Eltako KR09-12V/UC

Eltako KR09-12V UC Coupling Relay User Manual

Model: KR09-12V/UC | Brand: Eltako

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Eltako KR09-12V UC Coupling Relay. Please read these instructions carefully before using the device and retain them for future reference. The Eltako KR09-12V UC is a coupling relay designed for various electrical switching applications, featuring a nominal voltage of 230V and a maximum switching current of 2A with one normally open (NO) contact.

2. Safety Instructions

- **Electrical Hazard:** Installation and maintenance should only be performed by qualified electricians. Disconnect power before working on the device.
- **Voltage:** Ensure the supply voltage matches the device's nominal voltage (230V).
- **Current:** Do not exceed the maximum switching current of 2A.
- **Environment:** Install the relay in a dry, protected environment, away from direct sunlight, moisture, and extreme temperatures.
- **Proper Wiring:** Follow all local and national electrical codes and wiring diagrams.

3. Product Overview

The Eltako KR09-12V UC is a compact coupling relay designed for reliable switching operations in various control circuits. It features a single normally open (NO) contact and is rated for a nominal voltage of 230V with a maximum switching current of 2A. Its screw terminals ensure secure electrical connections.

Figure 1: Eltako KR09-12V UC Coupling Relay. This image displays the compact design of the relay, highlighting its terminals and housing.

Key Features:

- Nominal Voltage: 230V
- Maximum Switching Current: 2A
- Contact Type: 1 Normally Open (NO)
- Connection Type: Screw Terminals
- Compact Design

4. Specifications

Feature	Value
Manufacturer	Eltako
Model Number	KR09-12V/UC
Dimensions (L x W x H)	10 x 5 x 1 cm
Weight	40 Grams
Nominal Voltage	230 V
Coil Voltage	12 Volts (DC)
Max. Switching Current	2 A
Power	240 Watts
Contact Type	1 Normally Open (NO)
Contact Material	Copper
Connection Type	Screw Terminals
Operating Mode	Automatic
Certification	CULus, VDE
Intended Use	Professional and Domestic Use

5. Setup and Installation

The Eltako KR09-12V UC coupling relay is designed for fixed installation. Due to the electrical nature of this device, installation must be carried out by a qualified electrician in accordance with all applicable national and local electrical codes and regulations.

1. **Power Disconnection:** Before commencing any installation work, ensure that the main power supply to the circuit is completely disconnected and secured against accidental re-connection.
2. **Mounting:** Mount the relay in a suitable enclosure or on a DIN rail, ensuring adequate ventilation and protection from environmental factors.
3. **Wiring Connections:** Connect the relay using the screw terminals. Refer to the wiring diagram provided with the product packaging for specific connection points. Ensure all connections are tight and secure to prevent loose contacts and potential hazards.
4. **Coil Voltage:** Connect the 12V DC control voltage to the relay coil terminals.
5. **Load Connection:** Connect the load circuit to the normally open (NO) contact terminals. Ensure the load voltage and current do not exceed the relay's ratings (230V, 2A).
6. **Verification:** After wiring, double-check all connections for correctness and security.
7. **Power Restoration:** Restore power to the circuit and test the relay's functionality.

Note: Incorrect installation can lead to device malfunction, electrical shock, or fire.

6. Operating Instructions

The Eltako KR09-12V UC coupling relay operates automatically based on the control signal applied to its coil. When the 12V DC coil voltage is present, the normally open (NO) contact will close, completing the load circuit. When the 12V DC coil voltage is removed, the NO contact will open, breaking the load circuit.

- **Activation:** Apply 12V DC to the coil terminals to activate the relay.
- **Deactivation:** Remove the 12V DC from the coil terminals to deactivate the relay.
- **Indicator:** Some models may include an LED indicator to show the relay's activation status. Refer to your specific product for details.

7. Maintenance

The Eltako KR09-12V UC coupling relay is designed for long-term, maintenance-free operation under normal conditions. However, periodic inspection is recommended to ensure optimal performance and safety.

- **Visual Inspection:** Periodically inspect the relay and its connections for any signs of damage, discoloration, loose wiring, or overheating.
- **Cleaning:** If necessary, gently clean the exterior of the relay with a dry, soft cloth. Do not use liquid cleaners or solvents. Ensure power is disconnected before cleaning.
- **Environmental Check:** Ensure the operating environment remains within specified conditions (dry, protected, appropriate temperature).

Note: Do not attempt to open or repair the relay yourself. Refer to qualified personnel for any repairs.

8. Troubleshooting

If you encounter issues with your Eltako KR09-12V UC coupling relay, consider the following common troubleshooting steps:

Problem	Possible Cause	Solution
Relay does not activate (contact does not close)	No 12V DC coil voltage; Incorrect wiring; Faulty relay coil.	Check 12V DC supply to coil terminals; Verify wiring against diagram; Replace relay if coil is faulty.
Relay activates but load does not receive power	Load circuit wiring error; Faulty load; Overload protection tripped; Damaged relay contact.	Check load circuit wiring; Test the load independently; Check circuit breakers/fuses; Replace relay if contact is damaged.
Relay remains activated (contact stays closed)	Coil voltage not removed; Contact welded shut due to overload.	Ensure 12V DC coil voltage is correctly removed; Replace relay if contacts are welded.
Overheating or unusual odors	Overload; Loose connections; Internal fault.	Immediately disconnect power. Check load current; Tighten all connections; Replace relay if internal fault is suspected.

If the problem persists after performing these steps, contact a qualified electrician or Eltako customer support for further assistance.

9. Warranty and Support

Eltako products are manufactured to high-quality standards. This product comes with a stated spare parts availability of 1 year. For specific warranty terms and conditions, please refer to the documentation provided with

your purchase or visit the official Eltako website.
For technical support, inquiries, or to report a fault, please contact your local Eltako distributor or visit the Eltako official website for contact information.