

## 4-CHANNEL LIGHTING MODULE USER MANUAL



### Introduction

4-Channel Lighting Module, which is remotely controlled and designed to operate in AC mains. Four relay switches enable ON/OFF control of regular loads. It also has the capability of muxing its internal relays to support high wattage load like Air-Conditioners and Geysers. The Relay Switch also operates as a repeater within the Z-Wave Network to which it is associated, and uses the latest Z-Wave plus chips.

### Technical Specifications

<b>Power Input</b>	240VAC, 50Hz
<b>Maximum Load per Channel @240VAC</b>	LED Drivers for Strips - Max 40W LED - Max 100W(Max 4 LED bulbs) Incandescent - Max 800W, Fan - Max 120W(Only ON/OFF)
<b>Cumulative Load - 4 Channels Muxed @240VAC</b>	8A(Per Ch) x 4 = 32A(Geyser/AC)
<b>Operating Temperature</b>	-10° to +55°C
<b>Temperature Sensing</b>	NA

<b>Relative Humidity</b>	8% - 80%RH
<b>Dimensions</b>	49mm x 49mm x 18mm
<b>Radio Frequency</b>	865.2MHz (IN)
<b>Surge Protection</b>	1.2 kV
<b>Typical Line of Sight Range</b>	10~15m Indoor /30m Outdoor
<b>Plastic Housing</b>	Fire Retardant ABS
<b>Supported Load Type</b>	Incandescent Bulbs, LED Lights, Fan, AC and other ON/OFF Devices.

### Warnings & Considerations



#### CAUTION

#### READ INSTRUCTIONS IN FULL BEFORE USE

The wiring connection diagram and parameters to use are mentioned in the manual. The Manufacturer, Confio will not be held responsible for any loss or damage resulting from not following the instructions of the Operating Manual.



#### CAUTION

#### DO NOT CONNECT THE DEVICE TO LOADS EXCEEDING RECOMMENDED VALUES

Connect Loads to the module below the Load ratings to work normally. Do not connect overload, this may lead to module failure.



#### CAUTION

#### FOLLOW INSTRUCTION MANUAL FOR CIRCUIT CONNECTION

Connections must be made according to the instructions available on operational manual, faulty connections lead to manual failure.



#### DANGER

#### DANGER OF ELECTRIC SHOCK

All works on the device may be performed only by a trained Technicians.

If the installation is done by an unauthorized Technician the Manufacturer will not be held responsible. Contact support@confiolabs.com or call +91-9606030659 for a list of authorized Technicians.



#### DANGER

#### DANGER OF ELECTRIC SHOCK

Any works introducing changes to the configuration of connections or the load must be always performed with disconnected voltage. Since there are high chances of voltage occurrence at the terminals even after the Device is turned off. (Turn off the MCB) Faulty connection or use may result in fire or Electric Shock.

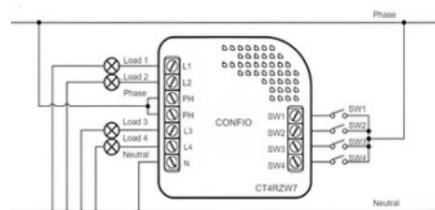
### Safety Measures

1. Before installation, make sure that the power supply mains are turned off.
2. Remove the switchboard cover frame and the switch frame to access the switches.
3. Select the loads to be connected to particular terminals.
4. If multiple loads are connected to a single terminal, use appropriate connectors to avoid short circuits.
5. Use only minimum of 1.5mm<sup>2</sup> wire and maximum of 2.5mm<sup>2</sup> wire connections.
6. This Device requires a neutral lead to operate.

### Circuit Connections

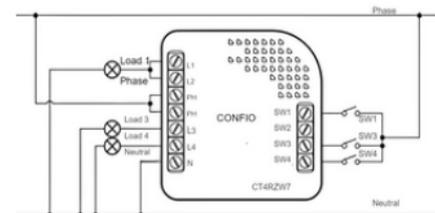
- The below wiring diagrams explain the possible combinations that are available.
- Check the load capacity before connecting.
- Loads must not exceed the maximum capacity mentioned in the instruction manual.

#### Option 1: Wiring Diagram



- For Connecting loads upto 8A use above mentioned Circuit Connections.
- Before connecting the load set the Parameter 09 to value 1.

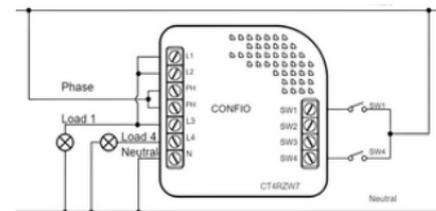
#### Option 2: Muxing Load L1+L2



- For Connecting loads upto 16A use the above-mentioned Circuit Connection.
- Before connecting the load set the Parameter 09 to value 2.
- By default, Parameter Number 09 is set to 1, so need to change the value to 02 function by the above image.

#### Option 3: Muxing Load L1+L2+L3

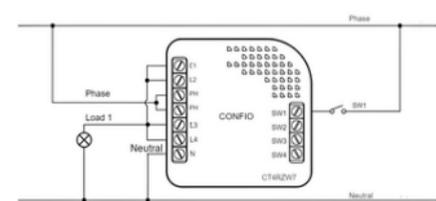
- For Connecting loads upto 12A use the below mentioned Circuit Connections.
- Before connecting the load set the Parameter 09 to value 3.



#### Option 4: Muxing Load L1+L2+L3+L4

- For Connecting loads upto 32A use the below mentioned Circuit Connections.
- Before connecting the load set the Parameter 09 to value 4.

**Note:** Use the below circuit connection for connecting the Geyser/AC or other similar higher-load appliances



The Manufacturer, Confio, will not be held responsible for any loss or damage resulting from not following the instructions of the Operating Manual.

## Activating Relay Module

### 1. Installing the Device

- Make sure that the power supply mains are turned off.
- Connect the phase, neutral and the loads on L1, L2, L3, L4.
- Use only mechanical switches for SW1, SW2, SW3, SW4.
- Complete all the connections and check the Pairing before sealing the Electrical Box.

### 2. Managing the Device through Z-Wave Network

- It is recommended to place the micro module within 3 meters Line of Sight, as adding mode requires direct communication with the Controller.
- Move the module near to the primary Controller during this step, if required.

## Inclusion Methods

### Method 1

Press the Node ID button (at the back of the module), to start Pairing the device to the Gateway.

### Method 2

Toggle S1 3 times within 4 seconds to start Unpairing the device to the Gateway. (Sequence: ON-OFF, ON-OFF, ON-OFF).

## Exclusion Methods

### Method 1

Press the Node ID button (at the back of the module), to start Unpairing the device from the Gateway.

### Method 2

Toggle S1 3 times within 4 seconds to start Unpairing the device from the Gateway. (Sequence: ON-OFF, ON-OFF, ON-OFF).

## Resetting Device

For resetting the micro module, press and hold the Node ID Button behind the module for 10 seconds. Then the Device will be restored to default.

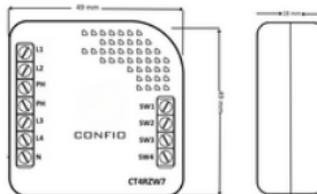
## Operating Relay Module

- S1, S2, S3, and S4 are controlled by position switches.
- It has no spring that would push the device after releasing manual pressure.
- Setting the selected switch to ON position activates the Load and vice-versa.
- If an external Controller turns off the Load and the switch is ON, turning off the switch does not affect the Load.

## Setting Additional Parameters

- Log on to Z-Wave Gateway from the app.
- Click Device Options >> Add Configuration Settings.
- Enter the parameter number in the Variable box and enter the desired parameter value.
- Click "SET".
- Close the dialog box and click Update Button.

## Device Dimensions



## LED Indications

LED Indication	Status
Red Blinking	Excluded
Green Blinking	Included/Paired
Red and Green	In Pairing Mode

## Important Instructions

- Wear standard personal protection equipment to give protection to the Technician.
- Position the antenna far away from metal elements to avoid interference.
- Do not cut or shorten the antenna, as its length is matched to the band in which the system operates.

## Additional Parameters

<b>Parameter 01</b>	Power ON state for Load1 (L1)
<b>Range</b>	0 to 1 (0: Memory, 1: Switch S1)
<b>Default</b>	0: Memory
<b>Description</b>	This Parameter decides the power ON state (when the Module is powered ON) of Load1(L1). This Parameter provides two options either power ON to memory (previous state as it was before power OFF) or present Switch position.

<b>Parameter 02</b>	Power ON state for Load2 (L2)
<b>Range</b>	0 to 1 (0: Memory, 1: Switch S2)
<b>Default</b>	0: Memory
<b>Description</b>	This Parameter decides the power ON state (when the Module is powered ON) of Load2(L2). This Parameter provides two options either power ON to memory (previous state as it was before power OFF) or present Switch position.

<b>Parameter 03</b>	Power ON state for Load3 (L3)
<b>Range</b>	0 to 1 (0: Memory, 1: Switch S3)
<b>Default</b>	0: Memory
<b>Description</b>	This Parameter decides the power ON state (when the Module is powered ON) of Load3(L3). This Parameter provides two options either power ON to memory (previous state as it was before power OFF) or present Switch position.

<b>Parameter 04</b>	Power ON state for Load4 (L4)
<b>Range</b>	0 to 1 (0: Memory, 1: Switch S4)
<b>Default</b>	0: Memory
<b>Description</b>	This Parameter decides the power ON state (when the Module is powered ON) of Load4(L4). This Parameter provides two options either power ON to memory (previous state as it was before power OFF) or present Switch position

<b>Parameter 05</b>	Auto OFF for Load1(L1)
<b>Range</b>	0: Auto OFF disabled, 1 minute to 240 minutes
<b>Default</b>	0: Auto OFF disabled
<b>Description</b>	This Parameter decides the ON time duration for Load1(L1). It ranges from 1 minute to 240 minutes i.e. 4 hours. Auto OFF counting starts as soon as L1 is turned ON either via S1 or GUI, once duration expires the L1 is turned off automatically. Setting this value to 0 (Zero) will disable auto OFF functionality.

<b>Parameter 06</b>	Auto OFF for Load2(L2)
<b>Range</b>	0: Auto OFF disabled, 1 minute to 240 minutes (4 hours)
<b>Default</b>	0: Auto OFF disabled
<b>Description</b>	This Parameter decides the ON time duration for Load2 (L2). It ranges from 1 minute to 240 minutes i.e. 4 hours. Auto OFF counting starts as soon as L2 is turned ON either via S2 or GUI. Once duration expires the L2 turned off automatically. Setting this value to 0 (Zero) will disable auto OFF functionality.

<b>Parameter 07</b>	Auto OFF for Load3(L3)
<b>Range</b>	0: Auto OFF disabled, 1 minute to 240 minutes (4 hours)
<b>Default</b>	0 Auto OFF disabled
<b>Description</b>	This parameter decides the ON time duration for Load3(L3). It ranges from 1 minute to 240 minutes i.e. 4hours. Auto OFF counting starts as soon as L3 is turned ON either via S3 or GUI. Once duration expires the L3 turned off automatically. Setting this value to 0 (Zero) will disable auto OFF functionality.

<b>Parameter 08</b>	Auto OFF for Load4 (L4)
<b>Range</b>	0: Auto OFF disabled, 1 minute to 240 minutes (4 hours)
<b>Default</b>	0: Auto OFF disabled
<b>Description</b>	This Parameter decides the ON time duration for Load4 (L4). It ranges from 1 minute to 240 minutes i.e. 4 hours. Auto OFF counting starts as soon as L4 is turned ON either via S4 or GUI. Once duration expires the L4 turned off automatically. Setting this value to 0 (Zero) will disable auto OFF functionality.

<b>Parameter 09</b>	Combine Relays/endpoints 1 to 4
<b>Range</b>	1: L1 only operates with S1 and GUI Master 2: L1 & L2 only operates with S1 and GUI Master 3: L1, L2, & L3 only operates with S1 and GUI Master 4: L1, L2, L3, & L4 only operates with S1 and GUI Master.
<b>Default</b>	1: L1 only operates with S1 and GUI Master.
<b>Description</b>	This Parameter is designed to combine two or more Relays to handle higher wattage Load current.

<b>Parameter 10</b>	Switch S1 Behavior. 0 to 1
<b>Range</b>	0: regular switch (i.e. ON-to-ON and OFF-to-OFF) 1: toggle switch (ON-to-Toggle and OFF-to-Toggle)
<b>Default</b>	0: regular switch (i.e. ON-to-ON and OFF-to-OFF)
<b>Description</b>	This Parameter defines the behavior of Switch S1. If set to 0, it behaves as Regular Switch (i.e. putting Switch to ON position will turn ON L1 and putting to OFF position will turn OFF L1) and if set to 1, it behaves as Toggle Switch (i.e. putting Switch to either ON or OFF position makes L1 to toggle). By default, this Parameter is set to 0 (Regular Switch operations).

<b>Parameter 11</b>	Switch S2 Behavior.
<b>Range</b>	0 to 1 0: Regular Switch (i.e. ON-to-ON and OFF-to-OFF) 1: Toggle Switch (ON-to-Toggle and OFF -to-Toggle) 0: Regular Switch (i.e. ON-to-ON and OFF-to-OFF)
<b>Default</b>	0: Regular Switch (i.e. ON-to-ON and OFF-to-OFF)
<b>Description</b>	This Parameter defines the behavior of Switch S2. If set to 0, it behaves as Regular Switch (i.e. putting Switch to ON position will turn ON L2 and putting to OFF position will turn OFF L2) and if set to 1, it behaves as Toggle Switch (i.e. putting Switch to either ON or OFF position makes L2 to toggle). By default, this Parameter is set to 0 (Regular Switch operations).

<b>Parameter 12</b>	Switch S3 Behavior
<b>Range</b>	0 to 1 0: Regular Switch (i.e. ON-to-ON and OFF-to-OFF) 1: Toggle Switch (ON-to-Toggle and OFF-to-Toggle)
<b>Default</b>	0: Regular Switch (i.e. ON-to-ON and OFF-to-)
<b>Description</b>	This Parameter defines the behavior of Switch S3. If set to 0, it behaves as Regular Switch (i.e. putting Switch to ON position will turn ON L3 and putting to OFF position will turn OFF L3) and if set to 1, it behaves as Toggle Switch (i.e. putting Switch to either ON or OFF position makes L3 to toggle). By default, this Parameter is set to 0 (Regular Switch operations).

<b>Parameter 13</b>	Switch S4 Behavior 0 to 1
<b>Range</b>	0: Regular Switch (i.e. ON-to-ON and OFF-to-OFF) 1: Toggle Switch (ON-to-Toggle and OFF-to-Toggle)
<b>Default</b>	0: Regular Switch (i.e. ON-to-ON and OFF-to- OFF)
<b>Description</b>	This Parameter defines the behavior of switch S4. If set to 0, it behaves as Regular Switch (i.e. putting Switch to ON position will turn ON L4 and putting to OFF position will turn OFF L4) and if set to 1, it behaves as Toggle Switch (i.e. putting switch to either ON or OFF position makes L4 to toggle). By default, this Parameter is set to 0 (Regular Switch operations).

<b>Parameter 14</b>	On board LED indications enable/disable.
<b>Range</b>	0 to 1 (0: disable, 1: enable)
<b>Default</b>	1: Enable
<b>Description</b>	This Parameter makes on board LED indication enable/disable. By default, this Parameter is set to 1 (enable LED indications).

<b>Parameter 15</b>	Load switch S1 disable
<b>Range</b>	0 to 1 (0: enable, 1: disable)
<b>Default</b>	0: enable
<b>Description</b>	This Parameter makes local Switch S1 either enable or disable. By default, this is set to 0 (enable S1).

<b>Parameter 16</b>	Load switch S2 disable
<b>Range</b>	0 to 1 (0: enable, 1: disable)
<b>Default</b>	0: enable
<b>Description</b>	This parameter makes local switch S2 either enable or disable. By default, this is set to 0 (enable S2).

<b>Parameter 17</b>	Load switch S3 disable
<b>Range</b>	0 to 1 (0: enable, 1: disable)
<b>Default</b>	0: enable
<b>Description</b>	This Parameter makes local Switch S3 either enable or disable. By default, this is set to 0 (enable S3).

<b>Parameter 18</b>	Load Switch S4 disable
<b>Range</b>	0 to 1 (0: enable, 1: disable)
<b>Default</b>	0: enable
<b>Description</b>	This Parameter makes local Switch S4 either enable or disable. By default, this is set to 0 (enable S4)

### Common Issues

**Pairing not working:** Confirm that the Gateway and the Relay Module are within 3 meters from each other while adding to the Gateway.

### Recommendations

For connecting multiple loads on a single device, ask the Electrician to calculate the total load and confirm that it does not exceed the ratings mentioned under the Technical Specification section.

- When outputs are muxed and connected to an AC or a Geysers, appropriate Switches automatically get disabled.
- Check the space behind the switch box for placing the Device.
- Turn off the MCB before the installation of Puck Module.
- Use only minimum 1.5mm<sup>2</sup> wires and maximum 2.5mm<sup>2</sup>wires for connections.
- Strictly follow the wiring diagram for connections. Do not connect higher loads (more than 8A) to single channel.
- Make sure parameters and configurations 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

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, flood, storm, fire, lightning, 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.



For any technical and support queries, please contact the Manufacturer

CONFIO TECHNOLOGIES PRIVATE LIMITED  
#3500/A, 80 Feet Road,  
Raghuvanahalli, Bangalore - 560062  
Karnataka, India

Email: [support@confiolabs.com](mailto:support@confiolabs.com)  
[www.confiolabs.com](http://www.confiolabs.com)