

Control System

WR12

Wireless Dual Relay Receiver

INSTALLATION INSTRUCTIONS

THIS PACKAGE INCLUDES:

1. Wireless Receiver:

(1) Wireless Transmitter



1. GENERAL DESCRIPTION

The Wireless Dual Relay Wireless Receiver WR12 is designed for door control, access control, and general automation applications. It provides two independent relay outputs and supports 4 operating modes to suit different installation scenarios.

The receiver accepts a 12–24V AC/DC power input and features removable screw-type terminal blocks for easy installation. Each relay provides normally open, normally closed, and common contacts, allowing the unit to interface with electric locks, door operators, lighting, or other low-voltage control devices.

The system supports 4 operating modes selectable via DIP switches, including independent relay control, interlocked door control, and sequential door operation.

Typical applications include:

- Automatic restroom door systems
- Access control door + operator combinations
- Dual-door vestibule control
- Lighting or fan control
- General low-voltage automation

NOTE: MZE Wireless Dual Relay Receiver WR12 is only compatible with MZE Wireless Transmitter WT01!

2. SYSTEM COMPONENTS AND TERMINALS

The receiver includes the following connections:

- Two relay outputs (Relay 1 and Relay 2)
- COM, NO, and NC contacts for each relay
- 12–24V AC/DC power input
- Removable screw terminal blocks

Relay contact rating:

- 120VAC, 3A
- 24VDC, 3A

Two push buttons on the unit allow pairing and clearing of transmitters for each channel.

3. INSTALLATION

Mount the receiver inside a protected enclosure, such as an operator header, control cabinet, or junction box. The unit should be installed in a dry indoor location away from moisture and excessive heat.

Before applying power, complete all wiring connections according to the selected operating mode. Ensure that the supply voltage matches the rated input of the receiver.

Basic installation steps:

1. Mount the receiver securely using screws.
2. Connect the power supply (12–24V AC/DC).
3. Connect the controlled devices to Relay 1 and Relay 2 terminals.
4. Select the desired operating mode using the DIP switches.
5. Apply power and test system operation.

4. WIRING

Wiring of this unit is dependant on the application and mode. Determine the appropriate mode, and then proceed to the section and drawing indicated.

5. OPERATING MODES

Operating modes are selected using the DIP switches. Different modes control how the two relays behave.

Mode 1 – Dual Independent Control Mode(Momentary / LATCHING)

In this mode, Relay 1 and Relay 2 operate completely independently. Each relay can be triggered by its corresponding transmitter.

The relays may operate in either:

- Momentary mode (timed output)
- Latching mode (toggle dip switch 4 ON/OFF)

The relay remains active for the duration set by the timer. If the transmitter is activated again before the timer expires, the timing cycle restarts.

Typical applications:

- Door control on Relay 1
- Lighting or fan control on Relay 2
- Two separate door operators

Mode 2 – Door Unlock Sequence Mode

This mode is designed for door lock and operator combinations.

When the transmitter is activated:

1. Relay 1 activates to release the electric lock.
2. After a short delay, Relay 2 activates the door operator.
3. Relay 2 turns off after the open time expires.
4. Relay 1 resets after the closing delay.

This sequence ensures safe and proper door operation.

Mode 3 – Two-Door Sequence Mode

This mode is used for two-door vestibule applications.

The system opens the exterior door first. After a delay, the interior door opens. The interior door then closes, followed by the exterior door.

This ensures that only one door is open at a time, which is commonly required in:

- Hospitals
- Laboratories
- Cleanrooms
- Building vestibules

Mode 4 – Relay 1 Latched Authorization Mode

In this mode:

- Channel 1 controls Relay 1 in latching mode.
- Channel 2 controls Relay 2 in momentary mode.

Relay 2 can only operate when Relay 1 is already active. If Relay 1 is turned off, Relay 2 is automatically deactivated.

This mode is commonly used for access control scenarios.

6. TRANSMITTER PAIRING

Each channel can store up to 10 transmitters.

Pairing Procedure

1. Press and hold the channel button for 5 seconds.
2. The green LED will flash rapidly, indicating pairing mode.
3. Activate the transmitter.
4. The receiver stores the transmitter and exits pairing mode.
5. The green LED will remain on to confirm successful pairing.

If no signal is received within 20 seconds, the receiver exits pairing mode automatically.

Clearing Paired Transmitters

- Press and hold the channel button for 10 seconds.
- All transmitters for that channel will be erased.
- The red LED will remain on to indicate no transmitters are stored.

7. TIMER ADJUSTMENTS

The receiver includes three timer adjustments:

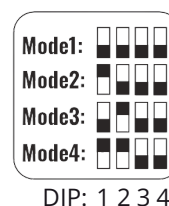
- Timer 1: Relay 1 hold time
- Timer 2: Relay 2 hold time
- Timer 3: Mode-dependent delay

Adjustment range:

- 1 to 30 seconds for all 3 timers

After adjusting a timer, allow approximately 3 seconds for the new setting to take effect.

8. DIP SWITCH SETTING



The DIP switches determine the operating mode of the receiver.

- DIP 1–2: Operating mode selection
- Additional switches may control relay behavior depending on the mode

Refer to the operating mode section for the correct switch configuration.

9. FUNCTIONAL TEST

After installation and configuration are complete, the system should be tested to ensure proper operation.

Activate each paired transmitter and observe the relay outputs. Confirm that the relays operate according to the selected mode and timer settings. If the receiver is connected to a door lock or operator, verify that the door unlocks, opens, and resets correctly.

Test Procedure

1. Activate the transmitter assigned to Channel 1.
 - Relay 1 should energize.
2. Activate the transmitter assigned to Channel 2.
 - Relay 2 should energize.
3. Observe the relay timing.
 - Relays should release after the set timer expires.
4. If using a door operator or lock:
 - Confirm the door unlocks and opens correctly.
 - Confirm the door returns to normal state after the cycle.

If the system does not operate as expected, check:

- DIP switch mode settings
- Wiring connections
- Timer adjustments
- Transmitter pairing status

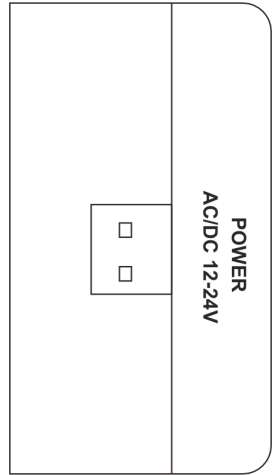
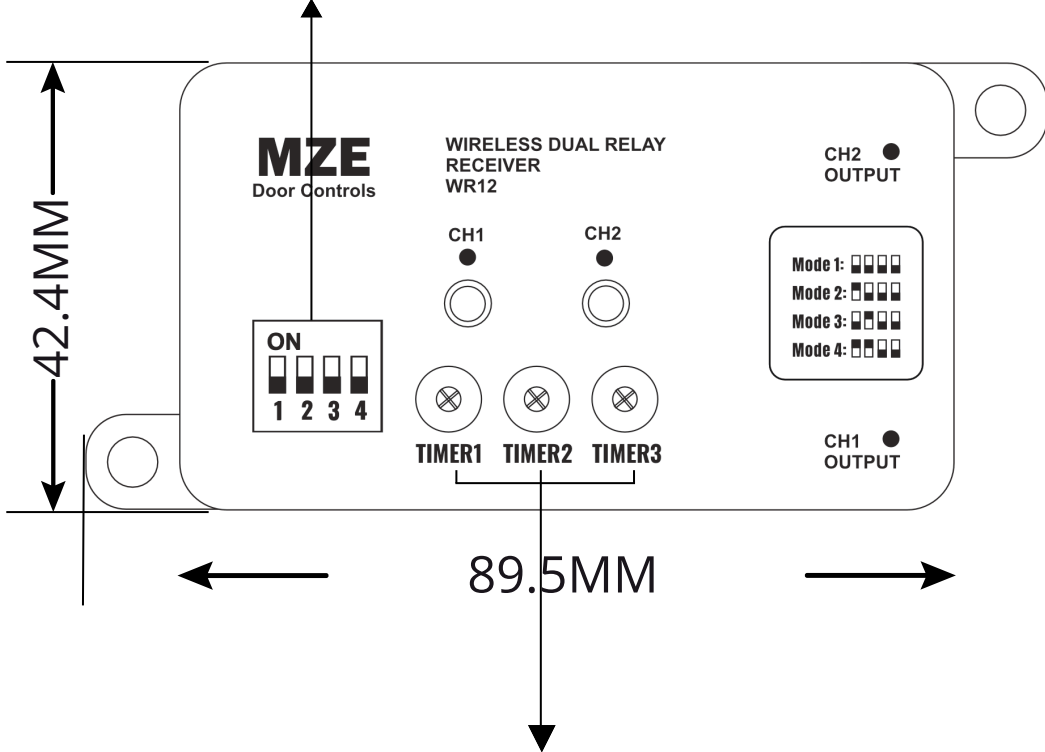
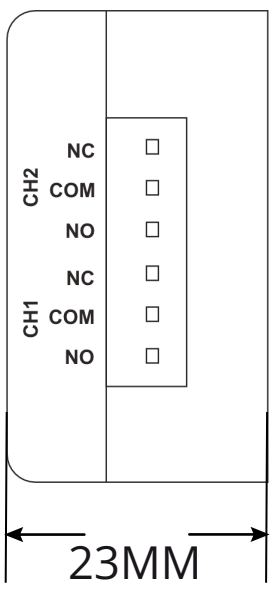
10. SAFETY NOTES

- Install according to local electrical codes.
- Use only the specified power supply.
- Do not expose the unit to water or excessive humidity.
- Disconnect power before servicing or wiring.

WR12 Electrical and Mechanical

MODE SELECTION:

MODE 1	MODE 2	MODE 3	MODE 4
DIP 1: OFF DIP 2: OFF DIP 4: OFF (MOMENTARY) DIP 4: ON (LATCHING)	DIP 1: ON DIP 2: OFF DIP 3: NOT USED DIP 4: NOT USED	DIP 1: OFF DIP 2: ON DIP 3: NOT USED DIP 4: NOT USED	DIP 1: ON DIP 2: ON DIP 3: NOT USED DIP 4: NOT USED



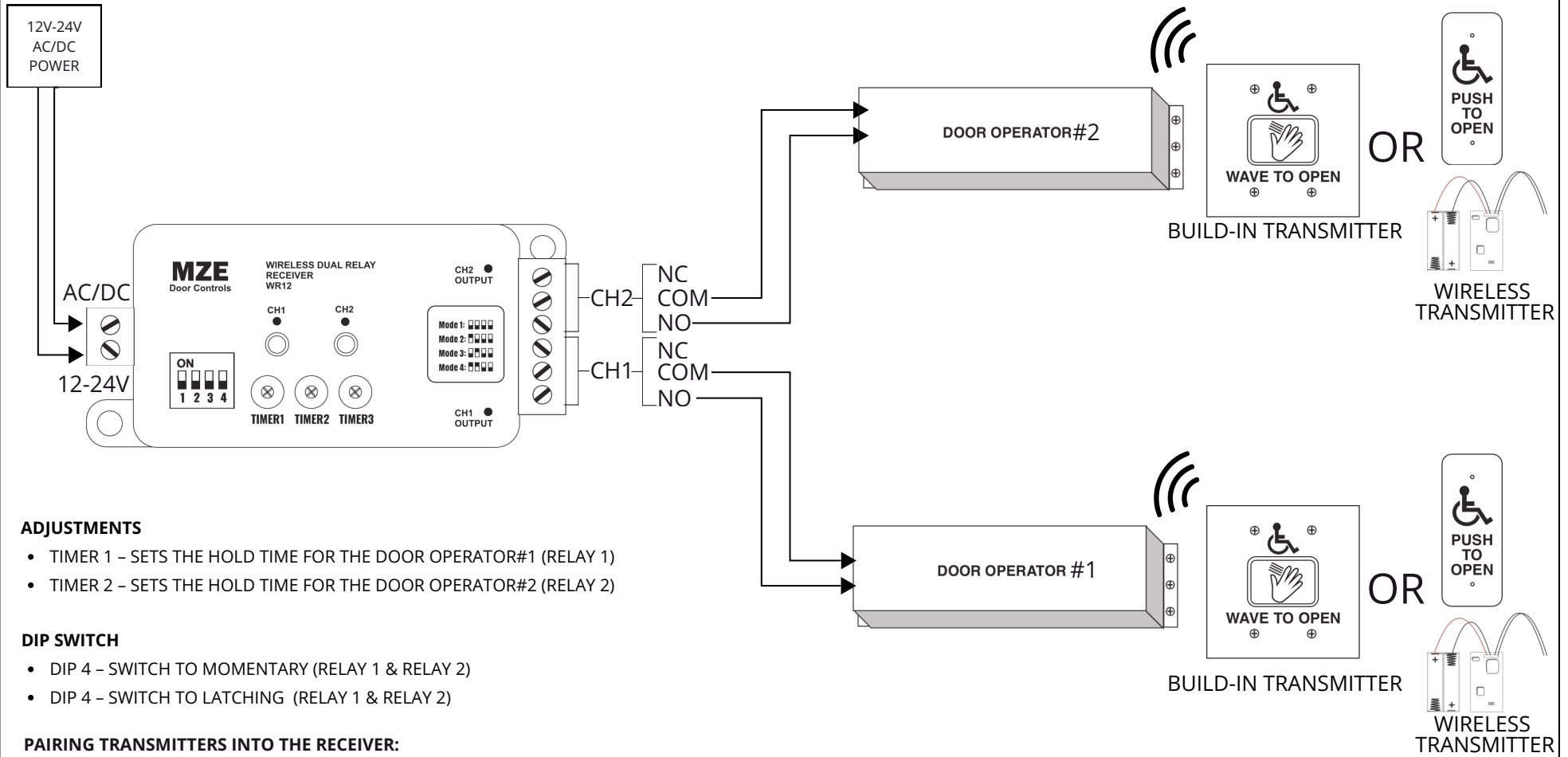
ADJUSTMENTS:

TIMER1: SETS THE HOLD TIME FOR RELAY 1.
TIMER2: SETS THE HOLD TIME FOR RELAY 2.
TIMER3: SETS THE DELAY TIME FOR RELAY 2.
 TURN CLOCKWISE TO INCREASE THE DURATION.

1 SEC
 CW SHORTER RANGE
 ⊖

30 SEC
 CCW LONGER RANGE
 ⊕

MODE#1 - DUAL INDEPENDENT CONTROL MODE (MOMENTARY / LATCHING)



ADJUSTMENTS

- TIMER 1 – SETS THE HOLD TIME FOR THE DOOR OPERATOR#1 (RELAY 1)
- TIMER 2 – SETS THE HOLD TIME FOR THE DOOR OPERATOR#2 (RELAY 2)

DIP SWITCH

- DIP 4 – SWITCH TO MOMENTARY (RELAY 1 & RELAY 2)
- DIP 4 – SWITCH TO LATCHING (RELAY 1 & RELAY 2)

PAIRING TRANSMITTERS INTO THE RECEIVER:

CHANNEL 1 / CHANNEL 2:

STEP 1: PRESS AND HOLD THE CH1 (OR CH2) BUTTON ON THE RECEIVER FOR 5 SECONDS.

- THE GREEN LED FLASHES RAPIDLY , THE RECEIVER IS NOW IN PAIRING MODE.

STEP 2: ACTIVATE THE TRANSMITTER BY (PRESS A PUSH SWITCH CONNECTED TO A WIRELESS TRANSMITTER / WAVE WIRELESS TOUCH FREE SWITCH).

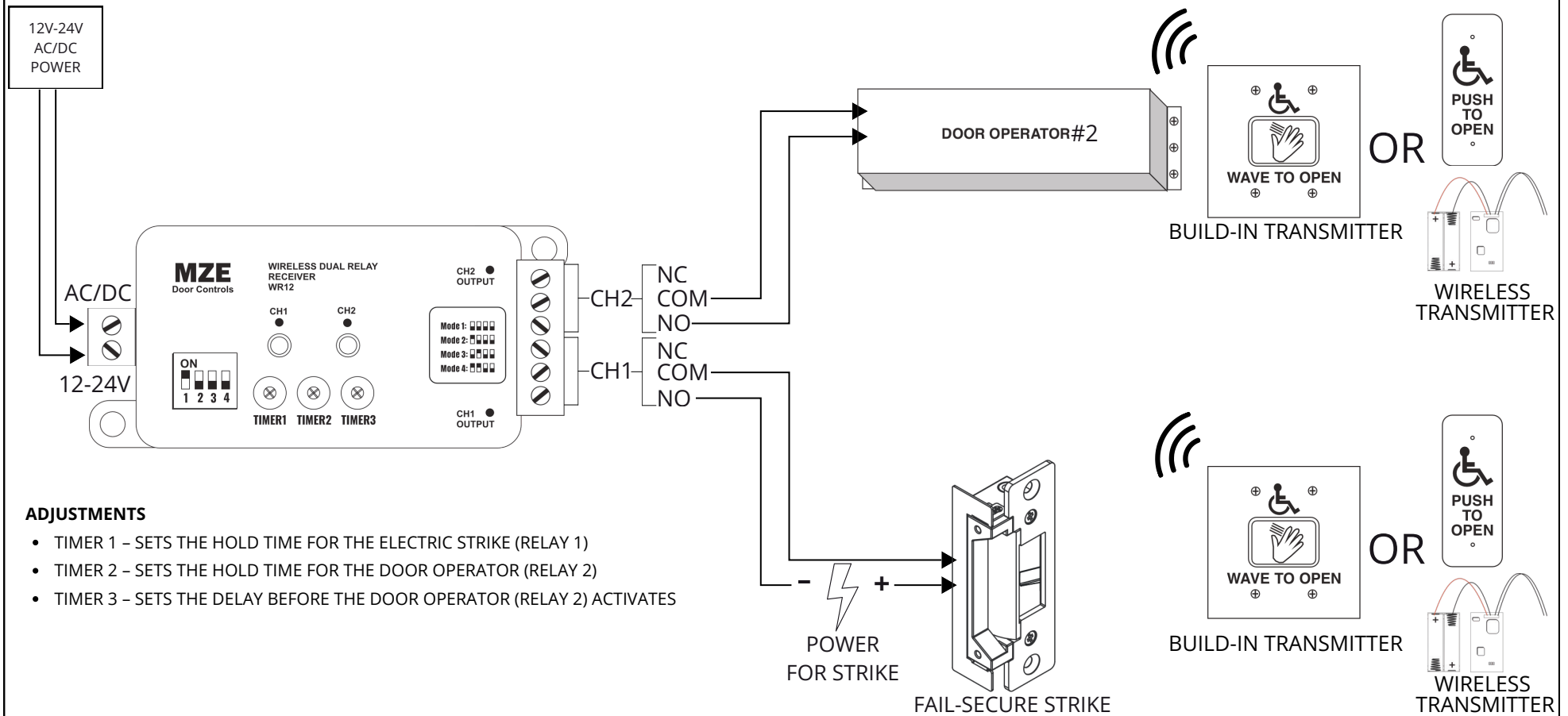
- THE GREEN LED FLASHES ONCE TO CONFIRM START PAIRING

STEP 3: ACTIVATE THE SAME TRANSMITTER AGAIN.

- PAIRING IS COMPLETED AND THE RECEIVER EXITS PAIRING MODE AUTOMATICALLY.

NOTE: IF NO TRANSMITTER SIGNAL IS DETECTED WITHIN 20 SECONDS, THE RECEIVER WILL EXIT PAIRING MODE AUTOMATICALLY.

MODE#2 - DOOR UNLOCK SEQUENCE MODE



ADJUSTMENTS

- TIMER 1 – SETS THE HOLD TIME FOR THE ELECTRIC STRIKE (RELAY 1)
- TIMER 2 – SETS THE HOLD TIME FOR THE DOOR OPERATOR (RELAY 2)
- TIMER 3 – SETS THE DELAY BEFORE THE DOOR OPERATOR (RELAY 2) ACTIVATES

PAIRING TRANSMITTERS INTO THE RECEIVER:

CHANNEL 1 / CHANNEL 2:

STEP 1: PRESS AND HOLD THE CH1 (OR CH2) BUTTON ON THE RECEIVER FOR 5 SECONDS.

- THE GREEN LED FLASHES RAPIDLY, THE RECEIVER IS NOW IN PAIRING MODE.

STEP 2: ACTIVATE THE TRANSMITTER BY (PRESS A PUSH SWITCH CONNECTED TO A WIRELESS TRANSMITTER / WAVE WIRELESS TOUCH FREE SWITCH).

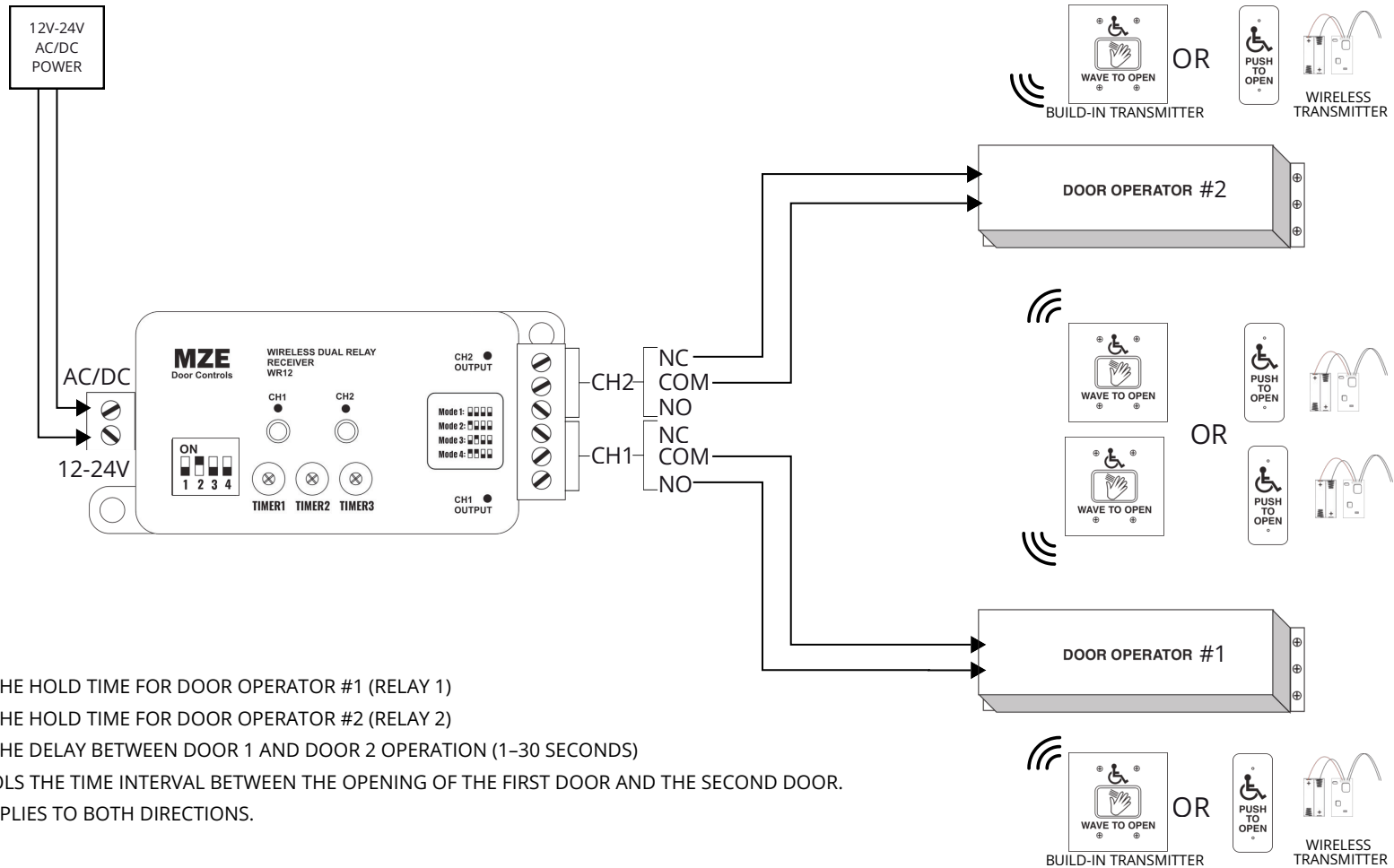
- THE GREEN LED FLASHES ONCE TO CONFIRM START PAIRING

STEP 3: ACTIVATE THE SAME TRANSMITTER AGAIN.

- PAIRING IS COMPLETED AND THE RECEIVER EXITS PAIRING MODE AUTOMATICALLY.

NOTE: IF NO TRANSMITTER SIGNAL IS DETECTED WITHIN 20 SECONDS, THE RECEIVER WILL EXIT PAIRING MODE AUTOMATICALLY.

MODE#3 - TWO-DOOR SEQUENCE MODE



ADJUSTMENTS

- TIMER 1 – SETS THE HOLD TIME FOR DOOR OPERATOR #1 (RELAY 1)
- TIMER 2 – SETS THE HOLD TIME FOR DOOR OPERATOR #2 (RELAY 2)
- TIMER 3 – SETS THE DELAY BETWEEN DOOR 1 AND DOOR 2 OPERATION (1-30 SECONDS)

THIS DELAY CONTROLS THE TIME INTERVAL BETWEEN THE OPENING OF THE FIRST DOOR AND THE SECOND DOOR. THE SAME DELAY APPLIES TO BOTH DIRECTIONS.

PAIRING TRANSMITTERS INTO THE RECEIVER:

CHANNEL 1 / CHANNEL 2:

STEP 1: PRESS AND HOLD THE CH1 (OR CH2) BUTTON ON THE RECEIVER FOR 5 SECONDS.

- THE GREEN LED FLASHES RAPIDLY , THE RECEIVER IS NOW IN PAIRING MODE.

STEP 2: ACTIVATE THE TRANSMITTER BY (PRESS A PUSH SWITCH CONNECTED TO A WIRELESS TRANSMITTER / WAVE WIRELESS TOUCH FREE SWITCH).

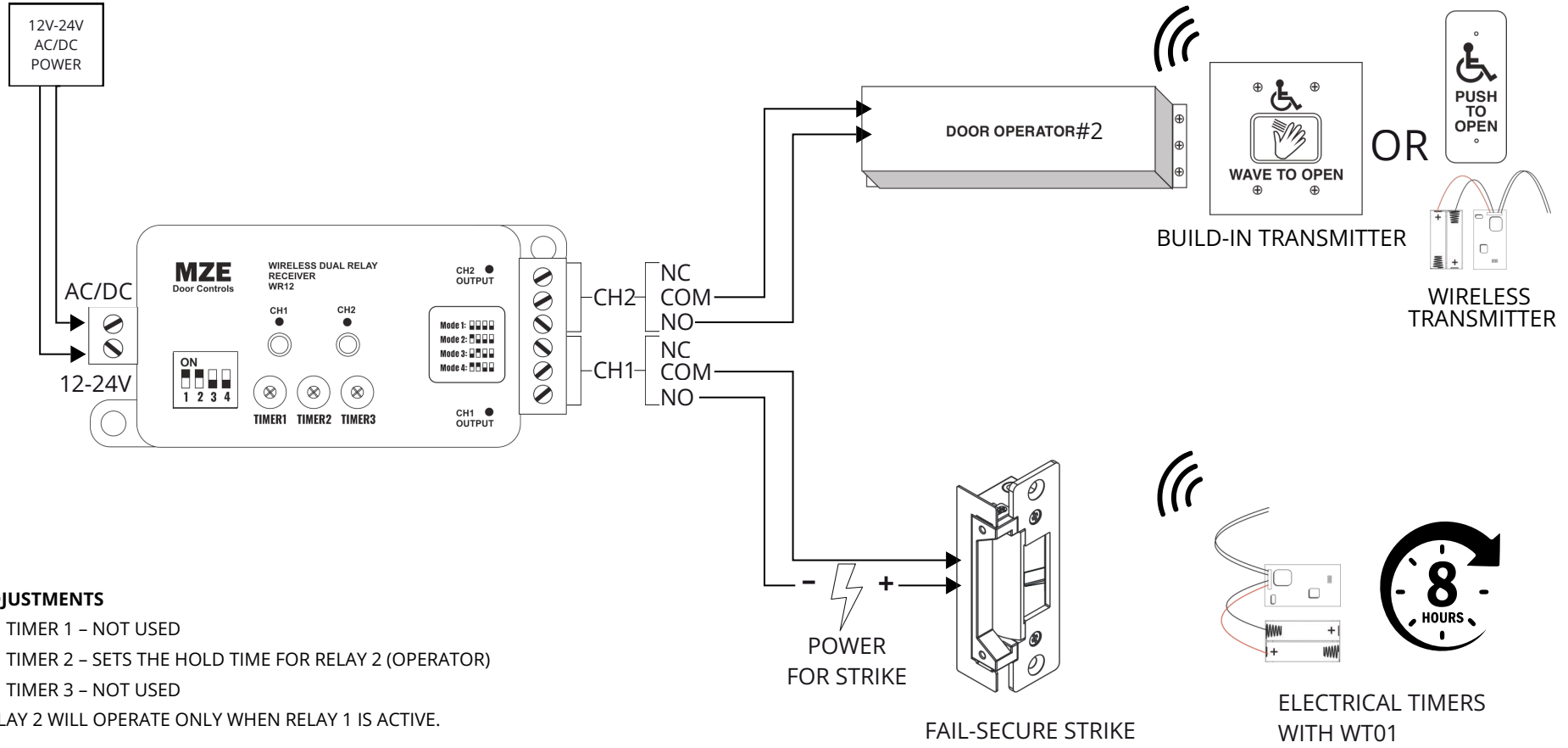
- THE GREEN LED FLASHES ONCE TO CONFIRM START PAIRING

STEP 3: ACTIVATE THE SAME TRANSMITTER AGAIN.

- PAIRING IS COMPLETED AND THE RECEIVER EXITS PAIRING MODE AUTOMATICALLY.

NOTE: IF NO TRANSMITTER SIGNAL IS DETECTED WITHIN 20 SECONDS, THE RECEIVER WILL EXIT PAIRING MODE AUTOMATICALLY.

MODE#4 - RELAY 1 LATCHED AUTHORIZATION MODE



ADJUSTMENTS

- TIMER 1 - NOT USED
- TIMER 2 - SETS THE HOLD TIME FOR RELAY 2 (OPERATOR)
- TIMER 3 - NOT USED

RELAY 2 WILL OPERATE ONLY WHEN RELAY 1 IS ACTIVE.

PAIRING TRANSMITTERS INTO THE RECEIVER:

CHANNEL 1 / CHANNEL 2:

- STEP 1:** PRESS AND HOLD THE CH1 (OR CH2) BUTTON ON THE RECEIVER FOR 5 SECONDS.
- THE GREEN LED FLASHES RAPIDLY , THE RECEIVER IS NOW IN PAIRING MODE.
- STEP 2:** ACTIVATE THE TRANSMITTER BY (PRESS A PUSH SWITCH CONNECTED TO A WIRELESS TRANSMITTER / WAVE WIRELESS TOUCH FREE SWITCH).
- THE GREEN LED FLASHES ONCE TO CONFIRM START PAIRING
- STEP 3:** ACTIVATE THE SAME TRANSMITTER AGAIN.
- PAIRING IS COMPLETED AND THE RECEIVER EXITS PAIRING MODE AUTOMATICALLY.

NOTE: IF NO TRANSMITTER SIGNAL IS DETECTED WITHIN 20 SECONDS, THE RECEIVER WILL EXIT PAIRING MODE AUTOMATICALLY.