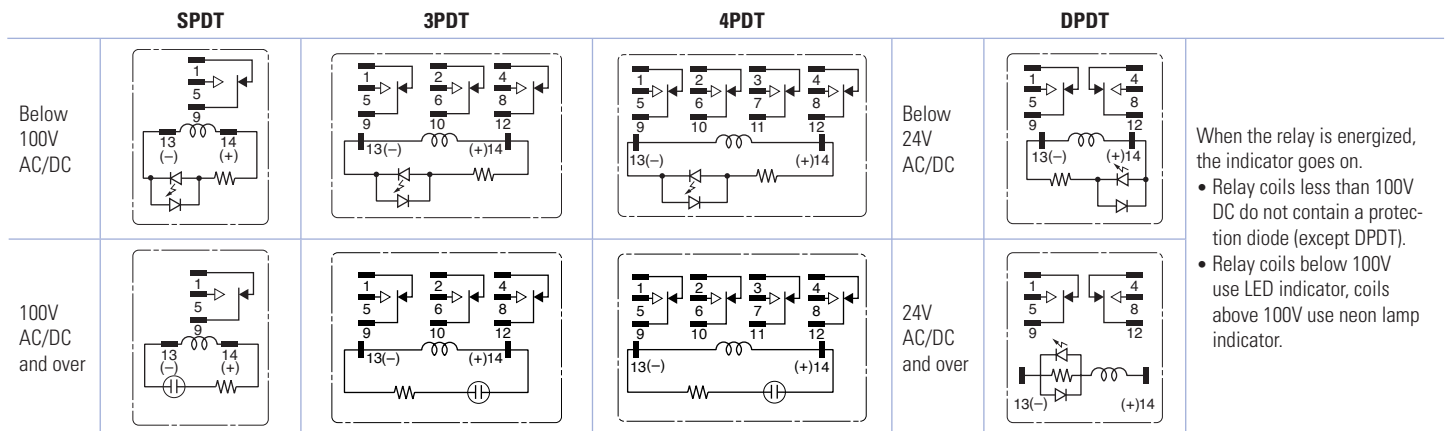


Internal Connection (View from Bottom)

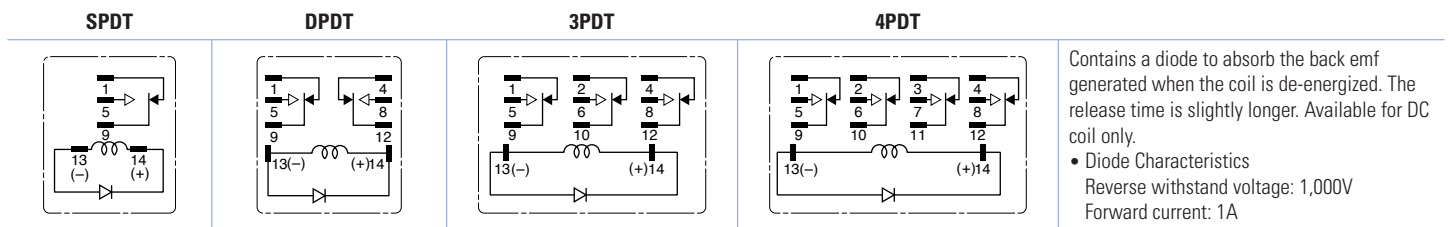
Basic Type



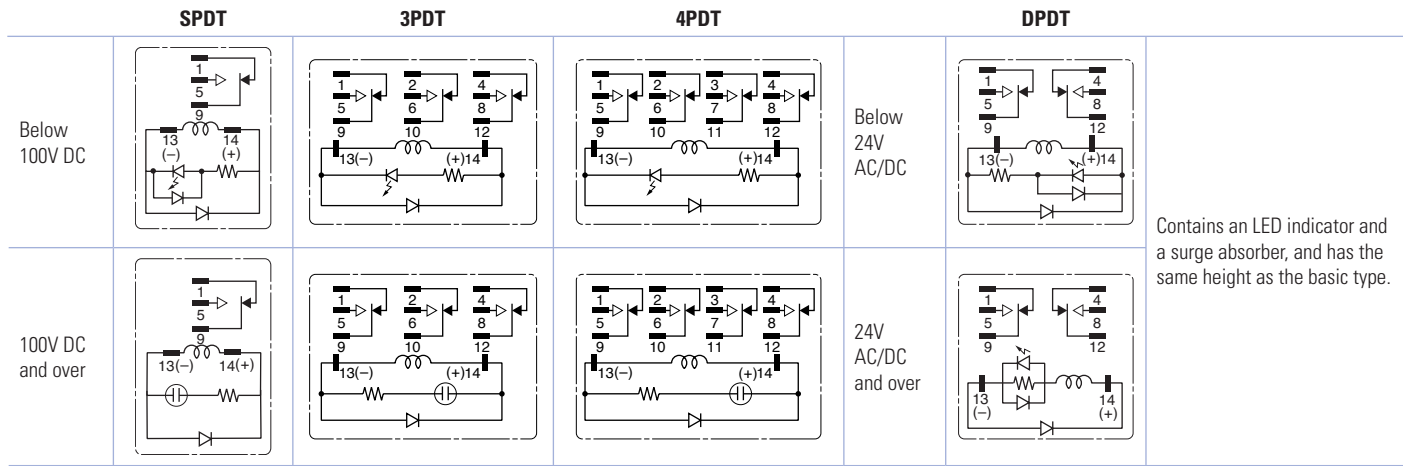
With Indicator (-L type)



With Diode (-D type)



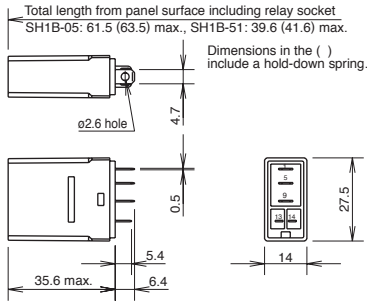
With Indicator LED & Diode (-LD type)



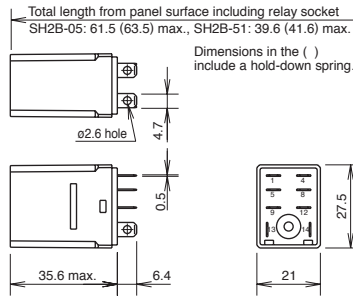
Contains an LED indicator and a surge absorber, and has the same height as the basic type.

Dimensions (mm)

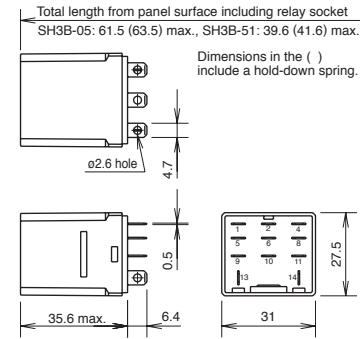
RH1B-U/RH1B-UL/RH1B-UD/RH1B-ULD



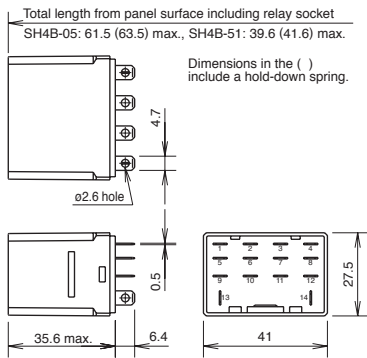
RH2B-U/RH2B-UL/RH2B-UD/RH2B-ULD



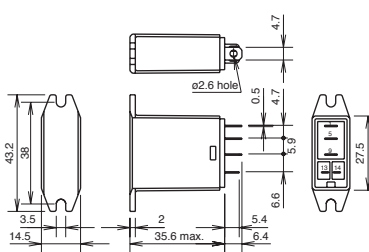
RH3B-U/RH3B-UL/RH3B-D/RH3B-LD



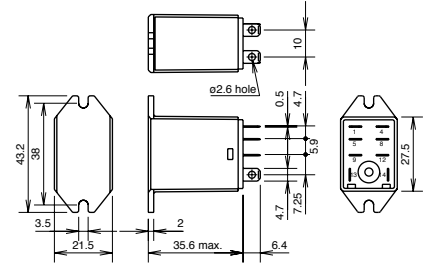
RH4B-U/RH4B-UL/RH4B-UD/RH4B-LD



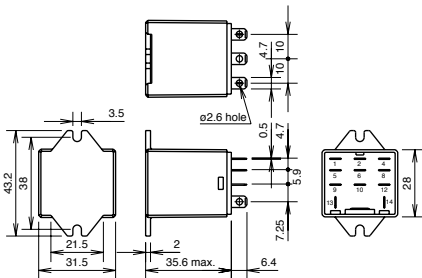
RH1B-UT



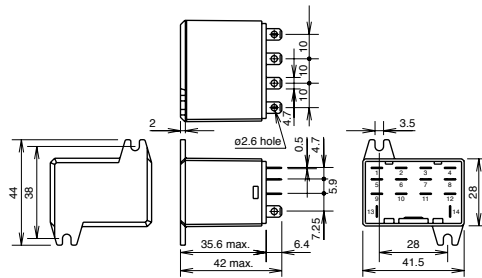
RH2B-UT



RH3B-UT

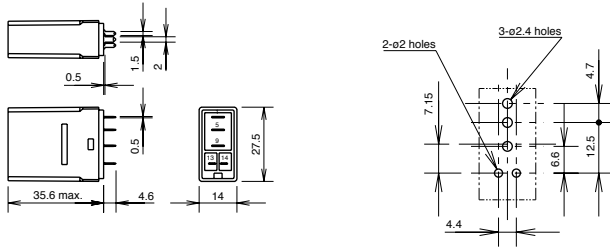


RH4B-UT

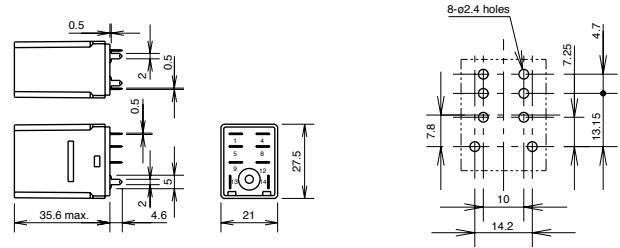


Dimensions con't (mm)

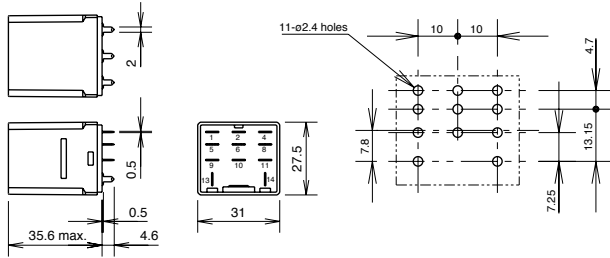
RH1V2-U/RH1V2-UD



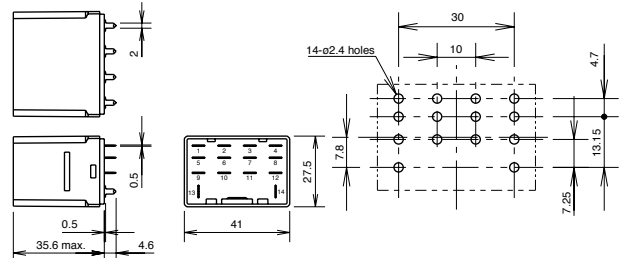
RH2V2-U/RH2V2-UL/RH2V2-UD



RH3V2-U/RH3V2-UL/RH3V2-D

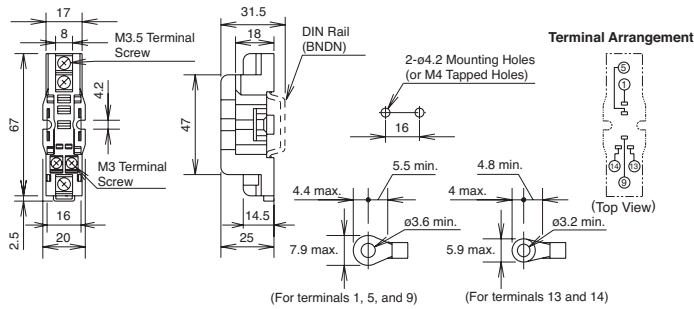


RH4V2-U/RH4V2-UL/RH4V2-UD

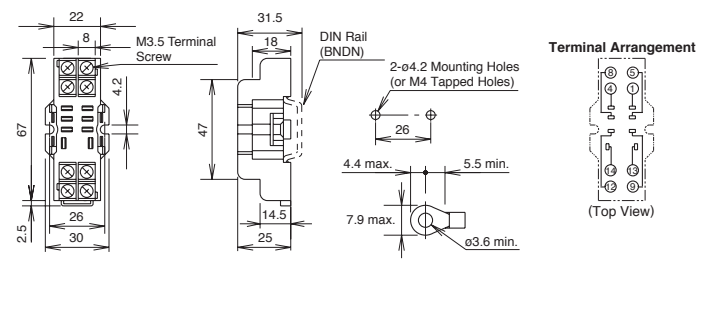


Standard DIN Rail Mount Sockets

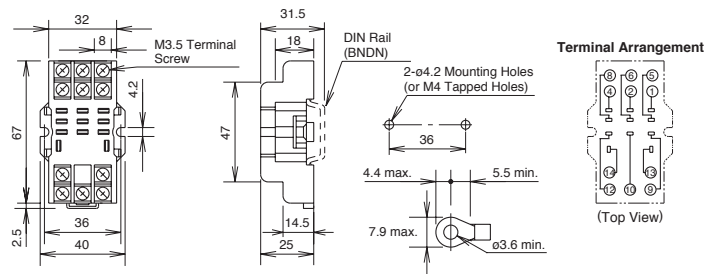
SH1B-05



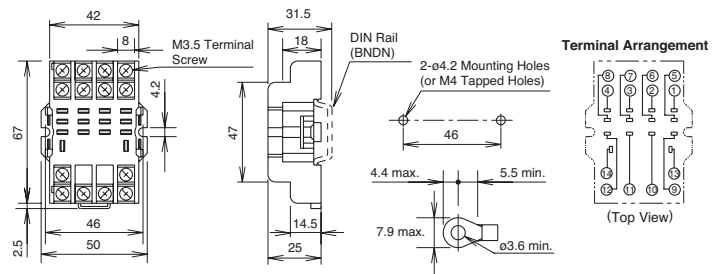
SH2B-05



SH3B-05



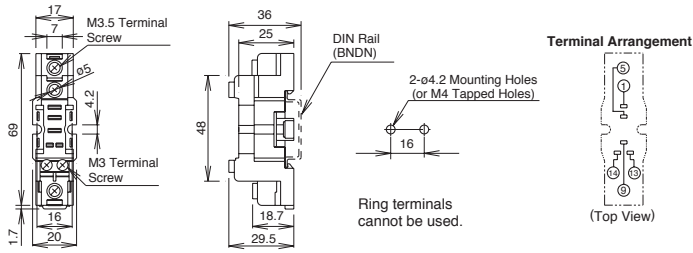
SH4B-05



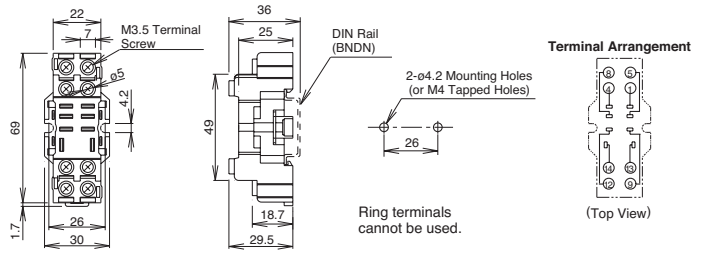
Dimensions con't (mm)

Finger-safe DIN Rail Mount Sockets

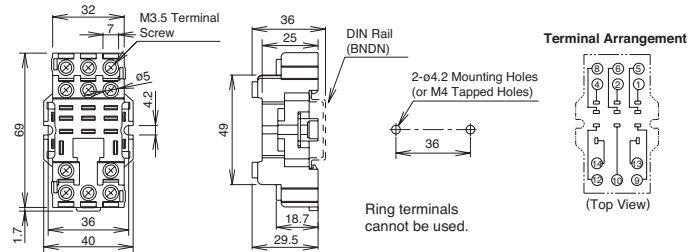
SH1B-05C



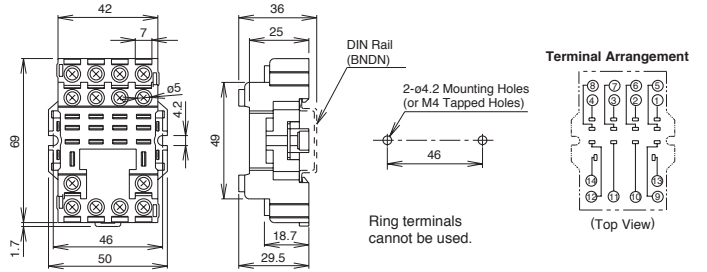
SH2B-05C



SH3B-05C

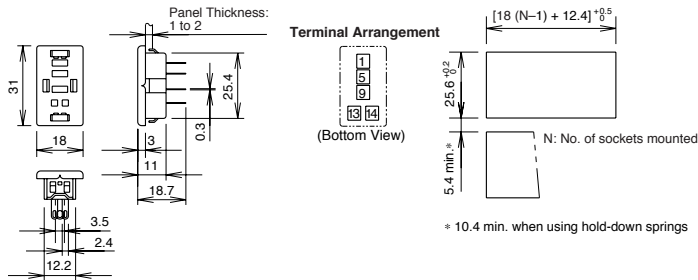


SH4B-05C

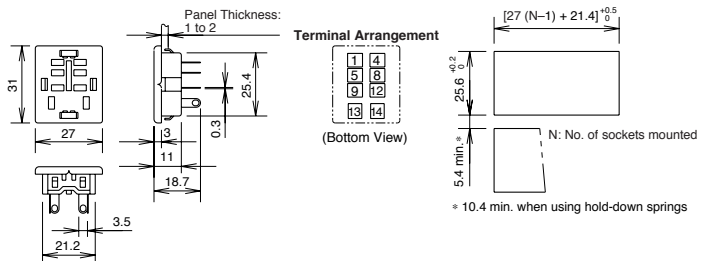


Through Panel Mount Socket

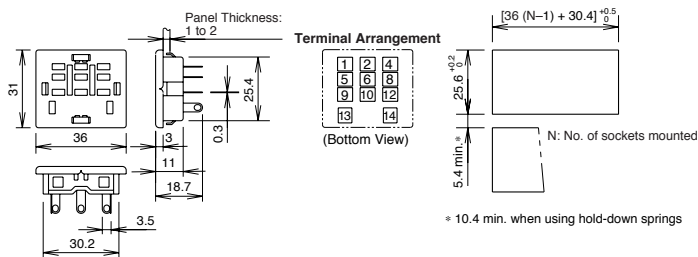
SH1B-51



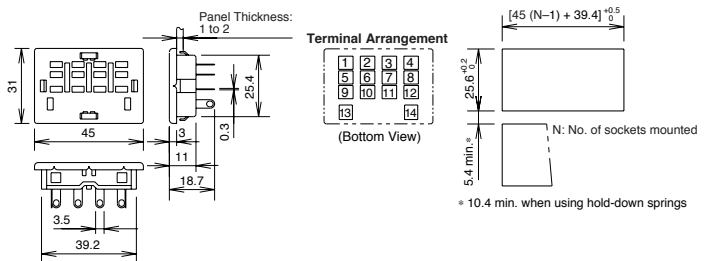
SH2B-51



SH3B-51



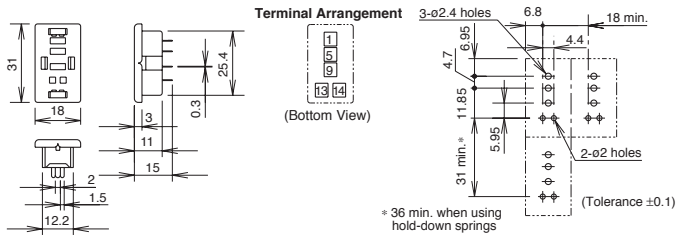
SH4B-51



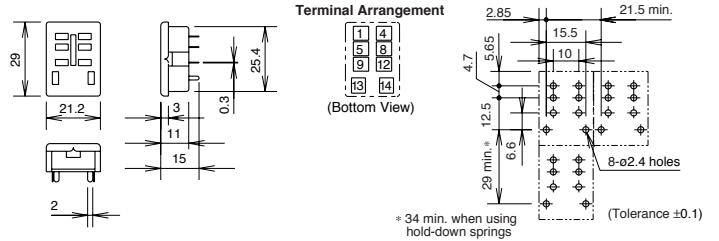
Dimensions con't (mm)

PCB Mount Sockets

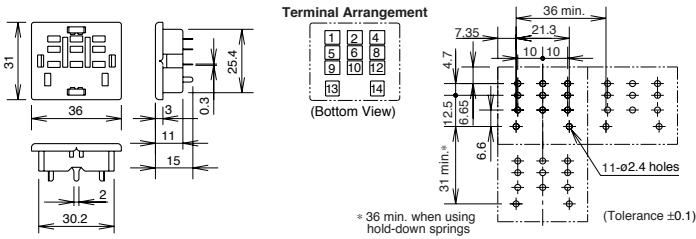
SH1B-62



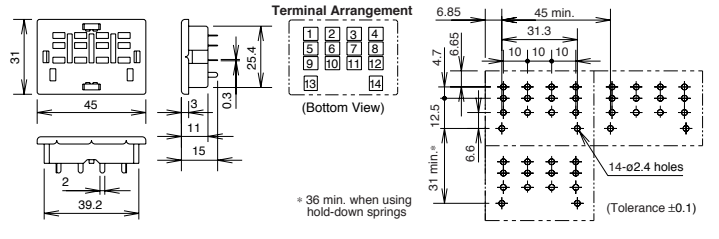
SH2B-62



SH3B-62



SH4B-62



Switches & Pilot Lights

Display Lights

Relays & Sockets

Timers

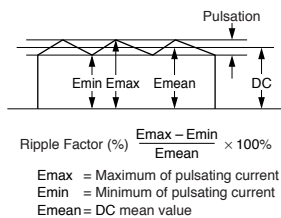
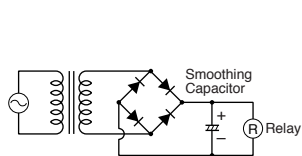
Terminal Blocks

Circuit Breakers

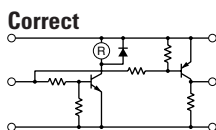
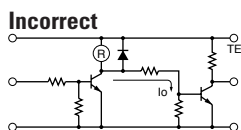
Operating Instructions

Driving Circuit for Relays

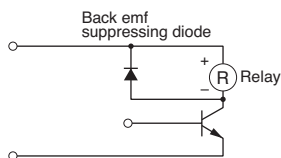
- To ensure correct relay operation, apply rated voltage to the relay coil.
- Input voltage for the DC coil:
A complete DC voltage is best for the coil power to make sure of stable relay operation. When using a power supply containing a ripple voltage, suppress the ripple factor within 5%. When power is supplied through a rectification circuit, the relay operating characteristics, such as pickup voltage and dropout voltage, depend on the ripple factor. Connect a smoothing capacitor for better operating characteristics as shown below.



- Leakage current while relay is off:
When driving an element at the same time as the relay operation, special consideration is needed for the circuit design. As shown in the incorrect circuit below, leakage current (I_0) flows through the relay coil while the relay is off. Leakage current causes coil release failure or adversely affects the vibration resistance and shock resistance. Design a circuit as shown in the correct example.



- Surge suppression for transistor driving circuits:
When the relay coil is turned off, a high-voltage pulse is generated, causing a transistor to deteriorate and sometimes to break. Be sure to connect a diode to suppress the back electromotive force. Then, the coil release time becomes slightly longer. To shorten the coil release time, connect a Zener diode between the collector and emitter of the transistor. Select a Zener voltage slightly higher than the power voltage.



Protection for Relay Contacts

- The contact ratings show maximum values. Make sure that these values are not exceeded. When an inrush current flows through the load, the contact may become welded. If this is the case, connect a contact protection circuit, such as a current limiting resistor.
- Contact protection circuit:
When switching an inductive load, arcing causes carbides to form on the contacts, resulting in increased contact resistance. In consideration of contact reliability, contact life, and noise suppression, use of a surge absorbing circuit is recommended. Note that the release time of the load becomes slightly longer. Check the operation using the actual load. Incorrect use of a contact protection circuit will adversely affect switching characteristics. Four typical examples of contact protection circuits are shown in the following table:

| | | |
|-----------------|--|---|
| RC | | <p>This protection circuit can be used when the load impedance is smaller than the RC impedance in an AC load power circuit.</p> <ul style="list-style-type: none"> R: Resistor of approximately the same resistance value as the load C: 0.1 to 1 μF |
| Diode | | <p>This protection circuit can be used for DC load power circuits. Use a diode with the following ratings.</p> <p>Reverse withstand voltage: Power voltage of the load circuit x 10</p> <p>Forward current: More than the load current</p> |
| Varistor | | <p>This protection circuit can be used for both AC and DC load power circuits.</p> <p>For a best result, when using a power voltage of 24 to 48V AC/DC, connect a varistor across the load.</p> <p>When using a power voltage of 100 to 240V AC/DC, connect a varistor across the contacts.</p> |

- Do not use a contact protection circuit as shown below:

| | |
|--|--|
| | <p>This protection circuit is very effective in arc suppression when opening the contacts. But, the capacitor is charged while the contacts are opened. When the contacts are closed, the capacitor is discharged through the contacts, increasing the possibility of contact welding.</p> |
| | <p>This protection circuit is very effective in arc suppression when opening the contacts. But, when the contacts are closed, a current flows to charge the capacitor, causing contact welding.</p> |

Generally, switching a DC inductive load is more difficult than switching a DC resistive load. Using an appropriate arc suppressor, however, will improve the switching characteristics of a DC inductive load.

Soldering

- When soldering the relay terminals, use a soldering iron of 30 to 60W, and quickly complete soldering (within approximately 3 seconds).
- Use a non-corrosive rosin flux.

Switches & Pilot Lights

Display Lights

Relays & Sockets

Timers

Terminal Blocks

Circuit Breakers

Operating Instructions con't

Other Precautions

1. General notice:
 - To maintain the initial characteristics, do not drop or shock the relay.
 - The relay cover cannot be removed from the base during normal operation. To maintain the initial characteristics, do not remove the relay cover.
 - Use the relay in environments free from condensation, dust, sulfur dioxide (SO₂), and hydrogen sulfide (H₂S).
 - Make sure that the coil voltage does not exceed applicable coil voltage range.
2. UL and CSA ratings may differ from product rated values determined by IDEC.
3. Do not use relays in the vicinity of strong magnetic field, as this may affect relay operation.

Safety Precautions

- Turn off the power to the relay before starting installation, removal, wiring, maintenance, and inspection of the relays. Failure to turn power off may cause electrical shock or fire hazard.
- Observe specifications and rated values, otherwise electrical shock or fire hazard may be caused.
- Use wires of the proper size to meet voltage and current requirements. Tighten the terminal screws on the relay socket to the proper tightening torque.
- Surge absorbing elements on AC relays with RC or DC relays with diode are provided to absorb the back electromotive force generated by the coil. When the relay is subject to an excessive external surge voltage, the surge absorbing element may be damaged. Add another surge absorbing provision to the relay to prevent damage.

Precautions for the RU Relays

- Before operating the latching lever of the RU relay, turn off the power to the RU relay. After checking the circuit, return the latching lever to the original position.
- Do not use the latching lever as a switch. The durability of the latching lever is a minimum of 100 operations.
- When using DC loads on 4PDT relays, apply a positive voltage to terminals of neighboring poles and a negative voltage to the other terminals of neighboring poles to prevent the possibility of short circuits.
- DC relays with a diode have a polarity in the coil terminals. Apply the DC voltage to the correct terminals.