Fafeicy LH40

Fafeicy LH40 12V Waterproof Relay Fuse Box Kit

Instruction Manual

1. Product Overview

The Fafeicy LH40 12V Waterproof Relay Fuse Box Kit is designed to provide a centralized and protected solution for electrical circuits in various vehicles and marine applications. This robust unit integrates 6 relays and 11 ATC/ATO fuses, offering comprehensive circuit protection and power distribution.
Its waterproof and wear-resistant ABS material construction ensures durability and reliable performance in demanding environments. The included Z-bracket allows for secure mounting in diverse locations, including engine compartments with inclined surfaces.

Image 1.1: Top-down view of the Fafeicy LH40 Relay Fuse Box, displaying the installed relays and fuses, along with the pre-wired input and output harnesses.

2. Package Contents

Please verify that all components are present in your package:

- 1 x Fafeicy LH40 Fuse Relay Box
- 6 x 4-pin 12V 40A Relays (pre-installed)
- 11 x ATC/ATO Blade Fuses (pre-installed):
  - 2 x 5A Fuses
  - 2 x 10A Fuses
  - 2 x 15A Fuses
  - 2 x 20A Fuses
  - 2 x 25A Fuses
  - 1 x 30A Fuse
- Crimp Terminals (for wiring connections)
- Z-Bracket (for mounting)

3. Specifications

Feature	Specification
Model	LH40
Material	ABS, Brass
Relay Type	4-pin
Number of Relays	6
Relay Voltage	12V
Relay Current Rating	40A (each)
Fuse Type	ATC/ATO Blade Fuses
Number of Fuses	11
Total Current Rating	40 Amps (overall box rating)
Application	Automobiles, Buses, Oil Tankers, Ships, Yachts, etc.

4. Safety Information

WARNING: Improper installation or wiring can lead to electrical shock, fire, or damage to your vehicle's electrical system. Always disconnect the vehicle's battery before performing any electrical work.

- Ensure all connections are secure and properly insulated to prevent short circuits.
- Do not exceed the maximum current rating of the fuse box (40 Amps) or individual fuses/relays.
- Use appropriate wire gauges for your application to handle the current load.
- Consult a qualified automotive electrician if you are unsure about any part of the installation process.
- Keep the fuse box cover securely latched to maintain its waterproof integrity.

5. Setup and Installation

The Fafeicy LH40 Relay Fuse Box is designed for straightforward installation, but careful attention to wiring is crucial for safety and performance.

5.1 Mounting the Fuse Box

- Identify a suitable mounting location in your vehicle or vessel. Consider proximity to the battery, the circuits to be protected, and protection from extreme heat or mechanical damage.
- Utilize the included Z-bracket to securely mount the fuse box. The Z-bracket design allows for flexible mounting on flat or inclined surfaces.
- Ensure the mounting location allows for easy access to the fuse box cover for future maintenance.

Image 5.1: The Fafeicy LH40 Relay Fuse Box with its protective cover removed, illustrating the internal layout of relays and fuses, alongside the separate cover.

5.2 Wiring Connections

The fuse box comes with pre-wired harnesses. You will need to connect these to your vehicle's electrical system and the accessories you wish to power.

- **Power Input:** Connect the main power input wire(s) from your battery (via a main circuit breaker or fuse, if applicable) to the designated input terminals of the fuse box. Ensure a secure, crimped connection using appropriate terminals.
- **Ground Connections:** Connect all necessary ground wires from the fuse box and your accessories to a reliable chassis ground point.
- **Accessory Connections:** Connect the output wires from the fuse box to your various accessories (e.g., lights, pumps, radios). Each output is protected by a specific fuse and controlled by a relay.
- **Relay Trigger Wires:** The relays require trigger signals (e.g., from a switch, ignition, or other control module) to activate. Connect these trigger wires to the appropriate relay control terminals.
- Use the provided crimp terminals for all connections to ensure a robust and reliable electrical contact.
- After all connections are made, double-check your wiring against a wiring diagram (if you have created one) to ensure correctness and prevent short circuits.

- Once wiring is complete, securely close the 2 clip lock cover to protect the internal components from splashes, dust, and debris.

6. Operation

The Fafeicy LH40 Relay Fuse Box operates by distributing 12V power to various circuits, protecting them with fuses and controlling them via relays. Once properly installed and wired, the system is ready for use.

- **Fuses:** Each blade fuse protects a specific circuit from overcurrent. If a circuit draws too much current (e.g., due to a short circuit or overload), the fuse will blow, breaking the circuit and preventing damage to the wiring or accessory.
- **Relays:** The 4-pin relays act as electrically operated switches. They allow a low-current control signal (from a switch or ECU) to switch a higher-current circuit (e.g., headlights, horn, fuel pump). This protects your control switches from high current loads.
- To activate a circuit, simply provide the appropriate trigger signal to the corresponding relay. The relay will then close, allowing power to flow through its associated fuse to the connected accessory.

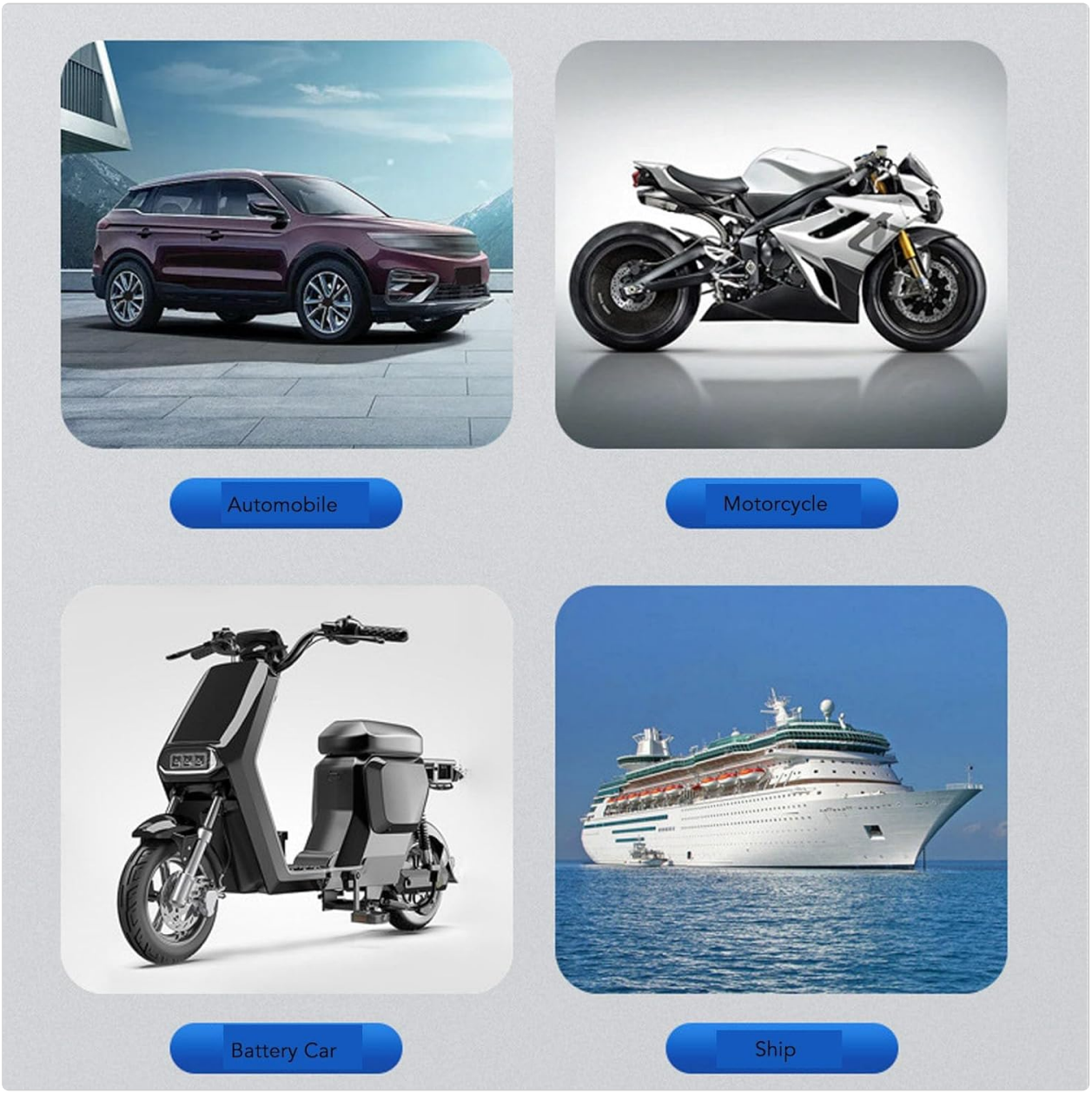

Image 6.1: Examples of common applications for the Fafeicy LH40 Relay Fuse Box, including automobiles, motorcycles, battery cars, and ships.

7. Maintenance

Regular maintenance ensures the longevity and reliable operation of your Fafeicy LH40 Relay Fuse Box.

- **Periodic Inspection:** Periodically inspect the fuse box for any signs of corrosion, loose connections, or damage to the wiring. Ensure the cover is securely latched.
- **Fuse Replacement:** If a circuit stops working, check the corresponding fuse. If a fuse is blown (the metal strip inside is broken), replace it with a new fuse of the **exact same amperage rating**. Never use a fuse with a higher rating, as this can lead to wiring damage or fire.
- **Relay Replacement:** If a relay fails, it can be carefully pulled out and replaced with a new 4-pin 12V 40A relay. Ensure the new relay is inserted correctly into its socket.
- **Cleaning:** Keep the exterior of the fuse box clean and free of dirt and debris. Use a damp cloth if necessary, ensuring no moisture enters the box.

8. Troubleshooting

If you encounter issues with your Fafeicy LH40 Relay Fuse Box, consider the following troubleshooting steps:

- **No Power to an Accessory:**
  - Check the corresponding fuse. Replace if blown.
  - Verify the relay is clicking when its trigger signal is applied. If not, check the trigger signal and the relay itself.
  - Inspect all wiring connections for looseness or corrosion.
  - Ensure the main power input to the fuse box is live.
- **Repeatedly Blown Fuses:**
  - This indicates an overcurrent condition, likely a short circuit or an overloaded accessory.
  - Inspect the wiring of the affected circuit for any bare wires touching metal or other wires.
  - Ensure the accessory's current draw does not exceed the fuse's rating.
  - Never install a fuse with a higher amperage rating than specified.
- **Relay Not Activating:**
  - Check if the trigger signal (12V) is reaching the relay's control terminal.
  - Ensure the relay has a proper ground connection.
  - Test the relay by temporarily swapping it with a known good relay of the same type.

If problems persist after following these steps, it is recommended to consult a professional automotive electrician.

9. Warranty and Support

For warranty information or technical support regarding your Fafeicy LH40 12V Waterproof Relay Fuse Box Kit, please refer to the documentation provided at the time of purchase or contact Fafeicy customer service through their official channels. Keep your purchase receipt as proof of purchase.