LUTRZPVT RXM2A

Electric RXM Miniature Plug-in Relays User Manual

Model: RXM2A Series

Brand: LUTRZPVT

1. Introduction

This user manual provides essential information for the safe and efficient use of LUTRZPVT Electric RXM Miniature Plug-in Relays. It covers product overview, installation guidelines, operational principles, maintenance procedures, and troubleshooting tips. Please read this manual thoroughly before installation and operation to ensure proper functionality and to prevent damage or injury.

2. Product Overview

The LUTRZPVT RXM Miniature Plug-in Relays are electromagnetic relays designed for various industrial control applications. These relays feature a compact design, an integrated LED indicator for status, and multiple contact configurations (e.g., 2CO). They are suitable for both AC and DC voltage applications, ranging from 12 VDC to 110 VDC and 24 VAC to 230 VAC, with a current rating of up to 12A.

Figure 2.1: Two RXM Miniature Plug-in Relays. One relay is shown with its clear protective cover, highlighting the internal components and the pin base. The other relay is shown without its cover, emphasizing the exposed pin structure for connection.

Figure 2.2: Detailed view of an RXM relay, showcasing the model number (RXM2AB2P7), voltage ratings (230 VAC), current capacity (12A), and compliance standards (IEC 61810-1, UL, cURus, CE, EAC). The integrated LED indicator is visible at the top.

Figure 2.3: An RXM miniature plug-in relay securely mounted onto its compatible RXZE1M2C socket base. This image demonstrates how the relay integrates with its mounting hardware, showing the connection terminals and the overall assembled unit.

Key Features:

- Miniature plug-in design for easy installation and replacement.
- Integrated LED indicator for visual status confirmation.
- Multiple contact configurations (e.g., 2CO - 2 Changeover contacts).
- Wide voltage compatibility for both AC and DC applications.
- High switching capacity up to 12A.
- Electromagnetic operation for reliable switching.

3. Setup and Installation

Proper installation is crucial for the safe and reliable operation of the RXM relay. Always ensure power is disconnected

before beginning any installation work.

Safety Precautions:

- Disconnect all power to the circuit before installing or removing the relay.
- Ensure the relay's voltage and current ratings match the application requirements.
- Installation should be performed by qualified personnel only.
- Avoid touching live terminals.

Installation Steps:

1. **Mounting the Socket:** If using a socket (e.g., RXZE1M2C), securely mount it onto a DIN rail or panel using appropriate fasteners. Ensure the mounting location is free from excessive vibration, moisture, and extreme temperatures.
2. **Wiring the Socket:** Connect the control circuit wiring to the coil terminals (A1, A2) of the relay socket. Connect the load circuit wiring to the appropriate contact terminals (e.g., 11, 12, 14 for common, normally closed, normally open contacts respectively for a 2CO relay). Refer to the wiring diagram provided with your specific socket or application for correct connections.
3. **Inserting the Relay:** Carefully align the pins of the RXM relay with the corresponding slots on the mounted socket. Gently push the relay into the socket until it is fully seated and secure. Do not force the relay, as this may bend the pins.
4. **Verify Connections:** Double-check all wiring connections for correctness and tightness. Ensure no bare wires are exposed that could cause short circuits.
5. **Apply Power:** Once all connections are verified, restore power to the circuit. The integrated LED on the relay should illuminate when the coil is energized, indicating the relay is active.

4. Operating Principles

The RXM Miniature Plug-in Relay operates on the principle of electromagnetism. When voltage is applied to the relay's coil (terminals A1 and A2), an electromagnetic field is generated. This field attracts an armature, causing the mechanical contacts within the relay to change state.

- **Normally Open (NO) Contacts:** These contacts are open (no current flow) when the relay coil is de-energized and close (allow current flow) when the coil is energized.
- **Normally Closed (NC) Contacts:** These contacts are closed (allow current flow) when the relay coil is de-energized and open (no current flow) when the coil is energized.
- **Common (COM) Contact:** This is the pivot point for the NO and NC contacts.
- **LED Indicator:** The built-in LED illuminates when the relay coil is energized, providing a visual indication of the relay's operational status.

The specific contact configuration (e.g., 2CO) indicates the number of changeover contact sets available. A 2CO relay has two independent sets of common, normally open, and normally closed contacts.

5. Maintenance

RXM relays are designed for long-term, reliable operation with minimal maintenance. However, periodic inspection can help ensure optimal performance and extend the lifespan of the device.

General Maintenance Tips:

- **Visual Inspection:** Periodically inspect the relay and its socket for any signs of physical damage, discoloration, or loose connections.
- **Cleanliness:** Ensure the relay and its surroundings are free from dust, dirt, and moisture, which can affect performance and lead to premature failure. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Connection Tightness:** Check that all wiring connections to the socket terminals are secure. Loose connections can cause overheating and intermittent operation.
- **Environmental Conditions:** Verify that the operating environment remains within the specified temperature and humidity ranges to prevent stress on the relay components.
- **Replacement:** If the relay shows signs of consistent malfunction, excessive heat, or physical damage, it should be replaced with an identical or equivalent model.

Always disconnect power before performing any maintenance or inspection.

6. Troubleshooting

This section provides solutions to common issues you might encounter with your RXM Miniature Plug-in Relay. If the problem persists after following these steps, contact a qualified technician or the manufacturer for assistance.

Problem	Possible Cause	Solution
Relay not energizing (LED off)	◦ No power to coil terminals (A1, A2). ◦ Incorrect coil voltage. ◦ Loose or incorrect wiring. ◦ Damaged relay coil.	◦ Check power supply to the coil. ◦ Verify coil voltage matches relay specifications. ◦ Inspect and correct wiring connections. ◦ Replace the relay if coil is damaged.
Relay contacts not switching	◦ Coil not energizing (see above). ◦ Contacts are welded or worn out. ◦ Incorrect load wiring.	◦ Troubleshoot coil energization. ◦ Replace the relay. ◦ Verify load circuit wiring against diagram.
Intermittent operation	◦ Loose connections. ◦ Unstable power supply. ◦ Relay nearing end of life.	◦ Tighten all wiring connections. ◦ Check power supply stability. ◦ Consider replacing the relay.
Excessive heat from relay	◦ Overcurrent through contacts. ◦ Incorrect coil voltage (too high). ◦ Poor ventilation.	◦ Ensure load current is within relay's rating. ◦ Verify coil voltage is correct. ◦ Improve ventilation around the relay.

7. Specifications

The following table outlines the general specifications for the LUTRZPVT RXM Miniature Plug-in Relays. Specific models may have variations in voltage and current ratings.

Attribute	Value

Attribute	Value
Product Name	Miniature plug-in relays
Model	RXM2A Series
Contact Configuration	2CO (2 Changeover contacts)
Current Rating	Up to 12A
DC Coil Voltage Range	12 VDC - 110 VDC
AC Coil Voltage Range	24 VAC - 230 VAC
Type	Electromagnetic
Indicator	Integrated LED
Package Dimensions	1.18 x 0.79 x 0.39 inches (approximate for single unit)
Item Weight	1.76 ounces (approximate for single unit)
Manufacturer	LUTRZPVT

8. Warranty and Support

For information regarding product warranty, please refer to the terms and conditions provided by your point of purchase or contact the manufacturer directly. LUTRZPVT is committed to providing quality products and support.
For technical assistance or further inquiries, please reach out to the seller or manufacturer through their official support channels. Always provide your product model number (RXM2A) and purchase details when seeking support.