Installation Manual

DZK

DAIKIN ZONING KIT

6:30
Jun 30

Zone 01

70° 52%

AIRZONE

Zoning Kit

TABLE OF CONTENTS   **Page**

WARNINGS, ENVIRONMENTAL POLICY, AND CERTIFICATIONS

WARNINGS

For personal safety and equipment protection, follow these instructions:

- Do not operate the system if it is wet, or handle it with wet hands.

- Connect the power supply cable before connecting the AC power.

- Perform any connection or disconnection with the power supply **OFF**.

- Verify that there is no short-circuited connection in the connectors between different cables or ground.

- Verify there are no abnormalities in the wiring.

ENVIRONMENTAL POLICY

Never dispose of this equipment with household waste. Electrical and electronic products contain substances that can be harmful to the environment if they are not given proper treatment. The symbol of the crossed container indicates separate collection of electronic equipment, unlike the rest of urban garbage. For proper environmental management, the equipment to be disposed must be taken to the proper collection center at the end of its lifespan.

The components of this equipment can be recycled. Follow the existing regulations on environmental protection in your area.

The unit must be delivered to your dealer if it is being replaced. If it is to be discarded, it must be sent to a specialized collection center.

FCC REGULATORY NOTICES

Modification statement

Corporación Empresarial Altra S.L. has not approved any changes or modifications to this device by the user. Any changes or modifications could void the user's authority to operate the equipment.

Interference statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Class B digital device notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

INTERTEK / UL REGULATORY NOTICES
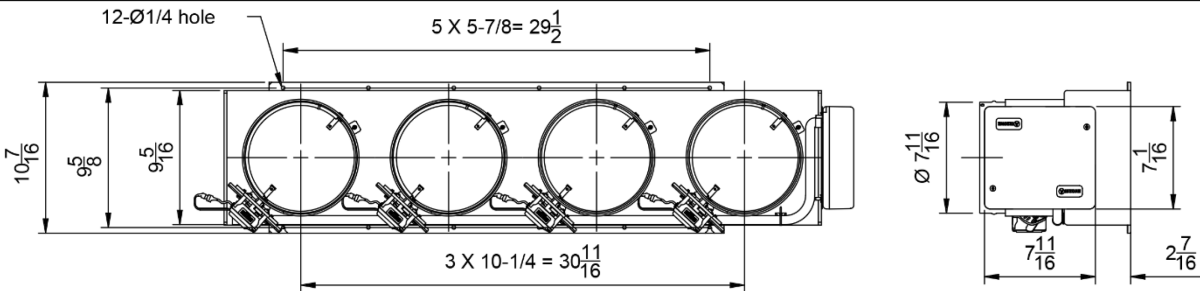
- The units shall be tested by a Nationally Recognized Testing Laboratory (NRTL) in accordance with ANSI/UL Standard UL 1995/CAN/CSA-C22.2 No. 236-11 – 4th Edition (R2011) – Heating and Cooling Equipment, and will bear the Listed Mark.

- All wiring shall be in accordance with the National Electric Code (NEC)/Canadian Electrical Code (CEC).

SYSTEM DESCRIPTION
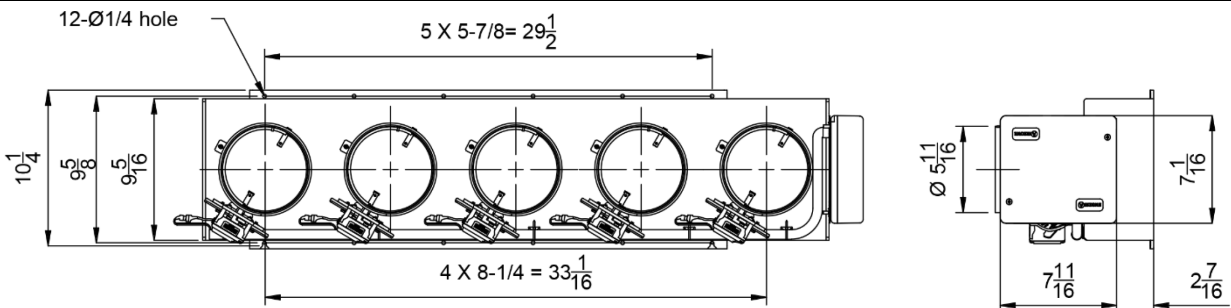
The Daikin Zoning Kit (DZK) is an optional accessory that increases the flexibility of the FXMQ, FXSQ, FBQ and FDMQ Indoor Unit fan coils. It allows multiple separate ducts to be connected to a fan coil and supply air to different individually controlled zones in a building.

PRODUCT DIMENSIONS
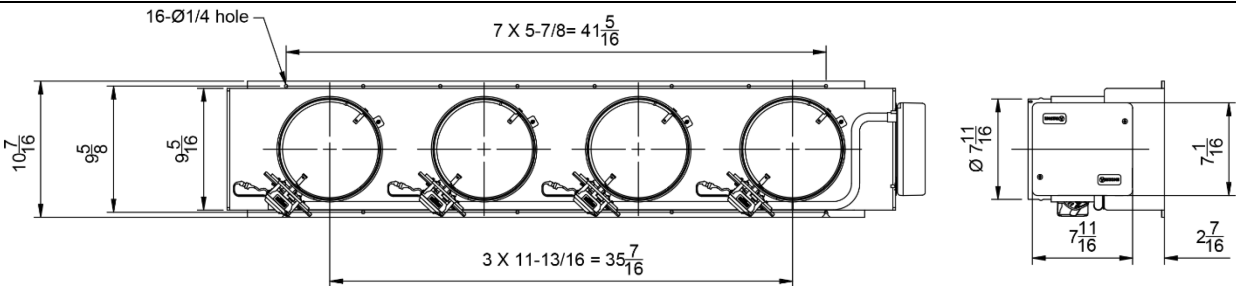
DZK030E4-3
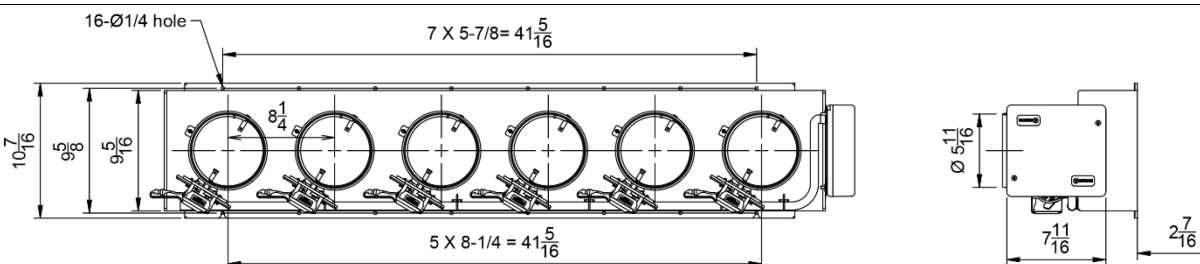
DZK030E5-3
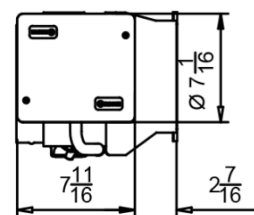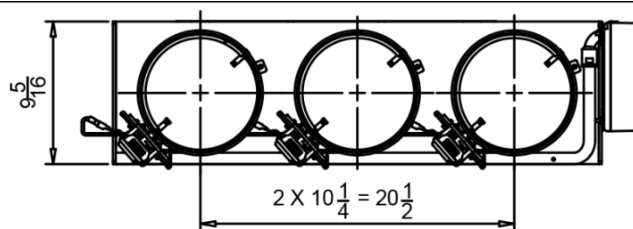
DZK048E4-3
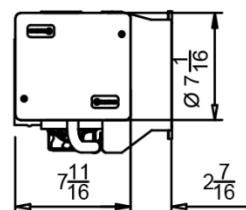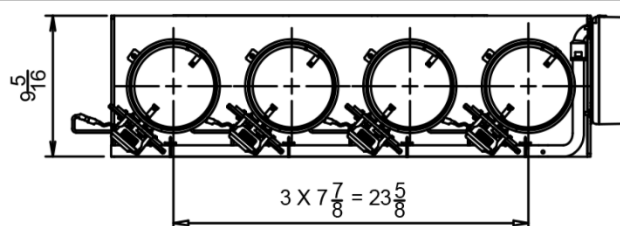
DZK048E6-3

DZKS015E3-3

$$2 \times 10\frac{1}{4} = 20\frac{1}{2}$$

$9\frac{5}{16}$

$\varnothing\ 7\frac{1}{16}$

$7\frac{11}{16}$

$2\frac{7}{16}$

DZKS015E4-3

$$3 \times 7\frac{7}{8} = 23\frac{5}{8}$$

$9\frac{5}{16}$

$\varnothing\ 7\frac{1}{16}$

$7\frac{11}{16}$

$2\frac{7}{16}$

DZKS030E4-3

$$3 \times 10\frac{1}{4} = 30\frac{11}{16}$$

$9\frac{5}{16}$

$\varnothing\ 7\frac{1}{16}$

$7\frac{11}{16}$

$2\frac{7}{16}$

DZKS030E5-3

$$4 \times 8\frac{1}{4} = 33\frac{1}{16}$$

$9\frac{5}{16}$

$\varnothing\ 7\frac{1}{16}$

$7\frac{11}{16}$

$2\frac{7}{16}$

DZKS048E4-3

$$3 \times 11\frac{13}{16} = 35\frac{7}{16}$$

$9\frac{5}{16}$

$\varnothing\ 7\frac{1}{16}$

$7\frac{11}{16}$

$2\frac{7}{16}$

DZKS048E6-3

$9\frac{5}{16}$

$5 \times 8\frac{1}{4} = 41\frac{5}{16}$

$\varnothing\, 7\frac{1}{16}$

$7\frac{11}{16}$

$2\frac{7}{16}$
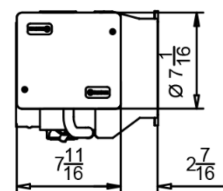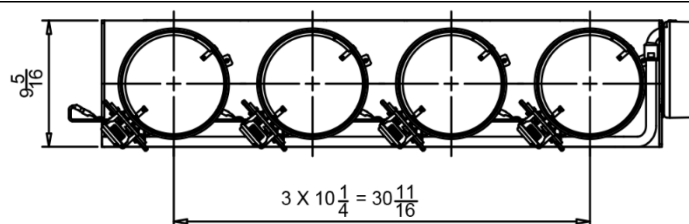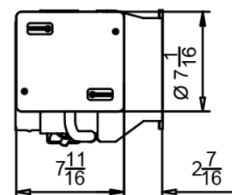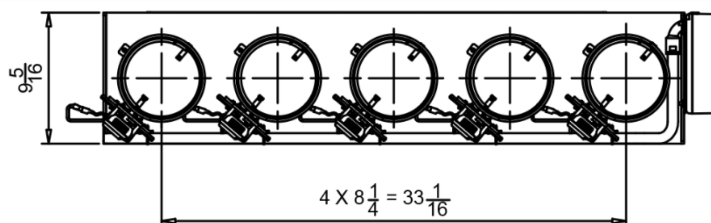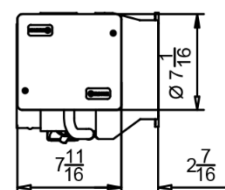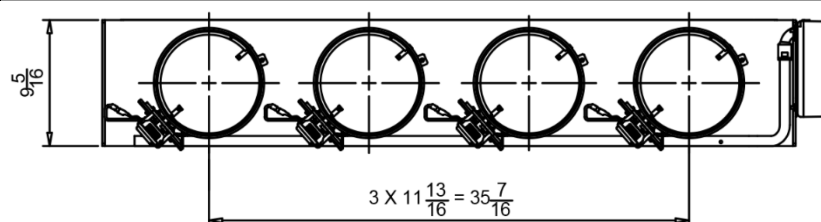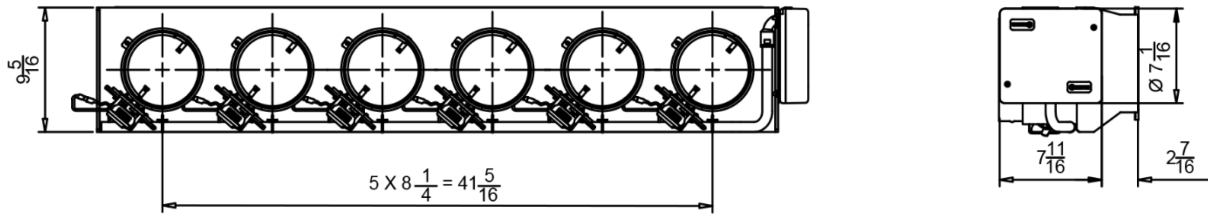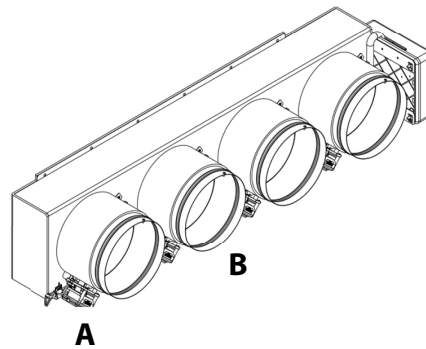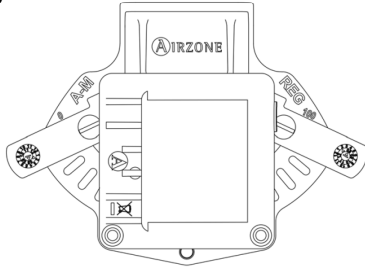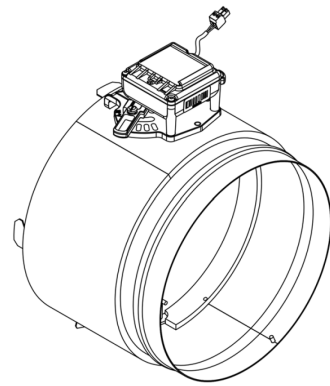
DZK Zoning Box

A. Damper limitation adjustment

B. Motorized damper

A

B
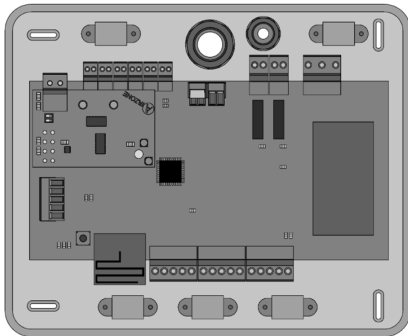
DZK CONTROL

DZK Control Board

This device manages all wired and wireless devices in the system, performing the following functions:
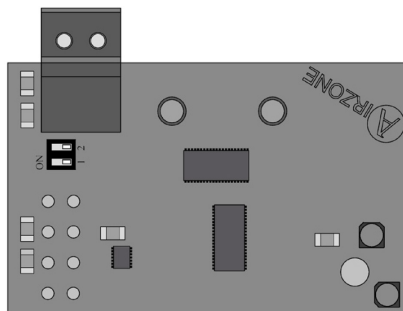
- Controls and manages the status of each thermostat or controller.

- Controls the position of the motorized dampers.

- Control of auxiliary heat (up to two stages).

- Manages communication with the Daikin Interface Board.

- Controls the On/Off status, mode, fan speed, and set point of the Daikin Indoor unit.

DZK Interface Board

This unit integrates the Daikin indoor unit with the DZK Control Board. The DZK Interface Board includes an energy efficiency control algorithm that is controlled with the Wired Thermostat, including the following functions:

- Automatically changes the indoor unit operation mode (Ventilation, Cooling, Heating, or Dry) from the DZK system's Main Wired Thermostat.

- Temperature setting for the indoor unit based on the overall demand of the DZK zone thermostats.

- Defrost function: In heating mode, when user set point temperatures are satisfied, instead of setting the Daikin unit to OFF, a 60˚F set point is set. This function is set by means of DIP-switch configuration.

Wired Thermostat

Color graphic interface with capacitive touch screen for controlling zones in DZK systems. Finished in steel and glass. Powered by DZK Control Board. Wall mounted. Functionalities:

- Available languages: English, French and Spanish.
- Control of set point temperature (increment of 1˚F/0.5˚C).
- Configurable set point range for Cooling and Heating.
- Room temperature and relative humidity sensing and display.
- Operation mode, User mode and Airflow control *(Only available to the Main Wired Thermostat).*
- Timer function.
- Time schedules programming.
- Remote access to other zones of the system.
- Configurable as Main or Zone thermostat.

Wireless Thermostat

Graphic interface with low-energy e-ink screen and capacitive buttons for controlling zones in DZK systems. Finished in steel and glass. Wireless communications. Powered by CR2450 button battery (included). Wall mounted. Functionalities:

- Available languages: English, French and Spanish.
- Control of set point temperature (increment of 1˚F/0.5˚C).
- Configurable set point range for Cooling and Heating.
- Room temperature and relative humidity sensing and display.
- Timer function.
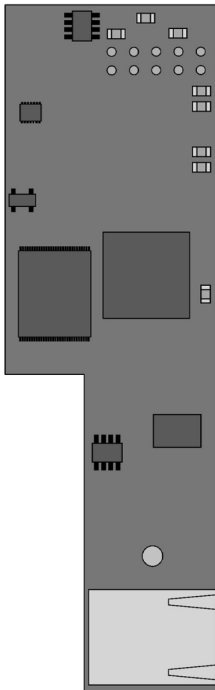
Wireless Lite Thermostat

Thermostat with capacitive buttons for controlling the temperature of the zones in the DZK systems. Finished in steel and glass. Wireless communications. Powered by CR2450 button battery (included). Wall mounted. Functionalities:

- On/Off control of the zone.

- Control of base set point temperature with an increment of $\pm 1°F/0.5°C$ (default value) or $\pm 2°F/1°F$, up to a limit of $\pm6°F/3°C$. The increments are configurable through Main Wired Thermostat. This base set point temperature can be configured through any Wired Thermostat.

- Room temperature and relative humidity sensing.

DZK BACnet Interface

The DZK BACnet Interface allows a Building Management System to control all variables of the DZK systems. The DZK BACnet Interface uses a standard open protocol based on ASHRAE Standard 135, and its objects are:

- Compatible with BACnet (ANSI /ASHRAE-135)

- Compatible with BACnet/IP (ISO16484-5)

The DZK BACnet Interface is a Plug&Play device for DZK, and it allows for control and monitoring of the following variables:
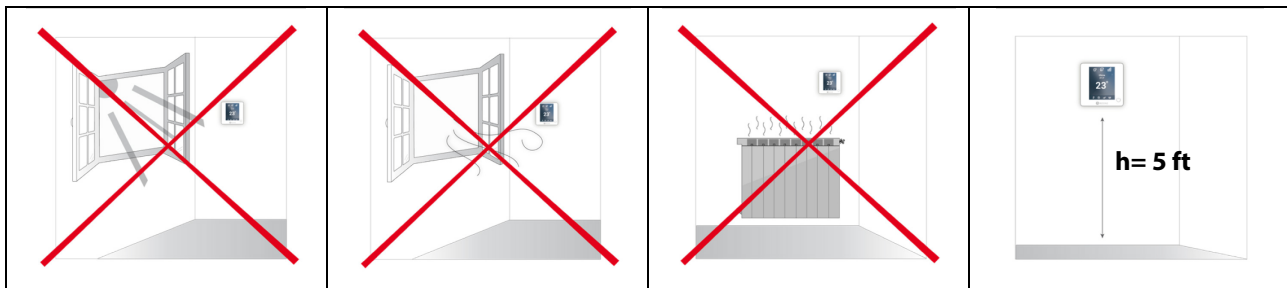
- Indoor Unit status.

- Fan status and Fan Speed.

- Auxiliary Heat stages status.

- Global Ventilation status.

- Operation Mode Control status.

- On/Off control for each zone.

- Set point setting for Cooling and Heating for each zone.

- Room Temperature in each zone.

- Local Ventilation activated/deactivated for each zone.

- Unoccupied Override activate/deactivate.

- Vacation Override activate/deactivate.

- Opening Damper Status for each zone.

- Indoor Unit and DZK errors.

DESCRIPTION, INSTALLATION AND CONNECTION OF THE COMPONENTS

GENERAL RECOMMENDATIONS

Closely follow the instructions on this manual to avoid installation and maintenance issues.

- The system should only be installed by qualified personnel.

- Never use solid wire to install the system. This is a communication device and requires the use of communication cables.

- While connecting the devices, be sure the system is not powered.

- Follow the local installation regulations for low and high voltage installation.

- The recommended specifications for the cable to install this system are: 4 wires, stranded, AWG 20, plenum and shielded.

- When connecting to other systems fed with high voltage, only use the A and B contacts of the communication bus. It is not recommended to connect the + and – contacts, nor the ground.

- Follow the color codes and polarity indications in the system components.

- Do not run the bus cable near high power cables or near electrical motors to avoid electromagnetic interference in the system communications.

- Use the following recommendations to locate the thermostats:
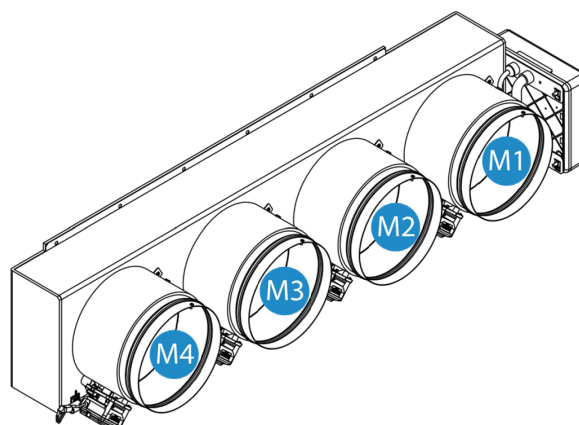
- The temperature operating range is: 32 to 122˚F (0 to 50˚C).

- The humidity operating range is: 5 to 90% (non-condensing).

If upon receiving the unit it is determined that one of the outlets will not be used, take the following actions:

1. Install the unit and wiring required to start with the Wired Thermostat configuration. The unit should have all dampers open.

2. Configure the Wired Thermostat. Once the thermostat is assigned to a zone, all other dampers will close except for the zone that is assigned to the Main Wired Thermostat.

3. At this time, disconnect the motor cable from the outlet that will not be used.

4. Permanently seal the outlet using the supplied plug and follow the local installation recommendations.

DZK ZONING BOX

Dampers are numbered starting with number 1 next to the Zoning box control board.

Assembly
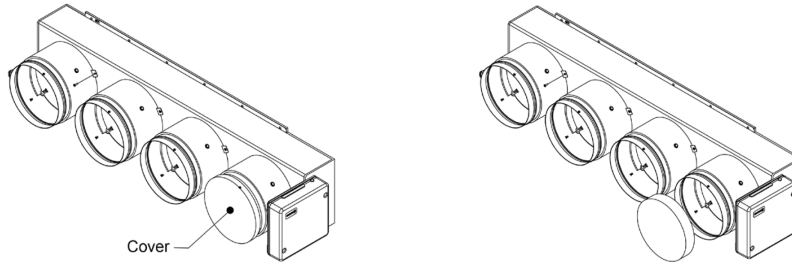
Keep in mind: *make sure that the zoning box is in its correct position. (Actuators at the bottom)*

The Zoning Box allows for a fast and simple connection to Daikin indoor units FBQ_P, FMXQ_P and FXSQ_T.
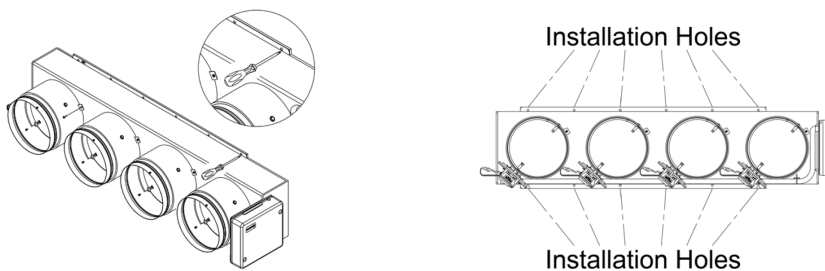
Models	Damper Size	Number of Dampers
FXSQ 15 TAVJU	6"	4
FDMQ09-12RVJU	8"	3
FBQ 18 - 24 - 30 PVJU	6"	5
FXMQ 15 - 18 – 24 PBVJU		
FXSQ 18-24-30 TAVJU	8"	4
FDMQ15-24RVJU		
FBQ 36 - 42 PVJU	6"	6
FXMQ 30 - 36 - 48 - 54 PBVJU		
FXSQ 36-48 TAVJU	8"	4

Follow the steps listed below to make an easy and reliable DZK installation:
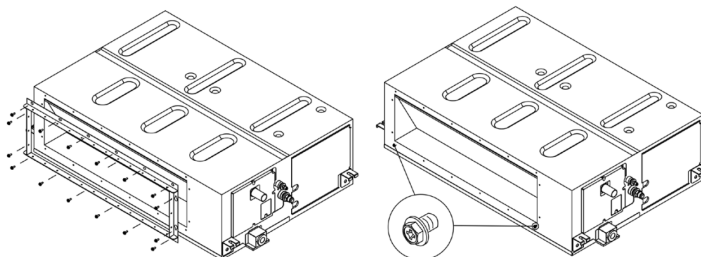
1) **The adaptor is shipped with the dampers fully open.** One of them includes a cover to be used in case one of the dampers is not used. If the damper is not used, the contractor needs to be sure that the cover will stay in place. If all dampers are used, take the cover off and store it.

Cover

2) **Insert a sharp** pointed object through the frame holes and the frame sealing to facilitate the location of the setting holes used to assemble the zoning box to the indoor unit.

Installation Holes

Installation Holes
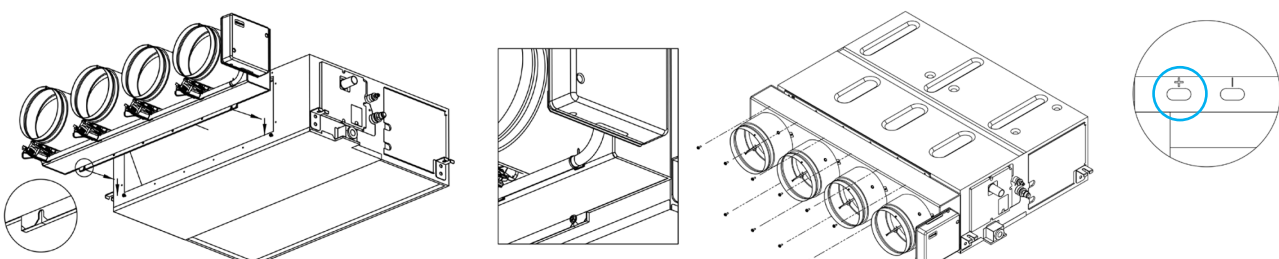
3) **Remove the indoor unit collar.** Insert a screw (not fully tightened) in the bottom corners of the indoor unit as shown in the following figure:
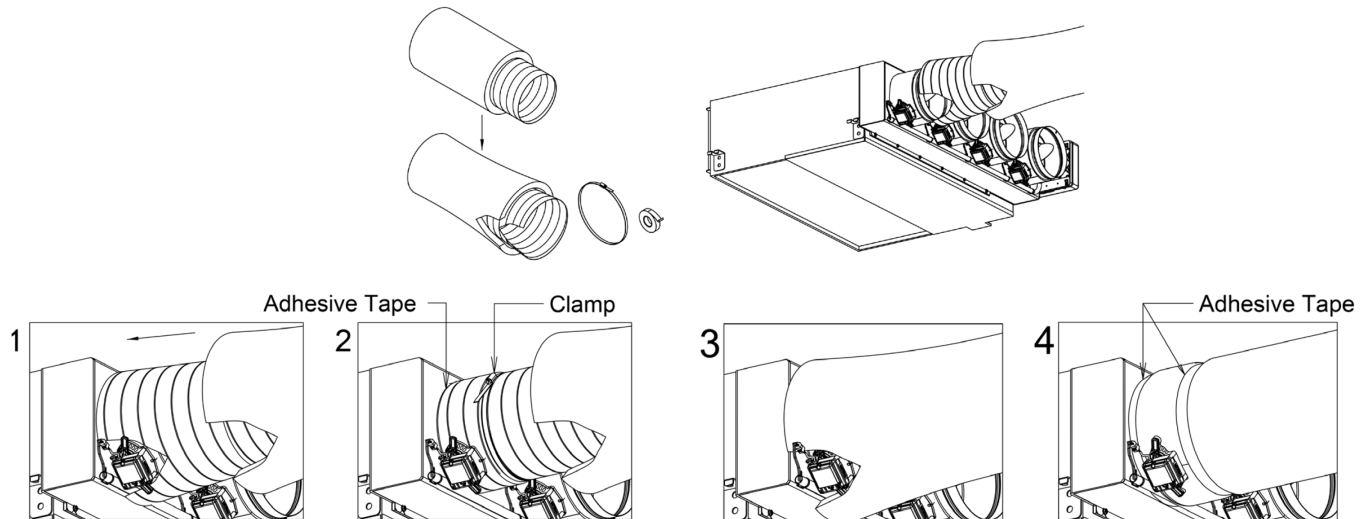
4) **Sit the zoning box** on the screws as shown below, and then affix the box using the remaining screws.

Important: If your DZK has holes marked as "+" or "I", use the holes marked with the "+" symbol

14
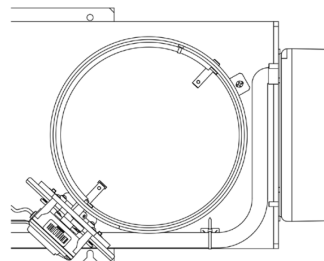
5) **Attach each zone's duct with its assigned damper.** Follow the local recommendations to insulate and seal the ductwork with the damper. **Make a cutout along the duct to keep the motor outside of the insulation.**
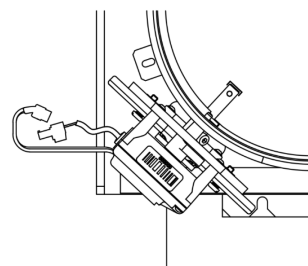
Keep in mind: to maximize the air flow for each damper, the best way to disable dampers is to start disabling from the ends to the center, due to the position of the DZK related to the air handler.

6) **Use of the insulated stopper.** If a damper is not used in the installation, proceed as follows:

· Make sure the damper is closed before installing the insulated stopper. (The damper will close as soon as the first zone is assigned.)
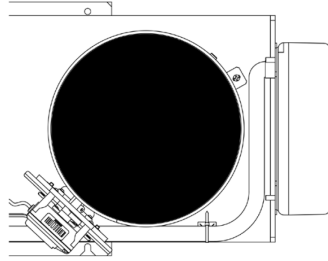
Keep in mind: when one or more dampers are disabled, it is recommended to adjust the Airflow control parameter to avoid overpressure on the active dampers and ductwork

· Check that the power cable is disconnected for the damper motor that will not be used.
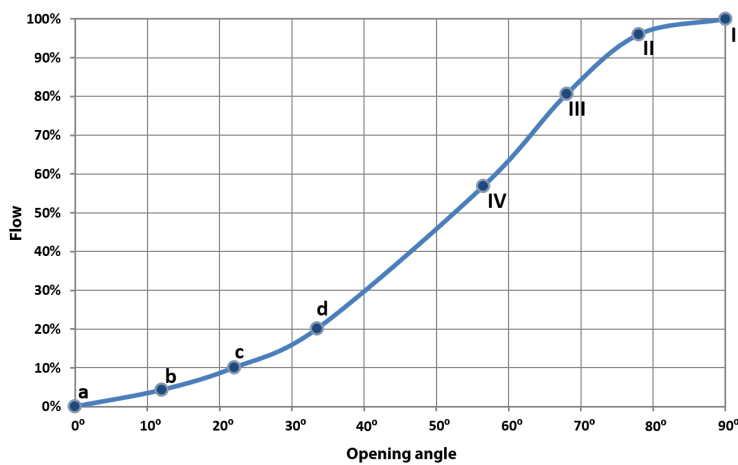
· Check that the damper remains airtight with the power **ON** and the fan running.

Damper setting

The dampers included in the zoning box have a built-in control system that allows you to manually set the maximum and minimum opening of each damper according to the needs of each installation.
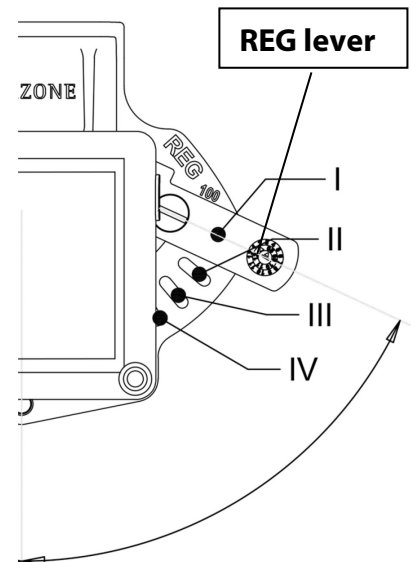
Average Flow (REG)

Due to the unique characteristics of each Daikin indoor unit supply opening with respect to the dampers of the box, the flow distribution is not identical in each damper. The central dampers receive more airflow than the others and the damper in the first and last position receives the least amount of air flow.
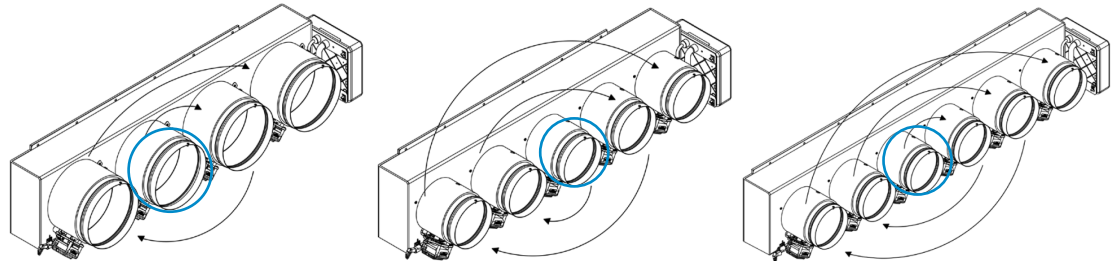
This zoning box offers maximum aperture adjustment which balances the flow of each damper to the needs of the installation.

By default, the dampers are configured with a maximum opening at **Position I**. To adjust the control of the dampers proceed as follows:
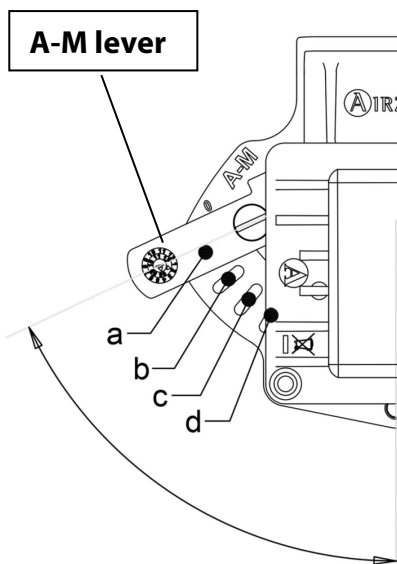
·   The damper must be completely closed to mechanically adjust its flow. To make this adjustment, create demand in all zones so that the indoor unit runs at maximum capacity. Then deactivate the zone to be adjusted, and verify that there is no air supplied to that zone.

·   With the damper closed, place the lever marked REG in the actuator to the desired open position. There are 4 position (I, II, III, and IV) with position I being completely open and position IV having the slightest opening. Perform the setting of the dampers by changing the lever REG position,

beginning with the central damper opening and ending with damper **No. 1** (Closest to the zoning box control board). The reduced flow in the central dampers will increase the flow of the dampers at the ends.

- The use of an anemometer verifies that the flow in each grille is within the installation requirements.

A-M lever
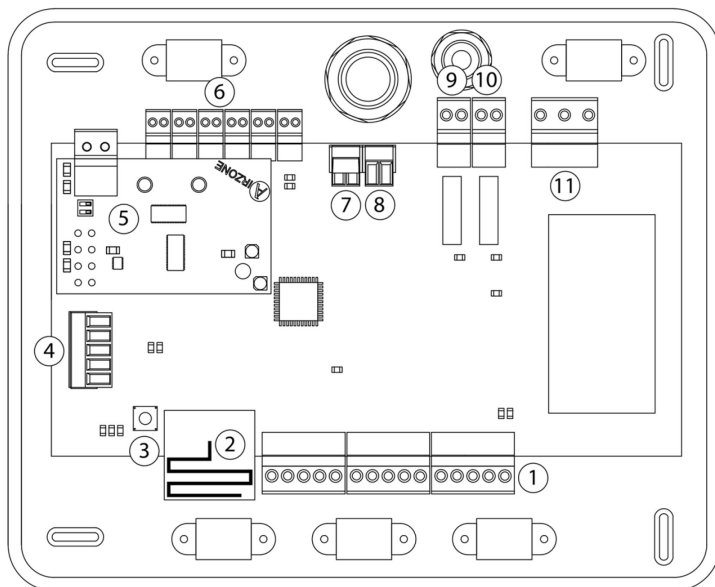
Minimum Air (A-M)

Similarly, the zoning box allows a minimum air opening for each damper, if needed. By default, the **Position a** damper is configured in the full-close position. To adjust minimum air for any damper, proceed as follows:

- Check that the dampers are wide open. To do so, set the system to Stop user mode, from the Main Wired Thermostat.

- Perform the setting of the dampers by changing the lever A-M position beginning with the central damper opening of the box and ending with damper **No. 1**. (Closest to the zoning box control board).

- With the damper open, place the handle A-M in the desired open position. It has 4 positions (a, b, c and d) where position "a" is fully closed and is "d" is the fully open.

- The use of an anemometer verifies that the flow in each grille is within the installation requirements.

Connection
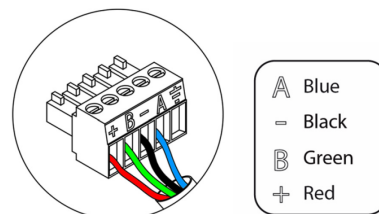
N°	Description
1	DZK connection bus
2	Wireless interface
3	Reset system button
4	Control for optional DZK BACnet Interface
5	DZK Interface Board
6	Actuator control outputs
7	Alarm input (normally close)
8	Protection probe input
9	Heating stage 2 output
10	Heating stage 1 output
11	Power supply

1. DZK connection bus

The DZK connection bus allows the connection of up to 6 Wired Thermostats. There are 3 connectors, each one with 5 contacts available, for connecting the expansion bus. The Wired Thermostat is connected to the DZK bus (Maximum of 2 Wired Thermostats per connector).

Connect the cables to the connector contacts following the color code indicated below.

Important: At least one Wired Thermostat is required for each DZK system, which can control up 6 zones.

A Blue
− Black
B Green
+ Red
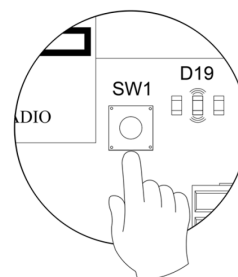
2. Wireless interface

This device provides the communication between the Zoning box control board and Wireless Thermostats and Wireless Lite Thermostats.

3. Reset system button

If the whole system needs to be reset (normally a replacement board that has been used before, or at the request of the technical support as a last resource to fix a problem), press and hold SW1 until LED 19 stops flashing. A system reset will return all settings to default values and conditions.

Keep in mind: once this sequence is started it cannot be interrupted and the Quick Setup process should be allowed to finish.

SW1   D19

4. Control for optional DZK BACnet Interface
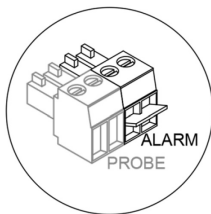
The DZK BACnet Interface allows the communication between the DZK zoning box and BMS BACnet/IP installation.

5. DZK Interface Board

This Interface provides the communication between the DZK zoning box control board and Daikin Indoor unit, connecting to "P1 P2".
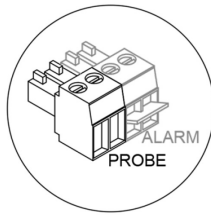
6. Actuator control outputs

These outputs are used to drive the damper actuators with 12VDC control for each damper.
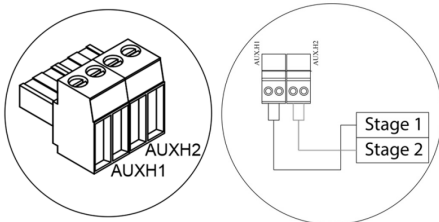
7. Alarm input (normally closed)

When this input is open it will stop the Daikin indoor unit and close all dampers. This input is shipped with a jumper in the connector that should be left in place unless an alarm input is connected.

8. Protection probe input

This input is used to connect the supply temperature sensor.

9. Heating stages
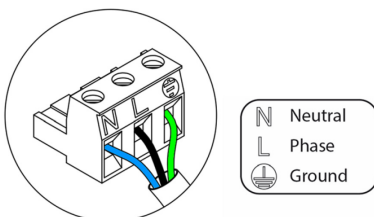
If the system includes Auxiliary Heat, when required by the heat demand, these outputs enable the first and second stages of Auxiliary Heat.

The technical specifications for the 1st and 2nd Stage Aux. Heat relay are: $I_{max.}$=1 A @ 24V, dry contacts.

If higher power is required for control, use external contactors of appropriate capabilities.

10. Power supply

Power supply 110/230 VAC line. The Zoning box control board is protected by a self-resettable fuse. This is an electronic component that does not require any action other than cycling the power to perform the reset.
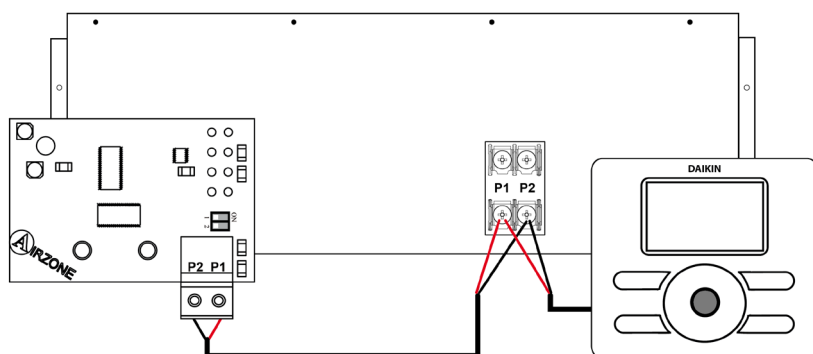
DZK INTERFACE BOARD

Connection and configuration

Complete the connections adhering to the following steps, in this order:

1. Disconnect the power supply from both the Daikin indoor unit and the DZK system.

2. Open the protective cover of the Daikin indoor unit, and locate the **P1, P2 connection** (to which the Daikin Navigation Remote Controller is connected).

3. Connect a two-wire cable supplied to **P1 P2** on the Indoor unit, in parallel with the Daikin navigation controller.

Important: a Daikin navigation controller is required to be connected to the Daikin indoor unit in addition to the DZK thermostats.

4. Close the Daikin indoor unit's protective cover.

5. Configure the microswitchs as required.

SW1	Algorithm		SW1	Defrost
	ON*			OFF*
	OFF			
	Set point	❄ - 4ºF/2ºC		ON
		☀ +8ºF/4ºC		

6. Power the Daikin indoor unit and the DZK system. Check the gateway LEDs (self-diagnosis).

Note: *Disable the Setback function using the Daikin controllers for a proper operation of the Airzone system.*

Algorithm function On
Depending on the set points of the zones calling for demand and on the return air temperature, the IDU's set point is set to reach a more efficient performance and to avoid stratification in heating.

Algorithm function Off
IDU's set point is set depending on the set points of the zones calling for demand.
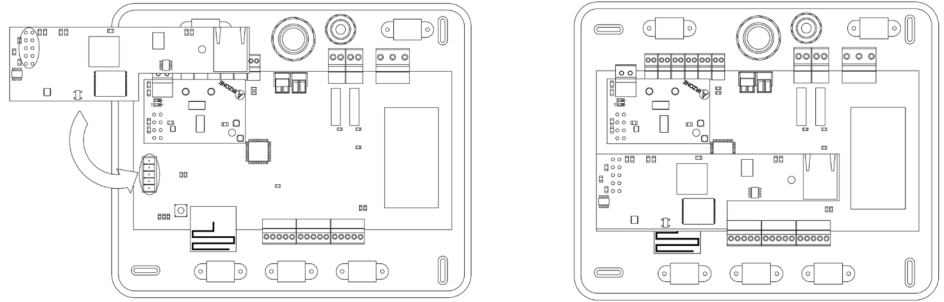
Defrost function
In heating mode, when all the zones are satisfied, instead of setting the Daikin unit to OFF, a 60˚F set point is set.

DZK BACNET INTERFACE
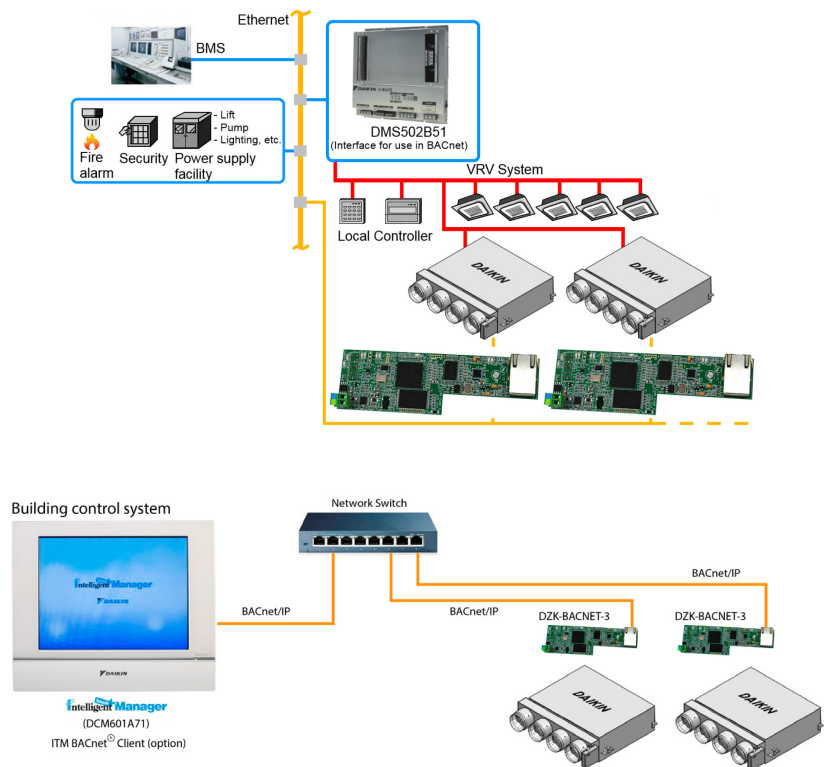
Installation

The DZK BACnet Interface is a Plug&Play interface. Disconnect the terminal and snap the connector and the interface support tube as shown in the pictures:

Note: *This BACnet/IP device is connected to the BMS by Ethernet cable.*
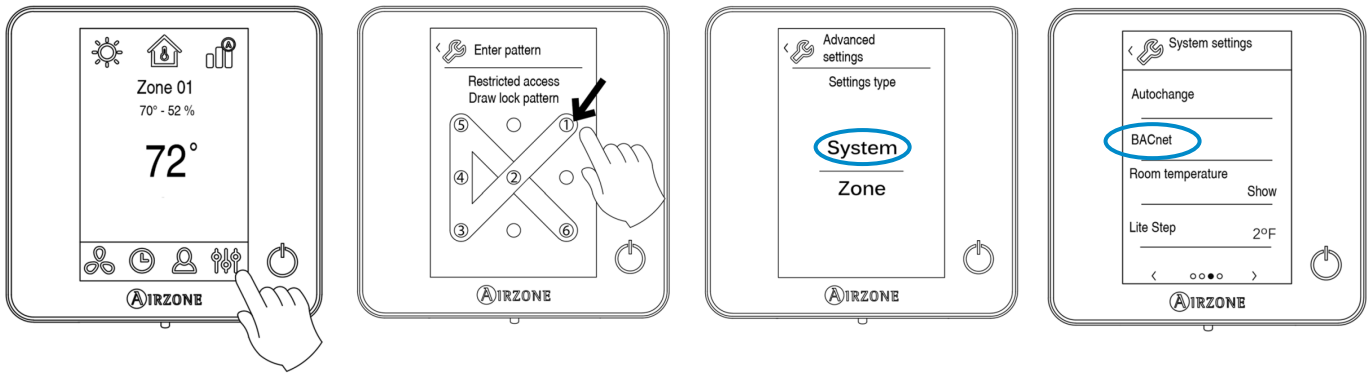
BACnet typical layouts are as follows:

Configuration

Note: check with BMS vendor what device ID should be configured here to avoid conflict within BACnet network.
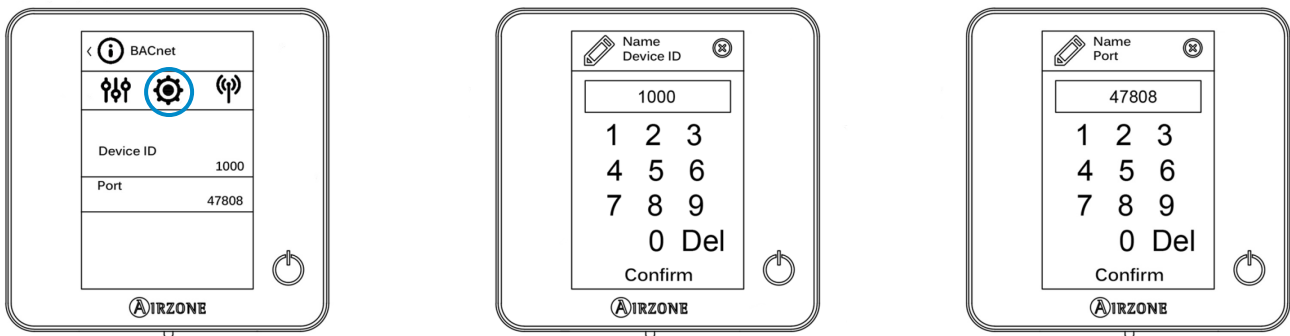
From the main screen, press and hold the icon ⚙ until the "Enter pattern" screen is displayed. Enter the sequence below to access the configuration menu, select the System settings and then select the BACnet setting.

Device ID and Port

In the BACnet menu, press the icon ⚙. For the proper identification on the BACnet/IP network and operation of the DZK BACnet Interface, it may be required to modify the Device ID (by default 1000) and the Port parameter (by default 47808). These properties can only be modified locally from the Main Wired Thermostat.

Note: device ID is unique per BACnet device.
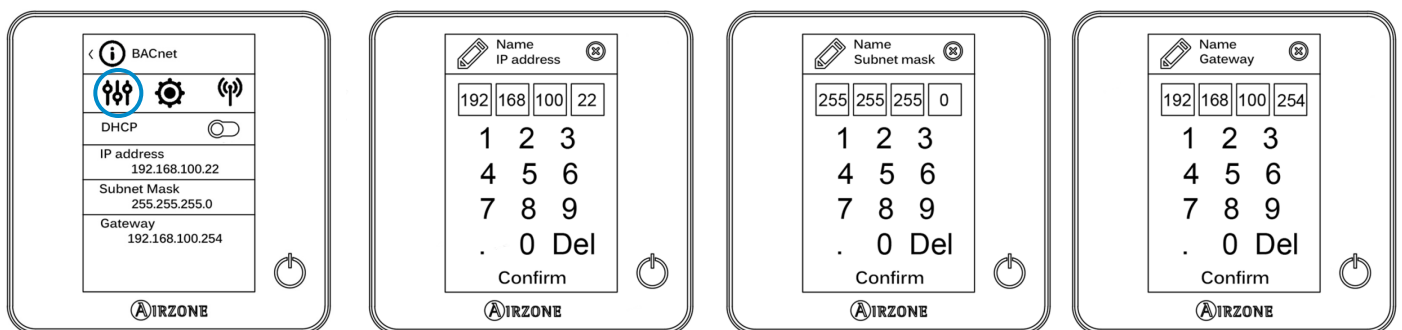
IP Configuration

In the BACnet menu, press the icon ⇪⇕. For the proper operation of the DZK BACnet Interface with the IP network, it is required to configure the following network parameters:

- IP Address (default 192.168.0.100)
- Subnet mask (default 255.255.255.0)
- Gateway IP (default 192.168.0.1)
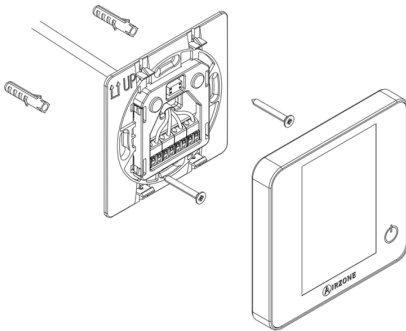
These properties can only be modified locally from the Main Wired Thermostat.

To configure them, access the IP Configuration menu from the BACnet menu:
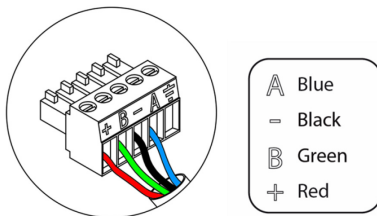
WIRED THERMOSTAT

Installation

The Wired Thermostat is available for wall mount. The wiring should not exceed 130 ft. (40 m) and stranded AWG20 shielded cable should be used. To mount the thermostat on the wall, take the following steps:
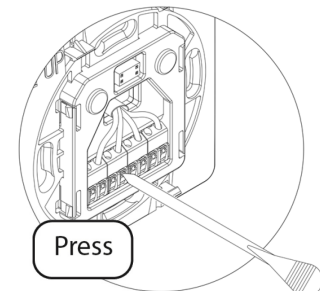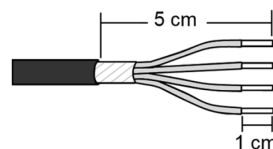
- Separate the back part of the thermostat from the wall support and make all the connections.

- Fix the back part of the thermostat to the wall.

- Place the display on the support once it is fixed.
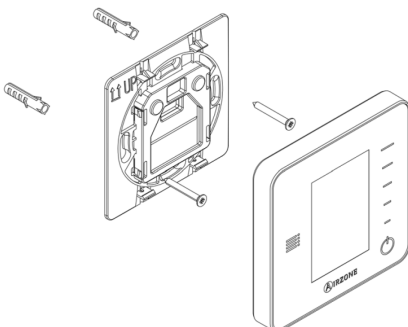
Wiring

The Wired Thermostats are connected to the DZK connection bus of the DZK Control Board. Attach the wires with the terminal screws following the color code.

Important: *Use a suitable screwdriver to press in the locking tabs.*

A Blue
− Black
B Green
+ Red

Important: perform the pairing of thermostat in their final location. Distances less than 18 inches between the thermostat and the control board can saturate the receivers and make the pairing impossible.

WIRELESS AND WIRELESS LITE THERMOSTAT
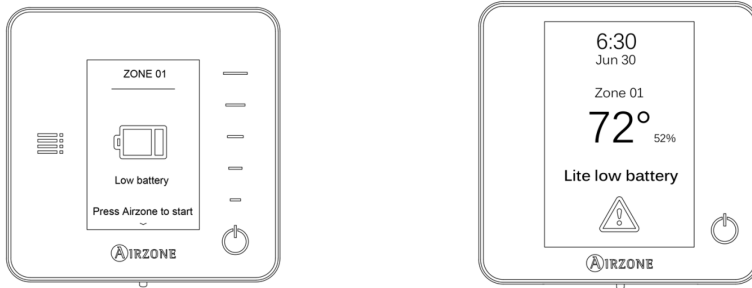
Installation

The Wireless and Wireless Lite Thermostats are available for wall mount. The maximum distance between the Zoning box control board and the thermostat in clear line of sight is 130 ft. (40 m). To mount the thermostat on the wall, take the following steps:
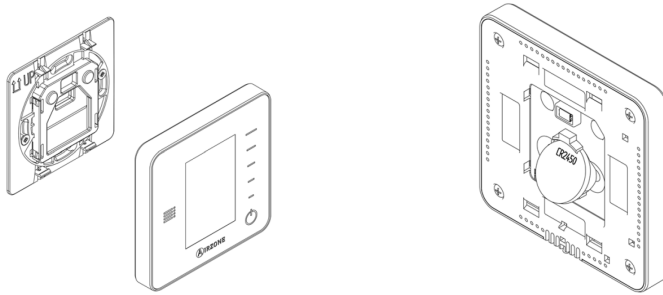
- Remove the back of the thermostat and insert the CR2450 button battery.

- Fix the back part of the thermostat to the wall.

- Place the display on the support once it is fixed.

23

Changing batteries

When a Wireless Thermostat is running out of battery, it displays the icon on the screensaver. In the case of the Wireless Lite Thermostats, a warning message will be displayed on the Wired Thermostat. In order to know the zone of the Wireless Lite Thermostat(s) running out of battery press on the warning icon.

To replace the battery, separate the thermostat from its support and replace the battery (CR2450).

Important: we recommend the use of top-brand batteries.
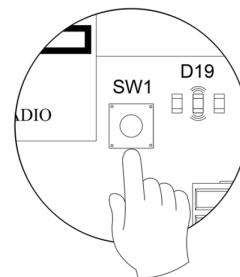
The use of low-quality batteries may reduce the duration of use.

Remember to deposit the old battery into an appropriate recycling point.

INITIAL CONFIGURATION

IMPORTANT: To associate Wireless and Wireless Lite Thermostats, it is necessary to open the radio channel. To do that, press on SW1 ③. The LED D19 will remain solid red. Once open, you have 15 minutes to make the association. If that period of time expires, start the process over again. Remember not to open more than one radio channel at the same time, it may alter the process.

You can also open the channel association radio through the Main Wired Thermostat *(see section System parameters)*.

WIRED AND WIRELESS THERMOSTATS CONFIGURATION

Language

Select your language: English, French or Spanish.

Important: once you start the process, it cannot be interrupted.

Wireless Association *(only Wireless Thermostat)*

Press Airzone to start seeking and confirm the wireless association. Verify **the range is correct** (30% minimum).

*Keep in mind: to access the main screen from the Wireless Thermostat screensaver, press on **Airzone**.*

Zone ID

Select the zone associated to the thermostat. Zone 1 controls damper 1, zone 2 controls damper 2, and so on for up to 6 zones in the system.

Linked Zones

If necessary, the system allows you to associate more than one control output to a zone. It is possible to control multiple outputs from the same thermostat.

Thermostat Configuration *(only Wired Thermostat)*

Each DZK system must have one Wired Thermostat configured as the Main thermostat. Select the operation of the thermostat:

- Main: controls all the parameters of the installation.

- Zone: controls all the parameters of the zone.

Note: given that only one thermostat can be configured as the Main thermostat, this parameter will not appear for selection if one thermostat in the system has been already configured as the Main thermostat.

Other Settings

Access the advanced settings to change other settings or activate the Basic Menu Mode if you want to.

Note: When set to Basic mode, the user can control the following parameters: On/Off, set point, local ventilation and user settings.

Wired Thermostat
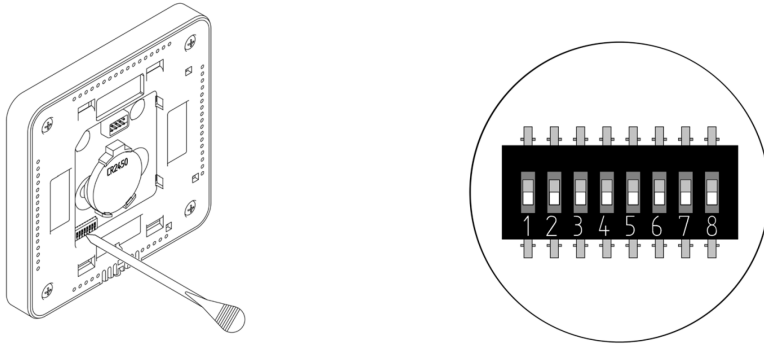
Wireless Thermostat

WIRELESS LITE THERMOSTAT CONFIGURATION

Zone ID

Select the zone associated to the thermostat by switching on the corresponding dip switch number.

Linked Zones

If required, select other control outputs associated to the zone by adjusting the corresponding dip switches. **The address zone will be the one with a lower value.**

Other Settings

Configure other functionalities of the Wireless Lite Thermostat from the Advanced Configuration menu of any Wired Thermostat (refer to the *Zone Parameters* settings of the Wired Thermostat).

If the association is correct, the LED ⏻ will flash green 5 times. If it flashes red, it means the zone is already occupied. If it flashes red twice, it means the thermostat is out of range.

Wireless Lite Thermostat Reset
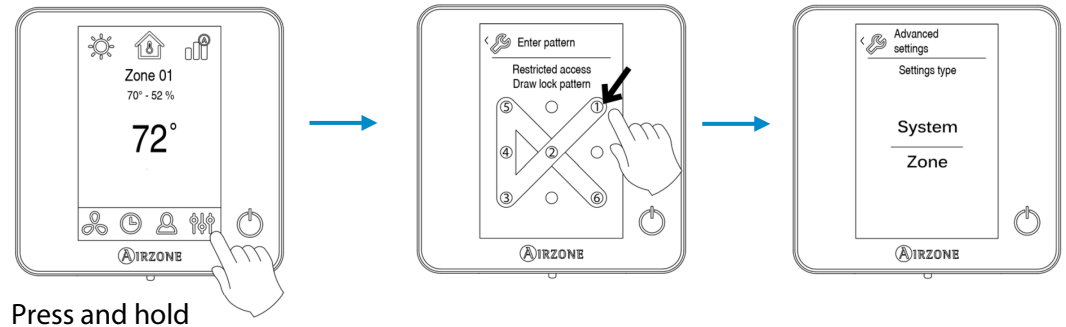
If you want to return your Wireless Lite Thermostat to factory values, pull down all the microswitchs. Press on ⏻ and the LED will flash green twice when the reset process is completed.

ADVANCED CONFIGURATION

Besides the quick configuration menu, the system has a number of configuration parameters to complete the installation.

ADVANCED CONFIGURATION - WIRED THERMOSTAT

To access the advanced configuration menu, follow the next steps:

Press and hold

From this menu you can change the system and zone parameters.

System Parameters

System ID. This option allows the installer to define the number of this DZK system within the whole installation. By default, the value is 1. The system displays the available IDs with a maximum value of 16.

Note: *If you have a DZK BACnet Interface, this parameter is not displayed and the address of the system is 1.*

Temperature SP Range. This menu allows you to change the maximum set point temperature for heating mode (66˚F to 86˚F / 18˚C to 30˚C, by default 86˚F/30˚C) and minimum set point temperature in cooling mode (64˚F to 78˚F / 18˚C to 26˚C, by default 64˚F/18˚C).

Global Ventilation. This menu allows you to activate/deactivate the fan mode in all zones when the system is not actively heating or cooling any zones. By default, the global ventilation is deactivated. When activated, the following settings are used to configure Global Ventilation:

Note: *when global ventilation is activated, a warning message will appear on the screensaver.*

- **Every (min).** Configure the length of the interval (in minutes) between periods of ventilation. Configurable from 5 to 40 minutes, in 5 minutes increments (by default, 15 minutes).

·   **Run For (min).** Configure the time duration that ventilation is activated (in minutes). Configurable from 5 to 20 minutes, in 5 minutes increments (by default, 10 minutes).

Type of Opening. This menu allows you to enable or disable the modulating system dampers. Proportionally graduated in four steps, the opening or closing of the damper is based on the demand for zone temperature to adjust the flow rate. By default, the dampers are set for Modulating.

If you select the Modulating option, select the desired damper and set the REG lever position, where position I is completely open and position IV has the smallest opening.

Radio Channel. This option allows you to open the wireless channel association for connecting Wireless and Wireless Lite Thermostats to the Zoning box control board. By default, the radio channel is closed.

Note: when the radio channel is opened, it will remain open for 15 minutes.

Supply Temperature. This option allows the system demand to be ignored if the supply temperature exceeds a certain limit. The selectable heating cut out temperatures are 100-114-129-143-158˚F (38-46-54-62-70˚C). By default, the system will stop heating if the supply temperature reaches 129˚F / 54˚C.

Away Mode Settings. This option configures the following parameters of the unoccupied user mode and the vacation user mode:

-    **Hysteresis.** If the set point temperature is surpassed by the differential defined, the zone will cease demand. Range: 2 to 7˚F / 1 to 3.5˚C in steps of 1˚ / 0.5˚C. By default, 6˚F / 3˚C.

-    **Override Time.** Sets time that the zone will resume the selected away mode when the user touches the thermostat screen during an away period. Values: 10 to 120 minutes in steps of 10 minutes. By default, 60 minutes.

Auxiliary Heat. This menu is used to enable/disable the auxiliary heat. By default, the auxiliary heat is disabled. When auxiliary heat is enabled, the following parameters are used to configure the operation of the auxiliary heat:

Configuration Menu.

- **Available Stages.** Defines how many stages of auxiliary heat a system has.

- **First Supply Heat**. If the setting for Auxiliary heat is 1 or 2, then the first system to supply heat must be defined as either: Heat Pump or Aux. Heat.

  o **Fan Configuration.** Select between Electric (Fan on) or Furnace (Fan off) option. If you select Electric option, define:

    § **Fan Delay (s).** Defines the delay time (in seconds) to turn off the fan when there is no demand from the Auxiliary Heater. Possible values are 0, 45, 60 and 120 seconds.

Note: if the auxiliary heat is electrical and the installation is heat pump type, then the first one to supply heat must be Heat Pump in the DZK master system.

First Stage Menu.

- **First Stage Differential.** Temperature that the system has to surpass to activate the first stage of auxiliary heat. Values: 2 to 10˚F/1 to 5˚C in increments of 1˚F/0.5˚C. By default, 2˚F/1˚C.

- **First Stage Hysteresis.** Defines the hysteresis for the operation of the first stage. Values: 1-2˚F/0.5-1˚C in increments of 1˚F/0.5˚C. By default, 1˚F/0.5˚C.

- **Min. Time Exhausted.** Minimum time that the Heat Pump must be active before the first stage of auxiliary heat can be activated. Possible values are 0, 45, 60 and 120 minutes. By default, 45 minutes.

Second Stage Menu.

- **Second Stage differential.** Temperature that the system has to surpass to activate the second stage of auxiliary heat. Values: 2 to 10˚F/1 to 5˚C in increments of 1˚F/0.5˚C. By default, 2˚F/1˚C.

- **Second Stage Hysteresis.** Defines the hysteresis for the operation of the second stage. Values: 1-2˚F/0.5-1˚C in increments of 1˚F/0.5˚C. By default, 1˚F/0.5˚C.

- **Min. Time Exhausted.** Minimum time that the first stage must be active before the second stage of auxiliary heat can be activated. Possible values are 0, 45, 60 and 120 minutes. By default, 45 minutes.

Autochange. This option allows the user to configure the three values that define the auto-changeover operation that sets the mode of the indoor unit.

- **Setpoint Differential.** Defines the minimum differential between heating and cooling set points. For example, if set to 2˚F, the system will force the cooling set point at least two degrees higher than the heating set point. Values: 0 to 7˚F / 0 to 3.5˚C in increments of 1˚F / 0.5˚C, by default 2˚F / 1˚C.

- **Mode Switching Protection (min).** Defines the minimum run time before allowing a mode change. Possible values are 15, 30, 60 and 90 minutes. By default, 30 minutes.

- **Heat OVR Temp.** If a zone has a higher heating demand than this temperature, the system reverts heating operation even if the cooling global demand exceeds the global heat demand. Possible values are: Off, 3 to 8˚F / 1.5 to 4˚C in increments of 1˚F / 0.5˚C. Default value: Off.

Note: in case of system reset, it will return to default values.

BACnet. This parameter displays the Device ID, the uplink port, the IP address, the subnet mask and the Gateway IP and allows you to modify them. Press on the value you want to change, modify it and then press to confirm. The values by default are:

- Port: 47808

- IP Address: 192.168.0.100

- Subnet Mask: 255.255.255.0

- Gateway IP: 192.168.0.1

Room Temperature. This option allows the room temperature and relative humidity to be shown/hidden. By default, the room temperature is shown.

Lite Step. This option configures the temperature increments (2˚F/1˚C or 1˚F/ 0.5˚C) of the base set-point for the Wireless Lite Thermostat. By default, 1˚F/0.5˚C.

Note: the Remote Assistance parameter enables a qualified technician the remote access to your installation in order to perform a diagnose of it.

Remote Assistance. This option enables/disables remote assistance. By default, remote assistance is disabled.

Reset System *(only available for the Main thermostat)***.** This option resets the system and returns to factory settings.

Zone Parameters

Linked Zones. Displays the linked zones and allows you to select the secondary control dampers associated with the thermostat.

Thermostat Type. Configure the thermostat as Main or Zone.

Note: it cannot be configured as Main if there is already another Main thermostat.

Menu Mode. The thermostats can be set in Basic or Advanced mode (Advanced by default). When set to Basic mode, the user can control the following parameters: On/Off, set point, local ventilation and user settings.

Offset. This option allows the user to apply an offset to the room temperature reading. The offset range goes from -5 to 5˚F (-2.5 to 2.5˚C). The default value is 0˚F/ 0˚C. This offset will always be applied to the measured room temperature of the zone.

User Mode Setpoint. This option is used to configure the set point temperature of each user mode for each zone.

- **Comfort.** Heating mode: 59 to 86˚F/ 15 to 30˚C, by default 68˚F / 20˚C. Cooling mode: 64 to 86˚F/ 18 to 30˚C, by default 75˚F / 24˚C.

- **Eco.** Heating mode: 59 to 86˚F / 15 to 30˚C, by default 66˚F / 19˚C. Cooling mode: 64 to 86˚F / 18 to 30˚C, by default 84˚F / 29˚C.

- **Unoccupied.** Heating mode: 59 to 72˚F/ 15 to 22˚C, by default 63˚F/17.5˚C. Cooling mode: 75 to 86˚F/ 24 to 30˚C, by default 81˚F/27˚C.

- **Vacation.** Heating mode: 50 to 61˚F/ 10 to 16˚C, by default 50˚F/10˚C. Cooling mode: 84 to 96˚F/ 29 to 35.5˚C, by default 95˚F/35˚C.

Weight. This option is used to set the weight of each zone for purposes of determining system operation. The weight of the zone will be used for calculating the mode (auto-change over) or for calculating heat demands when using auxiliary heat. It is an indicator of the size / importance of the zone. Possible values range from 0-100. By default, the weighting is set to Auto and each zone's weight is automatically generated based on the number of zones. For example, if there are four zones, each zone's weight is automatically set to 25.
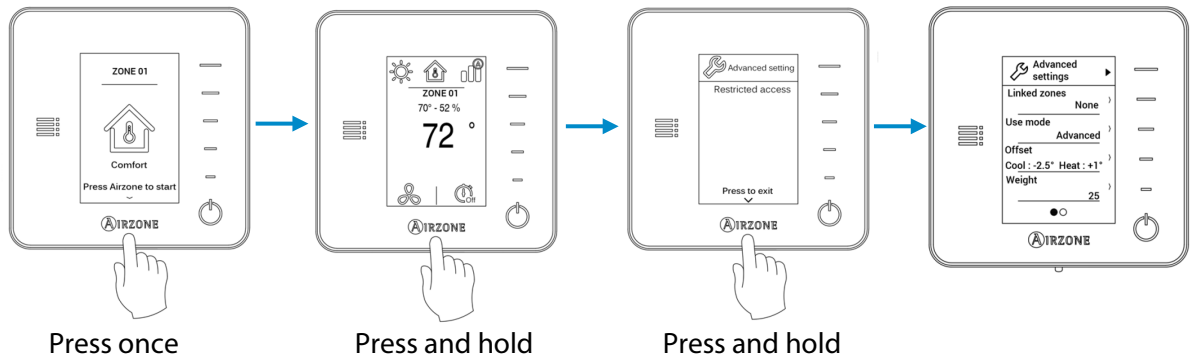
If this option is disabled, the weight of the zone can be set manually.

Reset Thermostat. This option resets the thermostat and returns it to factory values.

*Keep in mind: to access the main screen from the Wireless Thermostat screensaver, press on **Airzone**.*

ADVANCED CONFIGURATION -WIRELESS THERMOSTAT

To access the advanced configuration menu follow the following steps:

Press once   Press and hold   Press and hold

Linked Zones. Displays the linked zones and allows you to select the secondary control dampers associated with the thermostat.

Menu Mode. The thermostats can be set in Basic or Advanced mode. They are set in Advanced mode by default. These are the parameters you can control in Basic mode: On/Off, set-point temperature and local ventilation.

Offset. This option allows the user to apply an offset to the room temperature reading. The offset range goes from -5°F to +5°F (-2.5 to 2.5°C). The default value is 0°F. This offset will always be applied to the measured room temperature of the zone.

Weight. This option is used to set the weight of each zone for purposes of determining system operation. The weight of the zone will be used for calculating the mode (auto-change over) or for calculating heat demands when using auxiliary heat. It is an indicator of the size / importance of the zone. Possible values range from 0-100. By default, the weighting is set to Auto and each zone's weight is automatically generated based on the number of zones. For example, if there are four zones, each zone's weight is automatically set to 25.

Change from Manual to Auto if you want to automatically calculate the total weight of each zone.

Reset Thermostat. This option resets the thermostat and returns it to factory values.

USER SETTINGS – WIRED THERMOSTAT

Press on 👤 icon to see all the shortcuts list:

🌡ᵁ **Units.** Select temperatures to be displayed: Fahrenheit (default) or Celsius.

🏳 **Language.** Select your language: English, French or Spanish.

💡 **Brightness.** Adjust the brightness, and enable or disable screen brightness when the screen saver is active.

📅 **Date and Time.** Press on the clock to set time, format type (12 or 24 hours) and enable daylight saving time. Press on the calendar to set the date.

ⓘ **Information.** Displays information about:

- Zone: Firmware, zone, association, actuator or status of the communications.

- System: Firmware, configuration and information about the controllers.

- Devices: Displays what elements are connected to the system.

- Warnings and errors on system incidents.

✨ **Clean Screen.** Select this option if you want to clean the screen. The screen will lock for a few seconds in order to help prevent changes when cleaned.

ZONE SETTINGS

ZONE SETTINGS - WIRED THERMOSTAT

Press on 🎛 to access this menu. You will see these settings:

⏱ **Timer**. It is an auto power-off timer of the zone. You can select:

- **OFF.** Timer is not activated.

- **30.** Thirty minutes after its activation, the zone will turn off.

- **60.** Sixty minutes after its activation, the zone will turn off.

90. Ninety minutes after its activation, the zone will turn off.

🔧 **Lite Settings.** This parameter defines base set-point temperature for zones with Wireless Lite Thermostat.

Important: This parameter is available when navigating to a zone controlled by a Wireless Lite Thermostat by using a Wired Thermostat.

ZONE SETTINGS - WIRELESS THERMOSTAT

Press on ▤ to access this menu. You will see these settings:

Local Ventilation. This option allows activation 🌀 or deactivation 🌀 of the fan mode the selected when the system is not actively cooling or heating any of the zones.

Timer. Automatically switches off the zone after the defined time. You can select:

- **OFF.** Timer is not activated.
- **30.** Thirty minutes after its activation, the zone will turn off.
- **60.** Sixty minutes after its activation, the zone will turn off.
- **90.** Ninety minutes after its activation, the zone will turn off.

Information. Displays information about:
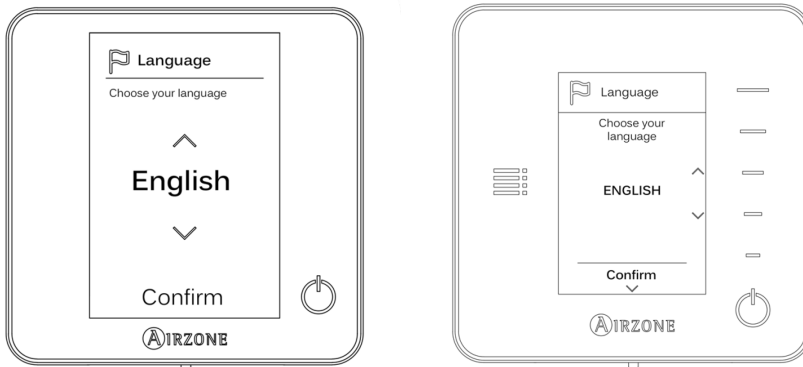
- Zone: Firmware, zone, association, actuator or status of the communications.
- System: Firmware, configuration and information about the controllers.
- Devices: Displays what elements are connected to the system.

Zone navigation. Zone navigation will be available only when the Master thermostat is in error. Will be able to access, through the "All zones" option to the parameters: Set Point, Mode, User mode and Airflow to modify them.
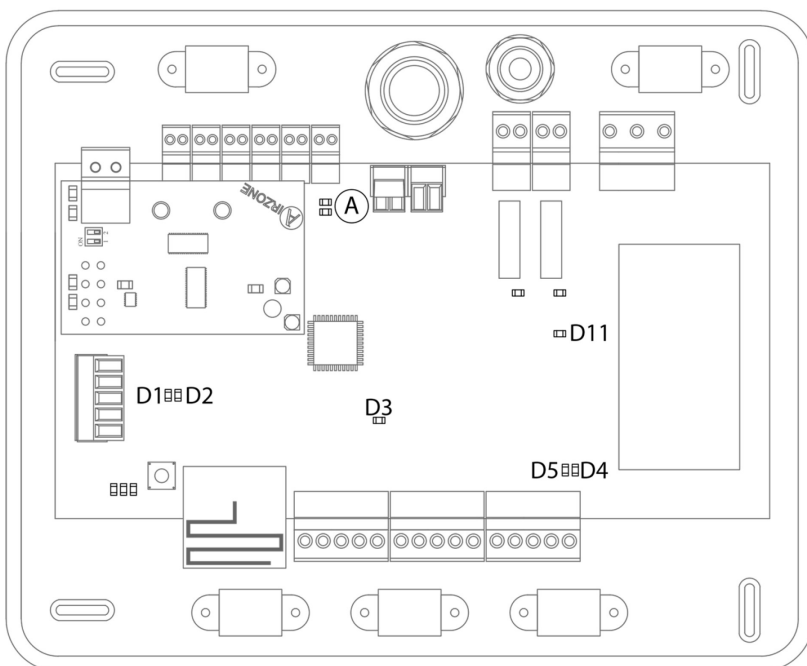
COMMISSIONING STEPS

TURN ON POWER TO ALL SYSTEM

Wired and Wireless Thermostats. Verify that the first configuration screen is displayed.
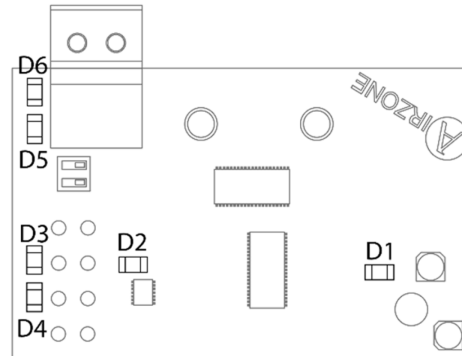
DZK Control Board. Verify that the LEDs status is correct.

Note: when configuring the system, the opening LEDs of the actuator control outputs will turn on sequentially as the system checks proper functioning.
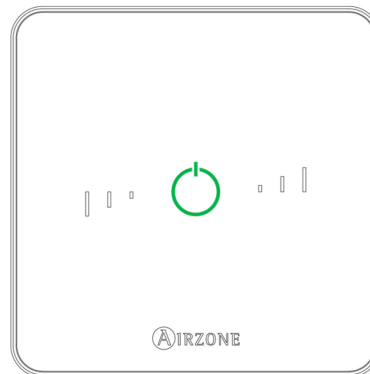
	Meaning		
D1	Data reception from BACnet interface connector	Blinking	Green
D2	Data transmission from BACnet interface connector	Blinking	Red
D3	Main control board internal bus activity	Blinking	Green
D4	Data transmission from DZK connection bus	Blinking	Red
D5	Data reception from DZK connection bus	Blinking	Green
D11	Main control board power	Solid	Red
(A)	Opening damper	On	Green
	Closing damper	On	Red

DZK Interface Board. Verify that the LEDs status is correct.
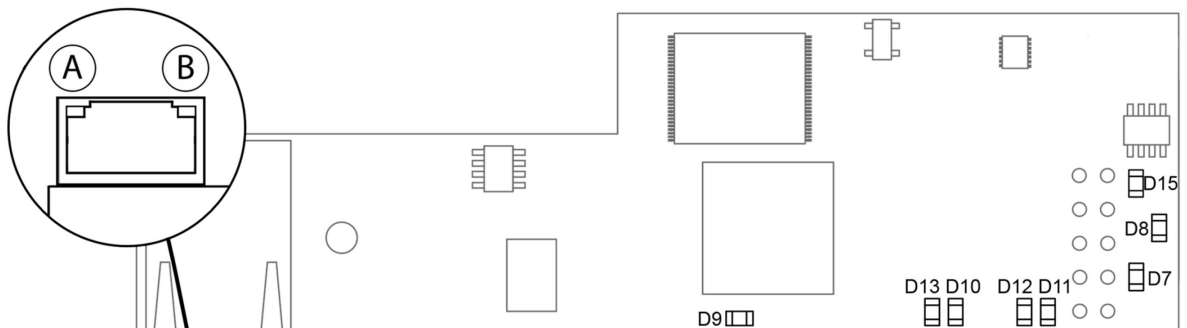
Meaning			
D1	Interface power supply	Solid	Red
D2	DZK Interface Board internal bus activity	Blinking	Green
D3	Data transmission to Zoning box control board	Blinking	Red
D4	Data reception from Zoning box control board	Blinking	Green
D5	Data transmission to Daikin navigation controller	Blinking	Red
D6	Data reception from Daikin navigation controller	Blinking	Green

Wireless Lite Thermostat. Verify that the LED ⏻ will flash green 5 times to confirm the association.
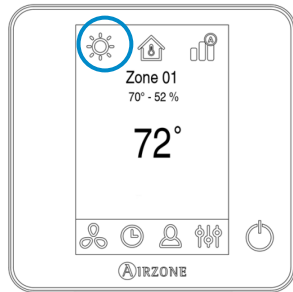
DZK BACnet Interface. Verify that the LEDs status is correct.
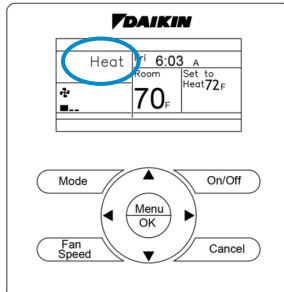
Meaning			
Ⓐ	Ethernet connected	Blinking	Green
Ⓑ	Ethernet activity	Blinking	Yellow
D7	Data transmission from automation	Blinking	Red
D8	Data reception from automation bus	Blinking	Green
D9	Microswitch performance	Blinking	Green
D10	Connected to the Internet	Blinking	Green
D11	Network data transmission	Blinking	Red
D12	Network data reception	Blinking	Green
D13	Configured as IP address through DHCP	On	Red
	Configured as Fixed IP address	Off	Red
D15	Power supply	Solid	Red

COMMUNICATIONS WITH THE INDOOR UNIT – MODES / TEMPERATURE

Check that the Navigation Remote Controller receives the operation mode change from the zoning system. To verify that, change the operation mode on the Main Wired Thermostat and verify that the new mode appears in the Navigation Remote Controller.
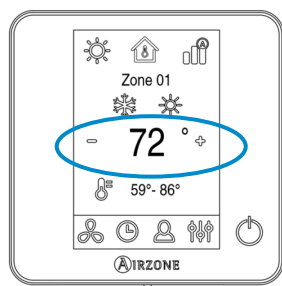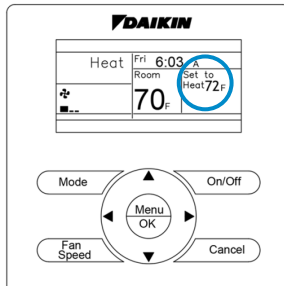
DZK Wired Thermostat   **Daikin Navigation Remote Controller**

Check that the Daikin Navigation Remote Controller receives the temperature changes from the zoning system. To do this, deactivate all thermostats but the Main Wired Thermostat. Change the Main Wired Thermostat set point, and verify that the set point in the Daikin Navigation Remote Controller follows the specified set point changes.

DZK Wired Thermostat   **Daikin Navigation Remote Controller**

ZONE ASSIGNMENT

Activate each thermostat, one at a time, and set it for demand by Zone Navigation menu (see the section *Zone Navigation* from the User's Manual). Verify that the zone where the thermostat is located is receiving air. Change the set point to eliminate the demand, and verify that the airflow stops.

AIRFLOW CONTROL SELECTION
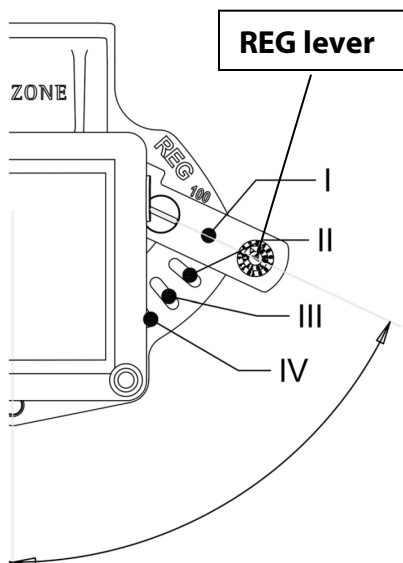
· Check the change of the fan speed depending on the number of demand zones with the Standard mode.

· Remember that the Airflow control function is available in the Main Wired Thermostat to adapt the velocity map according to the installation requirements.

2 speeds indoor unit

Speed	Total weight (Zones calling demand)		
	Silence	Standard	Power
Low	1-70	1-50	1-29
High	71-100	51-100	30-100

3 speeds indoor unit
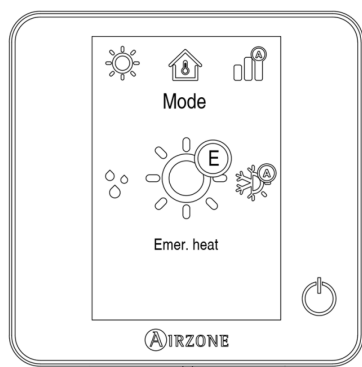
Speed	Total weight (Zones calling demand)		
	Silence	Standard	Power
Low	1-57	1-33	1-18
Medium	58-81	34-66	19-41
High	82-100	67-100	42-100
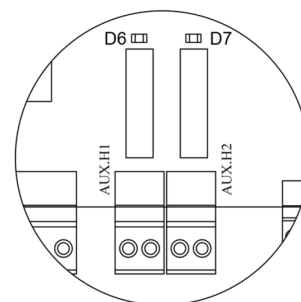
· Check with an anemometer that the air supply to each zone is the desired amount. Verify the airflow with all zones open, and also with each zone individually open.

· Before mechanically adjusting the maximum opening (REG), ensure that the zone damper is closed. To do this turn off the zone to be adjusted while keeping any other zone calling demand.

REG lever

ZONE

REG 100

I

II

III

IV

OTHER CONFIGURATION PARAMETERS

·   If the installation has Auxiliary Heat, verify that it is correctly installed and configured. Verify that the Operation Mode menu displays Emergency Heat as an option.

·   If you use Auxiliary Heat, check the relay operation in the zoning box control board to ensure it is working properly (first Aux H1, then Aux H2). To verify, set the system calling demand for heat and keep in mind that there is an action delay.

·   Turn off the system and verify that Aux H1 and Aux H2 are disabled.

	Meaning	Aux. Heat status	Normal status	Color
D6	1st Stage Auxiliary heat	On	On	Green
		Off	Off	
D7	2nd Stage Auxiliary heat	On	On	Green
		Off	Off	

EXCEPTION CODES

If there is any warning or error, it will be displayed on the screensaver. In case of Wired Thermostat, it also will be displayed on the main screen, press on ⚠ to access the Error menu.

ⓘ WARNINGS

Unoccupied Override. A zone has been activated while the user mode is set to Unoccupied. The system will start working in Comfort Mode, and the zone will be active for the configured Override time (configured in the Away mode settings, see section *System parameters*). When the override time has finished, the system returns to its previous status.

Global Ventilation. *(only Main Wired Thermostat)*. The global ventilation is activated. To set the activation intervals of the global ventilation and the duration of them (see section System parameters, Global ventilation).

Note: to replace the battery, see section Changing batteries.

Lite Low Battery *(only Wired Thermostat)*. The battery (CR2450) of a Wireless Lite Thermostat has approximately 2 weeks of life left. Check which Wireless Lite Thermostat is affected by this warning through the zone number displayed in the Warnings menu.

Low Battery *(only Wireless Thermostat)*. The battery (CR2450) has approximately 2 weeks of life left.

⚠ ERRORS

Error 1. Communication error with the DZK Control Board.

Error 5. Temperature sensor is open.

Error 6. Temperature sensor is short circuited.

Error 8 *(only Wired Thermostat)*. Wireless Lite Thermostat not found.

Error 9. Communication error between the DZK Interface Board and the DZK Control Board.

Error 10 *(only Wired Thermostat)*. Communication error between the DZK BACnet interface and the DZK Control Board.

Error 11. Communication error between the DZK Interface Board and the AC indoor unit.
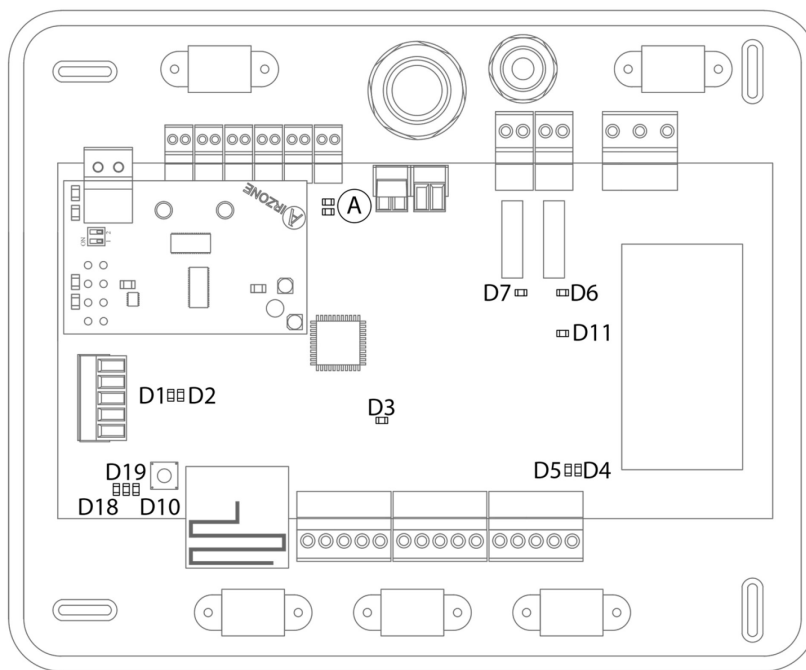
AC unit error *(only Wired Thermostat)*.

See the section *Errors in Wired and Wireless Thermostats*, to know the actions to be taken in these cases.

AUTO DIAGNOSTICS

DZK CONTROL BOARD AUTO DIAGNOSIS

The Zoning Box Control Board has LED's integrated on the DZK Control Board that provide information of abnormal conditions.

Meaning			
D1	Data reception from DZK BACnet Interface connector	Blinking	Green
D2	Data transmission from DZK BACnet Interface connector	Blinking	Red
D3	Main control board internal bus activity	Blinking	Green
D4	Data transmission from DZK connection bus	Blinking	Red
D5	Data reception from DZK connection bus	Blinking	Green
D6	1st Stage Aux. Heat Activated	Switches	Green
D7	2nd Stage Aux. Heat Activated	Switches	Green
D10	Wireless data packets reception	Switches	Green
D11	Main control board power	Solid	Red
D18	Wireless thermostat associated	Solid	Green
D19	Association channel: active	Solid	Red
Ⓐ	Opening damper	On	Green
	Closing damper	On	Red

LED D3 does not blink

- Verify that the Control Board is powered.

- If the LED 11 is ON, the control board is faulty. Contact Technical Support.

LED D5 does not blink
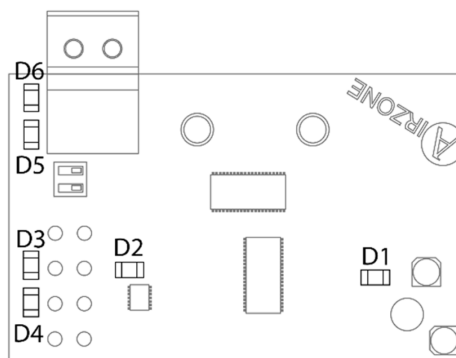
- The board is not receiving information from the Wired Thermostat. Verify the wiring between the Wired Thermostat and the Control Board. Never use solid wires for this connection.

LED D11 is not ON

- Verify that the Control Board is powered.

DZK INTERFACE BOARD AUTO DIAGNOSIS

DZK Interface Board has integrated LED's that provide information about abnormal conditions.

Meaning			
D1	Interface power supply	Solid	Red
D2	DZK Interface Board internal bus activity	Blinking	Green
D3	Data transmission to Zoning box control board	Blinking	Red
D4	Data reception from Zoning box control board	Blinking	Green
D5	Data transmission to Daikin navigation controller	Blinking	Red
D6	Data reception from Daikin navigation controller	Blinking	Green

LED D1 is not ON

- Verify the AC Unit Power Supply.
- Verify the correct connection between the Daikin Indoor unit and the DZK Interface Board.

LED D2 does not blink

- Contact Technical Support.

LED's D3/D4 do not blink
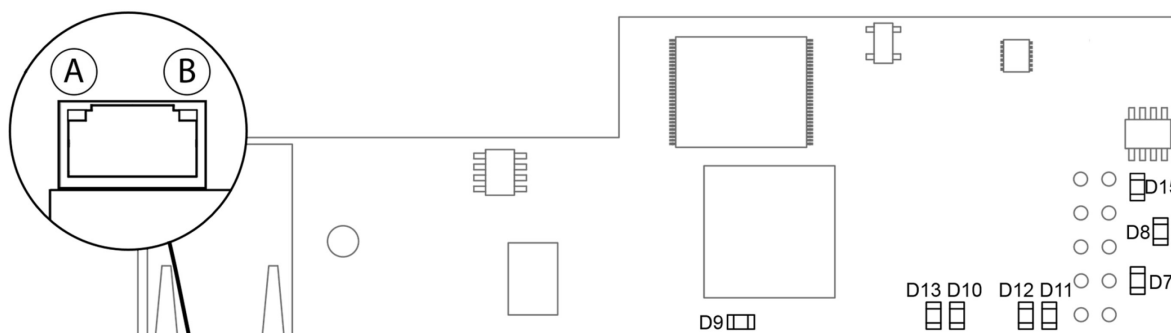
- Check the connection between the DZK Interface board and the DZK Control Board.

LED's D5/D6 do not blink

- Check the correct connection between the Daikin Indoor unit and the DZK Interface Board.

DZK BACNET INTERFACE AUTO DIAGNOSIS

The DZK BACnet Interface have integrated LEDs that detect unusual operations.
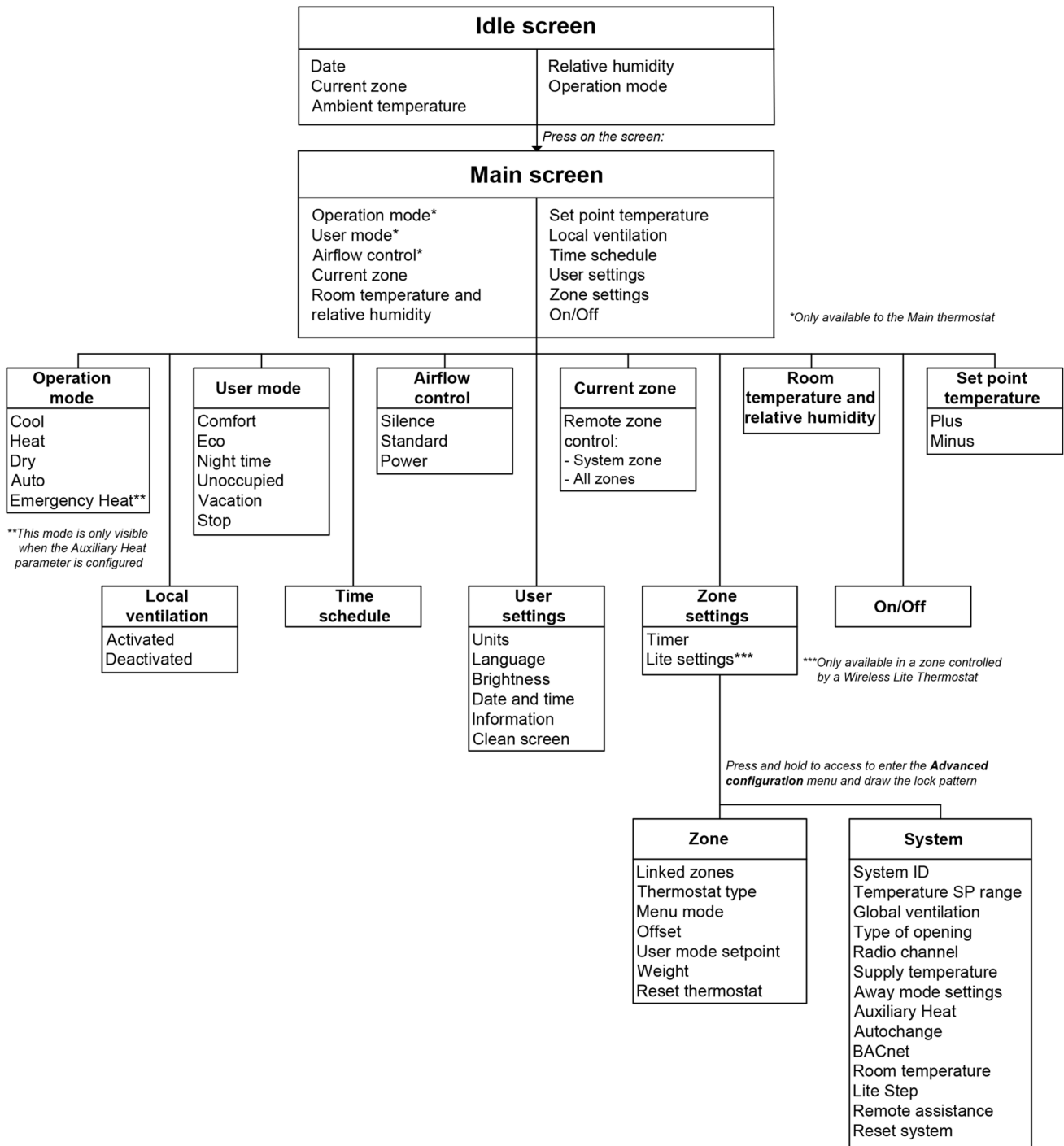
Meaning			
Ⓐ	Ethernet connected	Blinking	Green
Ⓑ	Ethernet activity	Blinking	Yellow
D7	Data transmission from automation	Blinking	Red
D8	Data reception from automation bus	Blinking	Green
D9	Microswitch performance	Blinking	Green
D10	Connected to the Internet	Blinking	Green
D11	Network data transmission	Blinking	Red
D12	Network data reception	Blinking	Green
D13	Configured as IP address through DHCP	On	Red
	Configured as Fixed IP address	Off	Red
D15	Power supply	Solid	Red

All LEDs are On

- Verify the correct connection between the DZK Control Board and the DZK BACnet Interface.

- Contact Technical Support.

NAVIGATION GUIDE

WIRED THERMOSTAT NAVIGATION GUIDE

Idle screen

Date	Relative humidity
Current zone	Operation mode
Ambient temperature	

Press on the screen:

Main screen

Operation mode*	Set point temperature
User mode*	Local ventilation
Airflow control*	Time schedule
Current zone	User settings
Room temperature and	Zone settings
relative humidity	On/Off

*Only available to the Main thermostat

Operation mode
- Cool
- Heat
- Dry
- Auto
- Emergency Heat**

**This mode is only visible when the Auxiliary Heat parameter is configured

User mode
- Comfort
- Eco
- Night time
- Unoccupied
- Vacation
- Stop

Airflow control
- Silence
- Standard
- Power

Current zone
Remote zone control:
- System zone
- All zones

Room temperature and relative humidity

Set point temperature
- Plus
- Minus

Local ventilation
- Activated
- Deactivated

Time schedule

User settings
- Units
- Language
- Brightness
- Date and time
- Information
- Clean screen

Zone settings
- Timer
- Lite settings***

***Only available in a zone controlled by a Wireless Lite Thermostat

On/Off

*Press and hold to access to enter the **Advanced configuration** menu and draw the lock pattern*

Zone
- Linked zones
- Thermostat type
- Menu mode
- Offset
- User mode setpoint
- Weight
- Reset thermostat

System
- System ID
- Temperature SP range
- Global ventilation
- Type of opening
- Radio channel
- Supply temperature
- Away mode settings
- Auxiliary Heat
- Autochange
- BACnet
- Room temperature
- Lite Step
- Remote assistance
- Reset system

WIRELESS THERMOSTAT NAVIGATION GUIDE

Idle screen

Date Zone state	On/Off Airzone

*Press **Airzone**:*

Main screen

Read-only icons: Operation mode User mode Airflow control Current zone Room temperature and relative humidity Set point temperature Local ventilation Timer	**Capacitive icons:** Settings parameters Airzone Control bars On/Off

Operation mode

Cool
Heat
Dry
Auto
Emergency Heat**

**This mode is only visible when the Auxiliary Heat parameter is configured

User mode

Comfort
Eco
Night time
Unoccupied
Vacation
Stop

Airflow control

Silence
Standard
Power

Current zone

Room temperature and relative humidity

Set point temperature

Local ventilation

Activated
Deactivated

Timer

Setting parameters

Zone navigation*
Local ventilation
Timer
Information

*Only available in case of failure Wired Thermostat

Airzone

Control bars

Increase/decrease temperature

On/Off

*Press and hold twice on **Airzone** to enter the advanced configuration menu*

Zone

Linked zones
Menu mode
Offset
User mode setpoint
Weight
Reset thermostat

TROUBLESHOOTING

ERRORS IN WIRED AND WIRELESS THERMOSTATS

| **Error 1 (Wired Thermostat) -** Communication error with the DZK Control Board	
This incident blocks the control of the zone. Check this error is not common to all thermostats. If so, verify the proper operation of the DZK Control Board. To solve this incident check:	
1	DZK Control Board status: Correctly powered.
2	DZK Control Board status: Expansion bus LEDs are operating properly (see section *Zoning box control board auto diagnosis*).
3	Connection: Verify the polarity of the DZK Control Board and thermostat connectors.
4	Wiring: Check that the voltage between the poles (A/ -) and (B/ -) is correct (1.8 Vdc).
5	Restart the zone and re-associate it with the system: Press on Reset to restart the device. If the error persists, press and hold on 🎛 and reset the thermostat.
6	Restart system: If the system is restarted, this error may be displayed in the thermostats at the beginning of the process. This message should disappear after around 30 seconds.
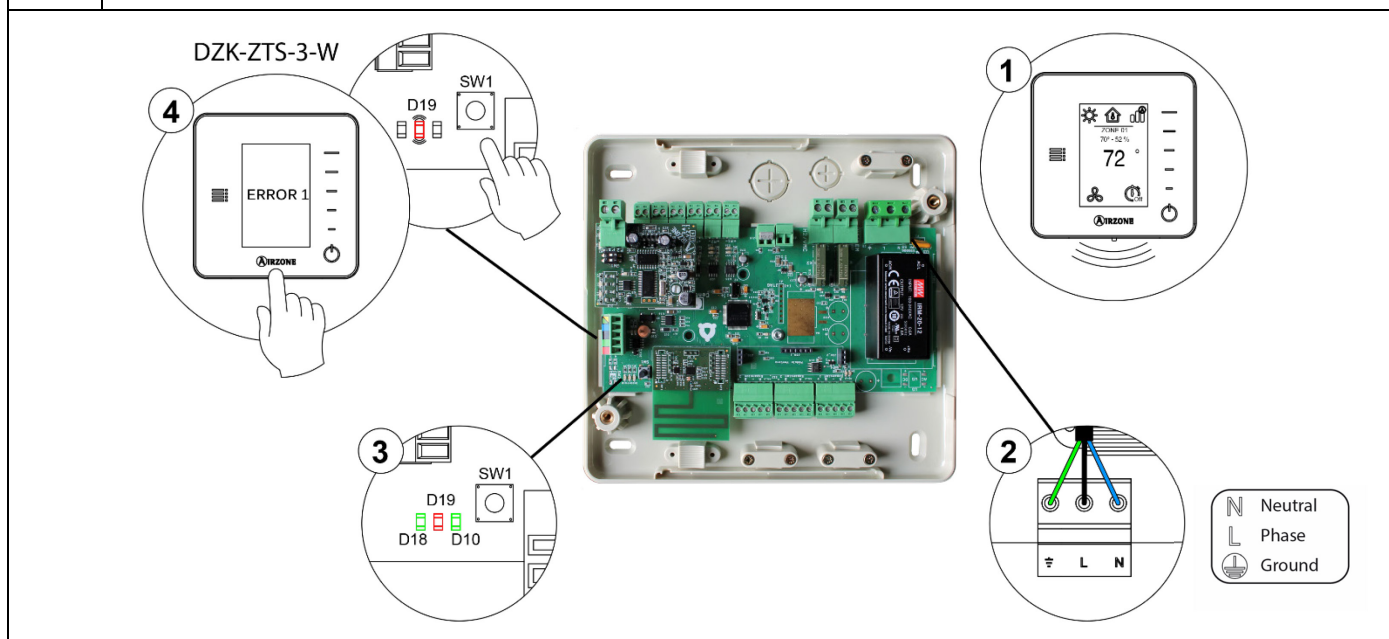
Error 1 (Wireless Thermostat) - Communication error with the DZK Control Board	
This incident blocks the control of the zone. Check this error is not common to all thermostats. If so, verify the proper operation of the DZK Control Board. To solve this incident check:	
1	Thermostat status: Check the signal range of the thermostat. Move the thermostat closer to the DZK Control Board. If that way the communications are reestablished, it means it is necessary to relocate it permanently as it was out of range.
2	DZK Control Board status: Correctly powered.
3	DZK Control Board status: Proper operation of the LED of wireless communication (see section *Zoning box control board auto diagnosis*).

| 4 | Restart the zone and re-associate it with the system. To do this, press and hold on ⬥**IRZONE** and restart the start-up configuration process. |
| | **Keep in mind:** To associate the thermostat, first open the association radio channel pressing the SW1 at the DZK Control Board or from any Wired Thermostat, activating the *Radio channel* parameter inside *Advanced Settings, system parameter*. |
| 5 | Restart system: If the system is restarted, this error may be displayed in the thermostats at the beginning of the process. This message should disappear after around 30 seconds. |

Error 5 - Temperature sensor is open

The zone ceases to measure the room temperature, therefore the zone cannot generate demand. Replace the device.
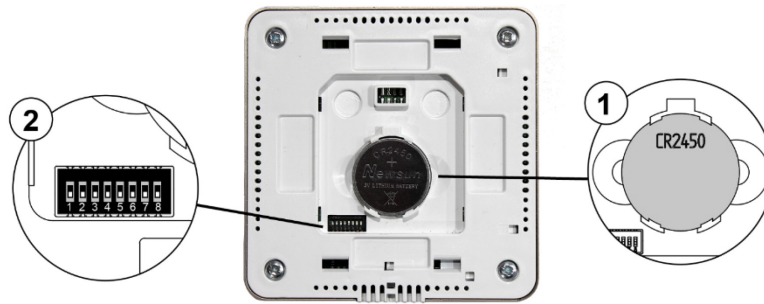
Error 6 - Temperature sensor is short circuited

The zone ceases to measure the room temperature, therefore the zone cannot generate demand. Replace the device.

Error 8 (Wired Thermostat) - Wireless Lite Thermostat not found

The zone ceases to measure the room temperature of an associated Wireless Lite Thermostat, therefore the zone cannot generate demand. Check which Wireless Lite Thermostat is not working properly. To solve this incident check:
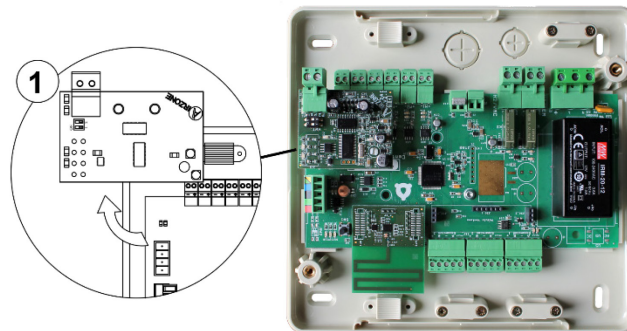
1	Power supply: Check the battery and replace it if necessary.
2	Verify the thermostat microswitch corresponds with the zone associated. If not, activate it using the tab with the value needed.
	Keep in mind: To associate the thermostat, first open the association radio channel pressing the SW1 at the DZK Control Board or from any Wired Thermostat, activating the *Radio channel* parameter inside *Advanced Settings, system parameter*.
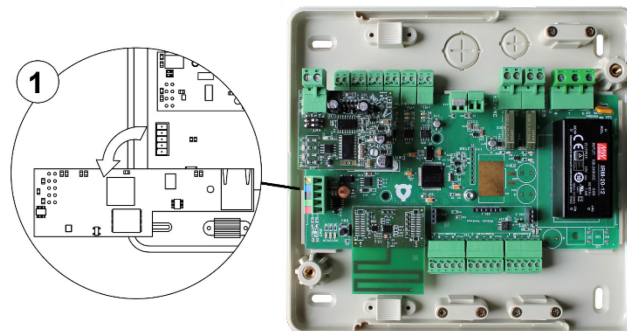
Error 9. Communication error between the DZK Interface Board and the DZK Control Board	
The system loses communication with the AC unit. The system will open all the zones and deactivate the control from the thermostats, only allowing the operation of the unit from the Daikin thermostat. To solve this incident check:	
1	Verify the DZK Interface Board is properly connected to the AC unit port of the DZK Control Board.
2	Check the status of the LEDs of the DZK Interface Board (see section *DZK Interface Board auto diagnose*).

Error 10 - Communication error between the DZK BACnet Interface and the DZK Control Board	
The system loses communication with the DZK BACnet Interface. To solve this incident check:	
1	Verify the DZK BACnet Interface is properly connected to the AC unit port of the DZK Control Board.
2	Check the status of the LEDs of the DZK BACnet Interface (see section *DZK BACnet Interface auto diagnose*).
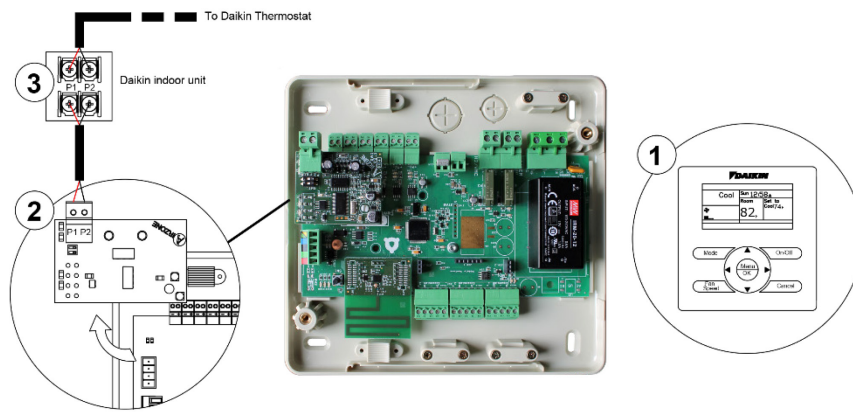
| **Error 11 -** Communication error between the DZK Interface Board and the AC indoor unit	
The system loses communication with the AC unit. The system will open all the zones and deactivate the control from the thermostats, only allowing the operation of the unit from the Daikin thermostat. To solve this incident check:	
1	Verify if the AC unit is powered. To do this, check the thermostat of the AC unit is ON.
2	Verify the AC unit operates properly by itself. To do this, disconnect the AC unit DZK system and select the unit from the thermostat from the AC unit.
3	Connection: Check the polarity and connection of the DZK Interface Board connectors and the indoor unit.
4	Check the status of the LEDs of the DZK Interface Board (see section *DZK Interface Board auto diagnose*).
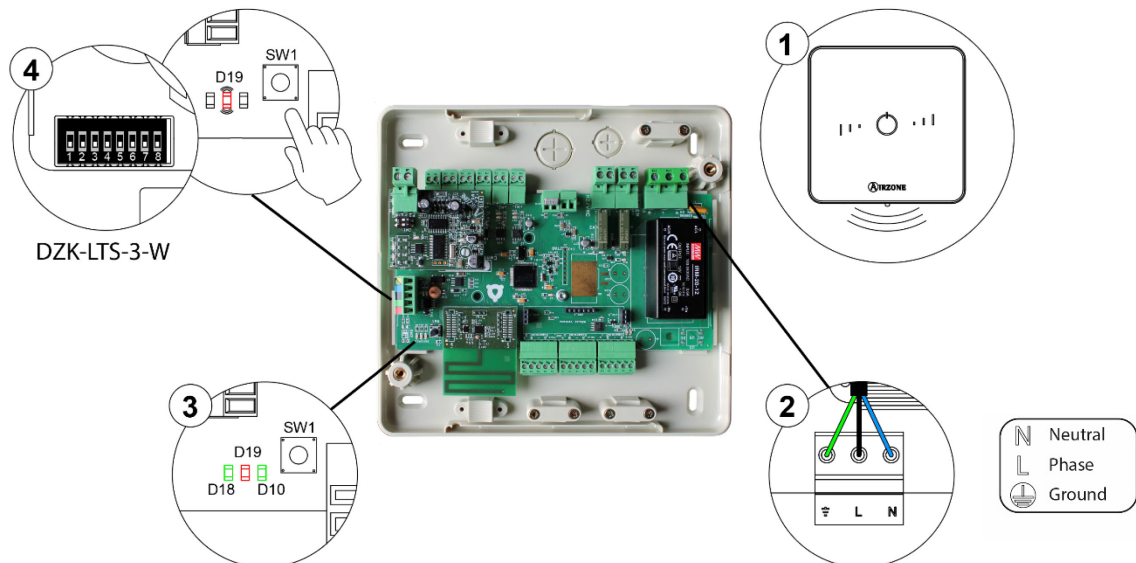
AC unit error
Check the type of error displayed on the Daikin Navigation Remote Controller and follow the instructions provided by the manufacturer.

ERRORS IN WIRELESS LITE THERMOSTAT

Status LED blinking red quickly - Communication error with the Zoning box Main controller	
This incident blocks the control of the zone. Check that "Error 1" is not displayed on all thermostats. If so, verify the proper operation of the main board. To solve this incident check:	
1	Thermostat status: Check the signal range of the thermostat. Move the thermostat closer to the Main control board. If communication is reestablished, it means that the thermostat was out of range and must be permanently relocated within range.
2	DZK Control Board status: Correctly powered.
3	DZK Control Board status: Proper operation of the LED of wireless communication.

4	Restart the zone and re-associate it with the system. To do this, pull down all the microswitchs, reinsert the thermostat in its base and press on the thermostat. The LED ○ will flash green twice when the reset process is completed. **Keep in mind:** To associate the thermostat, first open the association radio channel pressing the SW1 at the DZK Control Board or from any Wired Thermostat, activating the *Radio channel* parameter inside *Advanced Settings, system parameter.*
5	Restart system: If the system is restarted, this error may be displayed in the thermostats at the beginning of the process. This message should disappear after around 30 seconds.

MORE SYSTEM INCIDENCES

Wired Thermostat does not light up	
1	Verify the cable connection between the Wired thermostat and the DZK Control Board (see section *Wired Thermostat, Wiring*). Never use solid wire for this connection.
2	Verify that voltage between the poles (A/ -) and (B/ -) is correct (1.8 Vdc).
3	The zone controlled from the Wired Thermostat cannot be remotely accessed. After 45 minutes, its damper(s) will open and remain open until the problem is fixed.
4	From any other zone thermostat, accessing the remote zones by selecting All zones will allow you to change the Operation Mode until the Wired Thermostat returns to normal operation. See the User manual.
5	If the thermostat is replaced, only perform the initial configuration (see section *Initial configuration*). All other parameters and settings will be recovered automatically from the Control Board.
Wireless Thermostat does not light up	
1	Check the battery and replace it if necessary.

2	The zone controlled from the Wireless Thermostat cannot be remotely accessed. After 45 minutes, its damper(s) will open and remain open until the problem is fixed.
3	If the thermostat is replaced, only perform the initial configuration (see section *Initial configuration*). All other parameters and settings will be recovered automatically from the DZK Control Board.

The AC unit does not start even if everything is OK. After setting any mode, the Wired Thermostat shows User mode STOP

1	Verify that there is a jumper between the contacts of the Alarm connector (see *section DZK Zoning box, Connection*).

When accessing Remote zones, one of them is not listed

1	Verify that the thermostat of the zone missing is working correctly. To this end, activate/deactivate the zone and check that the damper opens/closes correctly.
2	The zones controlled for Wireless Thermostats or Wireless Lite Thermostats. After a power supply failure, it can take up to 4 minutes to have all the zones remotely accessible.

On activating the zone, no air is supplied to its grille(s) if the fan coil is on
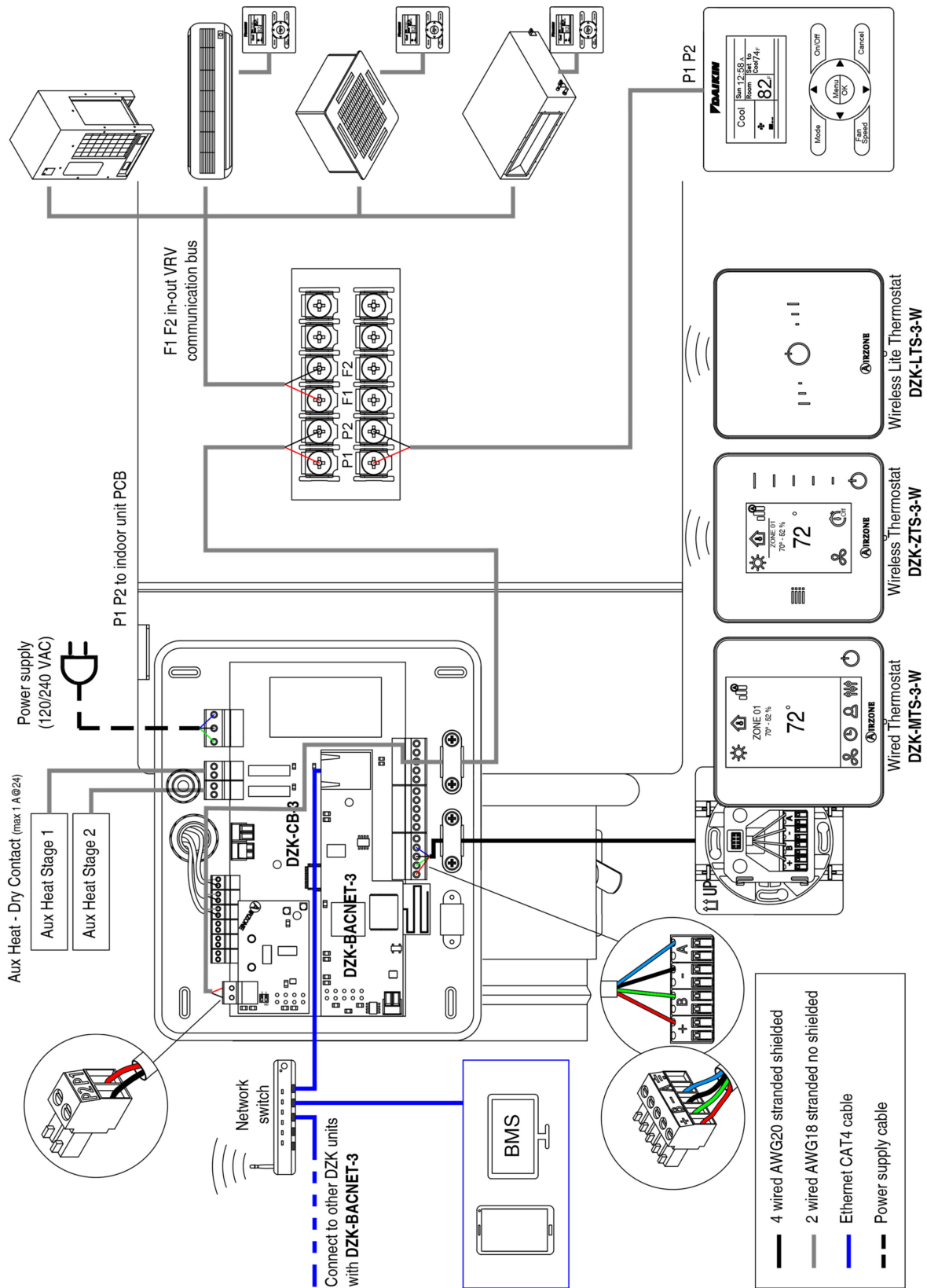
1	Verify that the damper assigned to the thermostat is not blocked by the insulation stopper (see *section DZK Zoning box, Assembly*).
2	Verify that the motor is electrically connected properly. There is a connection at about 4 inches from the actuator (see *section DZK Zoning box, Connection*).
3	Verify in the actuator connection indicated above, that when demand is created from the thermostat, there are 12VDC between the contacts indicated above. This voltage will be present for about 5 seconds (see *section DZK Zoning box, Connection*).
4	Verify that the zone assigned to the thermostat is the correct one. If it is not the correct damper, proceed to reset the incorrectly assigned thermostats and reassign to the correct zones. To reset the thermostats, follow these steps: - Wired Thermostat: *Advanced configuration menu > Wired Thermostat > Zone parameters*. - Wireless Thermostat: *Advanced configuration menu > Wireless Thermosta*t. - Wireless Lite Thermostat: *Wireless Lite Thermostat reset*. In order to re-configure the thermostats, see section *Initial configuration*.

If one or more zones do not control the temperature

1	Verify that the User mode is not Stop.
2	Verify room and set point temperatures in the non-working zone thermostat to see if it is creating demand.
3	Verify that the damper actuator is connected properly at about 4 inches from the actuator (see *section DZK Zoning box, Connection*).
4	Verify that the LEDs D5 and D6 located in the DZK Interface Board mounted over the Control Board are blinking (see section *DZK Interface Board auto diagnosis*). If D5 and D6 do not display normal behavior (constant blinking), verify the wiring between the DZK Interface Board and the Indoor Unit (see section *DZK Interface Board, Connection and configuration*).

5	Verify that no ERROR number is shown on the screen (see section DZK *Exception codes, Errors* and section *Errors in Wired and Wireless Thermostats*).

The damper-modulating functionality does not work as expected	
1	Verify that the damper REG level is located as configured in the *Type of opening* parameter (see section *Damper setting* and section *System parameters*).

In Heat mode, when trying to change to Cool mode, the thermostat returns to Heat mode	
1	The operation mode in the installation is controlled by the Daikin master indoor unit. The operation mode can only be changed from the DZK Main Wired thermostat connected to Daikin master indoor unit.

In Heat Pump installations, the DZK zoning box connected to a slave indoor unit, changes to Stop mode	
1	This is caused by the incompatibility between the subordinate unit mode and the master unit. Check the master unit is not operating in Fan mode (see User manual).

Defrost mode on the indoor unit don't work properly	
1	If the Daikin indoor unit has start/stop cycles in periods shorter than 30 minutes, set the dip switch #2 in the DZK Interface Board to ON.

The DZK system does not detect the DZK BACnet Interface	
1	Verify that the LED D9 is blinking and LEDs D7 and D8 are alternately blinking (see section *DZK BACnet Interface auto diagnosis*). If the above is not displayed, check the correct connection of the gateway on the DZK Control Board, verifying the 4-pin connector.

The Interface for use in BACnet cannot be connected	
1	Verify that LEDs situated on the Ethernet connector (see section *DZK BACnet Interface auto diagnosis*) are blinking, and those in the Ethernet connector are active. If the above is not true, check that the Ethernet cable is properly connected

The indoor unit starts with the system set on off (off or user mode on Stop)	
1	Verify that the Setback field setting on the Daikin indoor unit is disabled (see section *DZK Interface Board, Connection and configuration*).

WIRING DIAGRAM

DAIKIN ZONING KIT

Phone: (855) 770-5678

http://www.daikinac.com

IMDZKE200

RECOGNIZED
COMPONENT

Intertek
400886