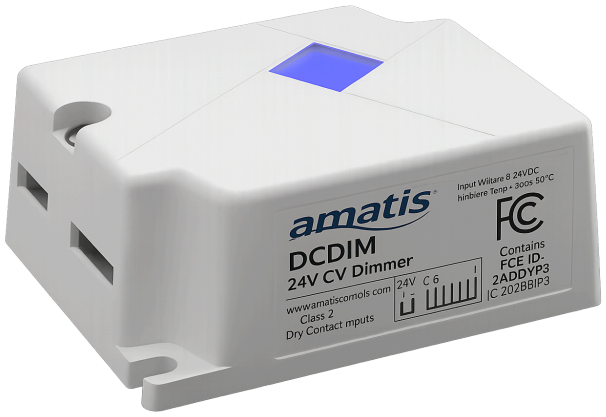
Installation Guide

XWS-DCDIM

DC load controller and dimming driver



INTRODUCTION

About This Guide

This guide provides instructions for installing the DCDIM (XWS-DCDIM), a Luum wireless DC load controller and dimming driver. In addition to the step-by-step installation process, this guide provides instructions on how to configure the DCDIM, as well as some basic troubleshooting steps.

Cautions and Warnings

When installing hardware, it is important to follow safety precautions to avoid potential injuries or damage to the equipment. Failure to follow safety guidelines can result in electric shock, fire, or other hazards.

Definitions

NOTE

A note provides additional information or clarification that is relevant to the installation process. It may include recommendations, tips, or other useful information that can help ensure a successful installation.

CAUTION

A caution statement indicates a potential hazard that could result in minor or moderate injury, or cause damage to the product if appropriate precautions are not taken. It alerts the reader to a potential risk and provides instructions on how to avoid it.

DANGER

A danger statement indicates a potential hazard that could result in serious injury or death if appropriate precautions are not taken. It alerts the reader to a critical risk that requires immediate attention to prevent harm.

Safety Precautions

DANGER

- Turn off the low-voltage supply and verify that no voltage is present on the wiring before connecting or disconnecting terminals. Do not apply line (mains) voltage to the DCDIM.
- When connecting the device to power, properly secure all wire connections to reduce the risk of intermittent operation, overheating, or equipment damage.
- Use wire that is appropriate for your low-voltage control circuit and installation environment. Do not exceed the rated 5A output per channel.

CAUTION

- This device is for commercial indoor or covered use only.
- Disassembling any part of the unit voids the warranty and regulatory certifications. There are no user-serviceable parts inside the unit.
- This equipment is not suitable for use in locations where children are likely to be present.
- Ensure all wire connections are fully seated per the wiring diagram before restoring power.

PRODUCT OVERVIEW

The DCDIM (XWS-DCDIM) is a wireless DC load controller and dimming driver with color-coded push-in terminals, PWM and 0-10V outputs, and reverse-voltage protection. It connects to wireless networks via the Luum Border Router (AMBR).

- 5A Class 2 DC load output with voltage equal to input voltage.
- PWM output for dimming one or more DC loads.
- 0-10V output for dimming one or more fixtures.
- Additional PWM or 0-10V output available for color tuning or up/down light configurations.
- On-board button for manual On/Off control and manual dimming.
- Cloud connection via AMBR, uploading real-time data from your site to the Luum app.

ORDERING INFORMATION

Controllers

Part number	Description

Part number	Description
XWS-DCDIM	DC load controller and dimming driver

INSTALLATION

Parts List

Before getting started with the installation process, make sure all the necessary components are included. Here's what should be found inside the box:

- (1) DCDIM (XWS-DCDIM)

Please ensure all items are accounted for. If any item is missing or damaged, contact the place of purchase for a replacement.

Placement

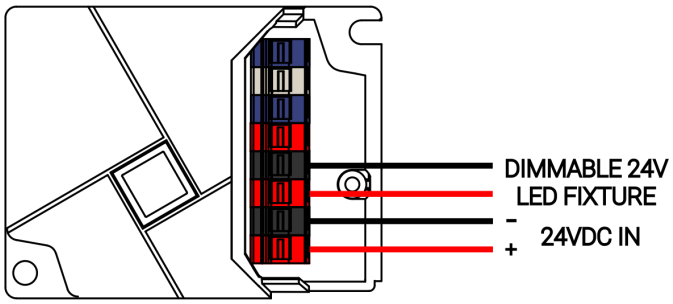
Follow these guidelines when deciding where to install the DCDIM:

- Install the DCDIM in an accessible location near the DC loads or fixtures being controlled.
- Allow adequate clearance for heat dissipation and for making push-in terminal connections.
- The DCDIM should be installed within 200 ft of an AMBR or other wireless node.

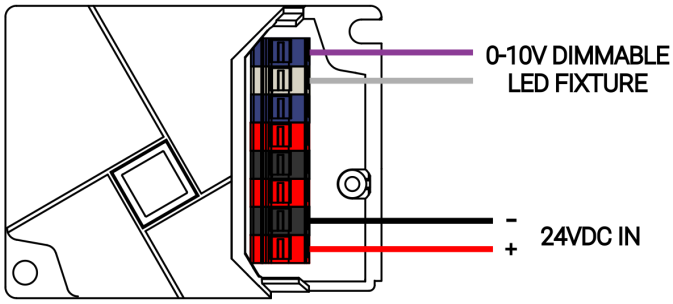
> **NOTE**
> The Luum system supports communication ranges up to 200 ft with a clear line of sight. Obstacles such as walls or floors will significantly impact communication range.

Wiring

Follow the wiring diagrams below to connect the DCDIM. Select the diagram that matches your application.



24V DC Load Wiring Diagram



0-10V Dimming Wiring Diagram

> **NOTE**
> The DCDIM provides two PWM channels and two 0-10V channels. Refer to the wiring diagram that matches the outputs used for your application.

Labeling and MAC Capture

After installing any Luum wireless device, it is important to note the device ID with the associated load or controlled equipment. This is how the devices will be identified during programming. It is also a good idea to label the DCDIM with the loads or fixtures it is controlling.

> **NOTE**
> The device ID can be found on the device's packaging or on the device itself.

INITIAL SETUP

Necessary Parts

Review the following list to ensure all necessary parts are available:

1. An active AMBR within communication range of the DCDIM.
2. Active 9-24VDC power to the DCDIM.
3. Connected DC loads or 0-10V dimming circuits as required by the application.

Device Configuration

Perform the following steps to configure the device:

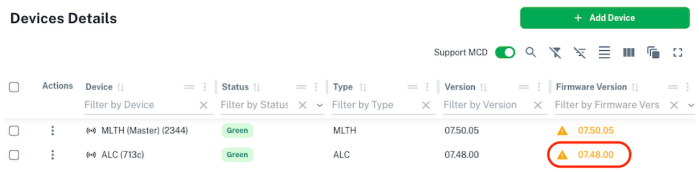
1. Open the Luum app and navigate to the site.
2. Open the Devices table and ensure a device with the ID noted in the previous step is active.

The device is now ready to be added to a location and programmed with the Luum app.

Firmware Update

Perform the following steps to update the device's firmware:

1. Open the Luum app and navigate to the site.
2. Open the Devices table and find the device to be updated.
3. Make sure the **Firmware Version** column is visible. If the firmware is out of date, it will show a yellow alert and yellow text.
4. Click on the out-of-date firmware entry to request a firmware update.



Firmware Update Button

> **NOTE**
> Depending on how out of date the firmware is, the programming may need to be synced to the devices after a firmware update.

RELATED INFORMATION

Basic Troubleshooting

Perform the following steps for basic troubleshooting of the device:

1. Verify the device is operating normally using the LED Troubleshooting Matrix below.
2. Verify load control by pressing the on-board button.
3. Power cycle the device by turning off the low-voltage source, then turning it back on 30 seconds later.

LED Indicator Troubleshooting

Use the following table to troubleshoot specific issues with the device based on the LED indicators:

LED Troubleshooting Matrix

LED color	State	Description
Blue	Off	No power (unless disabled)
Blue	Flashing	Device unable to communicate with an AMBR
Blue	Solid	Device communicating normally
Green	Off	Load OFF
Green	On	Load ON

Button Operation

The DCDIM includes an on-board button for local control:

Button Operation

Presses	Behavior
Press	Toggle the load On/Off
Press and hold	Manually dim the connected load

Technical Support

If you experience any issues during installation or operation of this product, contact our technical-support team via email at support@luum.io. Please provide a detailed description of the issue, including any error messages or other relevant information.

Warranty

All Luum.io lighting products and controls come with a 5-year parts warranty. We warrant that our products will be free from defects in material and workmanship for a 5-year period from the date of purchase. Defective products under warranty will be replaced with an equal or higher-quality product.

If you experience any issues during the warranty period, we will repair or replace the product at no charge. To initiate a warranty claim, contact our customer-service team at support@luum.io. For additional support options, visit luum.io.

> **NOTE**
> The Luum Border Router (AMBR) connected to your affected device must have remained connected to the Luum cloud via the internet or cellular connection from the start of site commissioning to the date of return request. Non-connected systems are eligible for a 2-year limited warranty (730 days) from shipment date.

Contacts

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Document Feedback

While we have taken great care to ensure the accuracy and completeness of this document, we welcome your feedback and suggestions. If you notice any errors or omissions, or feel a topic could benefit from further explanation, please email your feedback to support@luum.io.

Revision History

Date	Revision	Notes
7/1/2026	A	Initial DCDIM install guide release

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