Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

TWTADE JQX-12F-2Z

TWTADE JQX-12F-2Z DC 12V Power Relay Instruction Manual

Model: JQX-12F-2Z | Brand: TWTADE

Introduction Safety Information Specifications Installation & Wiring Operation Maintenance Troubleshooting Support

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the TWTADE JQX-12F-2Z DC 12V Power Relay. Please read this manual thoroughly before using the product to ensure safe and efficient operation.

Product Overview

The TWTADE JQX-12F-2Z is a general-purpose, high-power electromagnetic relay designed for various industrial and electrical control applications. It features a Double Pole Double Throw (DPDT) contact configuration with 2 Normally Open (NO) and 2 Normally Closed (NC) contacts, capable of switching up to 30A at 250V AC or 28V DC. The relay operates with a DC 12V coil voltage and is equipped with 8 pins for connection.



Figure 1: Front view of the TWTADE JQX-12F-2Z DC 12V Power Relay, showing the clear casing and pin connections.

2. Safety Information

Always observe the following safety precautions to prevent injury and damage to the product or connected equipment:

- **Electrical Hazard:** Ensure all power sources are disconnected before installation, wiring, or maintenance.
- **Qualified Personnel:** Installation and wiring should only be performed by qualified electricians or technicians.
- **Voltage and Current Ratings:** Do not exceed the specified coil voltage (DC 12V) or contact ratings (30A 250V AC / 28V DC). Overloading can cause damage or fire.
- **Proper Wiring:** Verify all connections are secure and correctly wired according to the diagram to prevent short circuits or malfunction.
- **Environmental Conditions:** Install the relay in a dry environment, free from excessive dust, moisture, and corrosive gases.

- **Heat Dissipation:** Ensure adequate ventilation around the relay to prevent overheating, especially when operating at maximum load.

3. Product Specifications

Feature	Specification
Product Name	Power Relay
Model	JQX-12F-2Z
Contact Configuration	DPDT (Double Pole Double Throw) 2NO+2NC
Pin Number	8 Pins
Coil Voltage	DC 12V
Contact Rating (AC)	30A 250V AC
Contact Rating (DC)	30A 28V DC
Body Size (L x W x T)	3.5 x 3.3 x 4 cm (1.4" x 1.3" x 1.6")
Total Height	4.8 cm (1.6")
Installing Hole Size (L x W)	0.48 x 0.35 cm (0.19" x 0.14")
Installing Hole Distance (center L x W)	3.85 x 3.78 cm (1.52" x 1.49")
Material	Plastic, Metal
Item Weight	93g (3.2 ounces)
Mounting Type	Screw Mount
Operation Mode	Automatic

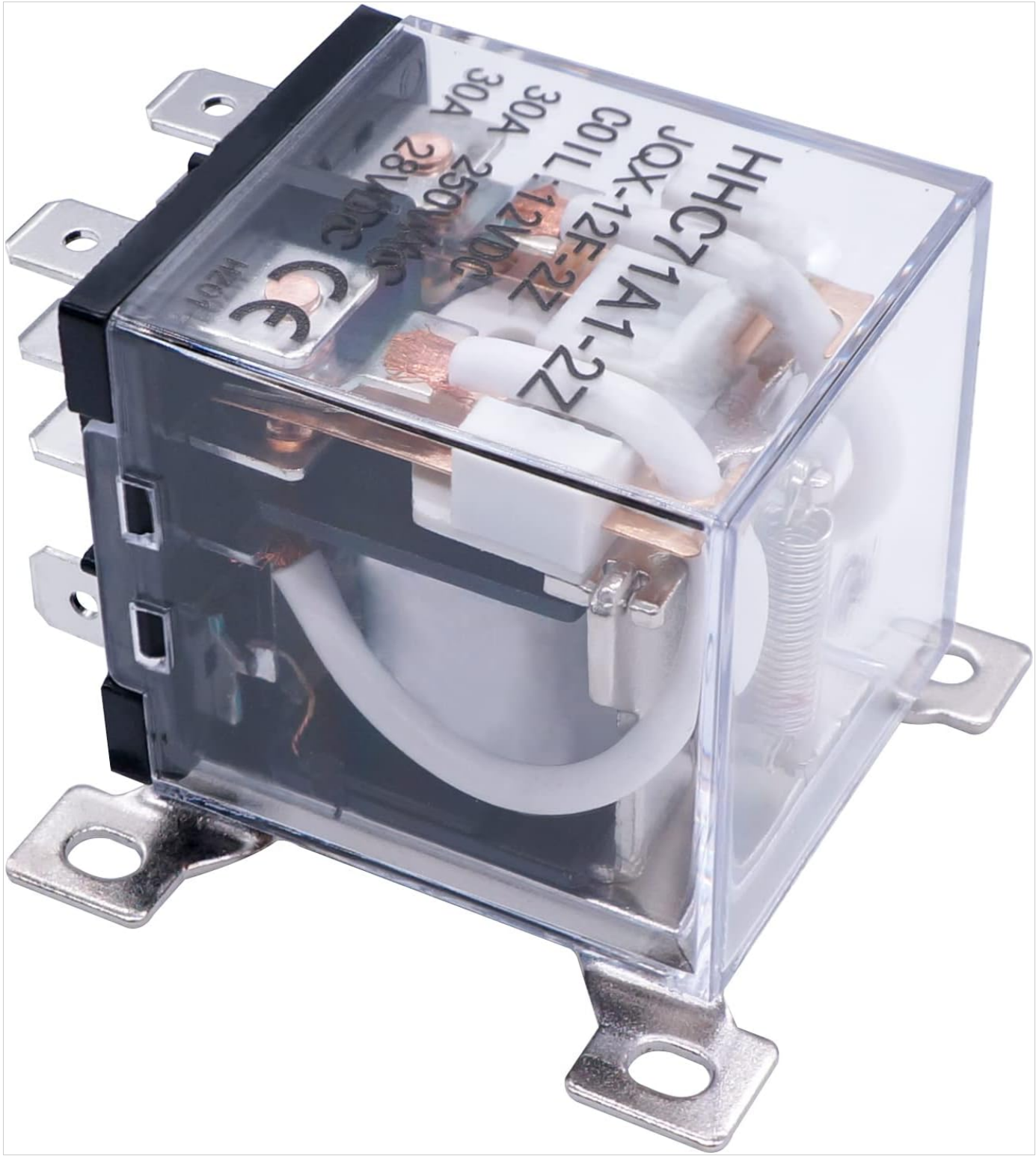


Figure 2: Side view of the relay, illustrating its compact design and mounting brackets.

4. Installation and Wiring

4.1 Installation Steps

1. **Power Disconnection:** Ensure all power to the circuit is turned off before beginning installation.
2. **Mounting:** Secure the relay to a stable surface using the integrated screw mount brackets. Use appropriate screws for the mounting surface.
3. **Environmental Check:** Confirm the installation location meets the environmental requirements (dry, well-ventilated, free from corrosive elements).

4.2 Wiring Instructions

The JQX-12F-2Z relay features an 8-pin configuration. Understanding the pinout is crucial for correct operation. Refer to the wiring diagram below for pin identification and connection details.



Figure 3: Detailed view of the relay's pins, indicating the coil and contact terminals for wiring.

Pin Configuration:

- The relay has a DC 12V coil. Connect the DC 12V power supply to the coil terminals (typically pins 2 and 7, or as indicated on the relay body/diagram).
- The relay has two sets of DPDT contacts. Each set consists of a Common (COM), Normally Open (NO), and Normally Closed (NC) contact.
- **Example Wiring (refer to diagram for specific pin numbers):**
    - If pins 1, 3, and 5 represent one contact set:
        - Pin 1: Common (COM)
        - Pin 3: Normally Open (NO) - Contact is open when the coil is de-energized, closed when energized.

        - Pin 5: Normally Closed (NC) - Contact is closed when the coil is de-energized, open when energized.
    - The second set of contacts will follow a similar pattern (e.g., pins 8, 6, 4).
- Connect the load circuit to the appropriate contact terminals (COM, NO, or NC) based on the desired switching behavior.
- Ensure all wire connections are tight and insulated to prevent accidental contact.

5. Operation

The TWTADE JQX-12F-2Z relay operates by energizing its coil. When the DC 12V coil is energized, an electromagnetic field is created, which pulls the armature, causing the contacts to switch positions.

- **De-energized State:**
    - Normally Open (NO) contacts are open.
    - Normally Closed (NC) contacts are closed.
- **Energized State (DC 12V applied to coil):**
    - Normally Open (NO) contacts close.
    - Normally Closed (NC) contacts open.

The relay will maintain its energized state as long as the DC 12V coil voltage is applied. Upon removal of the coil voltage, the relay returns to its de-energized state.

6. Maintenance

The TWTADE JQX-12F-2Z Power Relay is designed for reliable operation with minimal maintenance. However, periodic checks can help ensure its longevity and proper function.

- **Visual Inspection:** Regularly inspect the relay for any signs of physical damage, discoloration from overheating, or loose connections.
- **Cleaning:** Keep the relay free from dust and debris. Use a soft, dry cloth or compressed air for cleaning. Do not use liquid cleaners.
- **Contact Check:** If possible and safe, periodically check the contact surfaces for excessive pitting or carbon buildup, which can indicate wear or overloading.
- **Connection Integrity:** Ensure all wiring connections remain tight and secure.
- **Environmental Conditions:** Verify that the operating environment continues to meet the specified conditions.

Note: Always disconnect power before performing any maintenance.

7. Troubleshooting

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

Problem	Possible Cause	Solution
Relay does not energize (no click sound)	No power to coil Incorrect coil voltage Loose coil connections Damaged coil	Check DC 12V power supply to coil. Verify correct voltage (DC 12V) is applied. Tighten coil wiring connections. Replace relay if coil is damaged.

Problem	Possible Cause	Solution
Contacts do not switch or switch intermittently	Incorrect wiring of load Overloaded contacts Pitted or dirty contacts Damaged internal mechanism	Review wiring diagram and correct connections. Ensure load current is within 30A rating. Replace relay if contacts are severely damaged. Replace relay.
Relay overheats	Excessive load current Poor ventilation Coil voltage too high	Reduce load or use a higher-rated relay. Improve airflow around the relay. Verify coil voltage is exactly DC 12V.

8. Warranty and Support

For warranty information or technical support regarding your TWTADE JQX-12F-2Z Power Relay, please contact the manufacturer or your point of purchase. Keep your purchase receipt for warranty claims.
Manufacturer: TWTADE
For additional resources, you may visit the TWTADE Store on Amazon.

© 2023 TWTADE. All rights reserved.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

https://manuals.plus/asin/B08GRZTPGF

More documents and user manuals: **https://manuals.plus/**