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TWTADE YJ2N-LY

TWTADE YJ2N-LY AC 110V Electromagnetic Power Relay Instruction Manual

Model: YJ2N-LY

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the TWTADE YJ2N-LY AC 110V Electromagnetic Power Relay. This DPDT relay with an 8-pin socket base is designed for various industrial and automotive control applications, offering reliable switching capabilities.

2. Safety Information

- Always disconnect power before installation, wiring, or maintenance to prevent electric shock.
- Ensure all wiring is performed by a qualified professional and complies with local electrical codes.
- Verify the coil voltage (AC 110V) and contact capacity (10A 250VAC / 28VDC) match your application requirements.
- Do not exceed the specified current and voltage ratings.
- Keep the relay and socket away from moisture and extreme temperatures.

3. Product Overview

The TWTADE YJ2N-LY relay consists of an electromagnetic relay unit and a compatible YJTF08A-E socket base. The relay features a DPDT (Double Pole Double Throw) configuration with 8 pins, providing two sets of normally open (NO) and normally closed (NC) contacts.



Figure 3.1: TWTADE YJ2N-LY relay and YJTF08A-E socket base, along with the retaining clip.

An indicator light on the relay provides visual feedback on its operational status. For AC coil versions, the indicator light is red, while for DC coil versions, it is green.

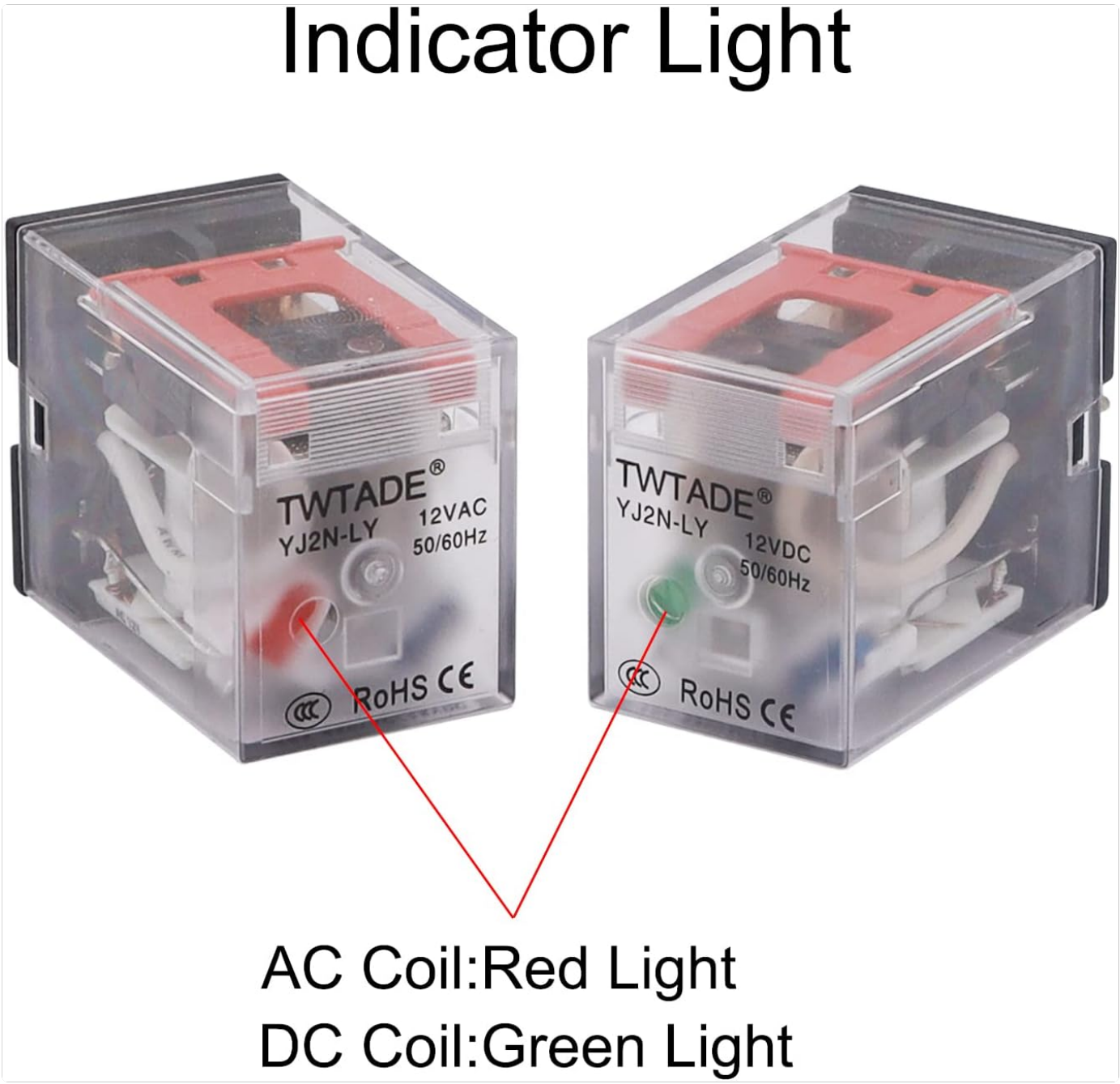


Figure 3.2: Indicator light color coding for AC (red) and DC (green) coil relays.

4. Specifications

Feature	Specification
Model	YJ2N-LY
Coil Voltage	AC 110V
Contact Capacity	10A 250VAC / 28VDC
Contact Type	DPDT (2NO 2NC)
Number of Pins	8 Pin
Mount Type	35mm DIN Rail Mount
Relay Dimensions (L x W x H)	2.6 x 2 x 3.5 cm (1" x 0.8" x 1.4")

Feature	Specification
Socket Dimensions (L x W x H)	7.7 x 2.4 x 2.7 cm (3.03" x 0.94" x 1")
Total Height (Relay + Socket)	6.5 cm (2.5")
Net Weight	81g
Contact Material	Silver
Operation Mode	Automatic



Figure 4.1: Detailed dimensions of the relay and socket assembly.

5. Setup

The TWTADE YJ2N-LY relay is designed for easy installation onto a 35mm DIN rail using its compatible socket base.

1. **Mounting the Socket:** Secure the YJTF08A-E socket base onto a standard 35mm DIN rail. Ensure it is firmly clipped into place.
2. **Inserting the Relay:** Carefully align the 8 pins of the YJ2N-LY relay with the corresponding slots on the socket base. Gently push the relay into the socket until it is fully seated.

3. **Securing the Relay:** Use the provided metal retaining clip to secure the relay firmly in the socket, preventing accidental dislodgement.



Figure 5.1: The YJ2N-LY relay properly installed in its socket base.

6. Wiring Methods

Proper wiring is crucial for the correct and safe operation of the relay. Refer to the pinout diagram and the provided video for guidance.



Figure 6.1: Pinout diagram for the YJ2N-LY relay, showing DPDT contacts (2NO, 2NC) and coil terminals (7 and 8).

The relay features two sets of contacts: Normally Open (NO) and Normally Closed (NC). When the coil is energized, the NO contacts close, and the NC contacts open.

6.1. Wiring Method 1: Simultaneous Control

This method demonstrates controlling two separate devices simultaneously using the relay's contacts. When the switch is turned on, the relay energizes, and both connected devices activate. When the switch is turned off, both devices deactivate.

Your browser does not support the video tag.

Video 6.1: Demonstration of Wiring Method 1, showing how to control two devices simultaneously with the relay. The video illustrates turning on and off a switch to activate/deactivate both connected loads, with the relay's indicator light providing status feedback.

Steps for Wiring Method 1 (as shown in video):

1. Connect the power supply to the relay coil terminals (pins 7 and 8) through a control switch.
2. Connect the first device (e.g., a turn signal light) to one set of Normally Open (NO) contacts.
3. Connect the second device (e.g., an LED strip) to the other set of Normally Open (NO) contacts.
4. Ensure common power is supplied to the common terminals of both contact sets.
5. When the control switch is activated, the relay coil energizes, closing both NO contacts and activating both devices.
6. When the control switch is deactivated, the relay coil de-energizes, opening both NO contacts and deactivating both devices.

6.2. Wiring Method 2: NO/NC Control

This method demonstrates using both Normally Open (NO) and Normally Closed (NC) contacts to control different devices based on the relay's state. When the relay is de-energized, the NC device is active. When the relay is energized, the NO device becomes active, and the NC device deactivates.

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Video 6.2: Demonstration of Wiring Method 2, illustrating how to use both Normally Open (NO) and Normally Closed (NC) contacts to control different devices. The video shows one device active when the relay is off (NC) and another active when the relay is on (NO).

Steps for Wiring Method 2 (as shown in video):

1. Connect the power supply to the relay coil terminals (pins 7 and 8) through a control switch.
2. Connect the first device (e.g., a turn signal light) to a Normally Open (NO) contact.
3. Connect the second device (e.g., an LED strip) to a Normally Closed (NC) contact.
4. Ensure common power is supplied to the common terminals for both contact sets.
5. When the control switch is off, the relay is de-energized, and the device connected to the NC contact is active.
6. When the control switch is activated, the relay coil energizes, closing the NO contact and opening the NC contact. The device connected to the NO contact activates, and the device connected to the NC contact deactivates.

7. Operation

Once properly wired and powered, the TWTADE YJ2N-LY relay operates automatically based on the control signal applied to its coil. When the coil receives the specified AC 110V, it energizes, causing the internal contacts to switch states. The indicator light will illuminate (red for AC 110V model) when the coil is energized.

- **Energized State:** Normally Open (NO) contacts close, Normally Closed (NC) contacts open.
- **De-energized State:** Normally Open (NO) contacts open, Normally Closed (NC) contacts close.

Monitor the indicator light for visual confirmation of the relay's state.

8. Maintenance

The TWTADE YJ2N-LY relay is designed for long-term, reliable operation with minimal maintenance. However, periodic checks can help ensure optimal performance:

- **Visual Inspection:** Periodically inspect the relay and socket for any signs of physical damage, discoloration, or loose connections.
- **Contact Cleaning:** If the relay is operating in a dusty or corrosive environment, contacts may require cleaning. This should only be performed by a qualified technician after disconnecting all power.
- **Connection Check:** Ensure all wiring connections to the socket terminals are secure and free from corrosion.

- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges to prevent premature failure.

9. Troubleshooting

Problem	Possible Cause	Solution
Relay does not energize (indicator light off)	No power to coil, incorrect coil voltage, faulty coil, loose wiring.	Check power supply to coil (pins 7 & 8). Verify coil voltage matches AC 110V. Inspect wiring for loose connections. Replace relay if coil is faulty.
Relay energizes but contacts do not switch	Damaged contacts, mechanical failure.	Replace the relay.
Connected device does not activate	Incorrect wiring to contacts, faulty device, open circuit in load.	Verify wiring to NO/NC contacts according to diagram. Test the connected device independently. Check for continuity in the load circuit.
Overheating or burning smell	Overcurrent, incorrect voltage, short circuit.	Immediately disconnect power. Check load current against relay capacity. Verify correct voltage. Inspect for short circuits. Replace damaged components.

10. Warranty and Support

TWTADE provides a **2-year quality assurance** for this Electromagnetic Power Relay. If you encounter any quality problems within this period, please contact TWTADE for support and replacement.
For further assistance or technical inquiries, please refer to the official TWTADE support channels or your point of purchase.

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