

# 4 Channel Relay Manual



## Introduction

The Confo 4-Channel Relay is a wireless control module which can be remotely controlled and is designed to operate with AC mains power. Four relay switches enable ON/OFF control of loads. It also has the capability of muxing its internal relays to support high wattage load.

The 4-Channel Relay can be used in one of four operating modes:  
**4-Channel Relay Controller** - Control up to 4 relay-controlled devices  
**Dual-Channel Curtain Controller** - Control up to 2 dual channel curtains or blinds  
**Single-Channel Curtain Controller** - Control a single high-wattage curtain, blind or gate up to 300W at 240V AC and 150W at 120V AC  
**Fan-Light Controller** - Control a three-speed fan and a light

## Technical specification

Power input	110 – 240 VAC, 50Hz / 60Hz
Operating temperature	-10 to +35 °C
Relative humidity	5 % – 95%
Dimensions	49mm x 49 mm x 18mm
RF frequency	2.4GHz
Power consumption	<1 watt

Surge protection	2.5KV
Typical line of sight range	Up to 10m indoor / 10-20m outdoor
Plastic housing	Fire retardant ABS

Max Load Per Channel	240V AC	120V AC
Incandescent	600W	300W
Inductive	300W	150W
LED	150W	75W

## QR codes

This document includes usage details for the 4-Channel Relay mode. Please refer to the following documents for details for additional operating modes

Please Scan the QR code below for the 2 channel curtain controller module or click on the link



<https://confo.in/pdf/CT2CCZB.pdf>

Please Scan the QR code below for the single channel curtain controller module or click on the link



<https://confo.in/pdf/CTCCZB.pdf>

Please Scan the QR code below for the Fan controller module or click on the link



<https://confo.in/pdf/CTFLZB.pdf>

## Warnings and considerations



**WARNING!**  
Turn OFF 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 (20A max).



**WARNING!**  
Ground this device 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 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 aluminum wiring. This product has not been approved for use with aluminum wiring.



**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, Confo is NOT liable for any damage incurred with the misuse of this product.

## Safety measures

1: Before installation, make sure that the power supply mains is turned off

2: If multiple loads are connected to a single terminal, use appropriate connectors to avoid short circuit.

3: Use only minimum 1mm<sup>2</sup> wires and maximum 1.5mm<sup>2</sup> wires for connections.

4: This device requires a neutral lead to operate

## What you can control

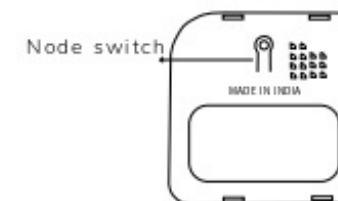
- 1: Incandescent bulbs
- 2: LED lights
- 3: Fan
- 4: AC
- 5: Other ON/OFF devices

## LED indications

Normal Led Indications

Red	Green	Device Status	Time in sec
Blinking	OFF	Ready to join network	Cont.
OFF	Blinking	Successfully joined network	Cont.
Blinking	Blinking	Joining network in process	4 sec

## Node\_SW Location On Device



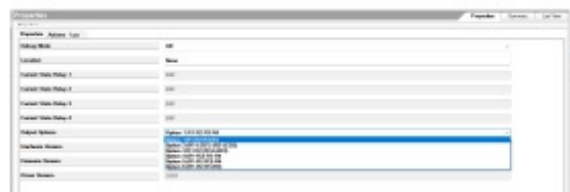
## Node\_SW functions for Multi firmware modules

Device Mode	Node_SW Preses	Operation	Led indications	Commands
Functional Mode	4	Join network (Start identify process)	Red & Green LED's Blinking (1sec Toggle period)	
	9	Factory Reset	Parameters will be set to default state. Both LED keep glowing until factory reset completes)	
	13	Leave network	Red LED Blinking	
	15	Restart		Device power cycle
In App_Select Mode	5	App_Select Mode	Red & Green LED's Blinking (500ms Toggle period)	Device should not be in Mesh network while selecting Applications. After 5times pressing if user not selected any application within 30sec by pressing 1 or 2 times, device will go to previous application state
	1	To select 4-channel relay application	Red LED Blinking (500ms Toggle period) Until device includes to Mesh network	
	2	To select Dual curtain controller	Red LED Blink pattern 2 times/sec Until device includes to mesh network	Refer Dual Curtain Controller Manual for operations
	3	To select single curtain	Red LED Blink pattern 3 times/sec Until device includes to mesh network	Refer Curtain Controller Manual for operations
4	To select Fan control	Red LED Blink pattern 4 times/sec Until device includes to mesh network	Refer Fan Controller Manual for operations	

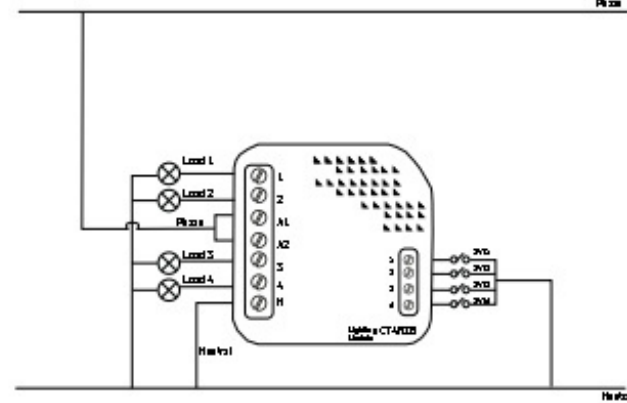
Note: By default device application will be 4-channel relay

## Output Circuit connections

Select output options. Select CT4R Driver in system design under properties goto output options shown below. Choose the appropriate option and refer to circuit connections.

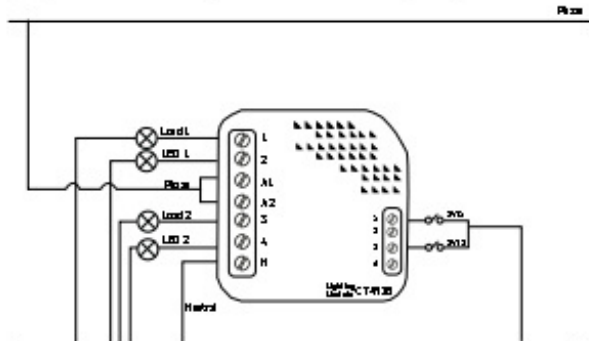


### Option 1: R1 R2 R3 R4



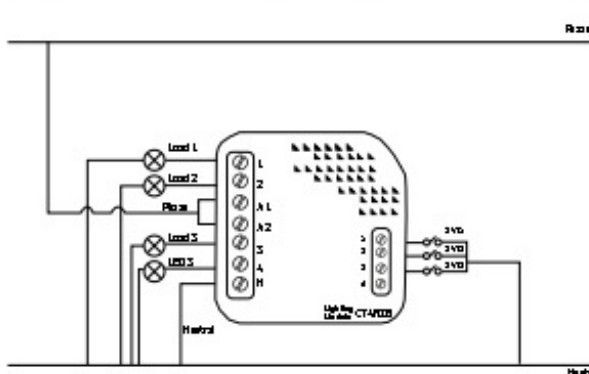
All Relays are treated separately

### Option 2: (R1 - LED1) (R2 - LED2)



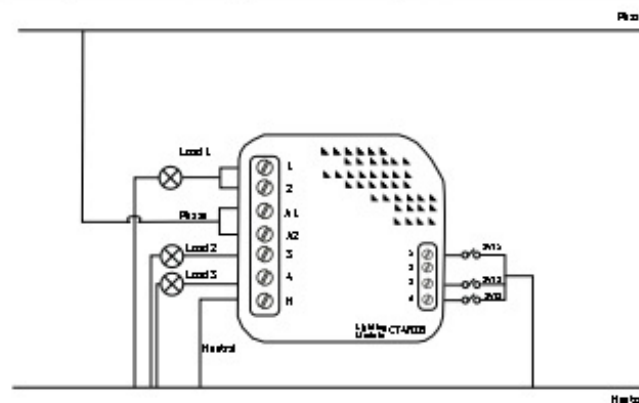
(R1-LED1)(R2-LED2) Triggering relay no. 1 will also trigger relay no. 2. Same for relays 3 and 4. Relays 2 and 4 cannot be independently triggered. SW1 will work for (R1-LED) and SW2 will work for (R2-LED2).

### Option 3: R1, R2 (R3 - LED3)



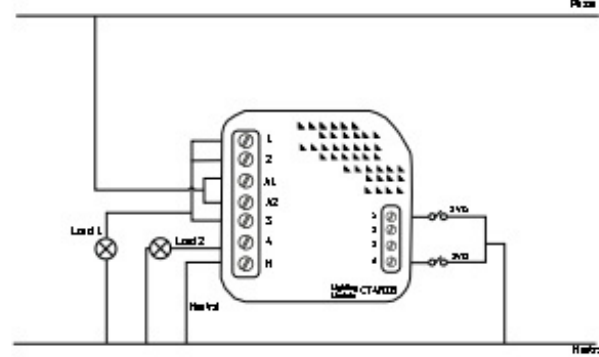
R1 R2 (R3-LED3) - Relays 1 and 2 are independent and triggering relay no. 3 will also trigger relay 4. Relay 4 cannot be independently triggered.

### Option 4: (R1 - R2) R3 - R4



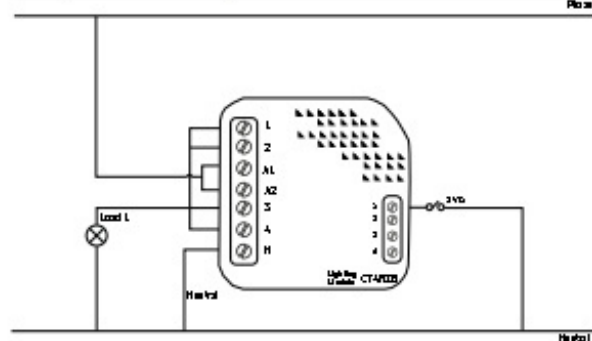
(R1-R2) R3 R4 - Triggering relay 1 will also trigger relay 2. Relays 3 and 4 are independent. Relay 2 cannot be independently triggered.

### Option 5: (R1 - R2 - R3) R4



(R1-R2-R3) R4 - Triggering relay 1 will also trigger relays 2 and 3. Relay 3 is independent. Relays 2 and 3 cannot be independently triggered.

### Option 6: (R1 - R2 - R3 - R4)



(R1-R2-R3-R4) - Triggering relay 1 will also trigger relay 2, 3 and 4. Relays 2, 3 and 4 cannot be independently triggered.

## Operations and Configuration

### Changing modes

By default, the 4-Channel Relay Puck is configured to operate as a 4-Channel Relay.

The operating mode can be changed using one of two methods.

1: Change using the App\_Select Mode button press sequence as referred to in the Hardware Installation Guide. If using the device's App\_Select Mode to change operating modes, this must be done prior to adding the device to the Control4 Zigbee network.

2: Use the Change Mode function available in the Confio Puck Control4 driver's Actions. This function will allow you to choose one of the four operation modes. After changing mode once, We can not change the mode again, Until the device leaves mesh and resets.

Please refer to the Control4 Confio Puck Driver documentation for additional details



## Control4 Driver

The following Control4 Drivers are available for use with the Confo 4-Channel Relay Puck.

- Confo Non-Dimmable Light
- Confo Blind
- Confo Fan

Each driver provides the required controls for each device type as used with the Confo 4-Channel Relay Puck in each of the four operating modes. The corresponding driver documentation provides additional details.

## Button Operation

Function	Node_SW	Aux. Contact 1 (SW_1)	Aux. Contacts 1 & 2 (SW_1 & SW_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

### A. Identify

Join the device to the Control4 Zigbee network

### B. Zigbee Channel

After the device is identified with the Control4 controller, the Zigbee channel is indicated by flashing both the red and green LEDs the number of times indicating the device's current Zigbee channel.

### C. Reboot Device

The device will be rebooted and the relays will return to their previous state prior to rebooting.

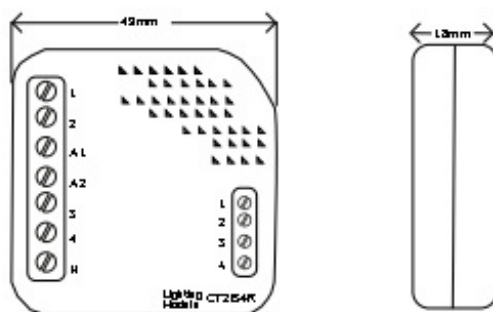
### D. Factory Reset

All of the device's parameters will all be reset to the factory defaults, except for the Zigbee network parameters. The device will remain connected to the Zigbee network.

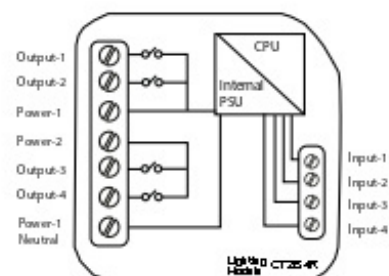
### E. Leave Mesh and Reset

Reset all of the device's parameters to factory defaults including the Zigbee network parameters. The device will be removed from the Zigbee network.

## Device Dimensions

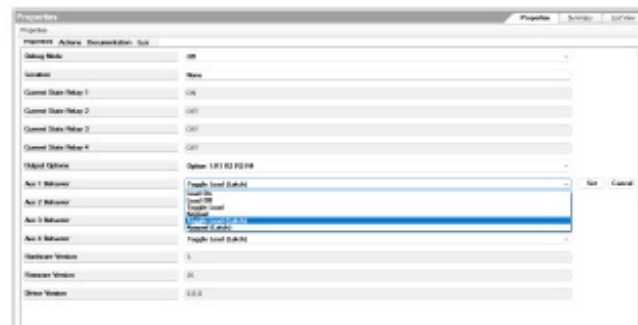


## Internal Block Diagram



As indicated Power 2 is not tied to the neutral or input terminals, care must be taken if power is sourced from a different RCD to alleviate tripping.

## AUX Behaviours



- 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 – When the switch detects voltage, the corresponding Load turns on; when the switch is turned off, the Load is turned off
- Keypad – Adds a keypad connected to the driver that will be triggered when the switch detects the voltage.
- Toggle load (Latch) – When the switch detects voltage the corresponding load is toggled
- Keypad (Latch) – When the switch detects voltage, the keypad connection is triggered; when the switch is turned off, the keypad is turned off

**Note: Default Switch Behavior is Toggle Load**

## Important instructions

- Wear standard personal protection equipment to give protection to the installer.
- Position the antenna far away from metal elements to avoid interference.
- Do not cut or shorten the antenna, as its length matches the band in which the system operates.
- Do not over-tighten the terminal block. It can cause serious malfunction after installation.

## Common issues

Pairing not working: Confirm that the remote controller and the device are within 10 meters from each other while adding to the gateway.

## Warranty

A standard warranty of 24 months from the date of supply is applicable for all products.

**The warranty shall not cover:**

- Mechanical damages caused by impact, falling or dropping the device or their object, unauthorized use or not observing the Operation Manual.
- Damages resulting from external causes, for example, floods, storms, fires, lightning, and natural disasters.
- Damages resulting from surges in the power and/or telecommunication network, improper connection to the grid in a manner inconsistent with the operating manual, or from connecting other devices not recommended by the manufacturer.
- Damages resulting from the use of spurious spare parts or accessories improper for given model, repairing and introducing alterations by unauthorized persons.
- Defects caused by operating inoperable devices or accessories.

## Recommendations

For connecting multiple loads on a single circuit, ask the electrician to calculate the total load and confirm that it does not exceed the following values:

- **Max load per channel at 240V AC** 800 Watts of Incandescent  
75 Watts of LED  
200 Watts Inductive load
- **Max load per channel at 120V AC** 300 Watts of Incandescent  
75 Watts of LED  
200 Watts Inductive load

- When 2 outputs are muxed and connected to an AC or a geyser, S2 automatically gets disabled. As the muxed channels are increased, respective switches stop functioning to avoid confusion.

- Check the space behind the switch for placing the relay.
- Turn off the MCB before the installation of dimmer module

- Use 2 mm<sup>2</sup> lugs for connection to terminals.

- Strictly follow the wiring diagram for connections

- Do not connect higher loads (more than 8A) to single channel.

- Make sure parameter configuration for muxing are set before connecting higher loads.

- Inclusion has to be done within 10 meter

- If there are signs of water seeping into the electrical box, turn off the MCB and disconnect the power supply to avoid short circuits.

- Strictly follow the wiring diagram for connections.



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