FOUNCY KT-909 12VDC (T91-1C-12V-40A)

FOUNCY KT-909 12VDC Relay User Manual

Model: KT-909 (T91-1C-12V-40A)

Introduction

This manual provides instructions for the safe and effective use of the FOUNCY KT-909 12VDC (T91-1C-12V-40A) 5-pin relay. Please read this manual thoroughly before installation and operation to ensure proper function and to prevent damage or injury.

Product Overview

The FOUNCY KT-909 is a 12VDC automotive-style relay designed for switching higher current loads using a low-current control signal. It features 5 pins, typically configured for a single pole, double throw (SPDT) operation, allowing it to switch between two circuits or to control a single circuit with normally open (NO) and normally closed (NC) contacts.



Image: FOUNCY KT-909 12VDC 5-pin relay. This image displays the compact black housing of the relay with its five metal pins protruding from the base.

Safety Information

Always observe the following safety precautions:

- Ensure power is disconnected before installing or servicing the relay.
- Do not exceed the specified voltage (12VDC) or current (40A) ratings.
- Use appropriate wire gauges for the current load to prevent overheating.
- Install the relay in a dry environment, away from moisture and extreme temperatures.
- Consult a qualified electrician if you are unsure about any wiring procedures.

Setup

Pin Identification

A standard 5-pin relay typically has the following pin assignments:

1. **Pin 85:** Coil Ground (Negative)
2. **Pin 86:** Coil Power (Positive, from switch or control circuit)
3. **Pin 30:** Common Input (Power source for the switched circuit)
4. **Pin 87:** Normally Open (NO) Output (Connected to Pin 30 when coil is energized)
5. **Pin 87a:** Normally Closed (NC) Output (Connected to Pin 30 when coil is de-energized)

Wiring Instructions

1. Connect Pin 85 to a reliable ground source.
2. Connect Pin 86 to the positive (+) control signal (e.g., from a switch or ECU).
3. Connect Pin 30 to the positive (+) power source for the device you wish to control. This source should be fused appropriately.
4. Connect Pin 87 (Normally Open) to the positive (+) terminal of the device you want to power when the relay is activated.
5. If using the Normally Closed function, connect Pin 87a to the positive (+) terminal of a device that should be powered when the relay is inactive.

Mounting

Secure the relay in a stable location using appropriate mounting hardware (not included). Ensure it is protected from excessive vibration, heat, and moisture. Avoid mounting near sensitive electronic components if possible, as relays can generate minor electromagnetic interference.

Operating

The FOUNCY KT-909 relay operates by energizing an internal electromagnetic coil. When 12VDC is applied across pins 85 and 86, the coil creates a magnetic field that pulls an armature, causing the internal contacts to switch.

- **De-energized State:** Pin 30 is connected to Pin 87a (Normally Closed).
- **Energized State:** When 12VDC is applied to the coil, Pin 30 switches connection from Pin 87a to Pin 87 (Normally Open).

This allows a low-current control signal to switch a high-current circuit, protecting the control switch from high loads and enabling various electrical control applications in vehicles or other 12VDC systems.

Maintenance

The FOUNCY KT-909 relay is designed for reliable operation with minimal maintenance. However, periodic checks can extend its lifespan and ensure continued performance.

- **Inspection:** Periodically inspect the relay and its wiring for any signs of corrosion, loose connections, or physical damage.
- **Cleaning:** Keep the relay free from dust, dirt, and moisture. Use a dry, soft cloth for cleaning. Do not use solvents or abrasive cleaners.
- **Storage:** If storing the relay, keep it in a dry, cool environment, away from direct sunlight and extreme temperatures.

Troubleshooting

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

- **No Click Sound:** If the relay does not produce an audible click when the control signal is applied, check the 12VDC supply to pins 85 and 86. Ensure proper polarity and sufficient voltage. Verify the control switch is functioning correctly.
- **Device Not Activating:** If the relay clicks but the connected device does not activate, check the power supply to Pin 30. Ensure the fuse is intact and the power source is live. Verify the wiring from Pin 87 (or 87a) to the device.
- **Overheating:** Excessive heat can indicate an overload or a short circuit. Immediately disconnect power and check the current draw of the connected device. Ensure the relay's 40A rating is not being exceeded.
- **Intermittent Operation:** This can be caused by loose connections, corrosion on the pins, or a faulty control signal.

- Inspect all connections and wiring.

If issues persist after basic troubleshooting, consider replacing the relay.

Specifications

Feature	Specification
Model	KT-909 (T91-1C-12V-40A)
Coil Voltage	12VDC
Contact Current Rating	40A
Number of Pins	5
Contact Configuration	SPDT (Single Pole, Double Throw)
Item Weight	0.035 ounces
Manufacturer	FOUNCY

Warranty and Support

Information regarding product warranty and customer support for the FOUNCY KT-909 12VDC Relay is not available in this manual. Please refer to the product packaging or the point of purchase for details on warranty coverage and how to contact customer support.

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