4-Channel Zigbee Relay Module User Manual



Introduction

The Confio 4-Channel Relay is a wireless control module that can be controlled remotely and is designed to operate on AC mains power. Four relay switches provide ON/OFF control of the connected loads. The internal relays can also be combined (muxed) to support higher-wattage loads.

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.

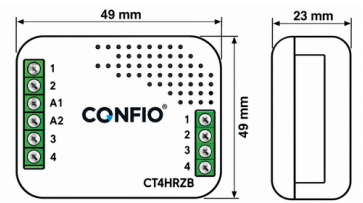
Technical Specifications

Power Input	110–240 V AC, 50/60 Hz
Operating Temperature	−10 °C to +55 °C
Relative Humidity	5% – 95%
Dimensions	49 × 49 × 23 mm
RF Frequency	2.4 GHz
Power Consumption	< 1 W
Surge Protection	1.2 kV
Typical Line-of-Sight Range	Up to 10 m indoor / 10–20 m outdoor
Plastic Housing	Fire-retardant ABS
Supported Load Types	Incandescent bulbs, LED lights, fans, AC and other ON/OFF devices

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

Device Dimensions



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.).

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.

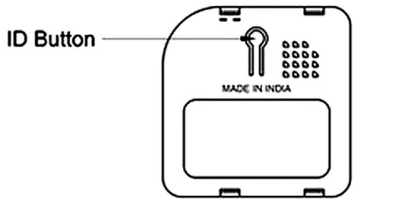
IMPORTANT! This product generates heat during normal operation.

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.

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 mm² and maximum 2.5 mm² cross-section for connections.
4. This device requires a neutral connection to operate.

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 theZigbee 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 theZigbee network and reset to its defaults.

Note: If the device is added to aZigbee 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.

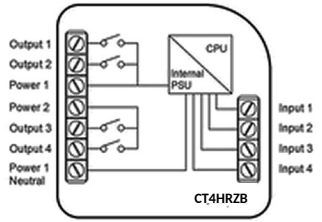
ID Button Functions & LED Indication

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

Internal Block Diagram



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

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

- **Identify** – Joins the device to theZigbee network.
- **Zigbee Channel** – The device's currentZigbee 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 theZigbee network parameters. The device remains connected to theZigbee 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.

Adding CT4HRZB to a Control4 System

- Power the CT4HRZB according to the approved wiring diagram.
- Open Control4 Composer Pro.
- Add the appropriate "Confio Puck" driver to the project.
- Open the driver identification function.
- Press the ID button on the module four times.
- Confirm that the module has been successfully identified.
- Verify that communication with the Control4 controller is established.
- Configure the required relay operating mode.
- Test each connected load using Composer Pro.
- Configure the physical switch inputs, if used.
- Requires Control4 OS version 3.1.2 or later, subject to driver compatibility.

Button Behaviour

Button behaviour can be changed using **Button Setup** in the Confio Puck Driver's properties.



Load On – When the switch detects voltage, the corresponding load turns ON.
Load Off – When the switch detects voltage, the corresponding load turns OFF.
Toggle Load – Designed for momentary push-button switches. Each button press toggles the corresponding relay between ON and OFF.
Toggle Load (Latch) – Designed for maintained rocker switches. The relay turns ON when the switch is in the ON position and turns OFF when the switch is in the OFF position.
Keypad – Adds a keypad connection to the driver that is triggered when the switch detects voltage.
Keypad (Latch) – When the switch detects voltage, the keypad connection is triggered ON; when the switch is turned off, the keypad connection is turned OFF.

Note: The default switch behaviour is Toggle Load.

Relay Configuration

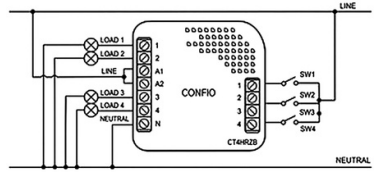
To select the relay configuration, click the "Confio Puck" driver in System Design, open its properties as shown below, and refer to the wiring diagrams for proper wiring.



Relay Configuration Options

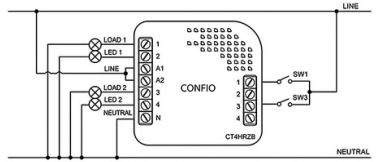
Configuration	Relay Grouping	Groups
Option 1	R1 / R2 / R3 / R4	4
Option 2	(R1+R2) / (R3+R4)	2
Option 3	R1 / R2 / (R3+R4)	3
Option 4	(R1+R2) / R3 / R4	3
Option 5	(R1+R2+R3) / R4	2
Option 6	(R1+R2+R3+R4)	1

Option 1: R1 / R2 / R3 / R4



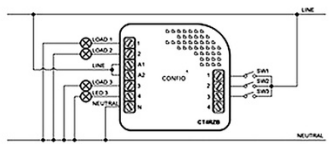
Note: All 4 relays work independently.

Option 2: (R1+R2) / (R3+R4)



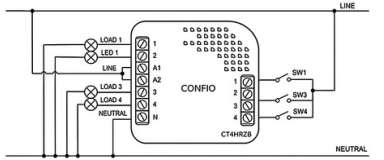
Note: Triggering Relay 1 also triggers Relay 2. Triggering Relay 3 also triggers Relay 4.

Option 3: R1 / R2 / (R3+R4)



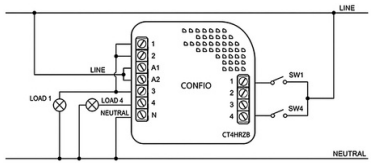
Note: Relays 1 and 2 work independently. Triggering Relay 3 also triggers Relay 4. Relay 4 cannot be triggered independently.

Option 4: (R1+R2) / R3 / R4



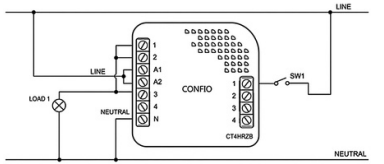
Note: Triggering Relay 1 also triggers Relay 2. Relays 3 and 4 work independently. Relay 2 cannot be triggered independently.

Option 5: (R1+R2+R3) / R4



Note: Triggering Relay 1 also triggers Relays 2 and 3. Relay 4 works independently. Relays 2 and 3 cannot be triggered independently.

Option 6: (R1+R2+R3+R4)



Note: Triggering Relay 1 also triggers Relays 2, 3 and 4. Relays 2, 3 and 4 cannot be triggered independently.

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.

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 wiring diagrams, Options 1–6).
2. **If the switches connected to the input terminals do not operate the load,** check for proper wiring (see the wiring diagrams, Options 1–6).
3. **If the device does not identify on theZigbee network:**
   - Confirm that the Control4 controller and the device are within 10 m of each other while adding the device to theZigbee 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 and Power Ratings sections.
- 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 10 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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For any technical and support queries, please contact the manufacturer:

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Manuals Database

This document covers the 4-Channel Relay Controller mode. For the other operating modes, please scan the QR code below for the user manuals.
https://confiolabs.com/control4/