Curtain Controller User Manual



Introduction

The Confio Curtain Controller (CTCCZB) is designed to control a high-wattage blind. It works with motorised roller blinds, is powered by a single-phase AC supply and provides precise positioning of the blind, so it can be set to any position you choose.

The 4-Channel Relay can be used in one of four operating modes:

- **4-Channel Relay Controller** – Controls up to 4 relay-controlled devices.
- **Dual-Channel Curtain Controller** – Controls up to 2 dual-channel curtains or blinds.
- **Single-Channel Curtain Controller** – Controls a single high-wattage curtain or blind.
- **Fan-Light Controller** – Controls a three-speed fan and a light when used with the Confio Fan Capacitor Module CTFCZB.

Technical Specifications

Protocol	Zigbee wireless mesh network, 2.4 GHz
Power Input	110–240 V AC, 50/60 Hz
Maximum Load / Relay	300 W inductive load at 250 V AC
Operating Temperature	−10 °C to +55 °C
Relative Humidity	5% – 90%
Dimensions	49 × 49 × 23 mm
Surge Protection	1.2 kV
Plastic Housing	Fire-retardant ABS
Supported Load Types	WT AC motors

Power Ratings

Load Type	Single Channel	2 Channels Muxed	3 Channels Muxed	4 Channels Muxed
Incandescent	500 W	1000 W	1500 W	2000 W
MLV	250 W	500 W	750 W	1000 W
LED	125 W	250 W	375 W	500 W
Inductive	187 W	374 W	561 W	748 W

Safety Measures

1. Before installation, make sure the mains power supply is turned off.
2. If multiple loads are connected to a single terminal, use appropriate connectors to avoid short circuits.
3. Use wires of minimum 1.5 mm^2 and maximum 2.5 mm^2 cross-section for connections.
4. This device requires a neutral connection to operate.

Warnings & Considerations

WARNING! Turn OFF the electrical power before installing or servicing this product. Improper use or installation can cause SERIOUS INJURY, DEATH or LOSS/DAMAGE OF PROPERTY.

WARNING! This device must be protected by a circuit breaker (20 A max.).

WARNING! Ground this device in accordance with the National Electrical Code (NEC) requirements. DO NOT rely solely on the yoke plate's contact with a metal wall box for adequate grounding. Use the device's ground wire to make a secure connection to the safety ground of the electrical system.

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

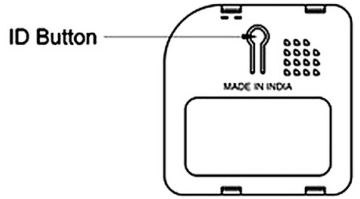
IMPORTANT! If you are unsure about any part of these instructions, consult a qualified electrician.

IMPORTANT! Use this device only with copper or copper-clad wire. Do not use aluminium wiring. This product has not been approved for use with aluminium wiring.

IMPORTANT! This product generates heat during normal operation.

IMPORTANT! Using this product in any manner other than that described in this document voids the warranty. Confio is NOT liable for any damage resulting from misuse of this product.

ID Button Location on the Device



Changing Modes

By default, the device is configured to operate as a 4-Channel Relay. The operating mode can be changed using either of the following two methods:

1. **ID button press sequence**, as shown in the table. This must be done **before** adding the device to the Zigbee network.
2. **Change Mode** function in the **Actions** tab of the Confio Puck Driver. This function lets you choose one of the four operating modes. After the mode has been changed once, it cannot be changed again unless the device is removed from the Zigbee network and reset to its defaults.

Note: If the device is added to a Zigbee network, the pre-configured parameters and mode in the device will be overwritten by the Confio Puck Driver. Please refer to the Confio Puck Driver documentation for additional details.

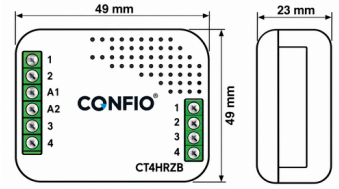
ID Button Functions & LED Indication

ID Button Presses	Function / Mode	LED Indication	Notes
Normal Operation			
4	Join Zigbee network (starts identify process)	Both LEDs toggle every 1 second	Joining process takes about 15 seconds
9	Factory reset	Both LEDs stay ON until the factory reset is complete	Parameters are set to their default state
13	Leave network & reset	Red LED toggles every 1 second	–
15	Restart	–	Device power cycle
Device Mode Selection			
5	**Device mode selection**	Both LEDs toggle every 500 ms	See Note 1 below
1	Select 4-Channel Relay mode	Red LED toggles every 1 second until the device joins theZigbee network	Refer to the 4-Channel Relay manual
2	Select Dual Curtain Controller mode	Red LED toggles every 2 second until the device joins theZigbee network	Refer to the Dual Curtain Controller manual
3	Select Single Curtain Controller mode	Red LED toggles every 3 second until the device joins theZigbee network	**Covered in this manual**
4	Select Fan Controller mode	Red LED toggles every 4 second until the device joins theZigbee network	Refer to the Fan Controller manual

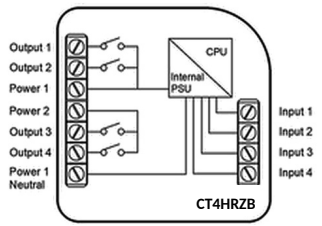
Notes:

1. If no device mode is selected within 30 seconds, the device returns to the previous application mode.
2. All settings are reset to factory defaults after the device leaves the Zigbee network using the ID button.
3. When the device is joined to a Zigbee network, the green LED toggles every 500 milliseconds.

Device Dimensions



Internal Block Diagram



Power 1: Supplies Relay 1 and Relay 2.
Power 2: Supplies Relay 3 and Relay 4.

Note: As indicated, Power 2 is NOT tied to the neutral or input terminals. Care MUST be taken if power is sourced from a different circuit breaker, to avoid tripping.

Configuration

Function	ID Button	Input 1 (SW1)	Inputs 1 & 2 (SW1 & SW2)
Zigbee Identification	4	4	NA
Zigbee Channel	7	7	NA
Reboot Device	15	15	NA
Factory Reset	9	22	9-4-9
Leave Zigbee & Reset	13	30	13-4-13

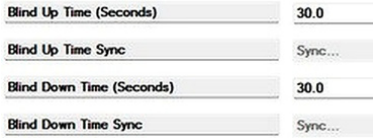
- **Zigbee Identification** – Joins the device to the Zigbee network.
- **Zigbee Channel** – The device's current Zigbee channel is indicated by the number of times the LEDs blink.
- **Reboot Device** – The device reboots and the relays return to their previous state.
- **Factory Reset** – All device application parameters are reset to factory defaults, except the Zigbee network parameters. The device remains connected to the Zigbee network.
- **Leave Zigbee & Reset** – All device parameters, including the Zigbee network parameters, are reset to factory defaults. The device is removed from the Zigbee network.

Note: If the device is disconnected from the Confio Puck Driver, the parameters and mode in the device will not change.

Important Instructions

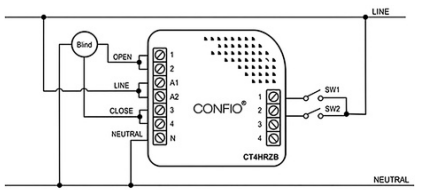
- Wear standard personal protective equipment during installation.
- Position the antenna away from metal objects to avoid interference.
- Do NOT cut or shorten the antenna; its length is matched to the operating frequency band.
- Do NOT over-tighten the terminal block screws. This can cause serious malfunction after installation.

Define Open & Close Time



1. Before defining the open/close time, measure the open/close time of the blind using a stopwatch.
2. The default open/close time of the device is 30 seconds.
3. Add the blind drivers: **Actions → Add Devices**.
4. Make sure the blind is in the fully open position before setting the open time or close time.
5. In the blind driver, set the open/close time as shown in the image above.
6. After setting, the blind position will show as 100% (i.e. fully open).

Circuit Connection



SW1 → Blind Open, **SW2** → Blind Close.

Output side: Mux terminals 1 & 2 and connect them to Blind Open. Mux terminals 3 & 4 and connect them to Blind Close.

Troubleshooting

1. **If the load does not turn ON/OFF:**
   - Ensure that the circuit breaker is not turned off or tripped.
   - Ensure that the load is not burnt out and is fitted properly.
   - Ensure that the device is working (red/green LED blinks).
   - Check for proper wiring (see the Circuit Connection diagram).
2. **If the switches connected to the input terminals do not operate the load,** check for proper wiring (see the Circuit Connection diagram).
3. **If the device does not identify on the Zigbee network:**
   - Confirm that the Control4 controller and the device are within 10 m of each other while adding the device to the Zigbee network.

Recommendations

- When connecting multiple loads to a single device, ask the electrician to calculate the total load and confirm that it does not exceed the ratings given in the Technical Specifications section.
- When outputs are muxed and connected to an AC or a geyser, the corresponding switches are automatically disabled.
- Check that there is enough space behind the switch box for placing the device.
- Turn off the MCB before installing the Puck module.
- Use wires of minimum 1.5 mm^2 and maximum 2.5 mm^2 cross-section for connections.
- Strictly follow the wiring diagram for connections.
- Do not connect loads higher than 8 A to a single channel.
- Make sure the parameters and configuration for muxing are set before connecting higher loads.
- If there are signs of water seeping into the switch box, disconnect the power supply to avoid short circuits.

Warranty

All products are covered by a standard warranty of **24 months from the date of supply.**

The warranty does not cover:

- Mechanical damage caused by impact, falls, accidental dropping, misuse, or operation contrary to the instructions in the Operating Manual.
- Damage caused by external events, including floods, storms, fires, lightning and other natural disasters.
- Damage caused by power surges, surges in telecommunications networks, improper connection to the power supply, or connection to devices not recommended by the manufacturer.
- Damage resulting from the use of non-genuine spare parts or incompatible accessories, or from repairs or modifications carried out by unauthorised persons.
- Damage or defects resulting from the continued use of faulty or inoperable devices or accessories.

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Manuals Database
This document covers the Curtain Controller mode. For the other operating modes, scan the QR code for the user manuals.
confiolabs.com/control4/