Control4™

Wireless Puck Dimmer and Switch Module Installation Guide

Supported models

- C4-DM201-Z Wireless Puck Dimmer
- C4-DM201-LW-Z Wireless Low Wattage Puck Dimmer
- C4-SM201-Z Wireless Puck Switch

Box contents

- Wireless Puck Module
- Warranty Card
- *Wireless Puck Dimmer and Switch Module Installation Guide* (this document)
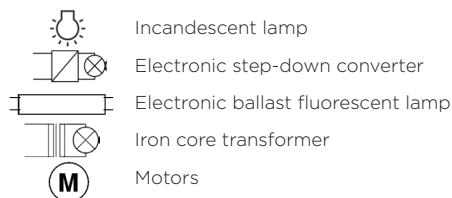
Specifications and supported fixtures

Power:	220-240V AC 50/60 Hz		
	C4-DM201-Z Dimmer	C4-DM201-LW-Z Dimmer	C4-SM201-Z Switch
Supported load types	Incandescent; halogen; magnetic low voltage (MLV); electronic low voltage (ELV); phase-cut dimmable: fluorescent, compact fluorescent, and LED fixtures.		Incandescent; halogen; magnetic low voltage (MLV); electronic low voltage (ELV); fluorescent; compact fluorescent; LED fixtures; and motors (ceiling fan and exhaust fan).
Maximum load* (@240V)	Incandescent: 400W Halogen: 400W Fluorescent: 250W CFL: 250W LED: 250W	200W 200W 200W 200W 200W	Incandescent: 400W Halogen: 400W Fluorescent: 250W CFL: 250W LED: 250W Motor: 1/4 HP
Minimum load* with neutral (@240V)	Incandescent: 5W Halogen: 5W Fluorescent: 10W CFL: 10W LED: 10W	1W 1W 2W 2W 2W	None
Minimum load* without neutral (@240V)	Incandescent: 10W Halogen: 10W Fluorescent: N/A CFL: N/A LED: N/A	10W 10W N/A N/A N/A	N/A
Auxiliary LEDs	220-240V AC		
Operating temperature	All load ratings are based on an ambient temperature of 25 °C (77 °F).		
Communications	IEEE 802.15.4, 2.4 GHz, 15-channel, spread spectrum radio		

* **Notes**: The maximum and minimum load requirements for fluorescent, CFL and LED loads can vary greatly depending upon the specific fixture and/or bulb being used. At higher wattages, these load types have significant in-rush current which can trip the protection circuitry on the device. At low wattages, some CFL and LED loads will not be able to completely shut off.

In both cases, the quality and performance of these load types varies greatly from manufacturer to manufacturer. When using these load types, we recommend testing in advance. If problems are found, simply changing to a different bulb manufacturer may solve the problem.

Additionally, we do not recommend the use of fluorescent, CFL, or LED loads without a neutral connected to the Dimmer due to the capacitive nature of these load types.

Load symbols

- Incandescent lamp
- Electronic step-down converter
- Electronic ballast fluorescent lamp
- Iron core transformer
- **M** Motors

Warnings and considerations

WARNING! Install in accordance with all national and local electrical codes.

WARNING! Improper use or installation can cause SERIOUS INJURY, DEATH or LOSS/DAMAGE OF PROPERTY.

WARNING! If you are unsure about any part of these instructions, consult a qualified electrician.

WARNING! If you are not sure which wires are Live, Load, Neutral, or Earth/Ground, have a trained electrician perform the installation.

CAUTION! Do not install to control a receptacle.

IMPORTANT! Using this product in a manner other than outlined in this document voids your warranty. Further, Control4 is NOT liable for any damage incurred with the misuse of this product.

IMPORTANT! Changes or modifications not expressly approved by Control4 could void the user's authority to operate the equipment.

Installation instructions

NOTE: The Puck Module can be wired and installed several different ways. Please follow the instructions below that are appropriate for your installation.

1. Ensure that the location and intended use meet the following criteria:
   - The range and performance of the wireless control system is highly dependent on: (1) distance between devices; (2) layout of the home; (3) walls separating the devices; and (4) electrical equipment located near the devices.
   - DO NOT exceed the maximum load rating of the device (see the previous section, "Specifications and Supported Fixtures").

WARNING! Disconnect the power before installing or servicing this device.

2. Switch off and isolate the mains power at the main consumer unit or fusebox before starting any installation or maintenance.

3. Strip each wire's insulation back 4.5 mm (3/16 in.) from the wire end.

4. If the Puck Module will be mounted to the wall box using the yoke plate or will be installed "floating" in the box rather than mounted to it, snap off the Puck Module mounting ears with a pair of pliers (see Figure 1).

Figure 1. Puck Module with Removable Mounting Ears
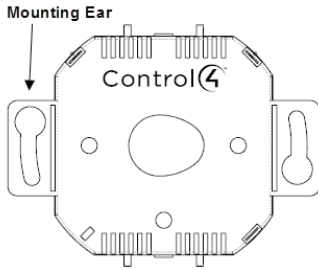
Wiring

1   Identify and connect the Line, Load, and Neutral (if applicable) wires to the screw terminals on the Puck Module according to the relevant wiring diagram (see Figures 2, 3, 4, or 5). The Puck Module does not require an earth ground.

> NOTE: Wiring configurations can differ depending upon how the fixture was wired by the electrician.

2   If applicable, identify and connect the external keypad/switch wires to the screw terminals on the Puck Module according to the relevant wiring diagram (see Figures 2, 3, 4, or 5).

> ⚠ WARNING! The LED1 and LED2 terminals provide line voltage to the indicator LEDs. Remove power from the device before servicing.

Mounting the Puck Module to the wall box or the wall with the mounting ears

> NOTE: The mounting ears are designed for wall boxes that utilize mounting holes which are 60 mm apart. They can also be used to mount the Puck Module directly to the wall surrounding the wall box if the wall box does not have mounting holes.

1   Ensure that the Control4 logo on the Puck Module is facing up (see Figure 1).

2   Fit the wires back into the wall box. Fold the wires into a zigzag pattern so that they easily fold into the wall box.

3   Secure the Puck Module to the wall box (or wall) using the mounting screws appropriate for the wall box or wall material. The Control4 logo should be horizontal.

Installing the Puck Module inside the wall box in a "floating" position

> NOTE: If local electrical code allows it, the Puck Module can be installed inside the wall box in a free floating manner. If the wall box is deep enough, this allows an external switch/keypad to be mounted to the wall box in front of the Puck Module.

1   Remove the Puck Module mounting ears (see Figure 1).

2   Fit the wires back into the wall box. Fold the wires into a zigzag pattern so that they easily fold into the wall box

3   Push the Puck Module into the wall box.

Finishing the installation

1   When the wiring and installation are complete, turn on the mains power.

2   Test the Puck Module to see if it is working properly (see "Operation and Configuration" on Page 2).

Sample wiring configurations

Figures 2, 3, 4, and 5 show wiring for a single or multiple locations.
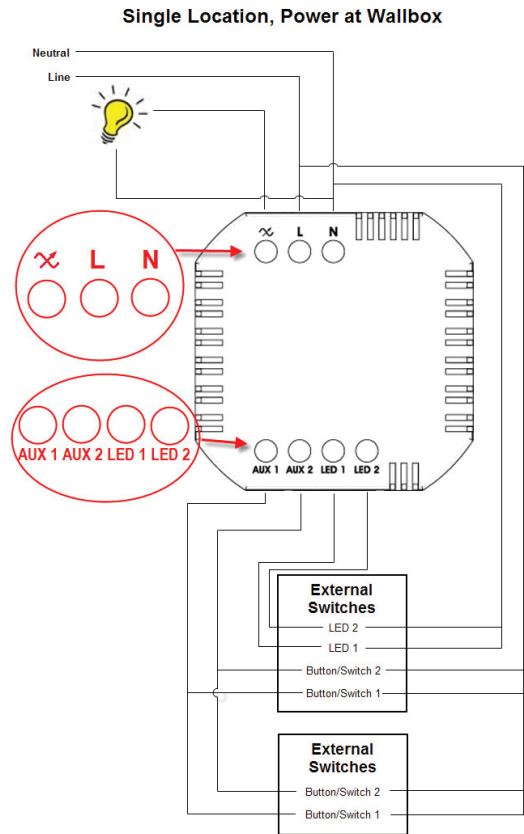
✗ —Load wire.

L—Line wire.

N—Neutral wire.

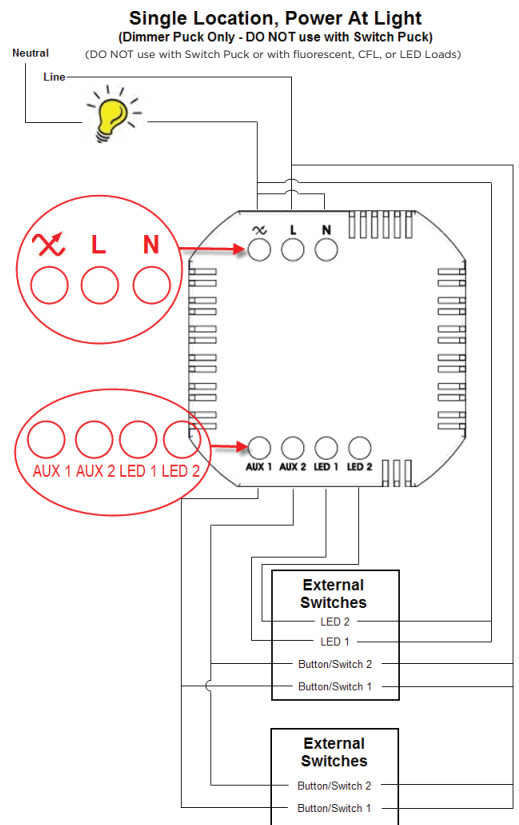**Aux 1, Aux 2**—Auxiliary switch(es). Use Composer Pro to define the behavior.

LED 1, LED 2—220-240V indicator LEDs (lamps) on auxiliary switches. Use Composer to define the behavior.

Figure 2. Single Location, Power at Wall box

Single Location, Power at Wallbox

Note: An unlimited number of switches can be connected in parallel to an auxiliary contact, but each contact can only service a single LED. DO NOT connect multiple LEDs in parallel.

Figure 3. Single Location, Power at Light

Single Location, Power At Light
(Dimmer Puck Only - DO NOT use with Switch Puck)
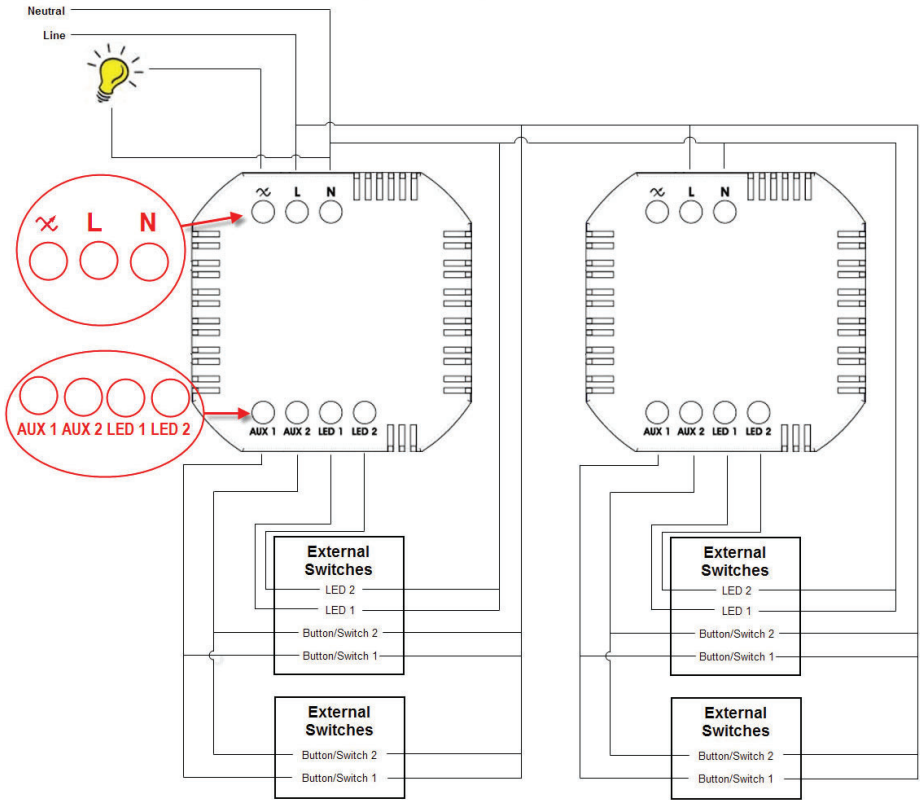(DO NOT use with Switch Puck or with fluorescent, CFL, or LED Loads)

Note: An unlimited number of switches can be connected in parallel to an auxiliary contact but each contact can only service a single LED. DO NOT connect multiple LEDs in parallel.

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Multiple Location, Power at Wallbox

Neutral
Line

∿ L N

AUX 1 AUX 2 LED 1 LED 2

∿ L N

AUX 1 AUX 2 LED 1 LED 2

External Switches
LED 2
LED 1
Button/Switch 2
Button/Switch 1

External Switches
Button/Switch 2
Button/Switch 1

External Switches
LED 2
LED 1
Button/Switch 2
Button/Switch 1

External Switches
Button/Switch 2
Button/Switch 1

Note: An unlimited number of switches can be connected in parallel to an auxiliary contact, but each contact can only service a single LED. DO NOT connect multiple LEDs in parallel.
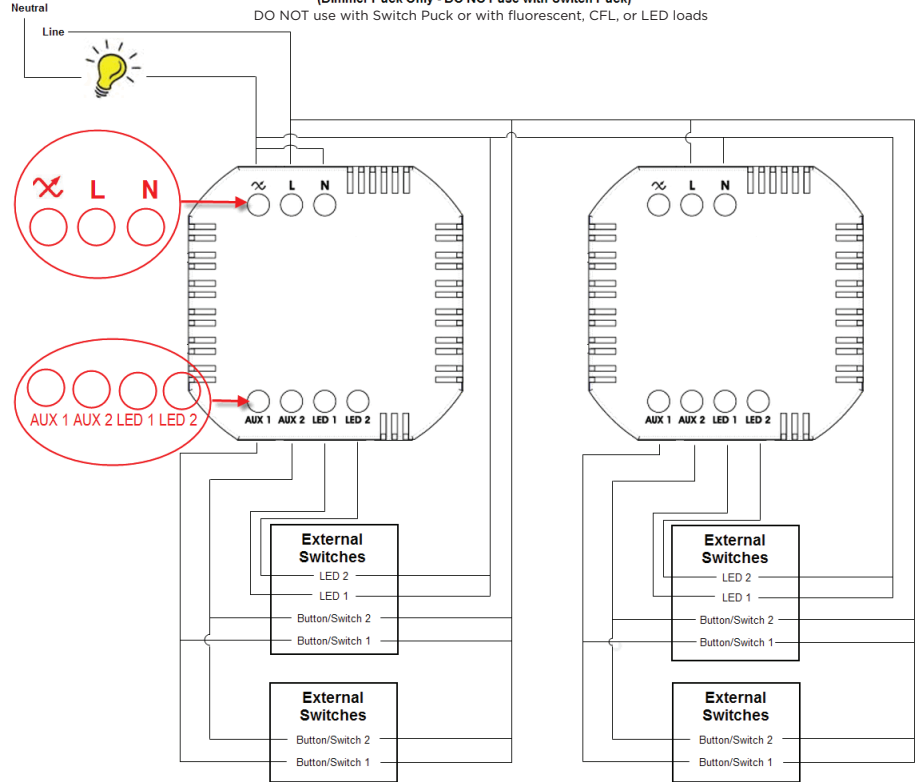
Multiple Location, Power At Light
(Dimmer Puck Only - DO NOT use with Switch Puck)
DO NOT use with Switch Puck or with fluorescent, CFL, or LED loads

Neutral
Line

∿ L N

AUX 1 AUX 2 LED 1 LED 2

∿ L N

AUX 1 AUX 2 LED 1 LED 2

External Switches
LED 2
LED 1
Button/Switch 2
Button/Switch 1

External Switches
Button/Switch 2
Button/Switch 1

External Switches
LED 2
LED 1
Button/Switch 2
Button/Switch 1

External Switches
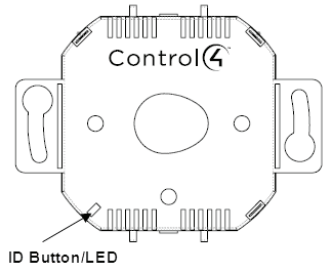Button/Switch 2
Button/Switch 1

Note: An unlimited number of switches can be connected in parallel to an auxiliary contact but each contact can only service a single LED. DO NOT connect multiple LEDs in parallel.

Operation and configuration

1   The Puck Module must be identified and configured using the Control4 Composer software application. See the *Composer Pro User Guide* for information about configuring the Puck Module.

2   To test/operate the Puck Module prior to configuration:

   - Press and release the **Identify** button on the puck to toggle the load. With a Puck Dimmer, pressing and holding the **Identify** button will ramp/fade the load. The LED on the ID button will be lit when the load is on, and the LED will be off when the load is off.

Figure 6. Puck Module with Button LED

- Both auxiliary contacts are configured to toggle the load by default. If a keypad/switch is connected to an auxiliary contact, press and release the button to toggle the load.
- The default behavior for both auxiliary LEDs is Load On = LED on, Load Off = LED Off.

3   In the case of a short circuit or overload condition, the Puck Module has built-in circuit protection that will put the module into a safe mode. When an incandescent bulb burns out, it creates a momentary high-current situation that can activate this protection. If the protection has been activated:

- The LED on the Puck Module and any LEDs on connected switches will blink once every two (2) seconds.
- To reset the device:
  - Click the **ID** button on the puck, OR
  - Press and release the button connected to auxiliary Contact 1 (One).
- If the Puck Module goes back into safe mode after resetting, the fault condition still exists and must be addressed before attempting to reset the Puck Module again.
- When the Puck Module returns to safe mode within 10 seconds of a reset, it cannot be reset by a single click of the ID button or auxiliary contact. To reset the device in this case:
  - Click the **ID** button on the puck 15 times, OR
  - Press and release the button connected to auxiliary Contact 1 (One) 15 times.

4   Button tap sequences can be performed using either the button on the Puck Module or the buttons attached to the auxiliary contact. When using a latching switch, each toggle of the switch (up to down or down to up) is treated as one (1) tap.

Function	Button on puck	Aux. Contact 1	Aux. Contacts 1 & 2
Identify	4	4	N/A
Zigbee channel	7	7	N/A
Reboot device	15	15	N/A
Factory reset	9	22	9-4-9
Leave mesh & reset	13	30	13-4-13

Troubleshooting

1   If the load does not turn on:

   - Ensure that the circuit breaker is not turned off or tripped.
   - Ensure that the light bulb is not burned out and is screwed in properly.
   - Ensure that the Puck Module is not in short circuit safe mode. (See Step 3 in the "Operation and Configuration.")
   - Check for proper wiring (see "Sample Wiring Diagrams").

2   If the button(s) connected to the auxiliary contacts do not operate the load, check for proper wiring (see "Sample Wiring Diagrams").

3   If the LEDs connected to the auxiliary LED terminals do not illuminate:

   - Check for proper wiring (see "Sample Wiring Diagrams").
   - Ensure that the LEDs are designed to operate at 220-240V.

Regulatory/safety information

To review regulatory information for your particular Control4 products, see the information located on the Control4 website at **ctrl4.co/reg**.

Warranty

For complete warranty information, including details on consumer legal rights as well as warranty exclusions, visit **ctrl4.co/warranty**.

Patent information

Applicable patents are available at **ctrl4.co/patents**