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Anrain 500A

Anrain 12V 500A Winch Solenoid Contactor Relay Kit User Manual

Model: 500A

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your Anrain 12V 500A Winch Solenoid Contactor Relay Kit. This kit is designed for use with 8000lb-17000lb ATV, UTV, Truck, and Jeep winches. Please read this manual thoroughly before installation and use to ensure proper function and safety.

Package Contents

Verify that all items listed below are included in your package:

- 1x 12V 500A Winch Solenoid Relay
- 1x Winch Hand Control (Corded Remote)
- 1x Relay Box (Weatherproof ABS plastic)
- 3x 6ft AWG4 Cables with Lugs
- 1x 16.1-inch AWG4 Cable with Lugs
- Ground wire and bolts for securing the solenoid in the box



Image: All components included in the Anrain 12V 500A Winch Solenoid Contactor Relay Kit, showing the relay box, 12V 500A relay, winch hand controller, and wiring kit.



Image: The included AWG4 cables with lugs, consisting of one 16.1-inch cable and three 6ft cables, essential for wiring connections.

Specifications

Feature	Specification
Coil Voltage	12V DC
Current Rating	500 A
Wattage	6000 watts
Contact Material	Steel
Contact Type	Normally Open
Mounting Type	Surface Mount

Feature	Specification
Operation Mode	Manual
Applicable Winch Capacity	8000lb - 17000lb
Relay Box Material	Weatherproof ABS Plastic

Setup and Installation

Proper installation is crucial for the safe and effective operation of your winch solenoid kit. Please follow these steps carefully.

1. Mount the Relay Box

The relay box is designed to protect the solenoid relay from environmental elements like wind and rain. Choose a secure, dry location near your winch and battery for mounting the relay box. Ensure it is easily accessible for wiring connections.

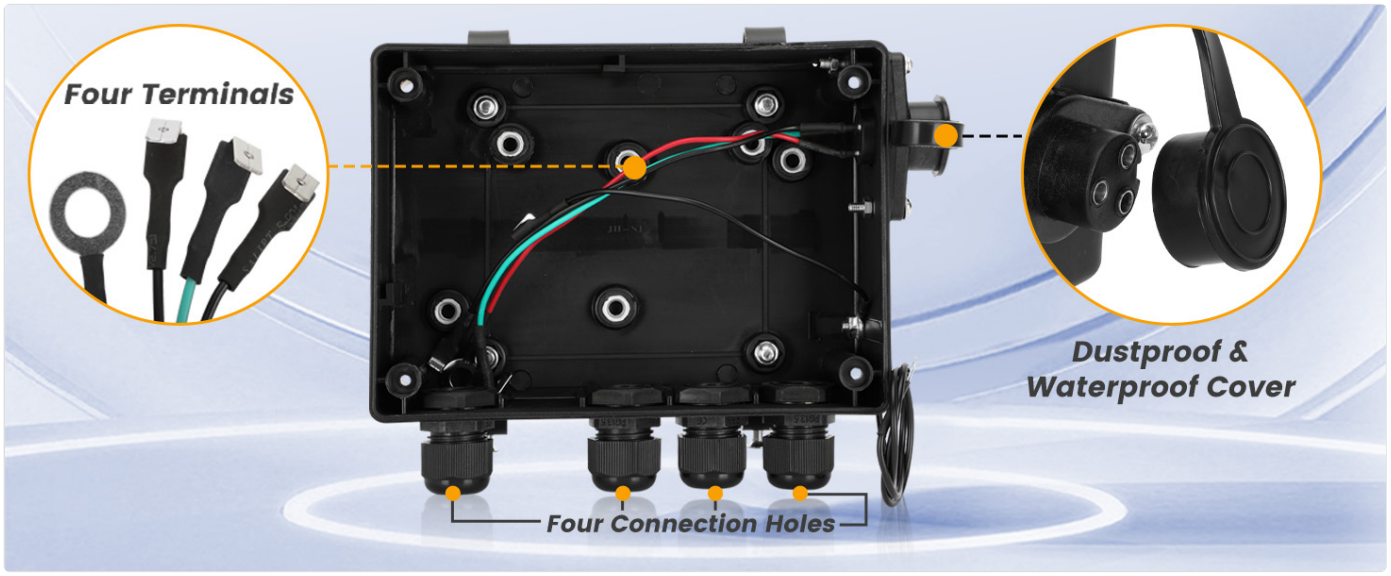


Image: The weatherproof relay contactor box, designed to protect the solenoid from elements. It features four connection holes and a dustproof/waterproof cover.

2. Install the Solenoid Relay

Place the 12V 500A solenoid relay inside the protective relay box. Use the provided bolts and ground wire to secure it properly within the box.



Image: Close-up view of the 12V 500A winch solenoid relay, highlighting the positive (B+) and negative (B-) battery terminals, and the motor positive (M+) and negative (M-) terminals for clear wiring identification.

3. Wiring Diagram and Connections

Refer to the wiring diagram below for correct connections. Ensure all connections are tight and secure to prevent electrical issues.

Image: Detailed wiring diagram for the 12V 500A winch solenoid contactor relay kit. Figure 1 illustrates the connections between the battery, fuse, emergency switch, motor, solenoid, and rocker switch. Figure 2 provides a visual guide to the solenoid's terminals (B1, B2, B3, B4, A1, A2) for accurate wiring.

1. **Battery Connections:** Connect the positive terminal of your 12V battery to the B+ terminal on the solenoid. Connect the negative terminal of your battery to the B- terminal on the solenoid. Ensure a fuse is installed on the positive battery line as shown in Figure 1.
2. **Winch Motor Connections:** Connect the positive wire from your winch motor to the M+ terminal on the solenoid. Connect the negative wire from your winch motor to the M- terminal on the solenoid.

3. **Hand Control Connection:** Plug the corded hand control into the designated port on the relay box.
4. **Grounding:** Ensure the solenoid and relay box are properly grounded to the vehicle chassis.

Safety Warning: Always disconnect the battery before performing any wiring or maintenance. Incorrect wiring can cause damage to the product, vehicle, or lead to personal injury.

Operating Instructions

Once the kit is correctly installed, you can operate your winch using the hand control.

Using the Hand Control



Image: The corded winch hand controller, featuring a sensitive and fast-response design for easy and accurate winch operation.

1. Ensure the vehicle engine is running to provide adequate power to the winch.
2. Uncoil the winch cable as needed, ensuring it is free of kinks and obstructions.

3. Use the buttons on the hand control to activate the winch:
    - Press the 'IN' or 'WIND' button to retract the winch cable.
    - Press the 'OUT' or 'UNWIND' button to extend the winch cable.
4. Operate the winch in short bursts to prevent overheating.
5. Always maintain a safe distance from the winch cable and hook during operation.

The hand control offers sensitive and fast response, allowing for precise control of your winch without needing to be directly next to it.

Maintenance

Regular maintenance ensures the longevity and reliable performance of your winch solenoid kit.

- **Inspect Connections:** Periodically check all electrical connections for tightness and corrosion. Clean any corroded terminals.
- **Check Wiring:** Inspect all wiring for signs of wear, fraying, or damage. Replace any damaged wires immediately.
- **Relay Box Integrity:** Ensure the relay box remains sealed and free from cracks or damage to protect the solenoid from moisture and dust. The box is made of weatherproof ABS plastic, designed for durability.
- **Solenoid Condition:** While protected by the box, occasionally inspect the solenoid for any signs of physical damage or excessive heat.

Troubleshooting

If you encounter issues with your winch solenoid kit, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Winch does not operate	No power to solenoid; Loose or corroded battery connections; Blown fuse; Faulty hand control.	Check battery voltage; Clean and tighten all connections; Inspect and replace fuse if necessary; Test hand control for functionality.
Winch operates intermittently	Loose wiring connections; Overheating solenoid; Low battery voltage.	Tighten all connections; Allow solenoid to cool down; Recharge or replace battery.
Solenoid clicks but winch does not move	Low battery voltage; Motor issue; Heavy load.	Check battery voltage and charge if low; Inspect winch motor; Reduce load on winch.

Application Scenarios

This Anrain 12V 500A Winch Solenoid Contactor Relay Kit is universally applicable for 8000-17000lbs 12V solenoid winches. It is suitable for a wide range of vehicles and uses, including:

- ATVs (All-Terrain Vehicles)
- UTVs (Utility Task Vehicles)
- SUVs (Sport Utility Vehicles)
- Jeeps
- 4x4 Vehicles

- 12V Trailers



Image: Examples of vehicles and situations where the winch solenoid kit can be used, including trucks, off-road vehicles, and snow removal equipment, demonstrating its versatility.

Customer Support

If you encounter any problems with your Anrain 12V 500A Winch Solenoid Contactor Relay Kit, please do not hesitate to contact us. Our customer service team is committed to resolving your issues within 12 hours.
For support, please visit our official website or contact us through the platform where you purchased the product.

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