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› Nilight 3-Way Rocker Switch Model 90741B Instruction Manual

Nilight 90741B

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For 12V/24V DC Vehicle Applications

1. IMPORTANT SAFETY INFORMATION

Always disconnect power before installing or servicing any electrical components. Improper installation can lead to electrical shock, fire, or damage to the product and vehicle. Ensure all wiring connections are secure and insulated. This product is designed for 12V-24V DC systems only. Do not exceed the rated current (20A at 12V DC, 10A at 24V DC).

If you are unsure about any part of the installation process, consult a qualified electrician or automotive technician.

2. PRODUCT OVERVIEW

The Nilight 3-Way Rocker Switch (Model 90741B) allows you to control a single electrical load (such as a light) from two separate locations. This is commonly used in vehicles like RVs, campers, trucks, boats, UTVs, and ATVs where convenient control from multiple points is desired. The switch features a durable, waterproof design for reliable performance in various environments.

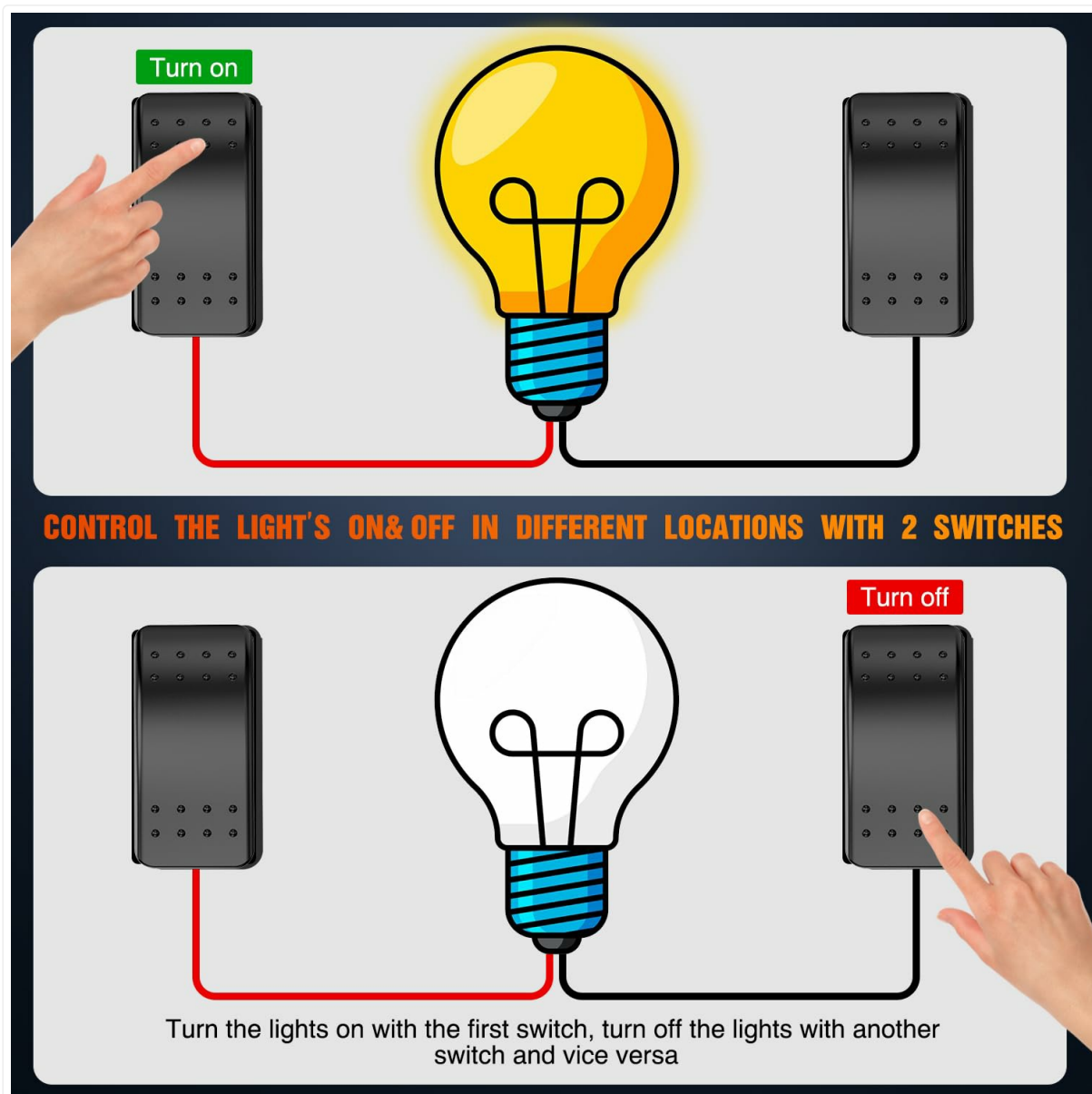


Figure 2.1: Illustration of a 3-way switch system controlling a light from two distinct points.

3. PACKAGE CONTENTS

- 2 x Nilight 3-Way Rocker Switches (Model 90741B)
- 1 x Wiring Diagram (included in package)

4. SPECIFICATIONS

Feature	Specification
Model Number	90741B
Operation Mode	ON-OFF-ON
Current Rating	20A @ 12V DC, 10A @ 24V DC
Operating Voltage	12-24 Volts DC
Contact Type	Normally Open

Feature	Specification
Connector Type	Plug In (Blade Terminals)
Switch Type	Rocker
Material	Acrylonitrile Butadiene Styrene, Metal (Brass Contacts)
Mounting Hole Size	1.66 x 0.96 inches (approx.)
International Protection Rating	IP65 (Waterproof)
Upper Temperature Rating	50 Degrees Celsius
Wattage	60 watts (at 12V)
Compatible Vehicle Types	RV, Camper, Trucks, Boats, UTV, ATV, Polaris Ranger, and other 12-24V vehicles

5. INSTALLATION

5.1 Mounting

1. Ensure the mounting surface is clean and dry.
2. Cut a rectangular hole with dimensions of approximately 1.66 inches by 0.96 inches.
3. Insert the rocker switch into the cutout. The snap-in design will secure it in place.



Figure 5.1: Illustration of the snap-in installation process for the rocker switch.

5.2 Wiring Diagram

The Nilight 3-Way Rocker Switch is designed to control a single load from two locations. A typical 3-way switch setup involves two switches and a load. The switches connect to the power source and the load using common and traveler wires.

3-WAY SWITCHES

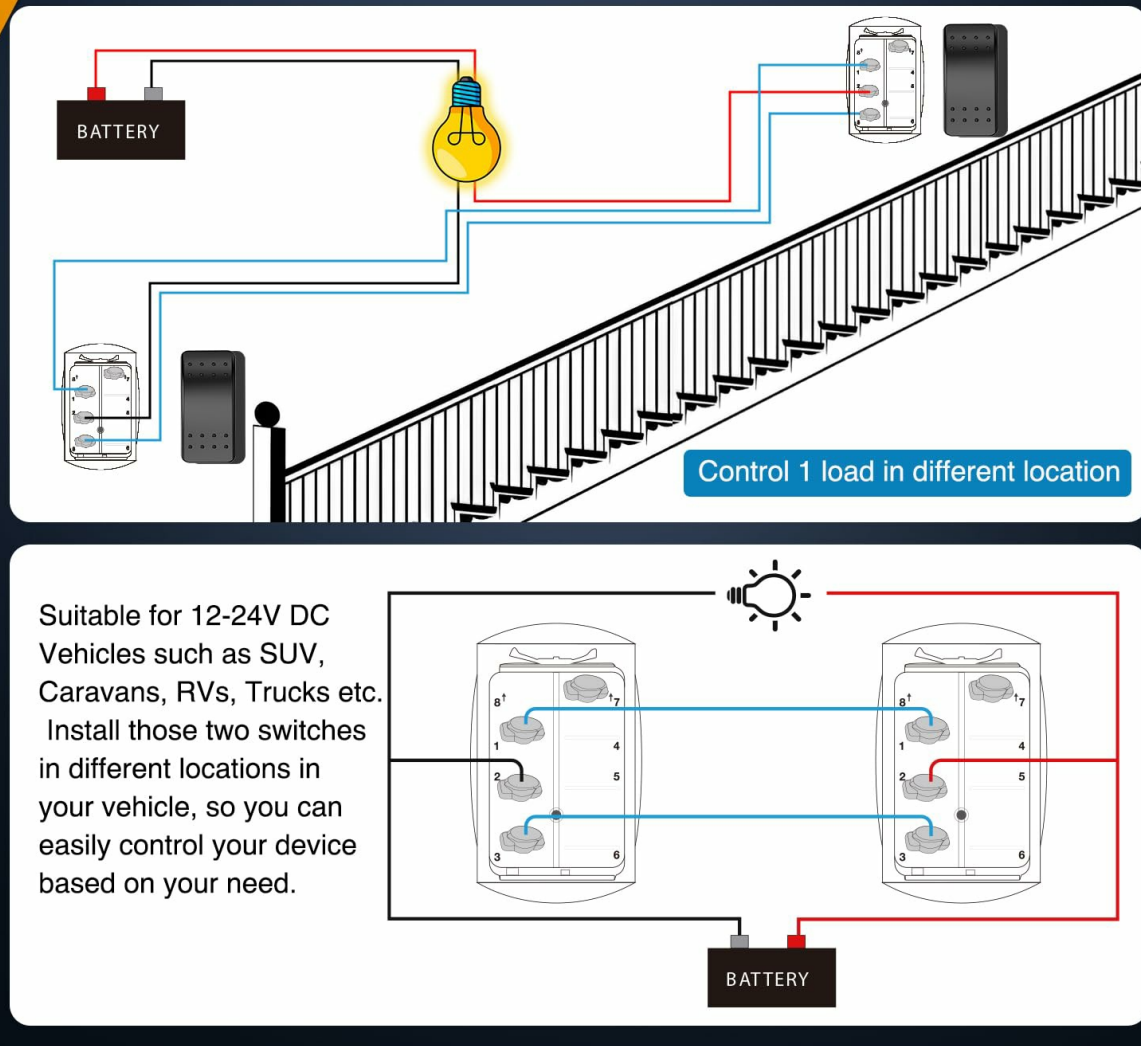


Figure 5.2: General wiring diagram for a 3-way rocker switch application in a 12-24V DC vehicle system.

IMPORTANT WIRING NOTE: Customer feedback indicates that the wiring diagram provided with the product may be incorrect or misleading, potentially causing short circuits if followed precisely. For a standard 3-way switch configuration:

- The **positive (+) battery wire** should connect to the **common terminal** (often marked '3' or 'Input') of the **first switch**.
- The **positive (+) load wire** (to the device being controlled) should connect to the **common terminal** (often marked '3' or 'Output') of the **second switch**.
- The **two traveler wires** connect the remaining terminals (often marked '1' and '2' or '4' and '5') between the two switches.
- The **negative (-) wire** from the battery should connect directly to the negative (-) terminal of the load and **does not typically connect to the switch terminals** in a standard 3-way setup.

Always verify your wiring with a multimeter before applying power. If you encounter issues or are uncertain, consult a professional or refer to reliable automotive electrical guides for 3-way switch wiring.

6. OPERATION

Once properly installed and wired, the Nilight 3-Way Rocker Switch allows for simple control of your

connected device. Pressing the rocker switch on either switch will change the state of the connected load (e.g., turn a light ON or OFF), regardless of the position of the other switch. This provides convenient control from two separate points within your vehicle.

7. MAINTENANCE

The Nilight 3-Way Rocker Switch is designed for durability and is IP65 waterproof rated. Regular maintenance is minimal:

- **Cleaning:** Wipe the switch surface with a damp cloth to remove dirt or debris. Avoid using harsh chemicals or abrasive cleaners.
- **Inspection:** Periodically check the wiring connections to ensure they remain secure and free from corrosion.
- **Environmental Protection:** While waterproof, prolonged submersion is not recommended. Ensure the switch is properly sealed in its mounting location.

8. TROUBLESHOOTING

- **Switch Not Functioning:**
 - Check all wiring connections for looseness or corrosion.
 - Verify that power is supplied to the circuit.
 - Confirm the load (e.g., light bulb) is operational.
 - Re-examine the wiring against the corrected 3-way switch principles mentioned in Section 5.2.
- **Short Circuit or Blown Fuse:**
 - This is often caused by incorrect wiring. Immediately disconnect power.
 - Carefully review the wiring diagram and ensure all connections are correct, especially the negative wire not being connected to the switch terminals.
 - Replace any blown fuses only after correcting the wiring issue.
- **Intermittent Operation:**
 - Check for loose connections or damaged wires.
 - Ensure the switch is securely mounted and not experiencing physical interference.

9. PRODUCT FEATURES AND APPLICATIONS



Figure 9.1: The switch features a sturdy ABS construction, snap-in design, 4-pin terminals, and brass contacts for good electrical conductivity.



Figure 9.2: Physical dimensions of the rocker switch, including height, width, and mounting hole size.

This switch is highly versatile and suitable for a wide range of 12-24V DC applications:

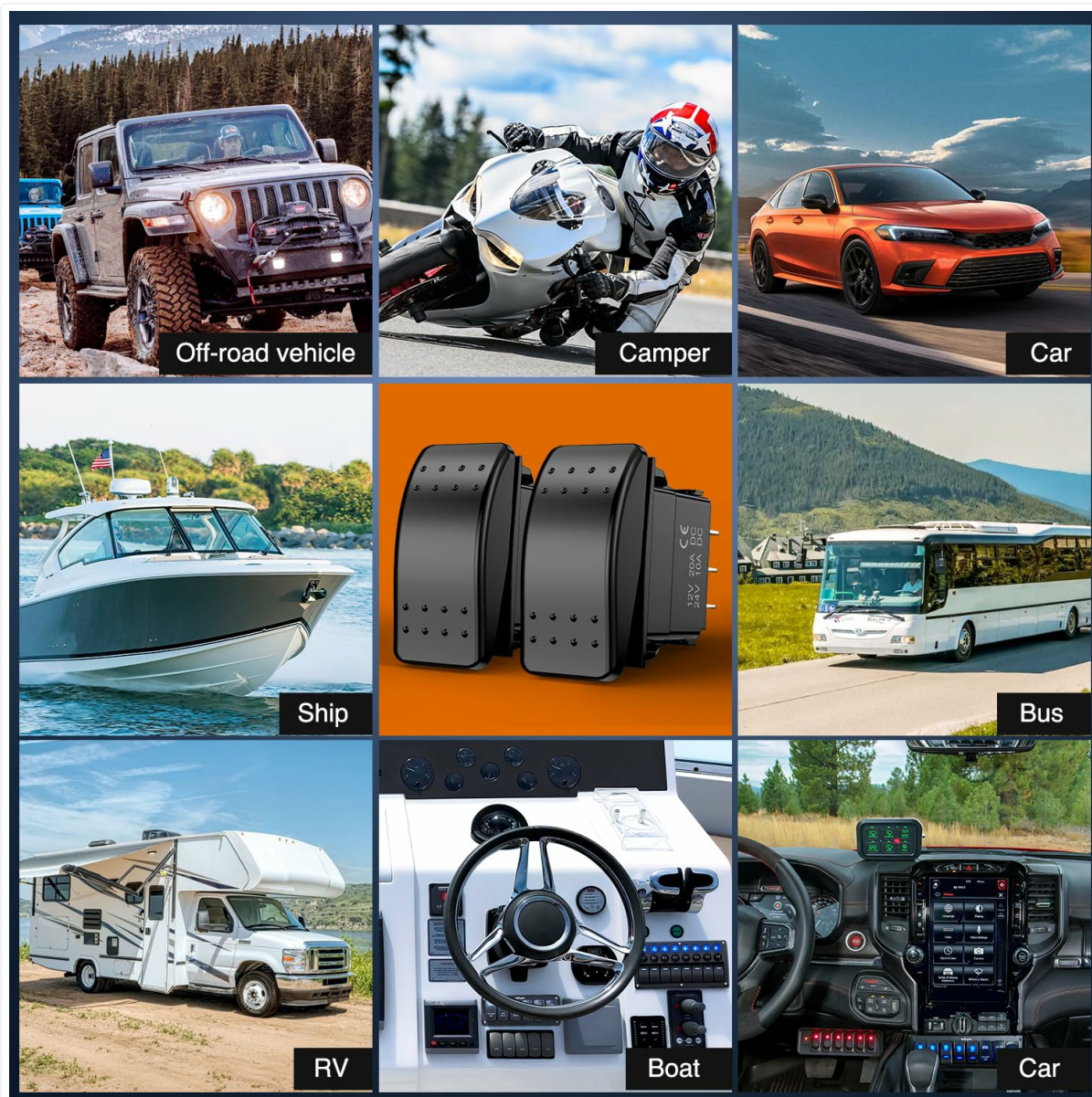


Figure 9.3: Examples of vehicle types where the Nilight 3-Way Rocker Switch can be used.

10. WARRANTY INFORMATION

The Nilight 3-Way Rocker Switch (Model 90741B) comes with a **2-Year Warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims. For specific terms and conditions, refer to the official Nilight warranty policy or contact customer support.

11. CUSTOMER SUPPORT

For technical assistance, warranty claims, or any questions regarding your Nilight 3-Way Rocker Switch, please contact Nilight customer support through their official website or the retailer where the product was purchased. Be prepared to provide your product model number (90741B) and proof of purchase.