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Cole Hersee 77050

Cole Hersee 48525 Smart Battery Isolator 85A 9-16V User Manual

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Cole Hersee 48525 Smart Battery Isolator. Designed to manage charging between a primary (starting) battery and an auxiliary (house) battery, this isolator ensures that your starting battery remains fully charged while allowing the auxiliary battery to power accessories. It features an 85 Amp continuous rating and operates within a 9-16 Volt system.

2. SAFETY INFORMATION

WARNING: Always disconnect battery power before installing or servicing electrical components to prevent electric shock or damage to the system.

- Ensure all connections are secure and properly insulated to prevent short circuits.
- Wear appropriate personal protective equipment, including eye protection, when working with batteries and electrical systems.
- Install the isolator in a well-ventilated area, away from flammable materials.
- Refer to your vehicle or equipment manufacturer's manual for specific wiring diagrams and safety precautions.

3. PRODUCT OVERVIEW

The Cole Hersee 48525 Smart Battery Isolator is an electronic device that automatically connects two battery banks when a charging voltage is present and disconnects them when the charging voltage is removed. This prevents the auxiliary battery from discharging the starting battery.



Figure 1: Cole Hersee 48525 Smart Battery Isolator. This image shows the compact design of the isolator, typically featuring terminals for battery connections and possibly an indicator light or control input.

Key Features:

- **Automatic Operation:** Connects and disconnects batteries based on charging voltage.
- **High Current Rating:** 85 Amps continuous.
- **Wide Voltage Range:** Compatible with 9-16 Volt DC systems.
- **Low Voltage Drop:** Minimizes power loss compared to traditional diode isolators.
- **Optional Parallel Function:** Allows for momentary parallel connection of batteries (if equipped and wired).

4. SETUP AND INSTALLATION

Proper installation is critical for the safe and effective operation of the Smart Battery Isolator. Consult a qualified technician if you are unsure about any steps.

4.1 Tools and Materials Required:

- Wire cutters/strippers
- Crimping tool
- Appropriate gauge battery cables (refer to vehicle specifications for current requirements)
- Battery terminals and connectors
- Mounting hardware (screws, bolts)
- Multimeter
- Heat shrink tubing or electrical tape

4.2 Installation Steps:

1. **Disconnect Batteries:** Disconnect the negative (-) terminals from both the starting and auxiliary batteries.
2. **Choose Mounting Location:** Select a dry, cool, and secure location for the isolator, close to the batteries but away from excessive heat or vibration. Ensure adequate ventilation.
3. **Mount the Isolator:** Securely mount the isolator using appropriate hardware.
4. **Wiring Connections:**
 - Connect the **Starting Battery (+)** terminal of the isolator to the positive (+) terminal of the starting battery. Use heavy gauge cable suitable for the 85A rating.
 - Connect the **Auxiliary Battery (+)** terminal of the isolator to the positive (+) terminal of the auxiliary battery. Use heavy gauge cable suitable for the 85A rating.
 - Connect the **Ground (-)** terminal of the isolator to a reliable chassis ground or the negative (-) terminal of the starting battery. This connection is critical for proper operation.

- *Optional:* If your model supports a parallel function, connect the control wire to a momentary switch as per the specific wiring diagram provided with your unit.

5. **Inspect Connections:** Double-check all wiring for correct polarity, secure connections, and proper insulation.

6. **Reconnect Batteries:** Reconnect the negative (-) terminals of both batteries.

5. OPERATING INSTRUCTIONS

The Cole Hersee Smart Battery Isolator operates automatically once installed correctly.

5.1 Automatic Charging:

- When the engine is running and the alternator is charging, the isolator will sense the increased voltage (typically above 13.2V for 12V systems) and automatically connect the starting and auxiliary batteries. Both batteries will then be charged simultaneously.
- When the engine is turned off and the charging voltage drops (typically below 12.8V for 12V systems), the isolator will automatically disconnect the batteries. This prevents accessories powered by the auxiliary battery from draining the starting battery.

5.2 Parallel Function (If Applicable):

Some models of the Smart Battery Isolator include a feature to momentarily connect the two battery banks in parallel. This can be useful for emergency starting if the main starting battery is low.

- To activate, press and hold the momentary switch connected to the isolator's control input.
- Release the switch once the engine has started or the emergency situation has passed.

6. MAINTENANCE

The Cole Hersee Smart Battery Isolator is designed for minimal maintenance. However, periodic checks are recommended to ensure optimal performance.

- **Inspect Connections:** Annually, check all battery cable connections to the isolator and batteries for tightness, corrosion, and damage. Clean any corrosion with a wire brush and baking soda solution.
- **Check Wiring:** Ensure all wiring is intact, not frayed, and properly insulated.
- **Clean Unit:** Keep the isolator housing clean and free of dirt or debris. Do not use harsh chemicals.
- **Ventilation:** Ensure the mounting location maintains adequate airflow around the unit.

7. TROUBLESHOOTING

If you experience issues with your Smart Battery Isolator, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Auxiliary battery not charging.	No charging voltage from alternator. Faulty connections to isolator or batteries. Isolator malfunction. Low voltage threshold not met.	Check alternator output. Verify all wiring connections are secure and clean. Ensure the ground connection is solid. Test isolator operation with a multimeter. Ensure engine is running and producing sufficient voltage (above 13.2V).
Starting battery drains when engine is off.	Isolator not disconnecting batteries. Faulty isolator. Incorrect wiring.	Check isolator operation; it should disconnect when voltage drops below 12.8V. Verify wiring, especially the ground connection. If isolator remains connected, it may be faulty and require replacement.
Voltage readings fluctuate or drop unexpectedly.	Loose or corroded connections. Intermittent fault in isolator or wiring.	Inspect and clean all battery and isolator terminals. Ensure all connections are tight. Carefully test voltage at various points with a multimeter while the system is operating to pinpoint the source of fluctuation.

If problems persist after following these steps, contact Cole Hersee customer support or a qualified technician.

8. SPECIFICATIONS

Feature	Detail
Model Number	77050 (Product Title: 48525)
Continuous Current Rating	85 Amps
Operating Voltage	9-16 Volts DC
Product Dimensions	3.25 x 4.25 x 3 inches
Item Weight	1.14 pounds
Manufacturer	Cole Hersee
ASIN	B015YSX97S
Date First Available	September 30, 2015

9. WARRANTY INFORMATION

Cole Hersee products are manufactured to high-quality standards. For specific warranty terms and conditions, please refer to the official Cole Hersee website or the warranty card included with your product. Typically, products are warranted against defects in materials and workmanship for a specified period from the date of purchase.

10. CUSTOMER SUPPORT

For technical assistance, replacement parts, or further information regarding your Cole Hersee Smart Battery Isolator, please contact Cole Hersee customer support:

- **Website:** Visit the official [Cole Hersee website](#) for product documentation and contact information.
- **Phone:** Refer to the website for regional contact numbers.

