

## ASRTD MY3NJ

# ASRTD MY3NJ AC 220V DIN Rail Electromagnetic Power Relay with Socket Base User Manual

## 1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the ASRTD MY3NJ AC 220V Electromagnetic Power Relay with its corresponding socket base. Please read this manual thoroughly before using the product to ensure proper function and to prevent potential hazards.

An electromagnetic relay is an electrically operated switch. It uses an electromagnet to mechanically operate a switch, opening or closing contacts. This allows a low-power signal to control a high-power circuit, or to control multiple circuits with a single signal.

## 2. PRODUCT FEATURES

- **Model:** MY3NJ (AC 220V variant)
- **Contact Configuration:** 2 Normally Open (2NO) and 2 Normally Closed (2NC) contacts
- **Coil Voltage:** AC 220V
- **Mounting:** Designed for DIN Rail installation with included socket base
- **Indicator:** Integrated LED indicator for coil status

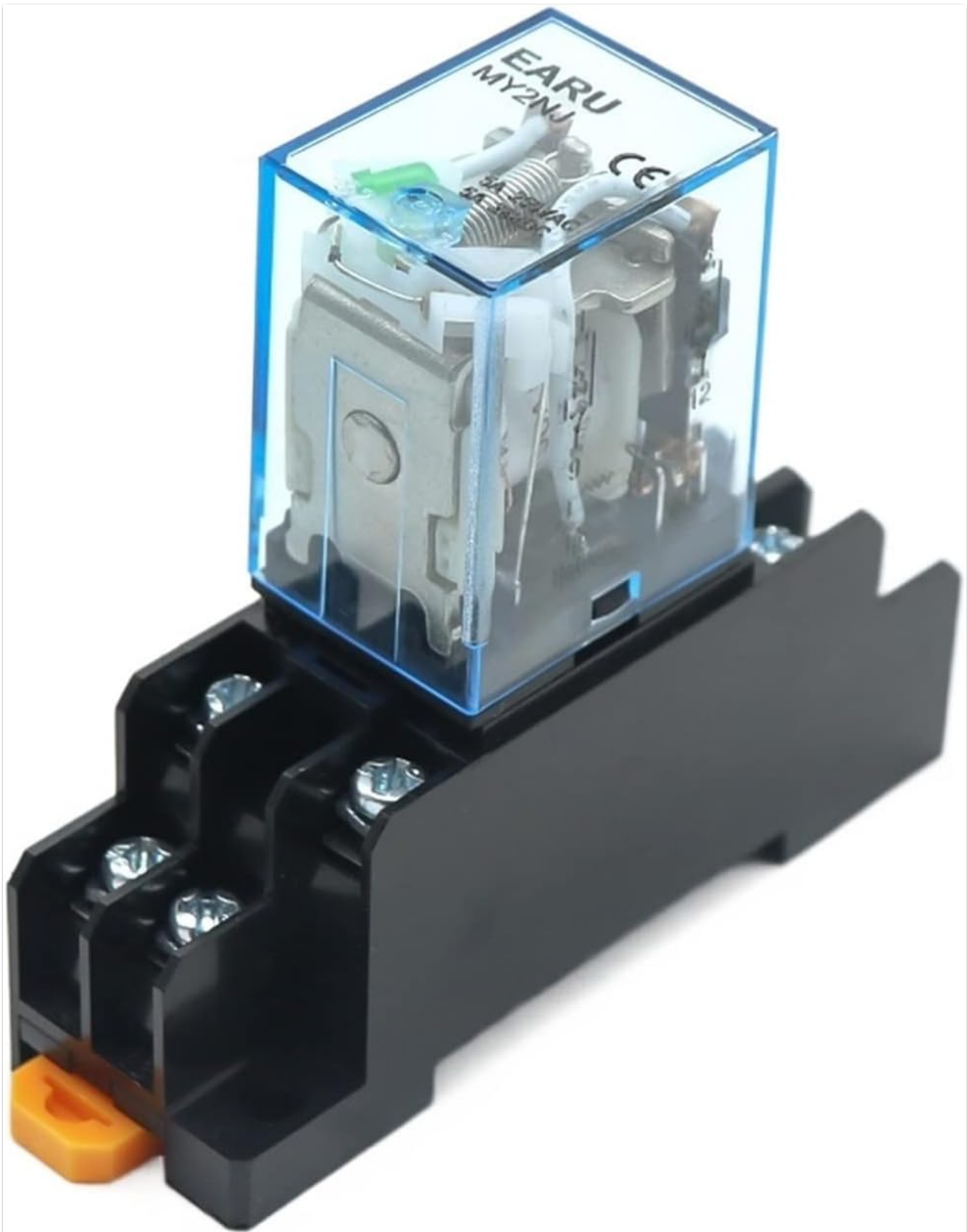


Figure 2.1: ASRTD MY3NJ Electromagnetic Power Relay with its socket base, ready for DIN rail mounting.

### 3. MODELS AND VARIANTS

The ASRTD series of electromagnetic relays includes several models, primarily differing in their contact configurations:

- **MY2NJ:** Features 2 Normally Open (NO) and 2 Normally Closed (NC) contacts.
- **MY3NJ:** Features 3 Normally Open (NO) and 3 Normally Closed (NC) contacts. (This is the model covered in this

manual.)

- **MY4NJ:** Features 4 Normally Open (NO) and 4 Normally Closed (NC) contacts.

These models are available with various coil voltage options, including DC12V, DC24V, AC24V, AC110V, and AC220V. Ensure the selected relay's coil voltage matches your application's power supply.

4. SPECIFICATIONS

| Specification         | Value                                                     |
|-----------------------|-----------------------------------------------------------|
| Model                 | MY3NJ                                                     |
| Coil Voltage          | AC 220V                                                   |
| Contact Configuration | 3PDT (3 Normally Open, 3 Normally Closed)                 |
| Manufacturer          | ASRTD                                                     |
| Item Weight           | Approximately 1.76 ounces (50 grams)                      |
| Package Dimensions    | Approximately 1.18 x 0.79 x 0.39 inches (30 x 20 x 10 mm) |
| Number of Pieces      | 1 (Relay with Socket Base)                                |

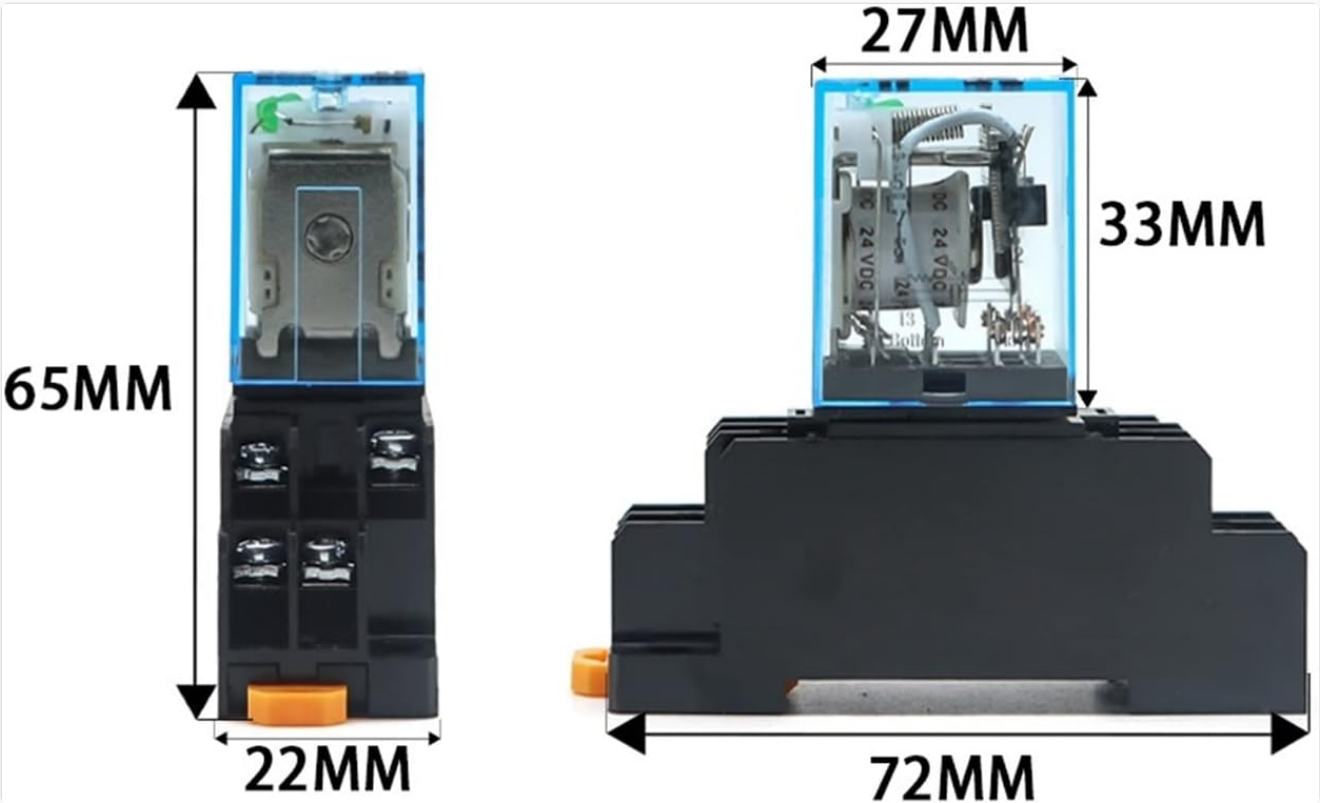


Figure 4.1: Side view dimensions of the relay and socket base.

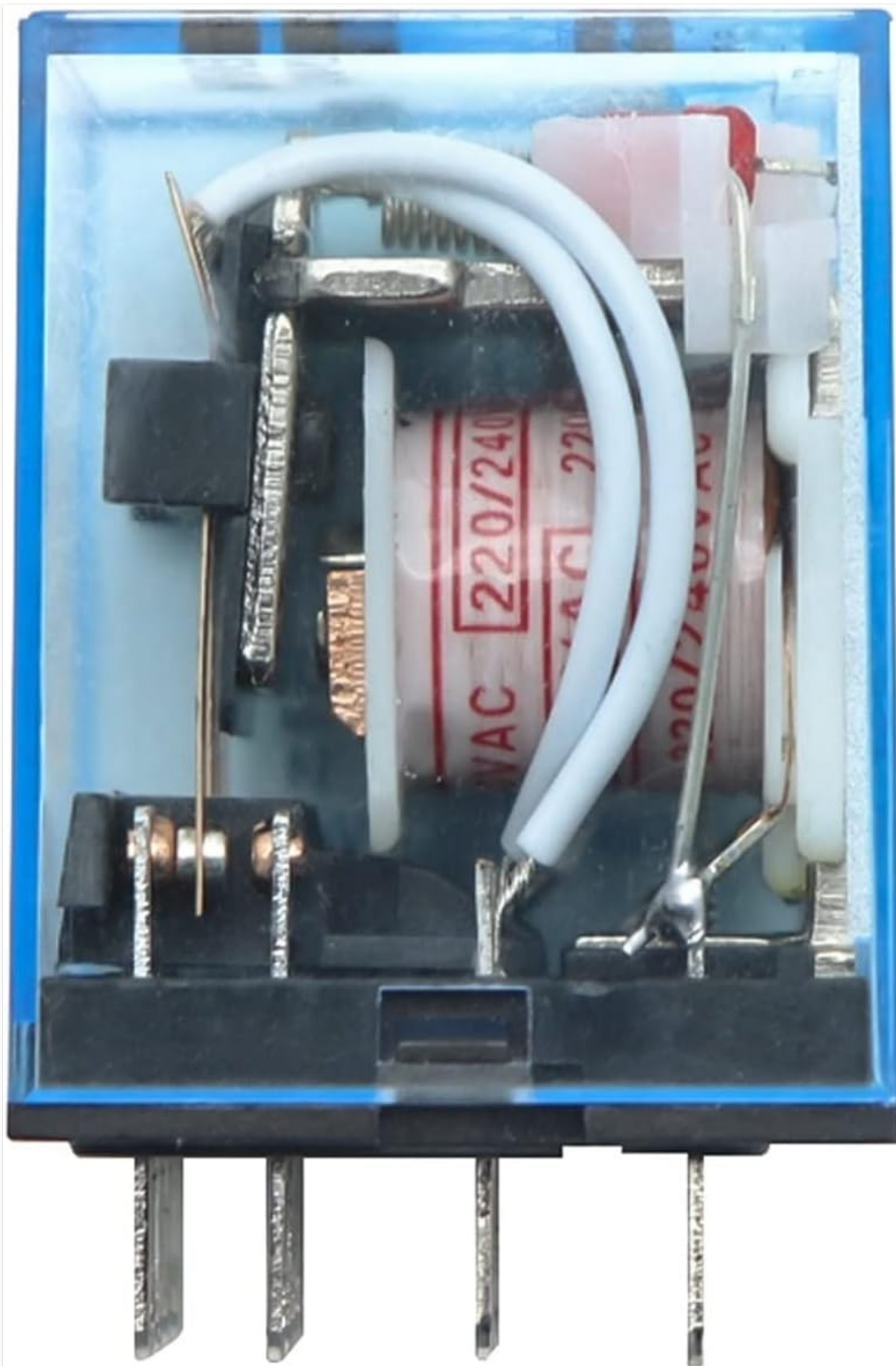


Figure 4.2: Front and top view dimensions of the relay and socket base.

## 5. SETUP AND INSTALLATION

## 5.1 Safety Precautions

- Always disconnect power to the circuit before installing or removing the relay.
- Ensure the coil voltage of the relay matches the control circuit voltage.
- Do not exceed the maximum current and voltage ratings of the relay contacts.
- Installation should be performed by qualified personnel.

## 5.2 Mounting the Socket Base

1. Locate a suitable position on a standard 35mm DIN rail within your control panel.
2. Align the socket base with the DIN rail.
3. Press the socket firmly onto the DIN rail until it clicks into place. Ensure it is securely fastened.

## 5.3 Installing the Relay

1. Carefully align the pins of the MY3NJ relay with the corresponding holes in the mounted socket base.
2. Gently push the relay into the socket until it is fully seated. Do not force it.
3. Verify that the relay is firmly in place and all pins are properly connected.

# 6. WIRING DIAGRAMS

Correct wiring is crucial for the proper function of the relay. Refer to the specific diagram for your relay model (MY3NJ) and other variants if applicable.

## 6.1 MY3NJ Wiring Diagram (3PDT)

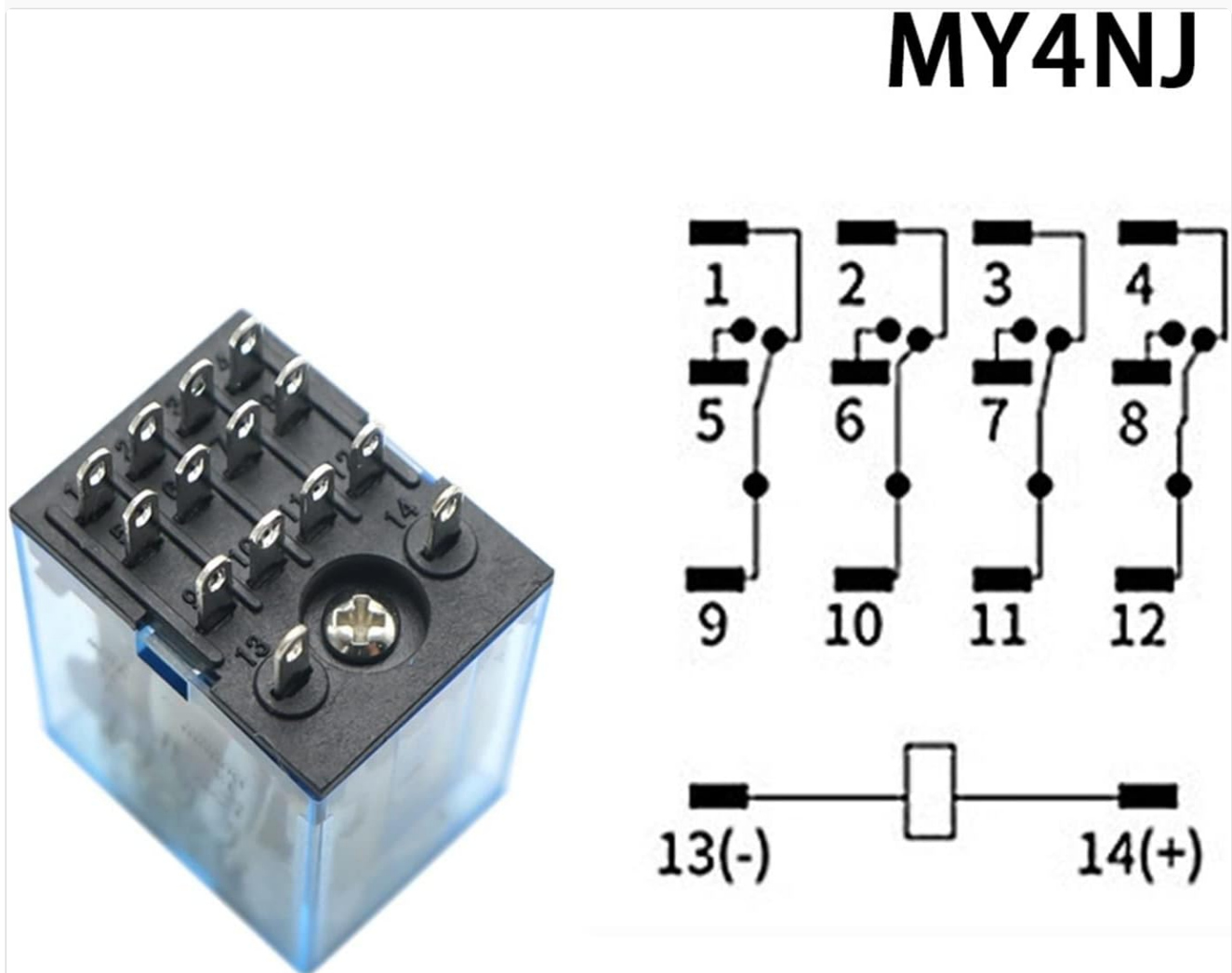




Figure 6.1: Wiring diagram for the MY3NJ relay. Pins 10 and 11 are for the AC 220V coil. Contacts are 1-4, 2-5, 3-6 (NO/NC pairs) and 7, 8, 9 are common terminals.

For the MY3NJ (3PDT) relay, pins 10 and 11 are the coil terminals. When the coil is energized, the common contacts (7, 8, 9) switch from their Normally Closed (NC) positions to their Normally Open (NO) positions. For example, contact 1-4 is a NO pair, and 1-7 is a NC pair. Please refer to the diagram for precise connections.

## 6.2 MY2NJ Wiring Diagram (2PDT)

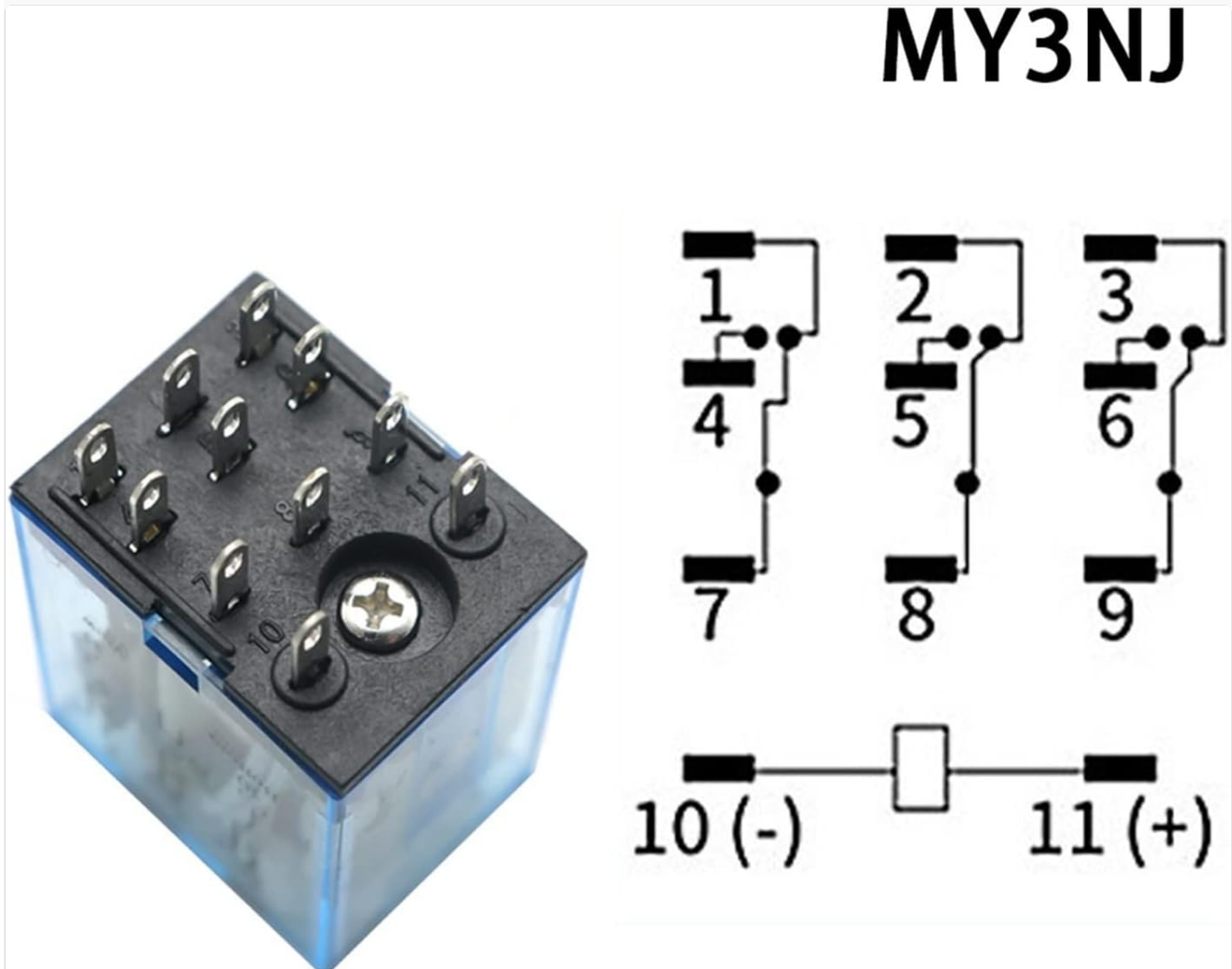


Figure 6.2: Wiring diagram for the MY2NJ relay. Pins 13(-) and 14(+) are for the coil. Contacts are 1-5, 4-8 (NO/NC pairs) and 9, 12 are common terminals.

For the MY2NJ (2PDT) relay, pins 13 and 14 are the coil terminals. When the coil is energized, the common contacts (9, 12) switch from their Normally Closed (NC) positions to their Normally Open (NO) positions. For example, contact 1-5 is a NO pair, and 1-9 is a NC pair. Please refer to the diagram for precise connections.

# MY2NJ

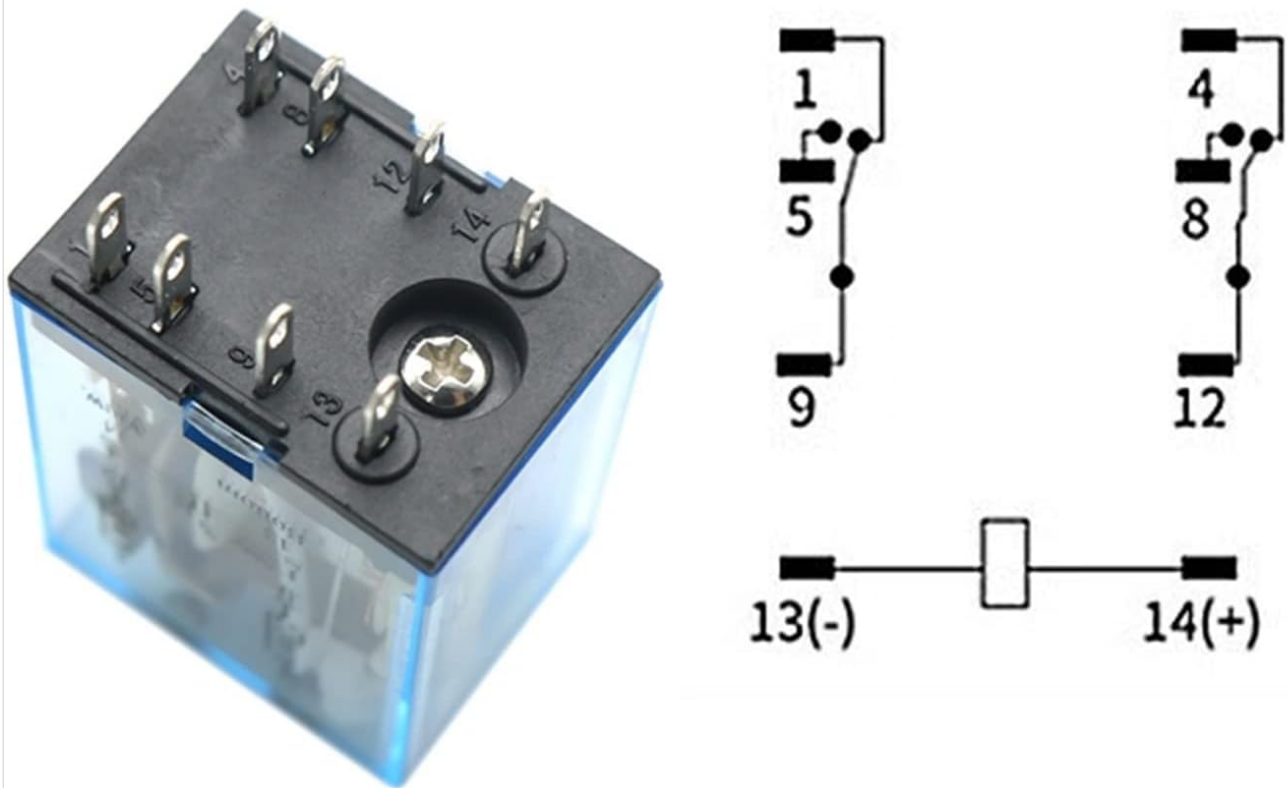


Figure 6.3: Internal view of an electromagnetic relay, showing the coil and contact mechanism.

## 7. OPERATION

The MY3NJ relay operates by energizing its coil. When the AC 220V coil is supplied with power, an electromagnetic field is generated, which pulls an armature. This mechanical action causes the relay's contacts to change state:

- Normally Open (NO) contacts close.
- Normally Closed (NC) contacts open.

When power is removed from the coil, the electromagnetic field collapses, and a spring returns the armature to its original position, causing the contacts to revert to their normal (de-energized) state.

The integrated LED indicator on the relay will illuminate when the coil is energized, providing a visual confirmation of its operational status.

## 8. MAINTENANCE

Electromagnetic relays are generally low-maintenance devices. However, periodic inspection can help ensure reliable operation:

- **Visual Inspection:** Periodically check the relay and socket for any signs of physical damage, discoloration, or loose connections.
- **Cleaning:** If dust or debris accumulates, gently clean the exterior of the relay and socket with a soft, dry cloth. Do

not use liquids or abrasive cleaners.

- **Contact Life:** Relay contacts have a finite lifespan, especially when switching inductive loads. If erratic behavior or contact welding is observed, the relay may need replacement.

## 9. TROUBLESHOOTING

If the relay is not functioning as expected, consider the following troubleshooting steps:

- **Relay Not Energizing:**
  - Check if the coil is receiving the correct AC 220V power supply.
  - Verify that the coil terminals (Pins 10 and 11 for MY3NJ) are correctly wired.
  - Ensure the relay is fully seated in its socket.
  - Check for any breaks in the control circuit wiring.
- **Contacts Not Switching:**
  - Confirm the coil is energizing (check the LED indicator).
  - Verify that the load circuit wiring is correct according to the diagram.
  - Check for excessive load current that might have damaged the contacts.
  - If the relay has been in service for a long time, contacts may be worn or welded. Consider replacing the relay.
- **Intermittent Operation:**
  - Inspect for loose wiring connections at both the coil and contact terminals.
  - Ensure stable power supply to the coil.

## 10. WARRANTY AND SUPPORT

This product is provided without an explicit warranty. For technical assistance or inquiries, please contact your point of purchase or the manufacturer, ASRTD, through their official support channels.