# Control

# Configurable Keypad Installation Guide

# Supported Model

C4-KC120277 Wireless Configurable Keypad

# Introduction

The Control4® Wireless Configurable Keypad is intended for use in a Control4 system. It installs in a standard wall box using typical wiring standards and communicates to the Control4 system using a wireless connection.

# **Box Contents**

- Wireless Configurable Keypad
- Button Kit
- Wire Nuts
- Warranty Card
- Wireless Configurable Keypad Installation Guide (this document)

# Specifications

The specifications are described below

Model Number	C4-KC120277-xx	
Power Requirements	110-277 VAC +/-10% 50/60 Hz	
	This device requires a neutral AC connection.	
Power Consumption	1 W	
	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	4.75 cubic inches	

# Warnings and Considerations



WARNING! This device must be installed by a licensed electrician in accordance with all national and local electrical codes.



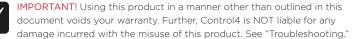
WARNING! If you are unsure about any part of these instructions, consult a qualified electrician.



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).





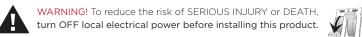
MPORTANT! Do NOT use a power screwdriver to install this device. If you do, you may overtighten the screws and strip them. Also, overtightening he screws may interfere with proper button operation.



MPORTANT! This is an electronic device with intricate components. Handle and install with care!

# Installation Instructions

- 1 Ensure that the location and intended use meet the following criteria:
- When replacing a traditional 3-way switch, refer to the "Two-Location" sample wiring configurations provided in the appropriate load control device installation guide.
- 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.

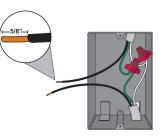


- 2 Turn off the local electrical power by either switching off the circuit breaker or removing the fuse from the fuse box. To ensure the wires do NOT have power running to them, use an inductive voltage detector.
  - WARNING! As with any electrical device, improper use or installation can cause SERIOUS INJURY or DEATH. It is important that you understand the particular wiring configuration of your installation before proceeding.

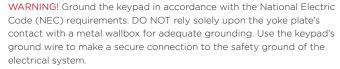
NOTE: The wallbox wiring shown in this document is an example. Your wire colors and functions may differ. If you are not sure which wires are the Hot, Neutral, and Ground wires, have a trained electrician do the installation.

3 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









**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.

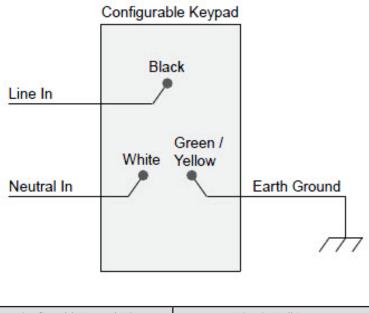
4 Identify and connect the keypad wires to the wallbox wires using the wire nuts



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

To wire the keypad, connect and cap the wires with a wire nut as indicated in the following figure and table

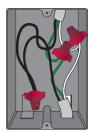
#### Figure 2. Keypad Wiring



Configurable Keypad Wires	Wires in Wall Box
White (neutral)	White (neutral)
Green (ground)	Green (ground)
Black (hot)	Black (hot)

Fit the wires back into the wallbox. Bend the wires in a zigzag pattern so that they easily fold into the wallbox (Figure 3).

#### Figure 3. Bend the Wires



- 7 If you are using a Control4 push-on (screwless) wall plate:
  - a. Align the keypad to the wallbox (the model # 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 configurable keypad and cause mechanical malfunction.
  - TIP: In multi-gang installations, leave the screws that attach the keypad 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.
  - b. Install the Top Actuator Bar, Bottom Sensor Bar, and Button Keycaps following the instructions in the "Keycap Installation" section below.
  - c. Install the Control4 Faceplate following the instructions in the Faceplate Installation Guide.
- 8 If you are using a Decora-style screw-on wall plate:
  - a. Align the keypad to the wallbox and fasten it with screws.
  - b. Tighten the screws until the back side of the yoke plate is even with the wall surface but no further. Overtightening can warp the keypad and cause mechanical malfunction.
  - c. Install the Top Actuator Bar, Bottom Sensor Bar, and Button Keycaps following the instructions in the "Keycap Installation" section below.
  - d. Fasten the faceplate to the keypad with screws.
- 9 Turn ON power at the circuit breaker or replace the fuse from the fuse box.
- 10 Ensure that all LEDs on the front are lit.



# Keycap Installation



WARNING! To reduce the risk of SERIOUS INJURY or DEATH, turn OFF the local electrical power before installing, removing, or replacing the kevcaps

#### To install the keycaps:

- Turn off the local electrical power.
- If previously installed, remove the faceplate and sub-plate from the keypad. 2
- 3 Snap the Top Actuator Bar onto the top of the keypad.
- 4 Snap the Bottom Sensor Bar onto the keypad.
- Snap the Button Keycaps onto the keypad in the desired configuration. 5
- 6 To remove the Top Actuator Bar, Bottom Sensor Bar, or Button Keycaps, simply grip the bar or keycap lightly from the right and left sides and pull out. DO NOT pry it off with a screwdriver.

# **Operation and Configuration**

On initial power up, all LEDs on the keypad will illuminate green indicating that the device has power. Until the keypad has been configured into a Control4 system, it will not control any loads. To set up this keypad for use with a Control4 system, refer to the Composer Pro User Guide.



# Control

#### 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 keypad. Button tap sequences requiring two (2) buttons should use the top-most and bottom-most buttons installed on the keypad.

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

# Troubleshooting

If one or more Light Emitting Diodes (LEDs) are not lit:

- Ensure circuit breaker is not turned OFF or tripped.
- Check for proper wiring (see Step 2 in "Installation Instructions"). You may also need to contact a trained electrician.
- 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 keypad or its wall plate.
- Do NOT use any chemical cleaners to clean the keypad.
- Clean surface of the keypad 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/.

# 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: 200-00309, Rev A 11/09/2012

Copyright @2013 Control4. . All rights reserved. Control4 logo, the Control4 iQ logo and the Control4 certified logo are registered trademarks or trademarks of Control4 Corporation in



## Regulatory Compliance & Safety Information for Contol4 Model C4-KC120277 & C4-KC240.

#### 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.
- 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: 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-003Unintentional 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: R33C4KC IC: 7848A-C4KC

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.



#### European Compliance

Conformity of the equipment with the guidelines below is attested by the application of the CE mark.

# CE

#### **CE Declaration of Conformity**

Manufacturer's Name: Manufacturer's Address:	CONTROL4 CORPORATION 11734 S. ELECTION ROAD SUITE 200 SALT LAKE CITY UT 84020 USA
EU Representative Name: EU Representative Address:	CONTROL4 EMEA LIMITED UNIT3, GREEN PARK BUSINESS CENTRE SULTON-ON-THE FOREST YORK YO61 IET, UNITED KINGDOM
Product Name(s): Brand: Model(s):	Configurable Keypad Contol4 C4-KC240

Product Standard(s) to which Conformity of the Council Directive(s) is declared:

EMC - 2004/108/EC "Electromagnetic Compatibility (EMC) Directive": (Emissions) EN 55022:2010, (Immunity) EN 55024:1998, EN 301 489-1:2008, EN 301 489-17:2009, EN 61000-3-2:2004 & EN 61000-3-3:2002

Safety – 206/95/EC "Low Voltage Directive (LVD)": EN 60669-2-1

Telecom & Radio - 1999/5/EC Radio equipment and Telecommunications Terminal Equipment (R&TTE) Directive: EN 300 328 V1.7.1 (2006-10)

RoHS - 2002/95/EC Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment (EEE) & WEEE - 2002/96/EC Waste of Electrical and Electronic Equipment (EEE).

We, the undersigned, hereby declare that the equipment specified above conforms to the above directives and standards. Date of Issue: January 11, 2013

Legal Representative

Plage midgle

Signature

Roger Midgley Sr. Regulatory Compliance Engineer

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

Copyright © 2012 Control4 Corporation. All rights reserved. Control4 and the Control4 logo are registered trademarks or trademarks of Control4 Corporation in the United States and/or other countries.

Part Number 200-00??? Rev A, 1/1/2013