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› [Nilight](#) /

› [Nilight 6 Gang Switch Panel Universal Circuit Control Relay System \(Model 90285F\) User Manual](#)

## Nilight 90285F

# Nilight 6 Gang Switch Panel Universal Circuit Control Relay System (Model 90285F) User Manual

## INTRODUCTION

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The Nilight 6 Gang Switch Panel is a universal circuit control relay system designed to manage up to six auxiliary electrical devices in various vehicles, including off-road vehicles, ATVs, UTVs, trucks, cars, SUVs, boats, and RVs. This all-in-one system simplifies wiring and provides a centralized control point for your accessories, featuring integrated relays, fuses, and automatic dimmable LED backlighting.

## KEY FEATURES

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- **6-Gang Control:** Manages up to six independent 12V DC accessories with a maximum output power of 720 Watts and a maximum input current of 60A.
- **Automatic Dimmable Backlight:** The switch panel's backlight adjusts automatically based on ambient light conditions, ensuring optimal visibility without glare.
- **Customizable Labels:** Includes 50 reusable stickers to personalize each switch function.
- **Integrated Safety Features:** Equipped with over-voltage, over-current, overheat, and reverse polarity protection for enhanced safety.
- **Easy Installation:** Features a plug-and-play wiring harness with an extension cable and two mounting options for flexible setup.
- **All-in-One Design:** Combines the switch panel, circuit control relay system, fuses, and wiring harness into a compact unit.

## PACKAGE CONTENTS

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Verify that all components are present in your package:

- 6 Gang Switch Panel
- Circuit Control Box with Relay System
- Wiring Harness with Extension Cable
- Assorted Auto Fuses
- 50 Reusable Switch Labels

- Double-sided Tape for Mounting
- Adjustable Mount Bracket
- Mounting Hardware (Screws, Nuts, Washers, Allen Keys)



Image: All components included in the Nilight 6 Gang Switch Panel package.

## SPECIFICATIONS

Feature	Specification
Input Voltage	12V DC
Max. Output Power	720W
Max. Input Current	60A
Switch Panel Size	3.74" x 2.65"
Circuit Control Box Size	6.26" x 3.52" x 3.27"
Operating Temperature	-40°C to +105°C

Feature	Specification
Protection	Over-Voltage, Over-Current, Overheat, Reverse Polarity
IP Rating	IP65
Model Number	90285F

## SETUP AND INSTALLATION

### 1. Wiring Diagram Overview

The system is designed for straightforward installation. The main components include the switch panel, the circuit control box (containing relays and fuses), and the wiring harness. Ensure your vehicle's battery is disconnected before beginning installation.



Image: Wiring connections for the switch panel and control box.

The diagram illustrates how to connect the control box to your vehicle's battery (positive and negative terminals) and an ACC (Accessory) power source. Each of the six outputs from the control box connects to a separate accessory (e.g., light bars, fog lights). The switch panel then connects to the control box via a single plug-and-play cable.

Video: An overview of the Nilight 6 Gang Switch Controller Circuit Control System, demonstrating its components and basic wiring setup.

## 2. Mounting the Switch Panel

Two primary mounting options are provided for the switch panel:

- **Double-sided Tape:** For a flush, low-profile installation on flat surfaces. Ensure the surface is clean and dry before applying.
- **Adjustable Mount Bracket:** For more flexible positioning, allowing the panel to be angled or mounted on uneven surfaces.



Image: Illustration of the double-sided tape and adjustable bracket mounting methods.

Video: Demonstrates the mounting process of the 6-gang switch panel using double-sided tape and applying custom labels.

## 3. Connecting Accessories

Each of the six output terminals on the circuit control box is designed to connect to a specific accessory. Ensure that the total wattage of connected accessories does not exceed the system's maximum output power of 720W.

# CONTROL DIFFERENT LIGHTS

This will give you the ability to have the central management system for you to control all your lighting products without wire , each lighting products to a relay harness

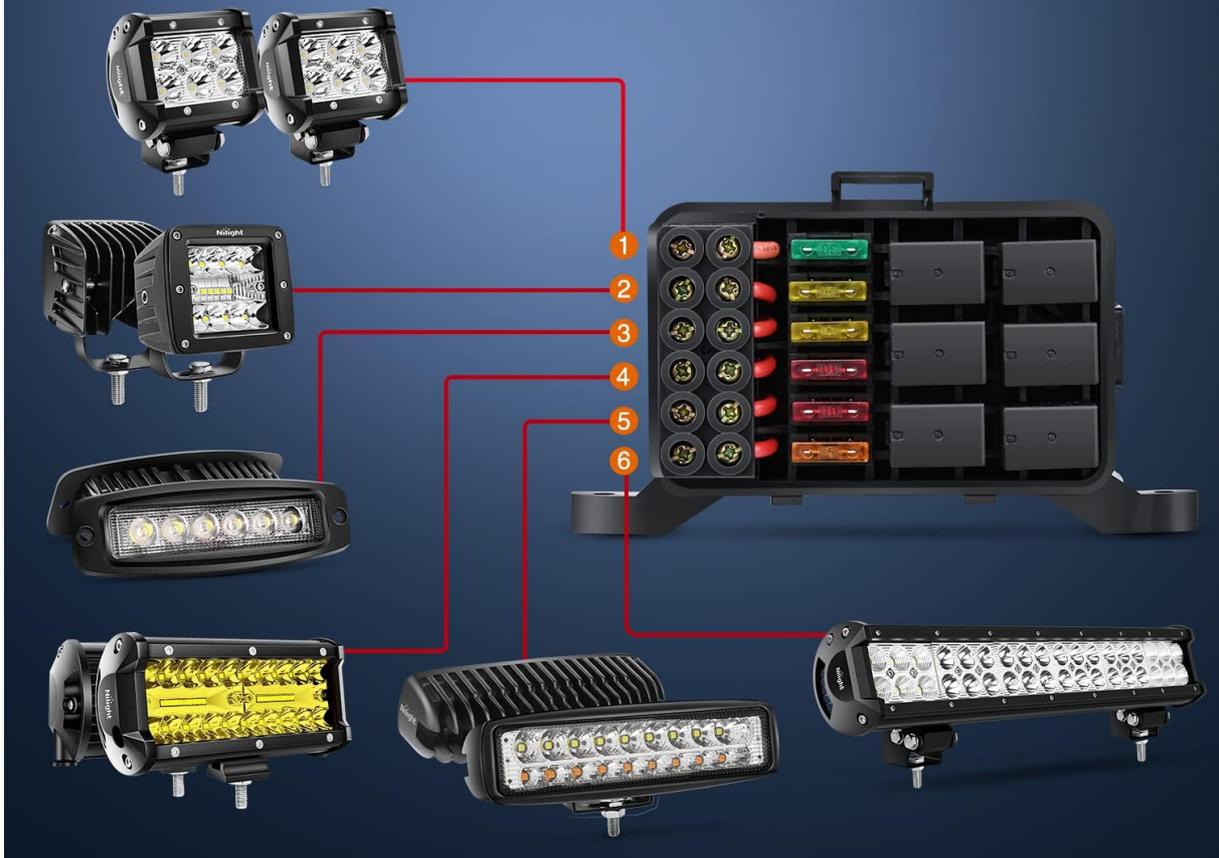


Image: Example connections of different lighting products to the relay harness.

## OPERATING INSTRUCTIONS

### 1. Main Switch Operation

The switch panel features a central 'OFF/ON' button. Press this button to activate or deactivate the entire switch panel system. Individual accessory switches will only function when the main switch is in the 'ON' position.

### 2. Dimmable Backlight Function

The switch panel's backlight automatically adjusts its brightness based on the surrounding environment. This feature ensures comfortable visibility during both daytime and nighttime driving conditions, preventing the backlight from being too bright or too dim.

# **DIMMABLE SWITCH**

The switch backlit is adjusted automatically by the surrounding environment, Not as dazzling as other switches and maintain the most comfortable visual brightness while driving



Image: The switch panel's dimmable backlight adjusts for daytime and nighttime visibility.

### **3. Customizing Switch Labels**

The kit includes 50 reusable labels to clearly identify the function of each switch. Simply peel and apply the appropriate label to the desired switch button.

# CUSTOMIZE YOUR PERSONAL PANEL

50pcs reusable labels meet your specific needs



Image: A selection of 50 reusable labels for personalizing the switch panel.

Video: Instructions on how to configure buttons for momentary action on the Nilight switch panel.

## MAINTENANCE

- **Regular Inspection:** Periodically check all wiring connections for tightness and signs of wear or corrosion.
- **Cleaning:** Wipe the switch panel and control box with a soft, damp cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Fuse Replacement:** If an accessory stops working, check the corresponding fuse in the control box. Replace blown fuses with new ones of the same amperage rating.

## TROUBLESHOOTING

- **Panel Not Powering On:** Check the main power connection to the battery and the ACC wire. Ensure the main 'OFF/ON' switch is engaged.
- **Individual Accessory Not Working:** Verify the specific switch is pressed. Check the fuse for that circuit in the control box. Inspect the wiring connection from the control box to the accessory.

- **Backlight Issues:** If the backlight is too dim or too bright, ensure the integrated sensor is not obstructed. The dimming is automatic based on ambient light.
- **Buttons Unresponsive:** Ensure all connections are secure. If the issue persists, refer to the momentary mode setting instructions if applicable.

## WARRANTY AND SUPPORT

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For warranty information, please refer to the documentation included with your purchase or contact Nilight customer support directly. Keep your proof of purchase for any warranty claims. For technical assistance or further inquiries, visit the official Nilight website or contact their customer service department.