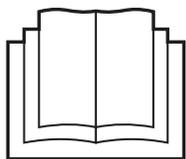


# NEXUS

## TOUCH CONTROLLER

### Installation and Commissioning Guide

Model:  
**WTC-01**



#### **IMPORTANT NOTE:**

Please read this manual carefully before installation and operation.  
Please keep this manual for future reference.



## Table of Contents

- 01. SAFETY PRECAUTIONS .....3
  - 01.01. Safety Instructions ..... 3
  - 01.02. Codes, Regulations and Standards ..... 3
  - 01.03. Waste Electrical and Electronic Equipment Disposal Guidelines ..... 3
- 02. INSTALLATION OF ACCESSORIES .....5
- 03. ZONE SYSTEM INSTALLATION GUIDE ..... 6
  - 03.01. Possible Application / Installation Scenarios ..... 7
- 04. PRODUCT DIMENSIONS ..... 9
- 05. PRODUCT OVERVIEW .....10
- 06. DETERMINE MOUNTING LOCATION.....11
  - 06.01. Combination with Controllers ..... 11
- 07. INSTALLATION INTRODUCTION ..... 12
- 08. SYSTEM SETTINGS (SINGLE CONTROLLER)..... 13
  - 08.01. Bypass Method ..... 15
  - 08.02. Constant Zone method ..... 17
- 08. SYSTEM SETTINGS (DUAL CONTROLLER) .....22
- 09. SYSTEM SETTINGS (RE-ENTER).....23
- 10. MAINTENANCE ..... 24
- 11. SOFTWARE VERSION (OTA).....25
- 12. ERROR CODES .....26



**WARNING**

**KEEP OUT OF REACH OF CHILDREN**

Contains button or coin cell battery. Hazardous if swallowed. Swallowing can lead to chemical burns, perforation of soft tissue and death. Severe burns can occur within 2 hours of ingestion. Seek medical attention immediately.

## 01. SAFETY PRECAUTIONS

Please read the SAFETY PRECAUTIONS carefully before operating or installing the unit. Failure to follow these instructions may result in severe damage or injury. The potential severity of damage or injury is indicated as either a WARNING or a CAUTION.

### 01.01. Safety Instructions

Safety instructions and warnings provided in this installation manual are non-exhaustive and given as a guide only. Prevailing WH&S regulations should be observed and will take precedence to the safety instructions contained in this manual. Safe work practices and environment should be of paramount importance in the performance of all service procedures.

- Read all instructions in this manual before operating the system. Failure to do so may result in damage to the unit and controllers that may void your warranty.
- Turn-Off power from mains supply by removing the fuse or switching the circuit breaker to the OFF position before performing the installation procedures.
- Follow sound LOCK-OUT/TAG-OUT (LOTO) procedures to ensure that power supply is not re-energized accidentally.
- Ensure that all safety work procedures and instructions are adhered to at all times in order to prevent personal injury or damage to the equipment.
- Only licensed technicians are allowed to perform the procedures described in this guide.
- The ActronAir Group Control kit is NOT FOR OUTDOOR USE. Install the kit away from excessive dust, heat and moisture.
- The air conditioning electrical panel and the ActronAir Group Control kit contain static sensitive electronic components. Careful handling and correct anti-static procedures should be followed to prevent damage of the equipment. Failure to protect the electronic components from static electricity may cause unreparable damage, that is NOT COVERED for replacement under Warranty.
- The instructions herein refer to work involving a Computer CPU Chip and Electronic CPU Board. Please ensure all instructions are followed accurately so as to prevent damage to these fragile and delicate components.

### 01.02. Codes, Regulations and Standards

The installer and/or contractor assumes responsibility to ensure that ActronAir Group Control kit installation and commissioning comply with the relevant council, state / federal codes, regulations and building code standards. All electrical wiring should be in accordance with current electrical authority regulations and all wiring connections to be as per electrical diagram provided with the unit.

### 01.03. Waste Electrical and Electronic Equipment Disposal Guidelines

- Do not dispose of the waste electrical and electronic equipment with local council waste. These should be disposed through the appropriate council designated waste disposal facilities.
- The equipment may contain hazardous substances. Improper or incorrect disposal may have a negative effect on human health and on the environment.

#### Explanation of Symbols

	<b>WARNING</b> The signal word indicates a hazard with a medium level of risk, Which if not avoided, may result in death or serious injury.
	<b>CAUTION</b> The signal word indicates a hazard with a low degree of risk, Which if not avoided, may result in minor or moderate injury.

Please read these operating instructions carefully and thoroughly before using or commissioning the unit. Keep them near the installation site for future reference.

 **CAUTION**

1. Have the product installed by a professional.
2. Improper installation by unauthorised individuals may lead to faulty installation, electric shock, or fire hazards.
3. Follow this installation manual. Do not uninstall the unit without authorisation. Unauthorised uninstallation can cause abnormal operation, overheating, or fire, resulting in product damage.
4. Re-installation, repair, and uninstallation must be performed by professionals.
5. Do not modify cables or terminals of this product.
6. Prevent liquids (water, alcohol, etc.) from entering the product during installation and use.
7. Do not operate the product with wet hands, as this may cause electric shock or product damage.
8. If water enters the product, turn off the power and contact a qualified service technician.
9. Do not place the product near a heat source.
10. Do not place heavy objects on the product.
11. During a thunderstorm, disconnect the power to avoid damage from lightning.
12. Do not operate or stop the product by switching the power on or off.

 **CAUTION**

1. The touch screen cover is made of glass. Handle the product with care to avoid dropping or throwing it against the ground, wall, or any hard object, as this can cause the glass to break and potentially injure people with glass fragments.
2. Avoid hitting or striking the screen, as this may break the glass cover.
3. If the glass cover is broken, turn off the power and stop using the product immediately. Keep children away from the glass fragments and contact a qualified service technician for assistance.

 **WARNING**

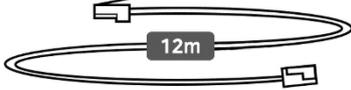
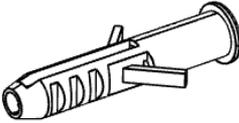
1. Before starting the installation or maintenance, ensure that the power supply is turned off to prevent electric shock or fire.
2. Before drilling into the wall, verify that there are no electrical wires, water pipes, or gas pipes inside the wall.
3. Install the power supply adaptor according to the instructions in this manual.
4. Do not alter the power supply adaptor or use a non-specified power supply adaptor.
5. Do not exceed the rating of the power outlet or connection device.
6. Do not modify the power cord length or share the outlet with other appliances.
7. If the power supply adaptor is damaged, turn off the power and contact a qualified service technician.
8. Do not install the product in a location that may be exposed to combustible gas.
9. Do not use the product near flammable gases or combustibles, such as gasoline, benzene, or thinner.
10. Do not use the product in areas where chemicals are handled.
11. Disconnect the power immediately if the product emits strange sounds, smells, or smoke.

**NOTE**

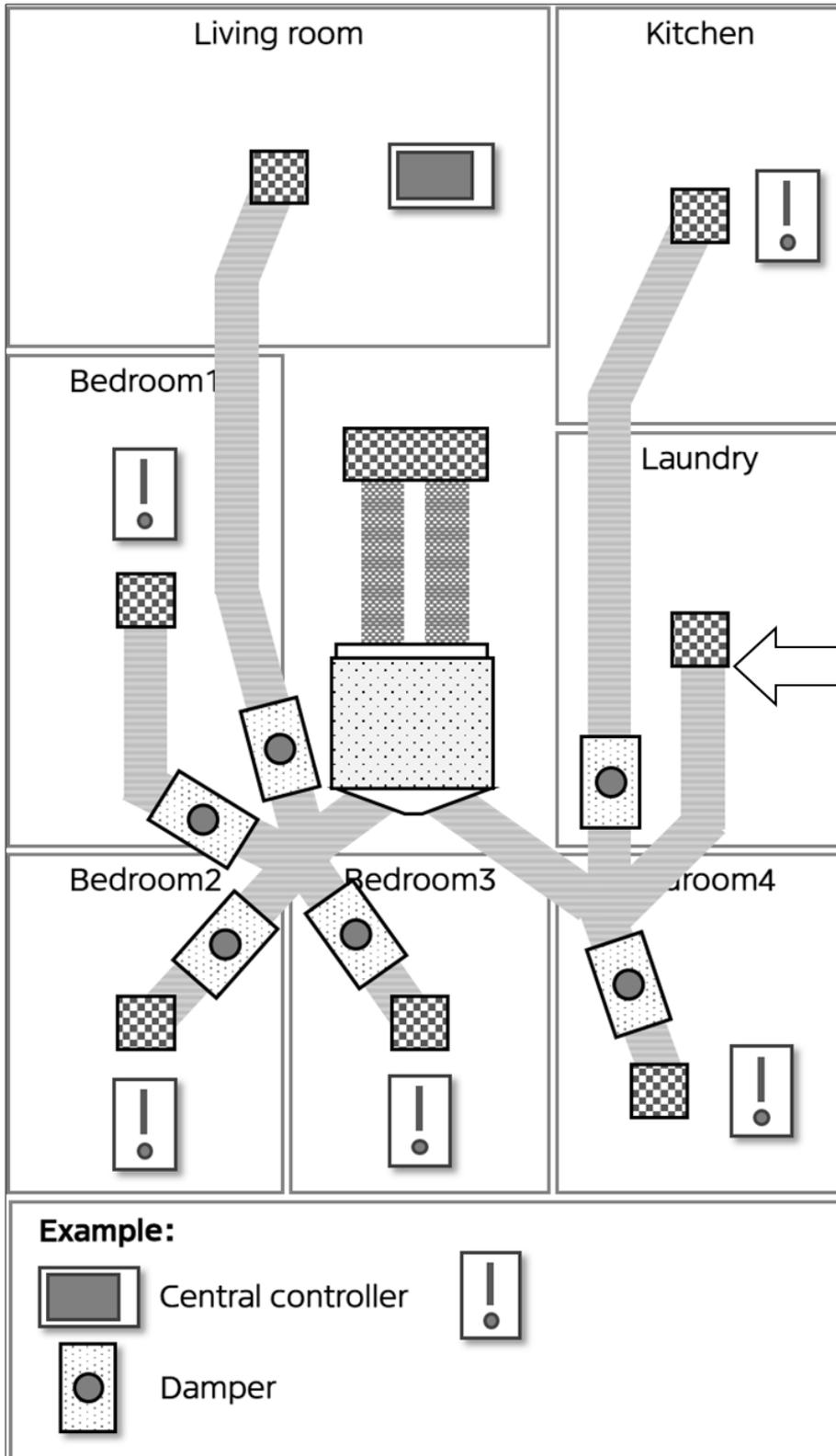
- The specified power supply adaptor and the correct installation method are described in detail in the following text. Please read this manual carefully. If you have any questions, please contact ActronAir's technical support team.
- Power Supply Adaptor sold separately from ActronAir (Model: WPS-01)

## 02. INSTALLATION OF ACCESSORIES

The following accessories are included in the product package. Please check to ensure all accessories are complete. If any are missing, contact ActronAir as soon as possible. Do not use unauthorised accessories.

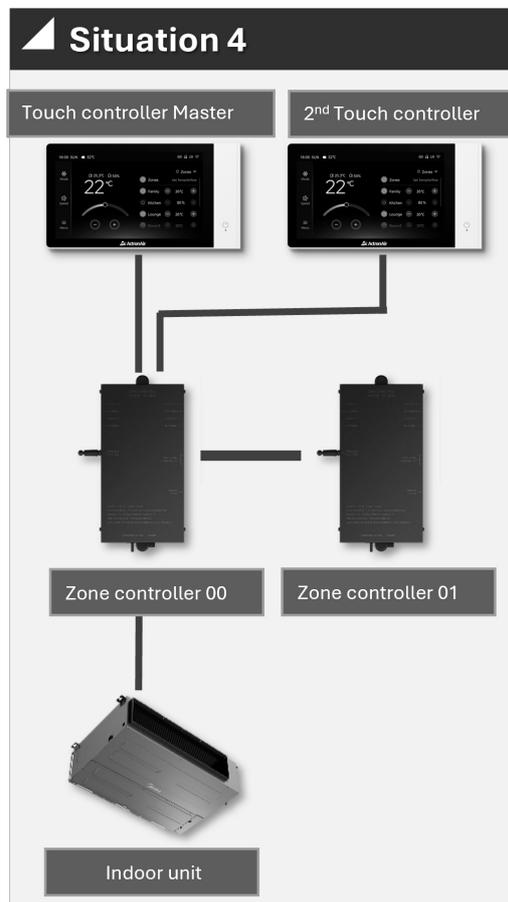
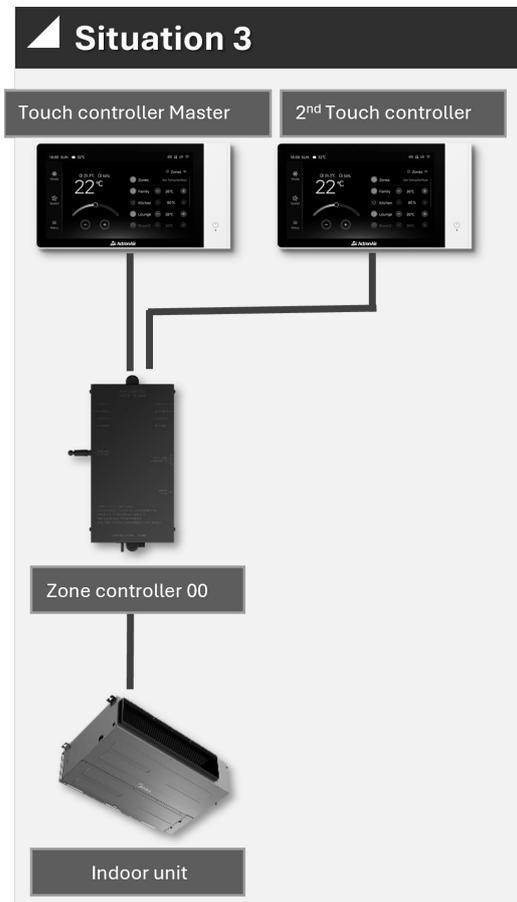
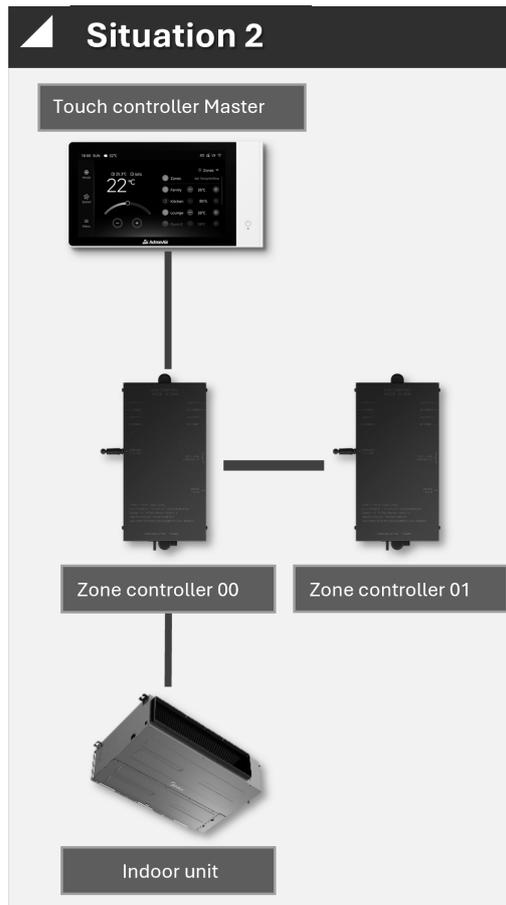
Accessories	Qty	Image
Owner's manual	1	
RJ12 Cable (left buckle) 12m	1	
Screws (M3.5*25)	4	
Nylon plug for brick and mortar surfaces	4	

### 03. ZONE SYSTEM INSTALLATION GUIDE



Recommended installation method

03.01. Possible Application / Installation Scenarios



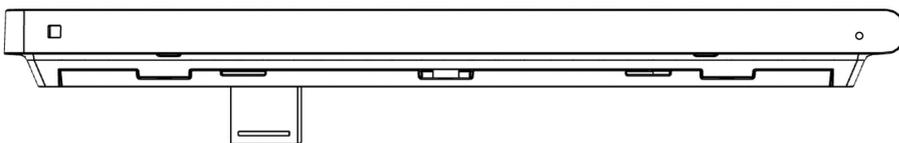
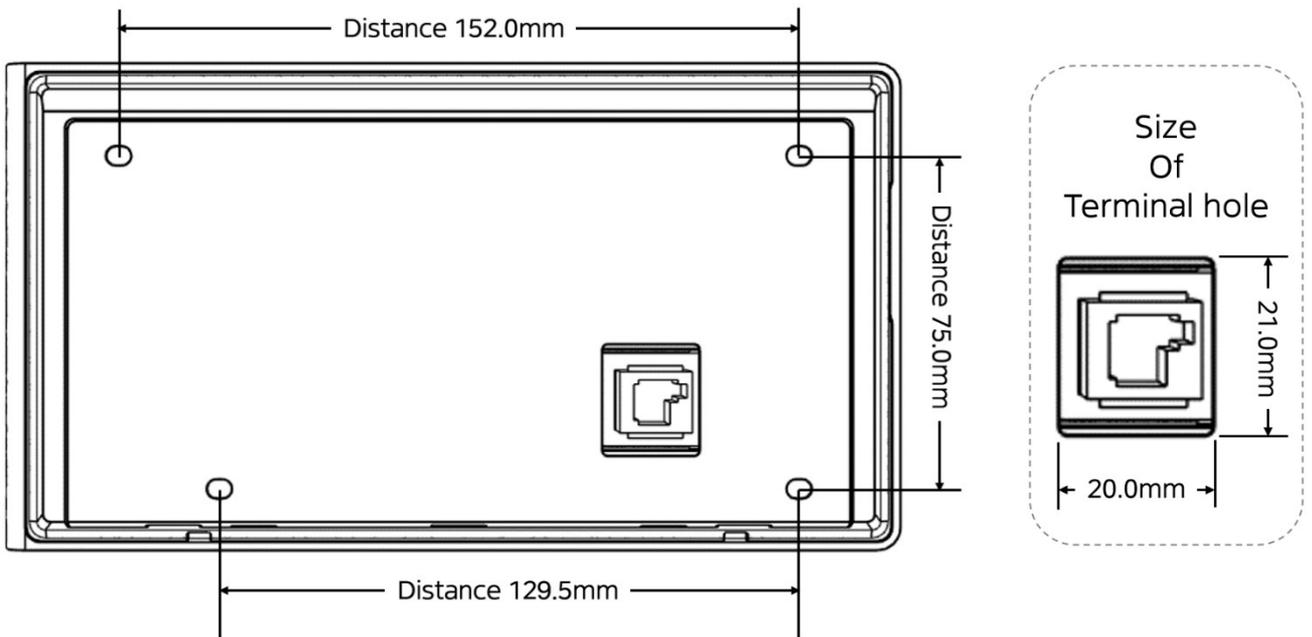
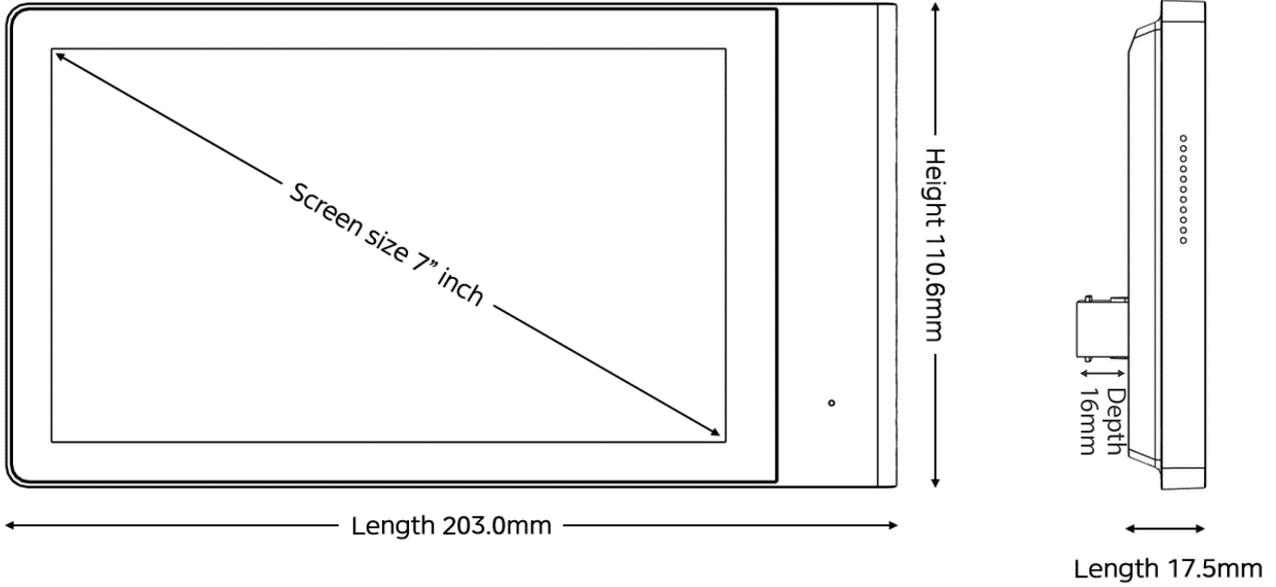
We strongly recommend to record the size of each damper. It will help the system work more effectively and improve the comfort performance.

Record the size of dampers on the list below, and enter the size if you are using different size of damper.

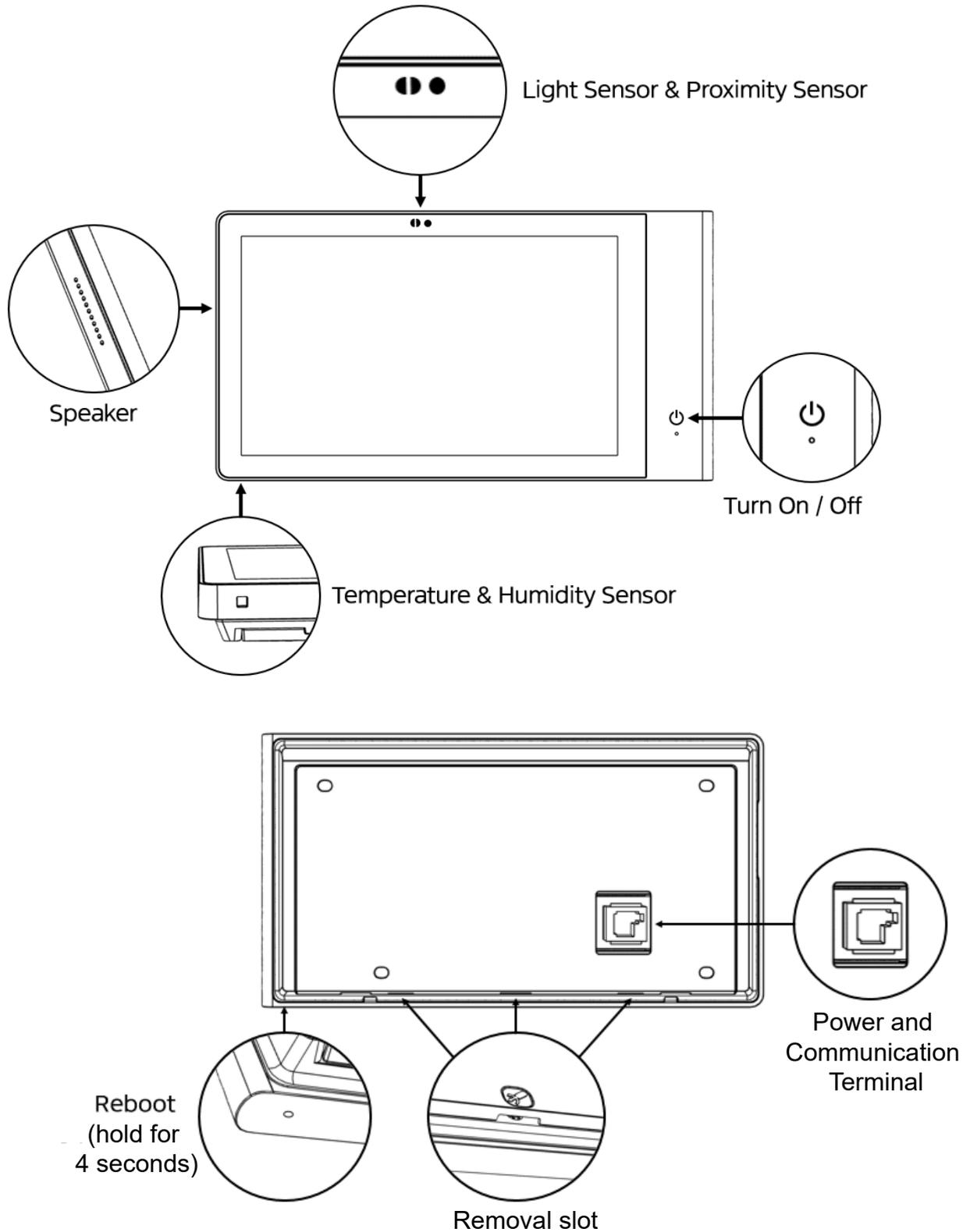
<b>Control Box</b>	<b>Damper Number</b>	<b>Zone Name</b>	<b>Zone Space</b>	<b>Damper Size</b>
Control box 1 Dial code 00	Damper 1			
	Damper 2			
	Damper 3			
	Damper 4			
	Damper 5			
	Damper 6			
	Damper 7			
	Damper 8			
Control box 2 Dial code 01	Damper 1			
	Damper 2			
	Damper 3			
	Damper 4			
	Damper 5			
	Damper 6			
	Damper 7			
	Damper 8			

### 04. PRODUCT DIMENSIONS

Length	203.0 mm
Width	17.5 mm
Height	110.6 mm
Screen size	7" inch colour touch screen



### 05. PRODUCT OVERVIEW

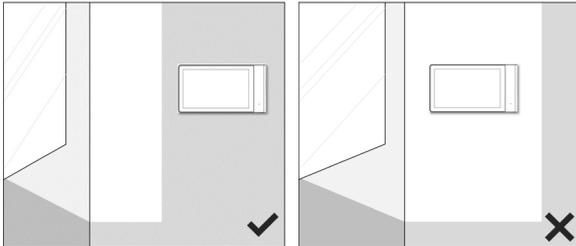


## 06. DETERMINE MOUNTING LOCATION

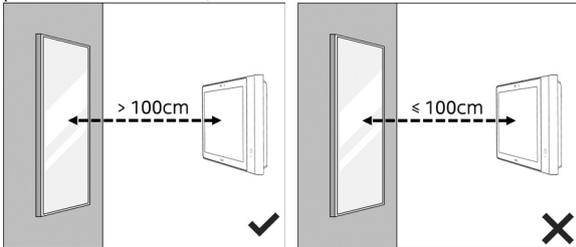
1. The product includes a light sensor and a proximity sensor. These sensors help control the screen display brightness and automatically wake up the screen according to the environment.
2. To ensure proper functioning of these sensors, please follow the installation position guidelines listed below.

### NOTE

1. Select a flat wall for the installation position of the product. An uneven wall may lead to an unstable installation.
2. Choose an installation position that is away from direct sunlight. Otherwise, the automatic screen wake function may not work properly.



3. Do not place mirrors, ceramics, or other reflective objects within 100 cm directly in front of the touchscreen at the 12 o'clock position. Otherwise, the automatic screen wake function may not work properly.



4. Please ensure that the touch controller is within close proximity of a wireless router.

Do not install the product in an environment with strong electromagnetic interference. The strong electromagnetic interference environment will affect the use of the product, which may lead to touch failure, frequent errors, function failure, sudden shutdown, etc.

The communication cable should be away from the HV cable. Do not install the communication cable in the cable slot of the HV cable.

### NOTE

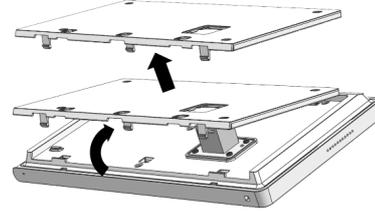
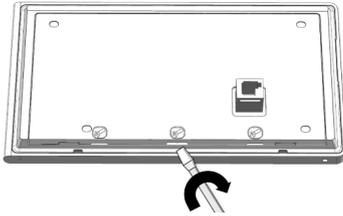
- If the above situation occurs, you might need to install the product away from the interference, or use a connection cable with interference shielding capability.
- The cause of electromagnetic interference may be the presence of high-power equipment nearby, such as factories, mining areas, etc.

### 06.01. Combination with Controllers

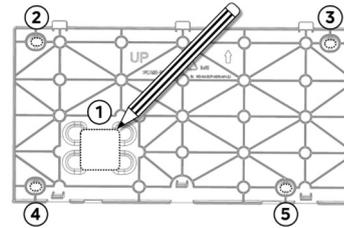
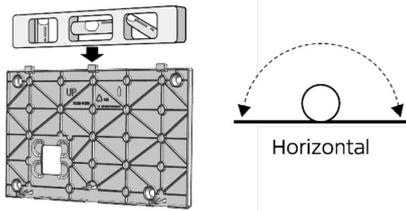
Remote controller, wall controller, 3rd party zone control system are not recommended to be installed or used at the same time with the zone control system.

## 07. INSTALLATION INTRODUCTION

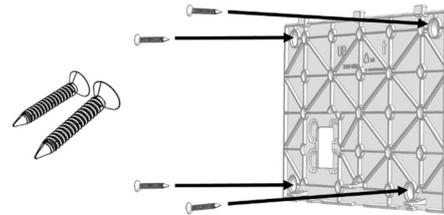
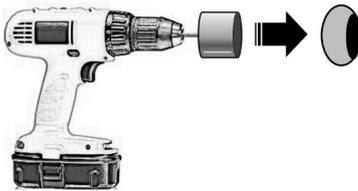
1. Insert the screwdriver into the unclench hole. Rotate the screwdriver to remove the back cover.
2. Remove the mounting bracket from the controller.



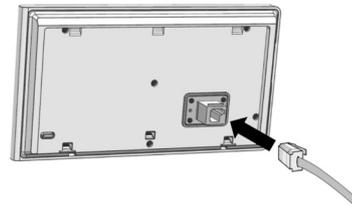
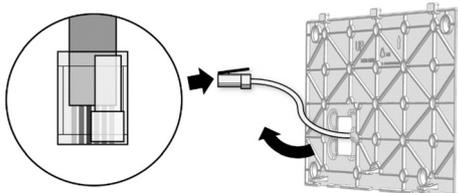
3. Place the back cover at the installation position and use a level to check if it is placed horizontally.
4. Mark the mounting holes along with the opening for the interconnecting cable.



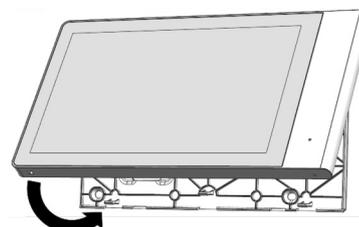
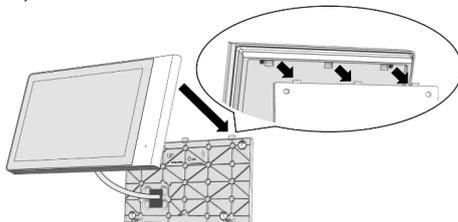
5. Mark the opening for the interconnecting cable, ensure it is sized correctly and open up the penetration.
6. Align the bracket with the drilled holes and fasten the screws.



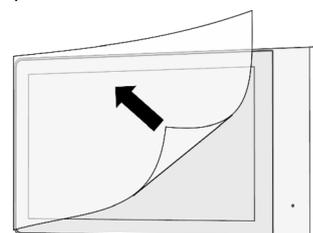
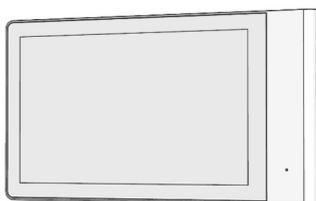
7. Route the interconnecting cable through the correct hole on the mounting bracket. Ensure that you are using the cable provided.
8. Connect the plug to the plug base on the back of the control, ensuring that has been fastened correctly.



9. Using the locating dowels on the top of the mounting bracket, slide the control onto the bracket.
10. Clip the bottom of the control to the bottom of the bracket.



11. Ensure that the wall control has flushed to the bracket and wall, with no visible gaps.
12. Remove the protective film.



**NOTE**

1. Before powering on and starting the Touch controller settings, ensure that all installation work for the zone system is complete. This includes installing the zone control box, dampers, power adapter, and the air conditioner unit.
2. The last page of this manual provides detailed installation information for the zone system.

**! WARNING**

1. Ensure that the control system has been fully and professionally installed before energizing.
2. Cables to be terminated in accordance with AS/NZ 3000.
3. Enclosures to be installed in accordance with AS/NZ 3000.
4. Ensure that the system is installed in a low flammability environment.
5. Ensure the control system is safe from water and debris ingress.

## 08. SYSTEM SETTINGS (SINGLE CONTROLLER)

1. Choose **[Start install produce]** option after system start up. (Fig 1.1)

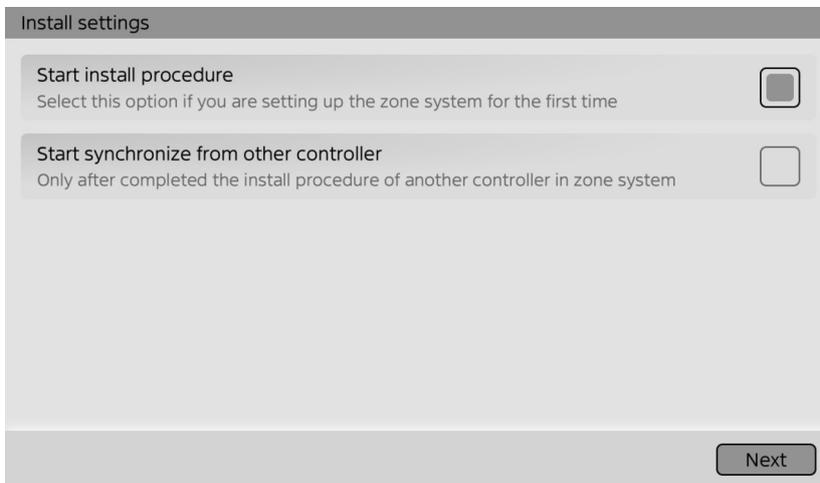


Fig 1.1

**NOTE**

The option [Start synchronize from other controller] is used for a dual Touch controller zone system. It is only used to set up the slave Touch controller after the master Touch controller installation is complete.

2. Press **[Find]** button to start finding devices, make sure all devices are well connected and powered on. (Fig 1.2).

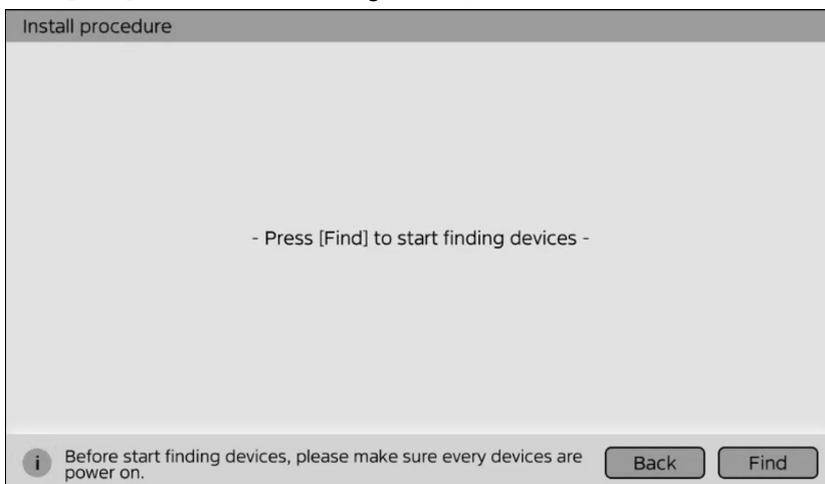


Fig 1.2

3. Ensure all touch screen and zone boxes appear bellow. (Fig 1.3).



Fig 1.3

**NOTE**

1. Ensure all devices are detected and none are missing.
2. If a **[Communication error]** occurs, it indicates a connection problem between the Touch controller and the control box, or between the control box and the indoor unit.
3. If **[No device found]** appears, it means all devices have connection problems.

4. Set the operation parameters of the damper and establish the corresponding relationship between rooms and dampers (refer to Fig 1.4).

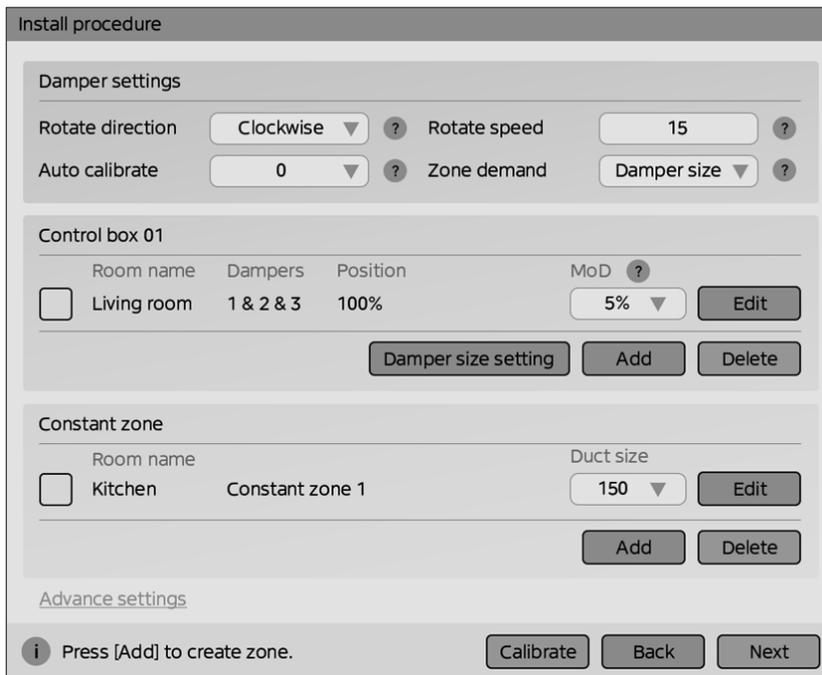


Fig 1.4

### 08.01. Bypass Method

**Install procedure**

**Select the Rotate direction of damper (Toward open)**

**Damper settings**

- Rotate direction: Clockwise
- Rotate speed: 15
- Auto calibrate: 0
- Zone demand: Bypass
- Common zone: 14-15kW High static pressure model
- A/C Capability: 3774 m<sup>3</sup>/h
- Min AF volume: 1430 m<sup>3</sup>/h
- Max AF volume: 3774 m<sup>3</sup>/h
- Damper size: 15
- Damper size setting: 1430 m<sup>3</sup>/h

Turn off A/C when all rooms turned off:

**Control box 01**

- Room name: Living room
- Dampers: 1 & 2 & 3
- Position: 100%
- MoD: 5%
- Buttons: Add, Edit, Delete

**Bypass**

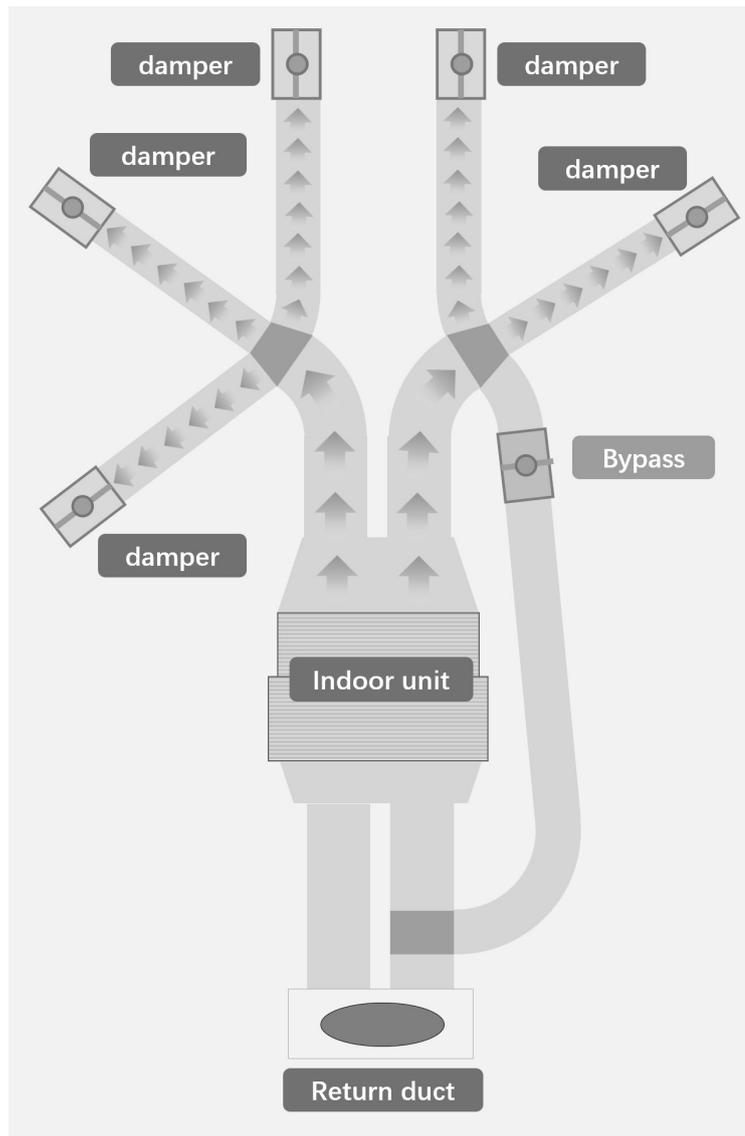
- Dampers: 8
- Position: 100%
- Balance: 100%
- Buttons: Calibrate, Edit, Back, Next

*Advance settings*

**Callouts:**

- Input the Rotate time of damper from 0° - 90°
- Select [Damper size] if you are using different size of dampers. Select [Balance] if you are using all same size dampers, and you might need balance to limit the opening position for each damper based on the different spaces of zones
- Select if you are using a bypass
- Select the capability of air conditioner
- Set up all dampers size, we strongly recommend you that we need to record each dampers size during installation
- Create the room, select damper, edit the MoD (minimum opening degree after reach the setpoint) of damper
- Select which damper is installed as bypass

**Footer:** Press [Add] to create zone.



### 08.02. Constant Zone method

Install procedure

Damper settings

Rotate direction Clockwise ? Rotate speed 15 ?

Auto calibrate 0 ? Zone demand Damper size ?

Common zone Constant ←

Damper size setting

---

Turn off A\C when all dampers are closed.

Control box 01

Room name	Dampers	Position	MoD ?
<input type="checkbox"/> Living room	1 & 2 & 3	100%	<span>5%</span> Edit

Add Delete

---

Constant zone

Room name	Duct size
<input type="checkbox"/> Kitchen	<span>150</span> Edit

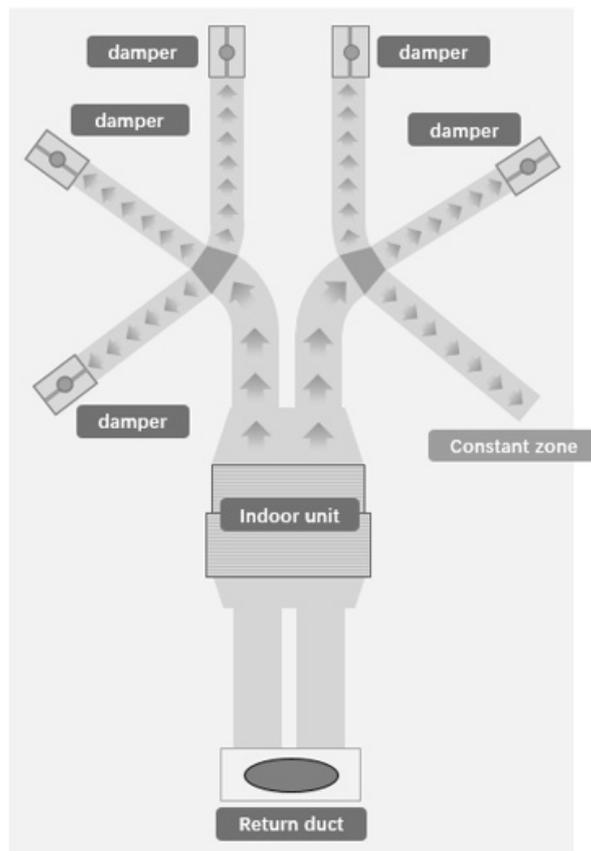
←

Advance settings

*i* Press [Add] to create zone. Calibrate Back Next

Select if you are using a constant zone

Select the duct size of the constant zone's vent



Rotate direction	The rotate direction of the dampers can be set to either <b>[clockwise]</b> or <b>[anti-clockwise]</b> . If you are unsure which option is correct, press the <b>[Calibrate]</b> button to check if all dampers are opening. If they are opening, you have selected the correct option. For ActronAir supplied dampers, the rotation direction should be set to anti-clockwise for opening.
Rotate speed	For ActronAir supplied dampers, the rotation speed should be set to 15 seconds.
Auto calibrate	The damper will calibrate automatically after the specified times of operation.
Zone demand	If the zone system are using different sizes of dampers, [Damper size] is recommended to be set as zone demand. You need to set up the size of each damper, the air conditioner will adjust air flow volume according to the calculated demand based on the damper sizes.  If the zone system are using same size of dampers, [balance] is recommended to be set as zone demand. You need to adjust the balance parameter based on zone's space.
MoD	[MoD] means minimum opening degree of damper when the room temperature reached the setpoint. For example: If [MoD] = 5%, the damper will keep 5% opening but not entire close when the room reach the setpoint. (Room that binded with Zone Sensor can activate the ability to set the setpoint for the room. Otherwise it can only set the position of the damper.)

- Press **[Add]** button to create a new room, enter the name of the room, and choose damper that belong to this room. (Fig 1.5).
- Each room should have at least one damper, but you can also choose more than one damper in one room. Which means that all dampers in the room will be operated as a group.

Dampers cannot relate to more than one room at the same time.

- Central controller can be set up as a sensor for the room, then the room will be available to adjust temperature set point without binding Zone Sensor.

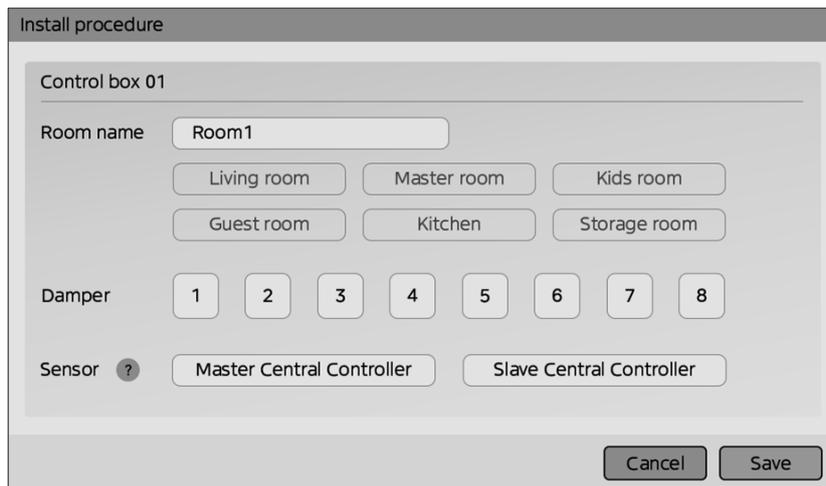


Fig 1.5

- Set up constant zone. There must have at least 1 constant zone, when the zone demand is set as [Damper size], duct size of the constant zone will be needed.

**NOTE**

- Constant zone is always on, it can not switch On/Off, adjust temperature, air flow volume.
- The duct of constant zone should be able to withstand the lowest air flow volume of the air conditioner. If there is more than 1 constant zone, all constant zones will share the lowest air flow volume and it can use a smaller size of duct for each constant zone.

- Press **[Calibrate]** to calibrate all dampers. All dampers will start calibrating after pressing the [Next] button. (Fig 1.6)

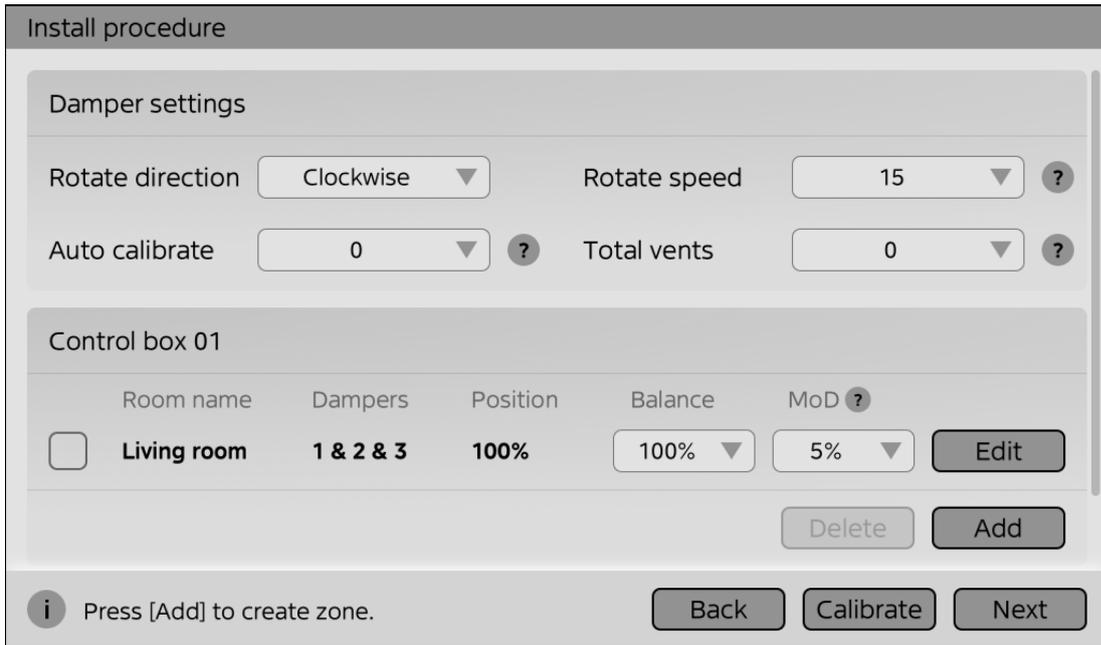


Fig 1.6

- Press **[Advance settings]** to change more operating parameters of damper.

Delay closing	The time between asking the zone to close, and the zone following this instruction.
Initial open time	The time between asking the zone to open, to where it begins to open.
Initial open degree	Minimum zone opening.

- Press **[Find]** to start finding Zone Sensor. There can be only one zone control box at pairing mode at the same time. (Fig 1.7).
- Ensure all sub-controllers set up the dial code according to the instructions on the Touch controller, and enter pairing mode. Follow the instructions in the zone sensor manual (9590-3039-03) for detailed guidance.

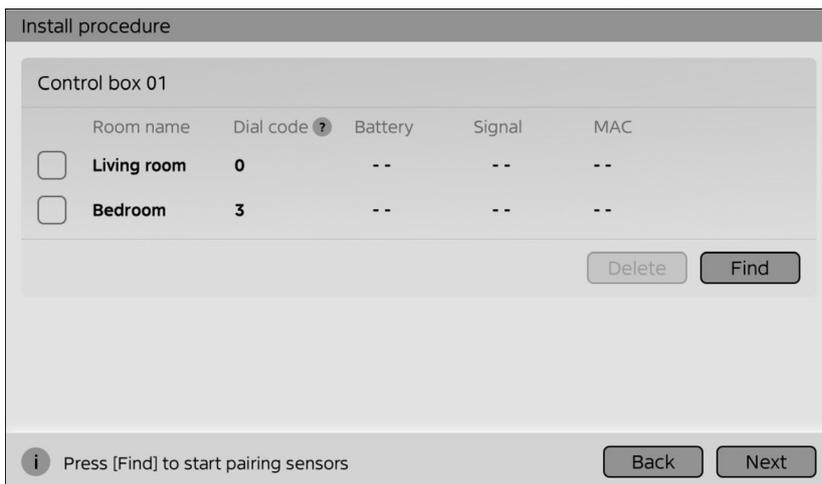


Fig 1.7

**NOTE**

1. Ensure no sub-controllers are set to the same dial code. Each room can only be bound to one sub-controller.
2. If an incorrect sub-controller appears, select it and press the **[Delete]** button to remove it.
3. If a sub-controller has not been found by the zone control box, turn the sub-controller into pairing mode and press **[Find]** to locate it. Other sub-controllers that have already been found do not need to start pairing again.
4. If the signal shows  it means the Zone Sensor is at a stable network position, Otherwise, it needs to be moved to a location with a better RF signal.
5. We recommend keeping the control box powered on at all times; otherwise, the sub-controller will go offline.
6. After replacing the batteries in the sub-controller, it will automatically rejoin the zone control box.
7. If the sub-controller goes offline, try long-pressing the On/Off button to enter pairing mode, which may help it rejoin the zone control box network.

13. After all sub-controllers have been found, please verify that the **[MAC]** address displayed matches the MAC address printed on each sub-controller (refer to Fig 1.8).

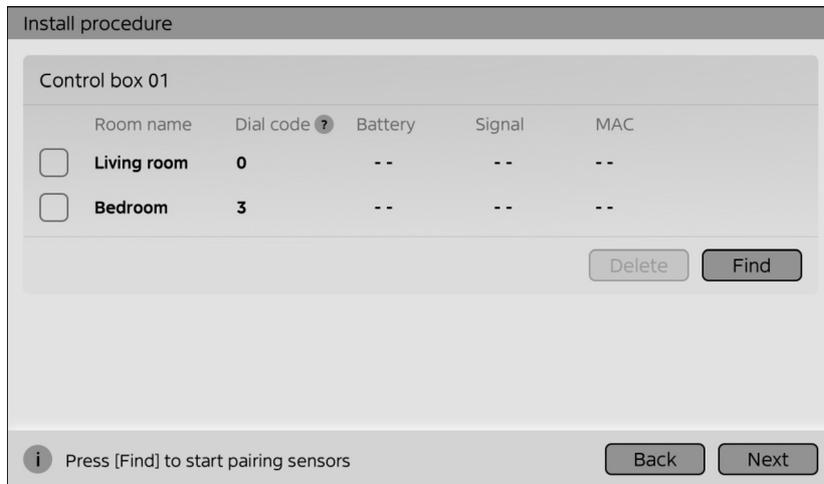


Fig 1.8

14. Set **[Static pressure]** level, press **[Test]** button to test static pressure. (Fig 1.9).

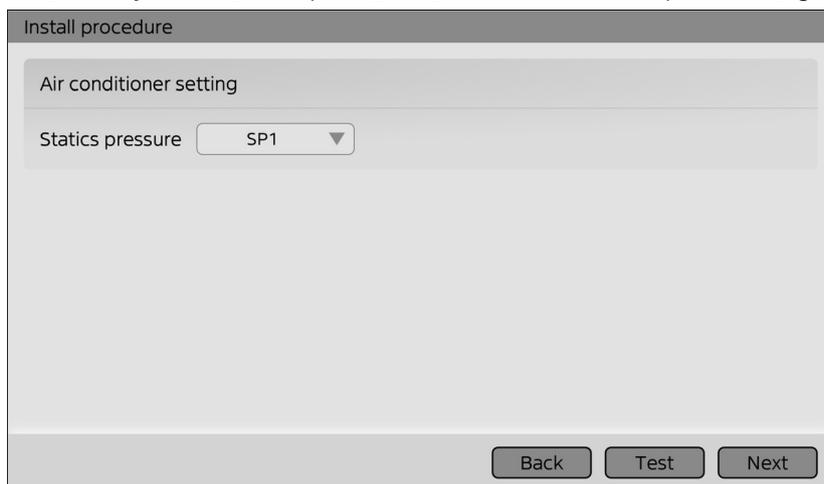


Fig 1.9

- After completing all setup steps, the Touch controller will enter the main page. Set up the wireless network information and enter the password (refer to Fig 1.10).

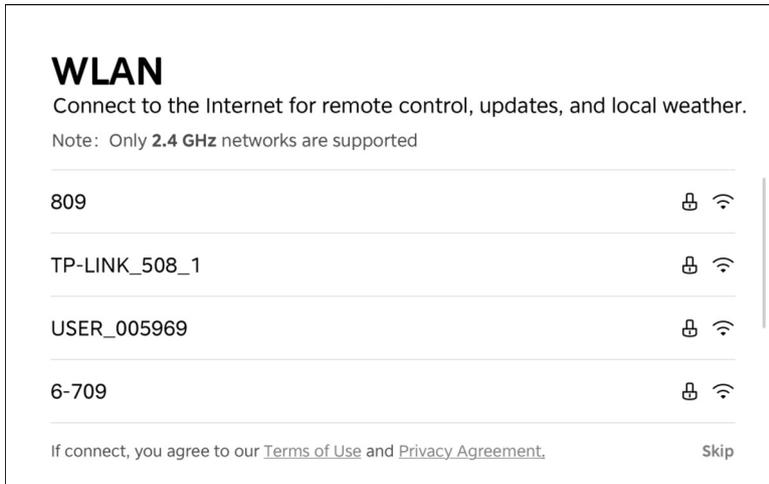


Fig 1.10

**NOTE**

- This device only supports 2.4Ghz WiFi.
- It supports WPA2/WPA3 security protocols.
- It can connect to a relay router.

- Once the commissioning process has been completed, you will be returned to the home page.

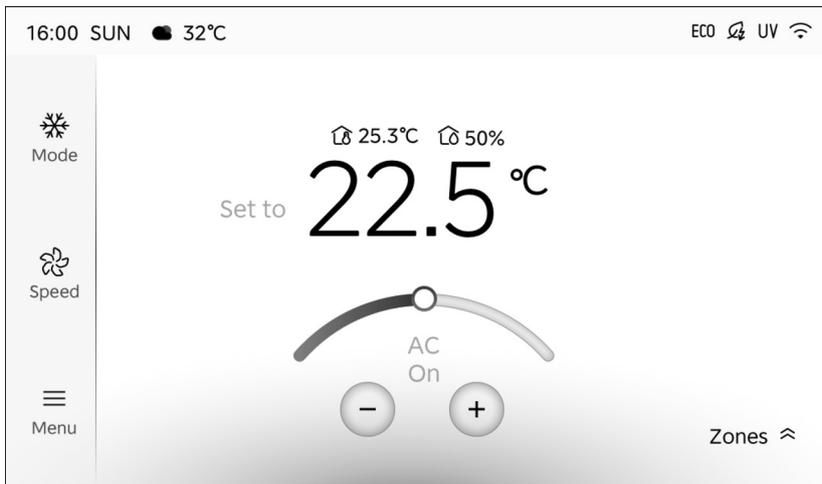


Fig 1.11

## 08. SYSTEM SETTINGS (DUAL CONTROLLER)

1. Choose the **[Start synchronize from other controller]** option on the slave Touch controller after the master touch controller installation process is complete (refer to Fig 2.1).

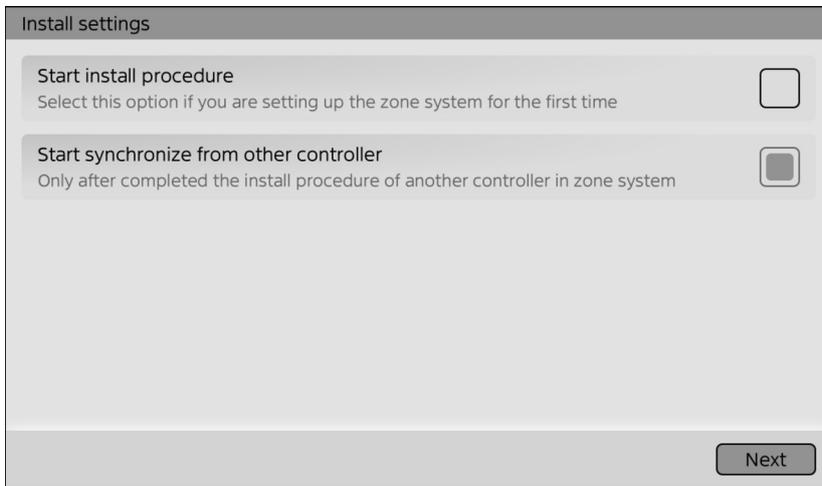


Fig 2.1

2. The touch controller will start synchronizing. Please wait until the synchronization is complete and do not turn off the power during this process (refer to Fig 2.2).

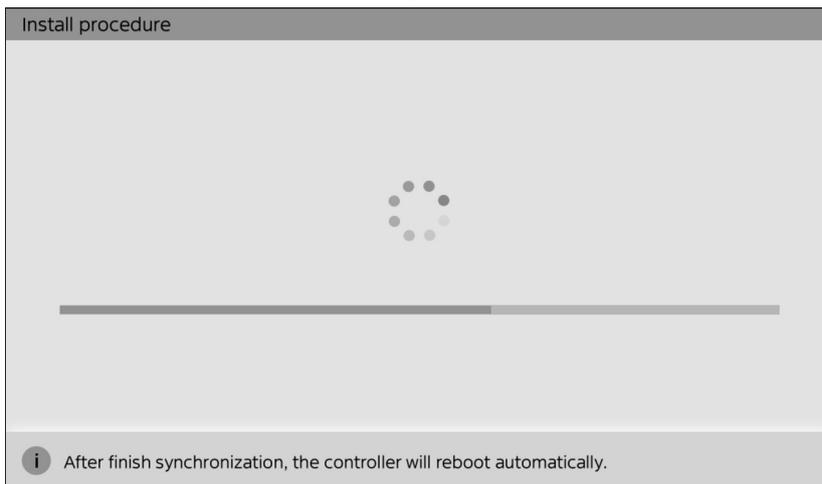


Fig 2.2

3. After synchronization is finished, the slave touch controller will enter the main page. All information will be the same between the master touch controller and the slave touch controller.

## 09. SYSTEM SETTINGS (RE-ENTER)

1. Click on the **[SETTINGS]** 5 times to get into system install setting mode. (Fig 3.1)

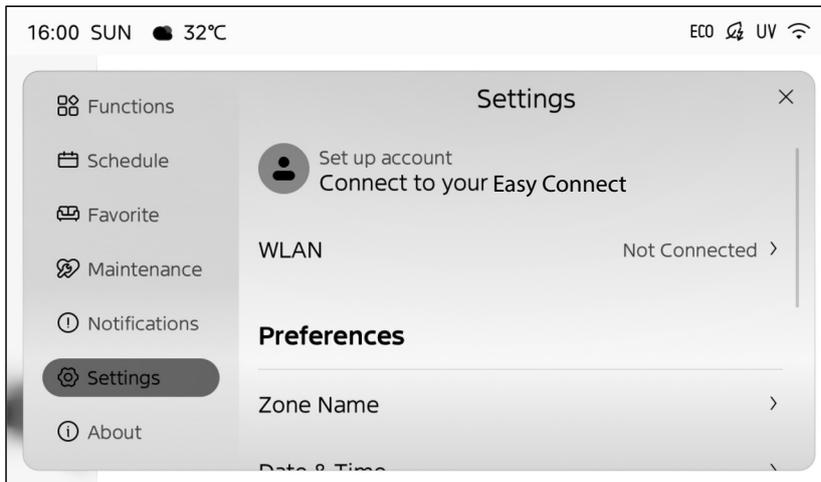


Fig 3.1

2. Enter the install settings menu to adjust commissioning settings.

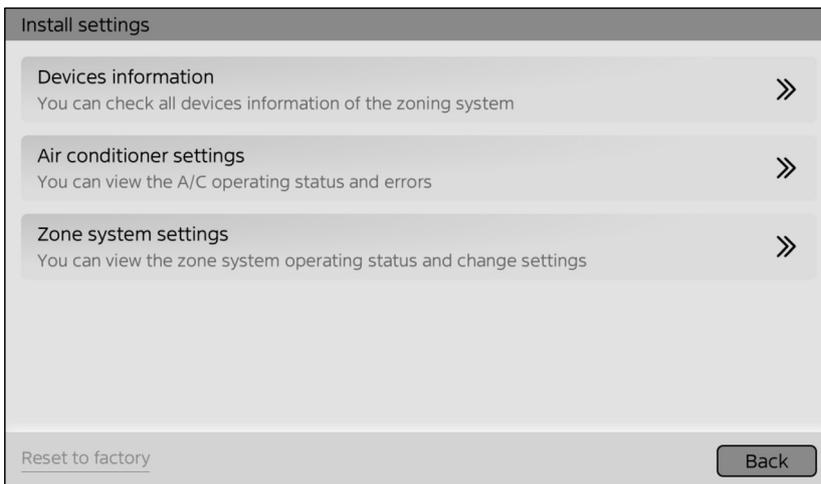


Fig 3.2

Devices information	Displays information for all connected components.
Air conditioner settings	Shows temperature sensor readings, allows the adjustment of indoor fan static pressure and stores the error log
Zone system settings	You can change <b>[Room settings]</b> , <b>[Damper settings]</b> , and <b>[Sensor settings]</b> .

## 10. MAINTENANCE

### WARNING

1. Carry out safe Lock Out Tag Out procedures before commencing works on the zoning system
2. In the event of faults please contact a licensed technician

### NOTE

- 1. Replace the Master Touch Controller.**  
Enter the [Start install procedure] after the touch controller is turn on.
- 2. Replace the Slave Touch Controller.**  
Enter the [Start synchronize from other controller] after the touch controller is turn on.
- 3. Replace the zone control box.**  
You need to start [Reset to factory] at the master controller first, then after finish installation of the new zone control box, enter the [Start install procedure] at master touch controller after it turns on.
- 4. Replace the air conditioner with same model.**  
You don't need to do anything with the zone control system.
- 5. Replace the air conditioner with different model.**  
You need to start [Reset to factory] at the master controller first, then after finish installation of the new air conditioner, enter the [Start install procedure] at master touch controller after it turns on.
- 6. Change single touch controller system to dual touch controller system. / Change single zone control box system to dual zone control box system.**  
You need to start [Reset to factory] at the master controller first, then after finish installation of the new zone control box or new central touch controller, enter the [Start install procedure] at master touch controller after it turns on.
- 7. Replace damper**  
You need to enter the system settings, find [Damper settings] and press [Calibrate] button to make sure the new damper is at correct position.
- 8. Add or reduce damper**  
You need to enter the system settings, find [Damper settings] and press [Add] / [Edit] / [Delete] button to change the room information of the zoning system.
- 9. Replace Zone Sensor**  
You need to enter the system settings, find [Sensor settings] and press [Find] button to find the new Zone Sensor, then press [Delete] button to delete the Zone Sensor that have been replaced.

## 11. SOFTWARE VERSION (OTA)

1. Find **[Update]** on the menu. (Fig 4.1)

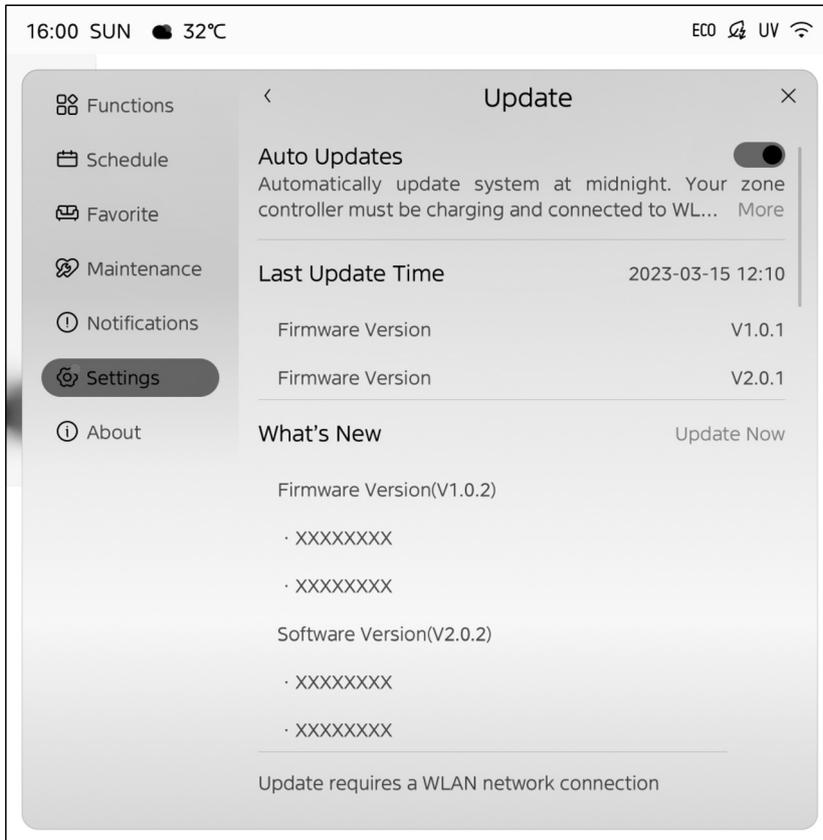


Fig 4.1

2. You can read the current **[Firmware Version]** and **[software Version]**, and see if there is new version to update.
3. You can turn on the **[Auto Updates]**, and the zone system will update automatically if there is new version available.
4. Also, you can turn off the **[Auto Updates]**, and press **[Update Now]** button manually anytime you want to update the software.

### NOTE

During updating, the touch controller will be unable to use, please wait until it finishes updating, and do not turn off the power supply.

## 12. ERROR CODES

Error Code	Causes
E0	Indoor EE failure
E3	Indoor DC fan stall failure
E4	Indoor T1 temperature sensor failure
E5	Indoor T2 temperature sensor failure
EC	Leakage of refrigerant
EE	Indoor water level alarm failure
F2	Outdoor T3 temperature sensor failure
FA	Communication failure between indoor board and display board / upper computer and lower computer
PC08	Outdoor current protection
PC0F	PFC (PFC module switch stop) / IGBT fault
PC03	System pressure protection
PH90	High evaporator temperature protection in heating mode
PH91	Low evaporator temperature protection in cooling mode
PC0A	High condenser temperature protection
----	Mode conflict fault

### NOTE

- R410a (AS Series) uses two-digit error codes
- R32 (CS Series) uses four-digit error codes

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