

Forward Phase Dimmer Installation Guide

Supported Model

- C4-FPD120 Forward Phase Dimmer

Introduction

The Control4® Forward Phase Dimmer operates independently or as part of a Control4 home automation system. It installs in a standard wall box using typical wiring standards and communicates to the Control4 system using a wireless connection.

Box Contents

- Forward Phase Dimmer
- Wire Nuts
- Warranty Card
- Forward Phase Dimmer Installation Guide* (this document)

Specifications and Supported Load Types

The specifications are described below.

Model Number	C4-FPD120-xx		
Power Requirements	120 VAC +/-10%, 50/60 Hz This device can function with or without a neutral AC connection depending on load type See load types and wiring diagrams below.		
Load Types and Ratings			
Supported Load Types	Incandescent, Halogen, Electronic (Solid State) Low Voltage (ELV) transformers, Magnetic (Iron Core, Inductive) Low Voltage (MLV) transformers*, Fluorescents, Compact Fluorescents, LEDs.		
Maximum Load	1 Gang	2 Gang	3+ Gang
Incandescent (Tungsten)	1000W	800W	600W
Halogen	1000W	800W	600W
Fluorescent*	1000W	800W	600W
Compact Fluorescent (CFL)*	1000W	800W	600W
LED*	200W	200W	200W
Minimum Load (with neutral)			
Incandescent (Tungsten)	25W		
Halogen	25W		
Fluorescent*	25W		
Compact Fluorescent (CFL)*	25W		
LED*	25W		

Minimum Load (without neutral)	
Incandescent (Tungsten)	25W
Halogen	25W
Fluorescent*	N/A
Compact Fluorescent (CFL)*	N/A
LED*	N/A
Environmental	
Operational Temperature	32° F - 104° F (0° C - 40° C)
All load ratings are based on an ambient temperature of 25° C.	
Humidity	5% to 95% non-condensing
Storage	-4° F - 158° F (-20° C - 70° C)
Miscellaneous	
Control Communications	ZigBee, IEEE 802.15.4, 2.4 GHz, 15-channel spread spectrum radio
Wallbox Volume	5.75 cubic inches

- * NOTES:**
- (1) 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.
- (2) 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.
- (3) Additionally, we do not recommend the use of fluorescent, CFL, or LED loads without a neutral wire connected to the dimmer due to the capacitive nature of these load types.

Warnings and Considerations

- WARNING!** This device must be installed by a licensed electrician 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!** To reduce the risk of SERIOUS INJURY or DEATH, turn OFF local electrical power before installing this product.
- WARNING!** Use this device only with copper or copper-clad wire. Do not use aluminum wiring. This product has not been approved for use with aluminum wiring.
- WARNING!** This device must be protected by a circuit breaker (20A max).
- CAUTION!** To reduce the risk of overheating and possible damage to other equipment, do not install to control a receptacle or a motor operated appliance.
- IMPORTANT!** This product generates heat during normal operation.

- 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. See "Troubleshooting."
- IMPORTANT!** Do NOT use a power screwdriver to install this device. If you do, you may overtighten the screws and strip them. Also, overtightening the screws may interfere with proper button operation.
- IMPORTANT!** This is an electronic device with intricate components. Handle and install with care!

Installation Instructions

- Ensure that the location and intended use meet the following criteria:
 - Do not exceed the load capacity requirements of the dimmer. In multi-gang installations, a reduction of the dimmers' capacity is required to allow the dimmers to be installed side-by-side. Refer to the load ratings in the specifications above for details.
 - Install in accordance with all national and local electrical codes.
 - The range and performance of the wireless control system is highly dependent on the following: (1) distance between devices; (2) layout of the home; (3) walls separating devices; and (4) electrical equipment located near devices.
- If installing in a multi-gang scenario, use pliers to remove the inner-side breakaway tabs. Bend each tab back and forth until it breaks off. Remove the inner-side tabs ONLY on any device side that will be adjacent to another device. DO NOT remove tabs on any side that will become the outer side of a group of devices.

WARNING! To reduce the risk of SERIOUS INJURY or DEATH, turn OFF local electrical power before installing this product.

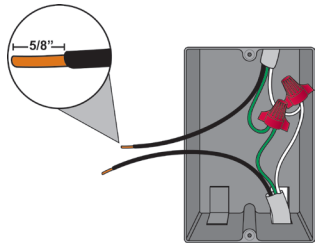
- Turn off the local electrical power by either switching off the circuit breaker or removing the fuse from the fuse box. To ensure the wires do NOT have power running to them, use an inductive voltage detector.

WARNING! As with any electrical device, improper use or installation can cause SERIOUS INJURY or DEATH. It is important that you understand the particular wiring configuration of your installation before proceeding.

NOTE: The wallbox wiring shown in this document is an example. Your wire colors and functions may differ. If you are not sure which wires are the Hot, Neutral, Load, Traveler, and Ground wires, have a trained electrician perform the installation.

- Prepare each wire. Wire insulation should be stripped back 5/8 of an inch from the wire end (see Figure 1).

Figure 1. Strip Wire Insulation



- Identify your wiring application, and then see the appropriate wiring diagram in the "Sample Wiring Configurations" section below.

WARNING! Ground the keypad in accordance with the National Electric Code (NEC) requirements. DO NOT rely solely upon the yoke plate's contact with a metal wallbox for adequate grounding. Use the keypad's

ground wire to make a secure connection to the safety ground of the electrical system.

IMPORTANT! Not grounding this product according to the preceding may result in an installation less immune to damage caused by electrical disturbances, such as ESD or lightning, and may void the warranty.

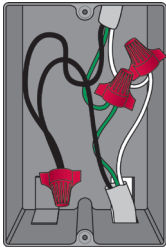
- Identify and connect the dimmer wires to the wallbox wires using the wire nuts.

IMPORTANT! The yellow wire is not a traditional traveler. It cannot directly power a lighting load. It must be used only to connect to a Control4 Auxiliary Keypad. See "Sample Wiring Configurations."

NOTE: Wallbox wires can differ depending upon how the box was wired by your electrician.

- Fit the wires back into the wallbox. Bend the wires in a zigzag pattern so that they easily fold into the wallbox (Figure 2).

Figure 2. Bend the Wires



- If you are using a Control4 push-on (screwless) wall plate:
 - Align the dimmer to the wallbox (the load rating label should be at the bottom) and fasten it with screws. Tighten the screws until the back side of the yoke plate is even with the wall surface, but no further. Overtightening can warp the dimmer and cause mechanical malfunction.

TIP: In multi-gang installations, leave the screws that attach the dimmer to the wallbox slightly loose until the faceplate's sub-plate is attached to all the devices. This allows all devices in the multi-gang box to be aligned before securing them to the wallbox. See the Control4 *Faceplate Installation Guide* for details.

- Install the Control4 Faceplate following the instructions in the *Faceplate Installation Guide*.

- If you are using a Decora-style screw-on wall plate:
 - Align the dimmer to the wallbox and fasten it with screws.
 - Tighten the screws until the back side of the yoke plate is even with the wall surface but no further. Overtightening can warp the dimmer and cause mechanical malfunction.
 - Fasten the faceplate to the dimmer with screws.

- Turn ON power at the circuit breaker or replace the fuse from the fuse box.



Operation and Configuration

On initial power up, all LEDs on the dimmer will illuminate green indicating that the device has power. To set up this dimmer for use with a Control4 system, refer to the *Composer Pro User Guide*.

To operate this dimmer as a stand-alone device:

- Click the **top button** to turn the light on.
- Click the **bottom button** to turn the light off.

- Press and hold the **top button** to ramp the light up. Release the button at the desired light level.
- Press and hold the **bottom button** to fade the light down. Release the button at the desired light level.

Air Gap Switch

During routine lamp replacement, remove power from the lamp by engaging the air gap mechanism. To engage, press on the right side of the top actuator bar until the left side pops out. All LEDs on the dimmer will turn off and the dimmer will no longer control the light when the air gap mechanism has been engaged.

Button Tap Sequences

The button tap sequences are defined in the table below. Button tap sequences that require a single (1) button should use the top-most button installed on the dimmer. Button tap sequences requiring two (2) buttons should use the top-most and bottom-most buttons installed on the dimmer.

Function Sequence	Button
Identify	4
ZigBee Channel	7
Reboot	15
Factory Reset	9-4-9
Leave Mesh and Reset	13-4-13

Troubleshooting

If the light does not turn on:

- Ensure at least one LED on the face of the dimmer is lit.
- Ensure the light bulb is not burned out and is screwed in tightly.
- Ensure that the circuit breaker is not turned OFF or tripped.
- Check for proper wiring (see “Sample Wiring Configurations”).
- For help on the installation or operation of this product, email or call the Control4 Technical Support Center. Please provide your exact model number. Contact support@control4.com or see the web site www.control4.com.

Care and Cleaning

- Do NOT paint the dimmer or its wall plate.
- Do NOT use any chemical cleaners to clean the dimmer.
- Clean surface of the dimmer with a soft damp cloth as needed.

Regulatory/Safety Information

To review Regulatory information for your particular Control4 products, see the information located on the Control4 website at: <http://www.control4.com/regulatory/>.

Patent Information

Protected under U.S. Patents 7,106,261, 7,336,463 and licensed under U.S. Patents 5,905,442 and 5,982,103.

Warranty

For complete warranty information, including details on consumer legal rights as well as warranty exclusions, review the Warranty card or visit www.control4.com/warranty.

About this Document

Part Number: 200-00307, Rev A 11/12/2012

Wiring Diagrams

Figure 3. Single Device Location, With Neutral Connection

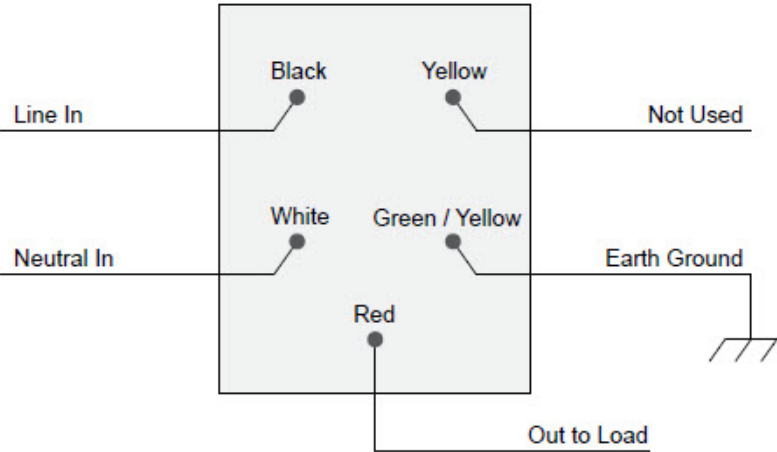


Figure 4. Single Device Location, Without Neutral Connection

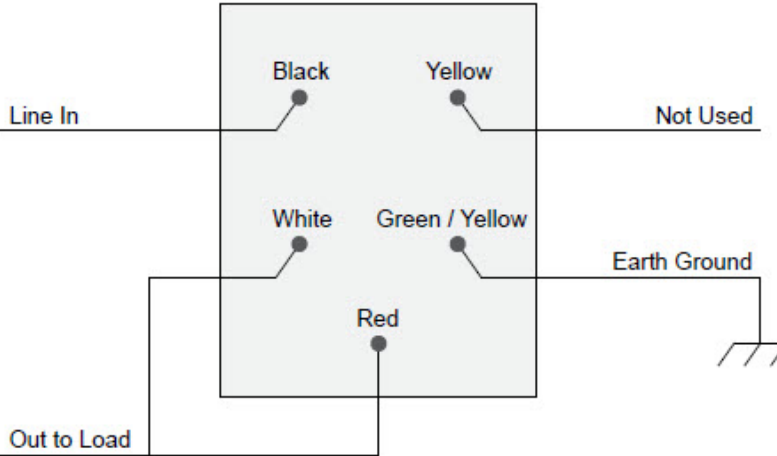


Figure 5. Multiple Device Location Using Auxiliary Keypad, With Neutral Connection

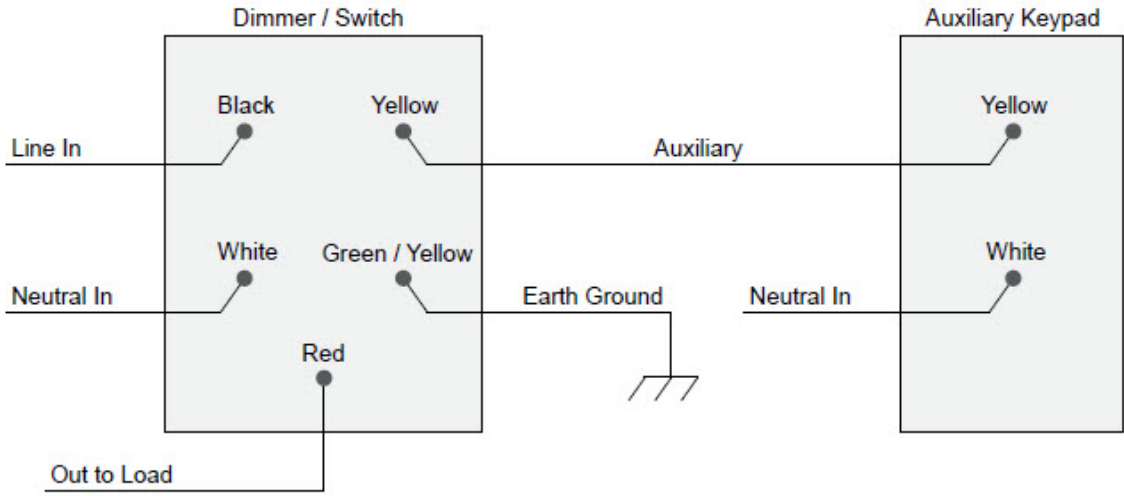


Figure 6. Multiple Device Location with Auxiliary Keypad, Without Neutral Connection

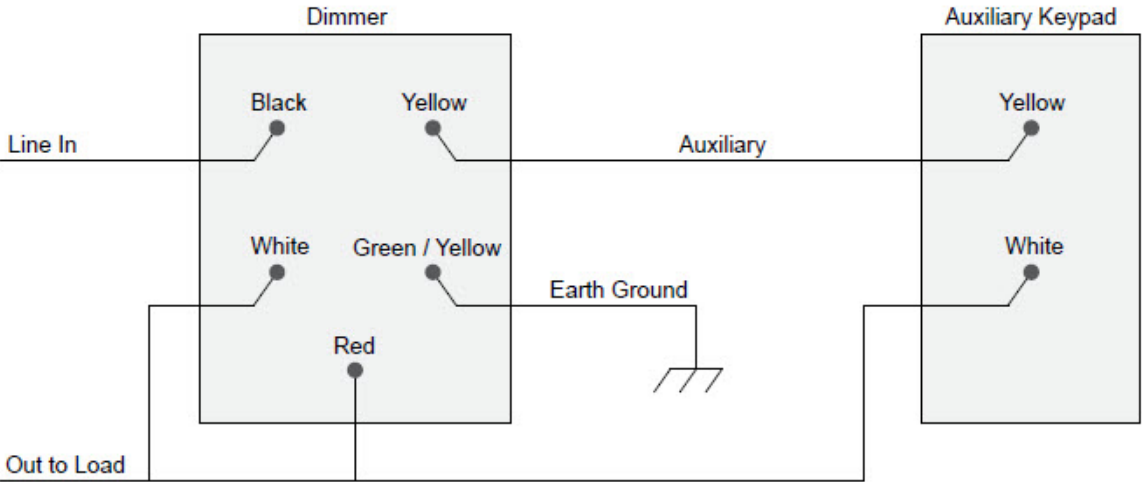
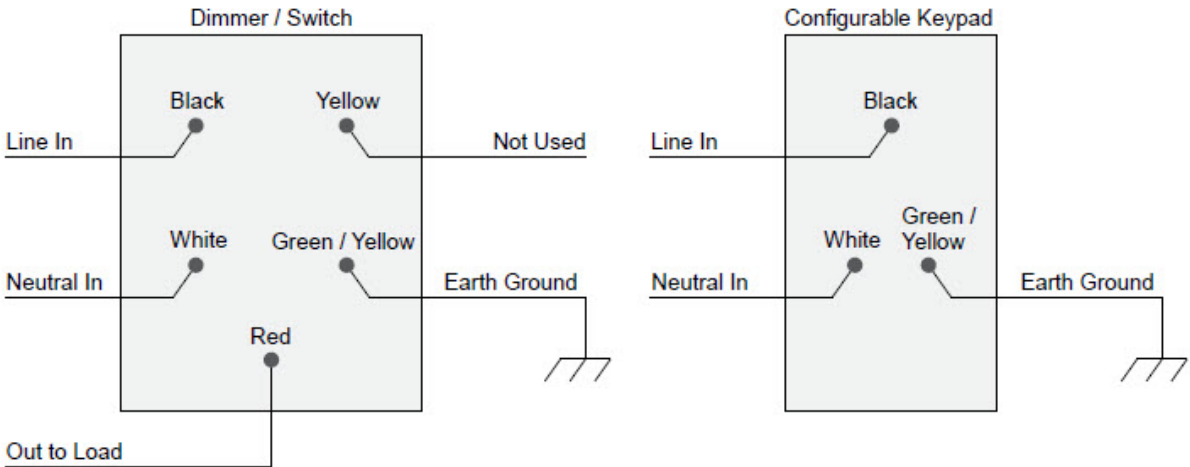


Figure 7. Multiple Device Location Using Configurable Keypad, Neutral Required





Regulatory Compliance & Safety Information for Contol4 Model C4-FPD120.

Electrical Safety Advisory

Important Safety Information

Read the safety instructions before using this product.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time. This equipment uses AC power which can be subjected to electrical surges, typically lightning transients which are very destructive to customer terminal equipment connected to AC power sources. The warranty for this equipment does not cover damage caused by electrical surge or lightning transients. To reduce the risk of this equipment becoming damaged it is suggested that the customer consider installing a surge arrestor.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Use the circuit breaker to disconnect the apparatus from the AC mains. The circuit breaker shall remain readily accessible.
16. To completely disconnect unit power from the AC mains, turn off the circuit breaker. To reconnect power, turn on the circuit breaker following all safety instructions and guidelines.
17. This product relies on the buildings installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 120 VAC, 20A.
18. **CAUTION:** As with all batteries, there is a risk of explosion or personal injury if the battery is replaced by an incorrect type. Dispose of used battery according to the



instructions of the battery manufacturer and applicable environmental guidelines. Do not open, puncture or incinerate the battery, or expose it to conducting materials, moisture, liquid, fire or heat above 54° C or 130° F.

19. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in fire or electric shock.
20. This product can interfere with electrical equipment such as tape recorders, TV sets, radios, computers and microwave ovens if placed in close proximity.



The lightning flash and arrow head within the triangle is a warning sign alerting you of dangerous voltage inside the product



Caution: To reduce the risk of electric shock, do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.



The exclamation point within the triangle is a warning sign alerting you of important instructions accompanying the product.

See marking on bottom / back of product



Warning!: To reduce the risk of electrical shock, do not expose this apparatus to rain or moisture

AVERTISSEMENT! Pour réduire le risque de choc électrique, n'exposez pas cet appareil à la pluie ou à l'humidité.

WARNUNG! Um das Risiko des elektrischen Schlages zu verringern, setzen Sie diesen Apparat nicht Regen oder Feuchtigkeit aus.

Save these instructions

Compliance of this equipment is confirmed by the following label that is placed on the equipment:



USA & Canada Compliance

FCC Part 15, Subpart B / ICES-003 Unintentional Emissions Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules and Industry Canada ICES-003. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a



particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC rules and Industry Canada ICES-003. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IMPORTANT! Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT! Tous les changements ou modifications pas expressément approuvés par la partie responsable de la conformité ont pu vider l'autorité de l'utilisateur pour actionner cet équipement.

FCC Part 15, Subpart C / RSS-210 Intentional Emissions Interference Statement

Compliance of this equipment is confirmed by the following certification numbers that are placed on the equipment:

Notice: The term "FCC ID:" and "IC" before the certification number signifies that FCC and Industry Canada technical specifications were met.

FCC ID: R33C4FPD

IC: 7848A-C4FPD

This equipment must be installed by qualified professionals or contractors in accordance with FCC Part 15.203 & IC RSS-210, Antenna Requirements. Do not use any antenna other than the one provided with the unit.

RF Radiation Exposure Statement

This equipment complies with the FCC/IC radiation exposure limits set fourth for portable transmitting devices operation in an uncontrolled environment. End users must follow the specific operating instructions to satisfy RF exposure compliance.

- The equipment should only be used or installed at locations where there is normally at least a 20cm separation between the antenna and all persons.
- This transmitter must not be co-located or operation in conjunction with any other antenna or transmitter.
- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.



Recycling

Control4 understands that a commitment to the environment is essential for a health life and sustainable growth for future generations. We are committed to supporting the environmental standards, laws, and directives that have been put in place by various communities and countries that deal with concerns for the environment. This commitment is represented by combining technological innovation with sound environmental business decisions.

WEEE Compliance

Control4 is committed to meeting all requirements of the Waste Electrical and Electronic Equipment (WEEE) directive (2002/96/EC). The WEEE directive requires the manufacturers of electrical and electronic equipment who sell in EU countries: (1) label their equipment to notify customers that it needs to be recycled, and (2) provide a way for their products to be appropriately disposed of or recycled at the end of their product lifespan. For collection or recycling of Control4 products, please contact your local Control4 representative or dealer.



Australia / New Zealand Compliance

Compliance of this equipment is confirmed by the following label that is placed on the equipment:



About this Document

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