

Refoss R10

Refoss Mini Wi-Fi Relay Switch R10 User Manual

Model: R10

1. INTRODUCTION

The Refoss Mini Wi-Fi Relay Switch R10 is a compact smart module designed to convert traditional light switches into smart switches. It integrates with Home Assistant via IP address and offers control through a web portal or the Refoss application. Key features include real-time energy monitoring, voice control compatibility with Alexa and Google, remote control, and scheduling capabilities. This manual provides detailed instructions for installation, operation, and troubleshooting.



Image 1: Two Refoss Mini Wi-Fi Relay Switches. These compact devices are designed to be installed behind existing light switches.

2. PRODUCT FEATURES

- **Compact Design:** Measures 4.3 x 4.3 x 1.9 cm, allowing for installation within standard switch boxes.
- **Home Assistant & Web Portal Integration:** Supports direct integration via IP address for configuration and control

without a dedicated app.

- **Static IP & Cloud Functionality:** Option to set a static IP and disable cloud services for local-only control and data storage (last 24 hours of energy consumption).
- **Current Measurement:** Monitors real-time energy consumption to help optimize energy usage and reduce electricity costs.
- **Voice Control:** Compatible with Amazon Alexa and Google Home for hands-free operation.
- **Remote Control:** Manage your lights from anywhere using the free Refoss application.
- **Scheduling & Scenarios:** Create custom schedules and countdown timers to automate lighting based on daily routines.
- **No Hub Required:** Connects directly to your existing 2.4 GHz Wi-Fi network.
- **Safety Design:** Features 10A Max current rating, pure copper terminals, and PC flame retardant material.

Small but Mighty



ESP8266
Chip



Easy
Installation

Not HomeKit Version



Remote
Control



Voice
Control



Smart
Scenes



Schedule
& Timer



Super-fast
Response



Routine Offline
Execution



No Hub
Needed



Safety &
Reliable



4.3cm

1.9cm

4.3cm

Neutral Wire Required

Blue Wire

Image 2: Overview of the Refoss Mini Wi-Fi Relay Switch's features and compact dimensions.

3. SETUP AND INSTALLATION

3.1 Safety Precautions

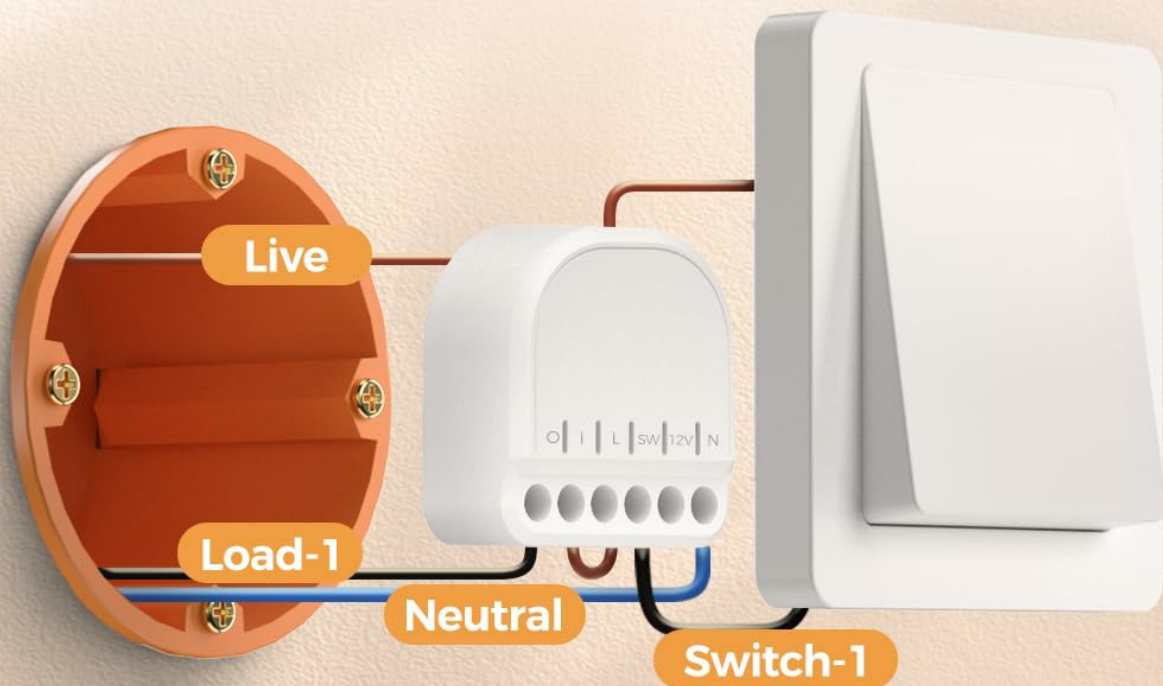
- **WARNING:** Always turn off power at the circuit breaker before performing any electrical work.
- Ensure you have a basic understanding of electrical wiring. If unsure, consult a qualified electrician.
- A neutral wire is required for the installation of this device.
- This device supports 2.4 GHz Wi-Fi networks only.

3.2 Wiring Diagram

The Refoss Mini Wi-Fi Relay Switch requires a neutral wire for proper operation. Below is a typical wiring diagram for integrating the smart module with an existing light switch.

Making Existing Switch Smart

Compact design ensures that it can be placed into a switch box for intelligent control.



Note: **Neutral wire** is required.

Image 3: Wiring diagram for integrating the Refoss Mini Wi-Fi Relay Switch with a traditional light switch. Note the requirement for a neutral wire.

- **L:** Live wire input.
- **N:** Neutral wire input.
- **O:** Output to the light fixture (Load-1).
- **SW:** Switch input (connects to the traditional wall switch).

- **12V:** Not used for standard light switch applications.

Ensure all connections are secure and insulated. After wiring, carefully place the module into the switch box.

3.3 Initial Configuration (Refoss App)

1. Download the Refoss app from your device's app store.
2. Create an account or log in.
3. Follow the in-app instructions to add your new Refoss Mini Wi-Fi Relay Switch. This typically involves putting the device into pairing mode and connecting it to your 2.4 GHz Wi-Fi network.
4. Once connected, you can rename the device and configure basic settings.

3.4 Home Assistant and Web Portal Integration

The device supports integration with Home Assistant via its IP address. This allows for advanced configuration and control through a web interface, bypassing the need for the Refoss app for daily operation.

1. Identify the IP address of your Refoss Mini Wi-Fi Relay Switch within your router's connected devices list or through the Refoss app.
2. Access the device's web portal by entering its IP address into a web browser.
3. Follow the on-screen instructions to integrate with Home Assistant or configure settings directly.

Home Assistant and Web Portal

Supports integration into the Home Assistant platform and use of the device on the web portal.

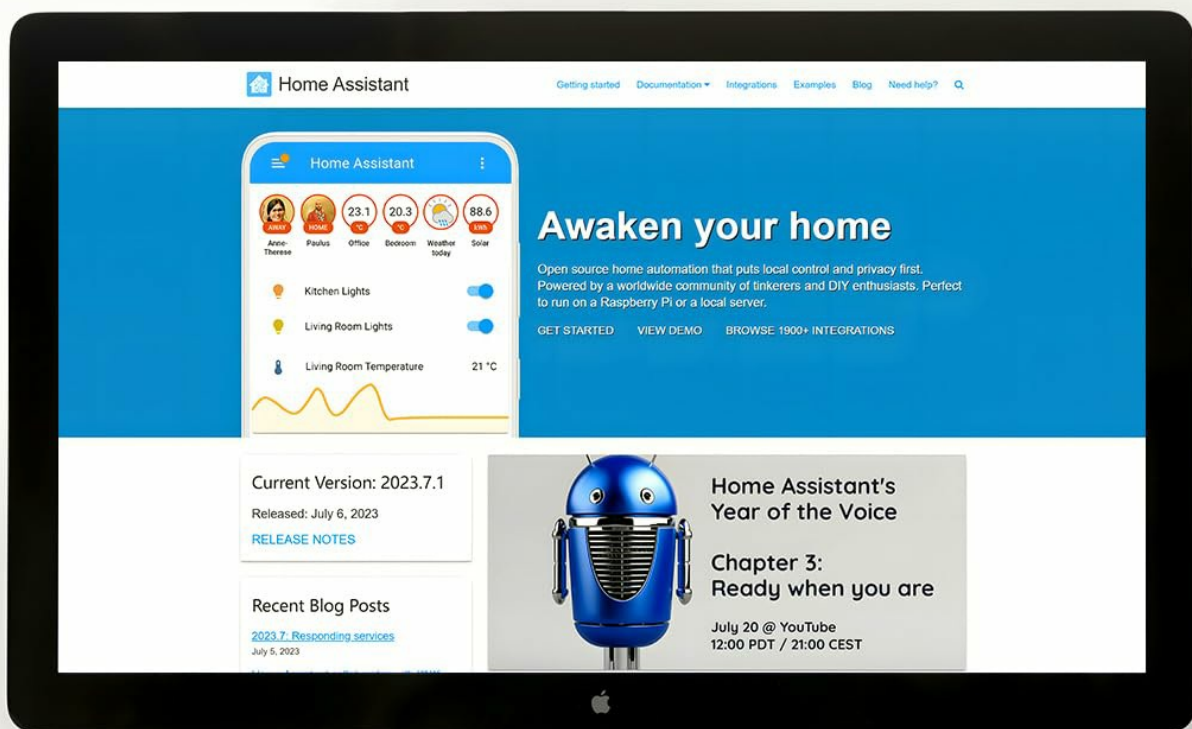


Image 4: Example of Home Assistant interface, demonstrating web portal control.

4. OPERATING INSTRUCTIONS

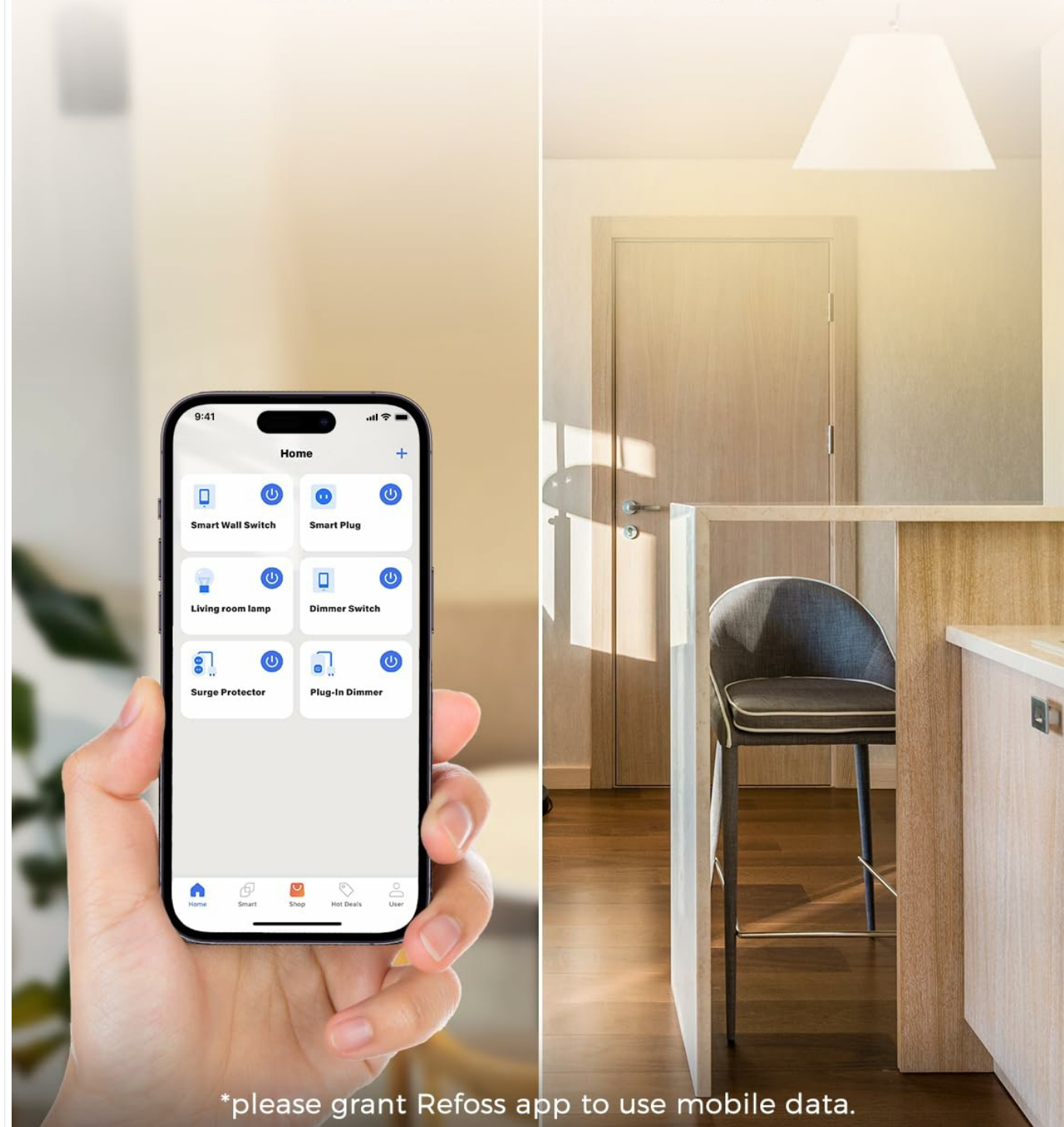
4.1 Remote Control via Refoss App

Once the device is configured in the Refoss app, you can control it remotely from anywhere with internet access.

- Open the Refoss app on your smartphone or tablet.
- Select the desired switch from your device list.
- Tap the on/off icon to toggle the connected light or appliance.

Remote Control

Control your light from anywhere at any time with internet access.



*please grant Refoss app to use mobile data.

Image 5: Remote control of devices via the Refoss application.

4.2 Voice Control (Alexa/Google Home)

Integrate your Refoss switch with Amazon Alexa or Google Home for convenient voice control.

1. Ensure your Refoss account is linked to your Alexa or Google Home app.
2. Discover new devices in your smart home assistant app.
3. Use commands such as:
 - "Alexa, turn on [Device Name]."
 - "Hey Google, turn off [Device Name]."
 - "Alexa, set [Device Name] to 50%." (If dimming is supported by the connected fixture)

Voice Control

Works with Amazon Alexa and Google Home for hands-free voice control.

Alexa, turn on the light.

OK.

works with
Google Home

works with | **alexa**

Attention
Apple HomeKit
NOT Supported.

Image 6: Voice control functionality with Amazon Alexa and Google Home.

4.3 Scheduling and Scenarios

Automate your lighting by setting schedules and creating smart scenarios within the Refoss app or Home Assistant.

- **Schedules:** Set specific times for the switch to turn on or off daily or on selected days of the week. For example, turn on lights at sunset and off at sunrise.

- **Countdown Timer:** Set a timer for the switch to turn off after a specified duration.
- **Scenarios:** Create custom rules based on conditions (e.g., if motion is detected, turn on light) or combine multiple actions.

Save Energy

Set schedules and timers to save energy.
Schedules can still perform even if the
internet is down.

 Sunrise / OFF

 Sunset / ON



Energy
Saved



Money
Saved



Image 7: Example of energy saving through automated schedules.

4.4 Energy Monitoring

The Refoss Mini Wi-Fi Relay Switch provides real-time energy consumption data, accessible through the Refoss app.

- Open the Refoss app and navigate to the device's details page.
- View current power consumption (Watts) and historical data (kWh) for daily, weekly, monthly, or yearly periods.
- Input your electricity cost per kilowatt-hour in the app to estimate total electricity costs.

Energy Monitor

Track power consumption to live a low carbon footprint life.



Image 8: Energy monitoring interface in the Refoss app.

5. MAINTENANCE

- **Cleaning:** Ensure the device is powered off before cleaning. Use a dry, soft cloth to wipe the exterior. Do not use liquid cleaners or solvents.

- **Firmware Updates:** Periodically check the Refoss app for available firmware updates to ensure optimal performance and security.
- **Connection Check:** If experiencing connectivity issues, verify your Wi-Fi network is operational and the device is within range of your 2.4 GHz router.

6. TROUBLESHOOTING

| Problem | Possible Cause | Solution |
|--|--|--|
| Device not connecting to Wi-Fi. | Incorrect Wi-Fi password, 5 GHz network, device too far from router. | Ensure correct 2.4 GHz Wi-Fi network and password. Move device closer to router. Reset device and try pairing again. |
| Light not turning on/off. | Incorrect wiring, no neutral wire, faulty light fixture. | Verify wiring according to the diagram (ensure neutral wire is connected). Check if the light fixture works with a traditional switch. Ensure power is supplied to the module. |
| Voice control not working. | Refoss account not linked, device not discovered, incorrect voice command. | Check if Refoss skill/service is enabled and linked in Alexa/Google Home app. Redo device discovery. Use correct device name in commands. |
| Energy monitoring data is inaccurate or missing. | Cloud function disabled (for remote access), temporary network issue. | If accessing remotely, ensure cloud function is enabled in the app. Local data is stored for 24 hours if cloud is off. Check network stability. |

7. SPECIFICATIONS

| Feature | Detail |
|--------------------------|--|
| Model Number | R10 |
| Dimensions (L x W x H) | 4.3 x 4.3 x 1.9 cm (1.69 x 1.69 x 0.75 inches) |
| Weight | 90 grams |
| Operating Mode | ON-OFF |
| Current Rating | 10 A (Max) |
| Operating Voltage | 240 Volts |
| Contact Type | Normally Closed |
| Connector Type | Crimp |
| Material | Plastic (PC Flame Retardant) |
| Wireless Connectivity | Wi-Fi 2.4 GHz (IEEE 802.11 b/g/n) |
| Compatibility | Amazon Alexa, Google Home, Home Assistant (via IP) |
| Neutral Wire Requirement | Required |

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Refoss website or contact their customer service directly. Details are typically provided with your product packaging or on the manufacturer's website.





Manufacturer: Refoss

Website: www.refoss.com (Example link, actual link may vary)



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Related Documents - R10

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|---|--|
|  <small>User Manual</small> | Refoss Smart Plug User Manual: Setup, Features, and Troubleshooting Comprehensive user manual for the Refoss smart plug, covering safety information, installation guide, LED status rules, linking with Google Assistant and Amazon Alexa, FAQs, and warranty details. |
|  <small>User Manual</small> | Refoss Smart Plug User Manual - Setup, Features, and Support Comprehensive user manual for the Refoss Smart Plug, detailing safety guidelines, package contents, LED status indicators, step-by-step installation, app setup, voice assistant integration with Alexa and Google Assistant, troubleshooting FAQ, warranty information, and disclaimers. Includes manufacturer details and support links. |
|  <small>User Manual</small> | Refoss MSS620 Smart Outdoor Plug User Manual and Installation Guide Comprehensive user manual and installation guide for the Refoss MSS620 Smart Outdoor Plug, covering setup, operation, features, troubleshooting, warranty, and compliance information. |
|  <small>User Manual</small> | Refoss Smart Garage Door Opener User Manual Comprehensive user manual for the Refoss Smart Garage Door Opener, covering package contents, installation, usage, voice control, notifications, FAQ, and warranty information. |

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| <div><div>Refoss</div><div>User Manual</div></div> | <div><div>Refoss RSS620 Smart Outdoor Plug User Manual and Installation Guide</div><div>Comprehensive user manual and installation guide for the Refoss RSS620 Smart Outdoor Plug, covering safety, setup, operation, troubleshooting, and warranty information.</div></div> |
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