

Eaton RF9640-NDW

Eaton RF9640-NDW Z-Wave Plus Universal Dimmer Instruction Manual

Model: RF9640-NDW | Brand: Eaton

INTRODUCTION

The Eaton RF9640-NDW Z-Wave Plus Universal Dimmer is designed to replace a standard light switch, providing both local manual control and wireless control capabilities. This device integrates into Z-Wave Plus wireless networks, offering enhanced security and performance. It is suitable for both new construction and retrofitting existing homes, as it does not require new wiring beyond standard electrical connections. This dimmer is compatible with various dimmable lighting loads, including LED, CFL, Halogen, Incandescent, Magnetic Low Voltage (MLV), and Electronic Low Voltage (ELV) fixtures. This manual provides essential information for the safe installation, operation, and maintenance of your Eaton RF9640-NDW Z-Wave Plus Universal Dimmer.



Image: Packaging for the Eaton RF9640-NDW Z-Wave Plus Universal Dimmer, highlighting its Z-Wave Plus compatibility and voice control features.

SETUP AND INSTALLATION

Important Safety Information: Before beginning installation, ensure power is turned OFF at the circuit breaker or fuse box. Installation should be performed by a qualified electrician or a person with a thorough understanding of electrical wiring. Use wires rated for at least 75°C for supply connections.

Wiring Requirements:

- A neutral wire is required for the installation of this dimmer.
- The dimmer supports single-pole and 3-way control. For 3-way applications, use with a Z-Wave Plus Accessory Dimmer (model RF9642-Z, sold separately).
- Compatible with dimmable LED, CFL (300W max), Incandescent/Halogen, ELV (600W max), and MLV (600VA max) loads.

Installation Steps:

1. **Turn Off Power:** Locate the circuit breaker or fuse that supplies power to the switch you are

replacing and turn it off. Verify power is off using a voltage tester.

2. **Remove Existing Switch:** Carefully remove the wall plate and unscrew the existing switch from the wall box. Disconnect the wires from the old switch.
3. **Identify Wires:** Identify the Line (hot), Load, Neutral, and Ground wires. The Eaton RF9640-NDW dimmer has pre-attached wires for easy connection.
4. **Connect Wires:**
 - Connect the **green** wire from the dimmer to the bare copper or green insulated **Ground** wire in the wall box.
 - Connect the **white** wire from the dimmer to the **Neutral** wire in the wall box.
 - Connect the **black** wire from the dimmer to the **Line (hot)** wire in the wall box.
 - Connect the **red** wire from the dimmer to the **Load** wire (to the light fixture).
 - For 3-way installations, refer to the specific wiring diagram provided with the RF9642-Z accessory dimmer.



Image: Side view of the dimmer, illustrating the pre-attached wires (green for ground, white for neutral, black for line, red for load).



Image: Rear view of the dimmer, showing the wire connections and the compact design for fitting into a wall box.

5. **Mount Dimmer:** Carefully fold the wires and push the dimmer into the wall box. Secure the dimmer to the wall box using the provided screws.
6. **Install Wall Plate:** Attach a screwless wall plate (PJS26W, sold separately) or a standard wall plate over the dimmer.
7. **Restore Power:** Turn the power back ON at the circuit breaker.

Z-Wave Network Inclusion:

To integrate the dimmer into your Z-Wave network:

1. Put your Z-Wave hub or controller into inclusion (pairing) mode. Refer to your hub's instructions for this step.
2. On the dimmer, press the top paddle once. The dimmer should then be detected and added to your Z-Wave network.
3. Confirm successful inclusion through your Z-Wave controller's interface.

OPERATING INSTRUCTIONS

The Eaton RF9640-NDW dimmer offers both manual control at the switch and remote control via a compatible Z-Wave hub and associated applications or voice assistants.

Manual Control:

- **Turn ON/OFF:** Press the large top paddle to turn the lights ON to the last dimmed level. Press the large bottom paddle to turn the lights OFF.
- **Dimming:** Use the small rocker switch on the right side of the dimmer. Press the top of the small rocker to increase brightness, and the bottom to decrease brightness.
- **LED Indicator:** The dimmer features a 7-step blue LED light bar on the left side, which indicates the current dimming level. This LED can be configured to be ON or OFF when the lights are in either state.



Image: Angled front view of the dimmer, showing the main paddle and the smaller dimming rocker switch.

Remote Control:

Once successfully included in a Z-Wave network, the dimmer can be controlled remotely:

- **App Control:** Use the mobile application associated with your Z-Wave hub to turn lights ON/OFF,

adjust brightness, and set schedules.

- **Voice Control:** If your Z-Wave hub is integrated with voice assistants like Amazon Alexa or Google Assistant, you can control the dimmer using voice commands.

MAINTENANCE

The Eaton RF9640-NDW Z-Wave Plus Universal Dimmer requires minimal maintenance.

- **Cleaning:** To clean the dimmer, wipe it with a soft, damp cloth. Do not use abrasive cleaners, solvents, or harsh chemicals, as these can damage the finish or internal components.
- **Firmware Updates:** Periodically check your Z-Wave hub's manufacturer for any available firmware updates for Z-Wave devices, including this dimmer, to ensure optimal performance and security.
- **Inspection:** Occasionally inspect the dimmer and wall plate for any signs of damage or loose connections. If any issues are found, turn off power at the circuit breaker and consult a qualified electrician.

TROUBLESHOOTING

If you experience issues with your Eaton RF9640-NDW dimmer, refer to the following common problems and solutions:

- **Dimmer does not respond to manual input (on/off or dimming):**
 - **Check Power:** Ensure the circuit breaker is ON and the dimmer is receiving power.
 - **Reset Dimmer:** Try cycling the power to the dimmer by turning off the circuit breaker for a few seconds, then turning it back on. This can resolve temporary glitches.
 - **Wiring Check:** Verify all wiring connections are secure and correct (Line, Load, Neutral, Ground). Ensure the neutral wire is properly connected, as it is required for operation.
- **Lights do not turn off completely or remain dimly lit:**
 - This can sometimes occur with certain LED or CFL bulbs due to minimal current leakage. Ensure your bulbs are specifically rated as dimmable.
 - Some Z-Wave hubs may require a slight delay or ramp-down setting for the 'OFF' command to ensure full light extinction. Consult your Z-Wave hub's documentation for advanced settings.
- **Dimmer cannot be included (paired) into the Z-Wave network:**
 - **Hub in Inclusion Mode:** Ensure your Z-Wave hub is actively in inclusion/pairing mode before attempting to add the dimmer.
 - **Proximity:** Try to perform the inclusion process with the dimmer closer to the Z-Wave hub, if possible.
 - **Exclusion First:** If the dimmer was previously paired to another network or failed to pair, perform an exclusion process first. Put your Z-Wave hub into exclusion mode, then press the top paddle of the dimmer once. After successful exclusion, attempt inclusion again.
 - **Interference:** Minimize potential interference from other wireless devices during the pairing process.
- **Dimmer is not dimming properly or lights flicker:**
 - **Bulb Compatibility:** Ensure the connected bulbs are dimmable and compatible with electronic dimmers. Non-dimmable bulbs can cause flickering or damage.

- **Load Type:** Verify the total wattage/VA of the connected load does not exceed the dimmer's maximum rating (300W for LED/CFL, 600W for Incandescent/Halogen/ELV/MLV).

SPECIFICATIONS

Feature	Specification
Model Number	RF9640-NDW
Brand	Eaton
Operation Mode	ON-OFF
Current Rating	10 Amps
Operating Voltage	120 Volts (AC)
Wattage	600 watts (Incandescent/Halogen/ELV/MLV), 300 watts (LED/CFL)
Connectivity Protocol	Z-Wave Plus
Control Method	Voice, Manual
Controller Type Compatibility	Amazon Alexa, Google Assistant (via compatible Z-Wave hub)
Circuit Type	Single-pole, 3-way (with accessory dimmer RF9642-Z)
Neutral Wire Required	Yes
Dimensions (L x W x H)	1.42 x 1.8 x 4.2 inches (36.1 x 45.7 x 106.7 mm)
Item Weight	8.1 ounces (230 grams)
Color	White
Material	Stainless Steel (Contact Material)
International Protection Rating	IP20
UPC	032664757242, 032664765100

Product dimensions

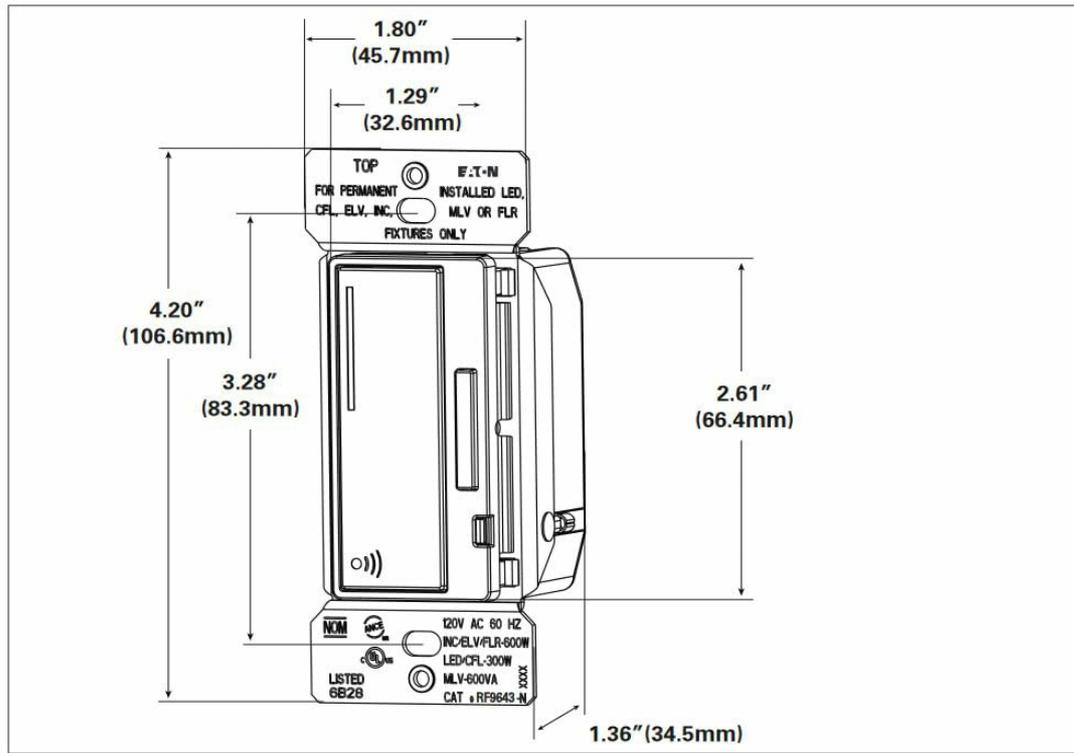


Image: Detailed product dimensions of the Eaton RF9640-NDW dimmer.

WARRANTY AND SUPPORT

For warranty information, technical support, or further assistance with your Eaton RF9640-NDW Z-Wave Plus Universal Dimmer, please refer to the documentation included with your product or visit the official Eaton website. Contacting Eaton customer service directly will provide the most accurate and up-to-date support information.