Daikin One+ for P1-P2 Installation & Commissioning

Technical Training Module XX-XX





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Agenda

Daikin One+

System Configurations

Installing Daikin One+

Commissioning Daikin One+

Dealer Navigation

Homeowner Navigation

- Premium control that provides optimal comfort.
- Easy to use, energy efficient, reliable, and ensures that the system is set up properly.
- Designed to regulate and communicate with HVAC equipment.
- The thermostat has a physical dial on the right used for manual setpoints adjustments.
- Pressing the center of the dial at any time during normal mode acts as a home button, displaying the primary screen.
- The high-resolution touch screen on the left supports tactile-based interactions.
- Navigating to each screen is done by tapping an icon.
- The user will be able to control the indoor unit remotely through The Daikin ONE Home App.







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Daikin One+ for P1P2 Indoor Units

- Offers communication to VRV, SkyAir and Single- and Multi-zone indoor units through the P1P2 communication bus.
 - Backward compatible with older P1P2 indoor units



Indoor Unit	Model Number
VRV and VRV Life (P1P2)	CXTQ, FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ
SkyAir (P1P2)	FAQ, FBQ, FTQ, FCQ, FHQ
Single-Zone and Multi-Zone (P1P2)	FDMQ, FFQ



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VRV System

Communication

- VRV outdoor units maintain communication with indoor units via F1-F2 loop
- The outdoor unit PCB assigns each indoor unit an individual address automatically
 - Logically, this address is separate from the group address
- The outdoor unit PCB monitors indoor units' PCB status
 - Calls for cooling and heating (THERMO ON), etc.
- The outdoor unit PCB supervises indoor units for specific operations and status, etc.
 - System level malfunctions
 - Oil recovery operation mode
 - Defrost operation mode





VRV System

Heat Pump

- Only one indoor unit in the system can be the mode master
- The mode master determines the outdoor unit operation mode.
- The operational modes are changed only by the mode master (Auto, cool, heat and Off)
- Other indoor units follow the master's mode



Heat Recovery

- Only one indoor unit connected to a BS-Box can be the mode master
- The operational modes are changed only by the mode master (Auto, cool, heat and Off)
- The mode master determines the BS-Box operation mode
- Other indoor units connected to the same BS-box will follow the master's mode



Mode Master/Master Controlled

- The mode master indoor unit is selectable during the commissioning process.
- Master controlled will follow the mode master:

Mode master IDU	Available modes on the ONE+ for the master controlled IDU
Mode Master is Auto-cool	Cool, Off, Emergency Heat*
Mode Master is Auto-heat	Heat, Off, Emergency Heat*
Mode Master is Cool	Cool, Off, Emergency Heat*
Mode Master is Heat	Heat, Off, Emergency Heat*

*The Emergency heat mode will not be displayed on the ONE+ operation mode until the Aux heat is set.



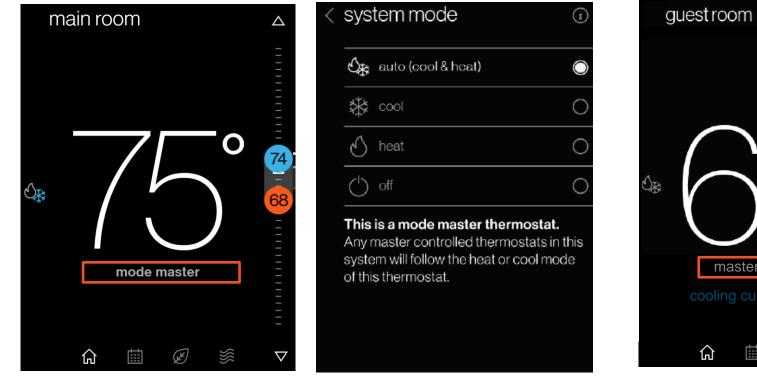
Notes:

- The master controlled indoor unit will not be able to change the system operation mode, the ONE+ will display what is the allowed modes.
- If the mode master is on cooling mode and the "master controlled" is connected to aux heater, the master controlled can run emergency heat mode while the master in cool mode.



Mode Master/Master Controlled - Display

 The mode of the master controlled indoor unit will follow the mode of the changeover Master indoor unit.



ONE+ is connected to a mode master IDU



< sys	tem mode	<i>(i)</i>
Ú¥:	master controlled	\bigcirc
\bigcirc	off	\bigcirc
Only	use auxiliary heating elements:	
<u>Gi</u>	emergency heat	\bigcirc
Whe therr	ter controlled thermostat n master controlled is selected th nostat follows the heat or cool e of the mode master thermostat	

ONE + is connected to a master controlled IDU



Daikin One+ for P1P2 Indoor Units

The ONE+ can connect to 16 indoor units (P1P2 daisy Chain)

P1-P2 P1-P2 Daisy Chained P1-P2 line - 72

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F1-F2



Compatibility - Local controller (main/sub)

- The ONE+ doesn't support main and sub remote controller configuration.
- The Daikin One+ cannot be used together with other wireless or wired remote controllers.
 - For retrofit project, please remove any other remote controller(s) before installation.

Compatibility – Central controller

- The Central controllers are compatible for the purpose of monitoring only.
- If a central controller (iTM, BACnet, Modbus, LON interfaces or Service Checker) is connected to the VRV system, commands sent by the central controller to the IDU will be overwritten by the One+









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Packaging

- Welcome documentation.
 - Includes quick reference cards.
- Daikin One+ smart thermostat.
- Translation adapter with cover, mounting plate and power cable.
- Double-sided adhesive tape.
- Mounting screws.
 - One set for thermostat.
 - One set for translation adapter.
- Thermostat terminal plate.
- S21 cable Don't use for P1P2 IDU
- Optional trim plate.

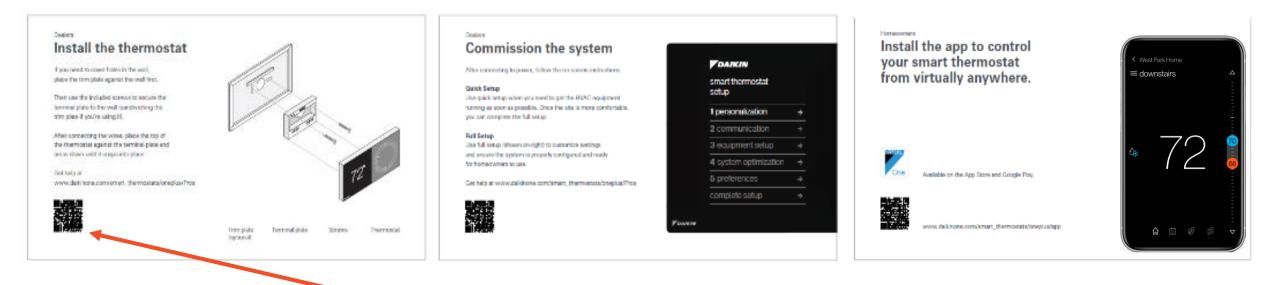






Quick Reference Card

 Quick reference cards are packaged with the thermostat to help answer questions during the installation and commissioning.



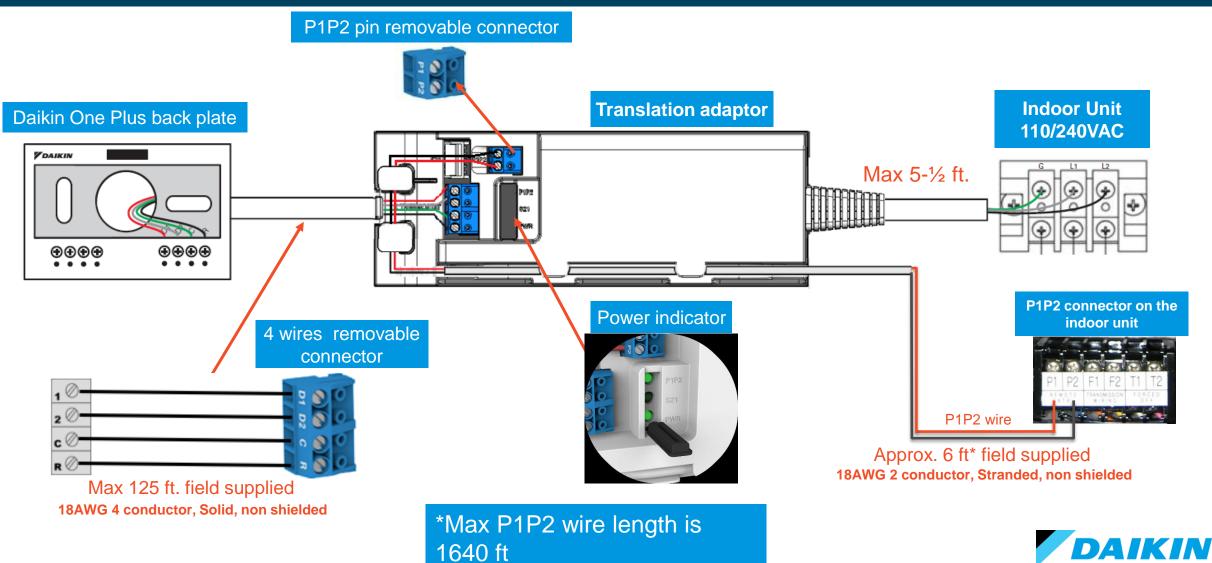
Scanning the bar code on the bottom left corner will link you to a website related to the title of the card. <u>https://daikinone.com/smart_thermostats/oneplus/pros/</u>





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Wiring thermostat to a translation adaptor – P1P2



Installing Daikin One+

- Check for proper voltage before and after wiring is installed.
 - Typical 0.6VDC between Data 1 and 2.
 - 24VDC between R and C.
 - Refer to system I/O manual for proper voltage.
- Note:
- If wired incorrectly, you will receive an error.
 - If power wires are reversed the PWR LED will flash green.





- 2 Data Line 2
- 24 VDC common
- **R** 24 VDC power



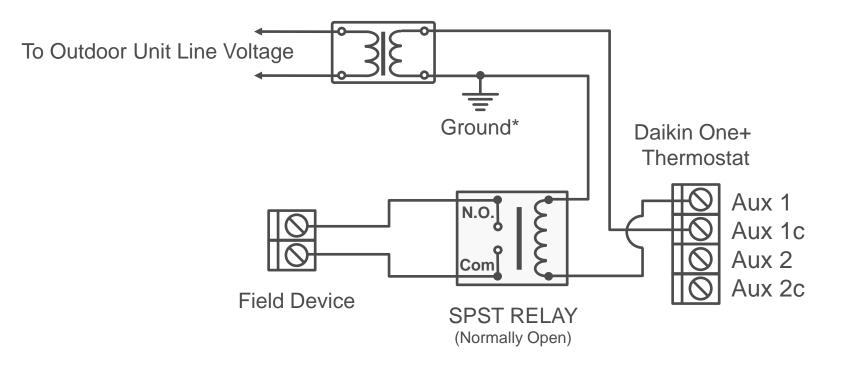
Aux1 to Aux1C and Aux2 to Aux2C Connections are Dry contacts (contacts are rated for Max 24VAC)





Aux wiring

- The thermostats Aux outputs are dry contacts that close the connection to turn on the Aux equipment.
- A 24V AC control signal must be routed through one of the aux contacts of the thermostat.



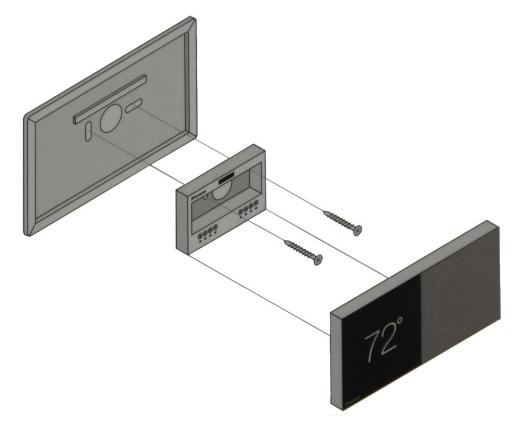
*The terminals are selected in the Daikin One+ installer wizard.

Note: It is recommended to use a minimum of 18-gauge wire. Maximum operating length of wire is 125 ft.



Installing Daikin One+

- Mount the thermostat to be
 - Leveled.
 - Approximately 5' from the floor.
 - On an interior wall using the included screws.





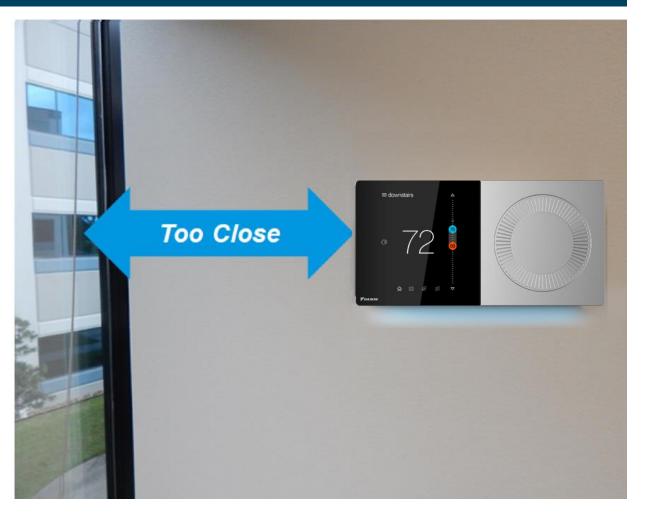


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DO NOT Install The Thermostat Where It Can Be Affected By:

- Drafts or dead spots behind doors and in corners.
- Hot or cold air from ducts or ceiling fans.
- Radiant heat from the sun or appliances.
- Concealed pipes and chimneys.
- Unheated (uncooled) areas such as an outside wall.



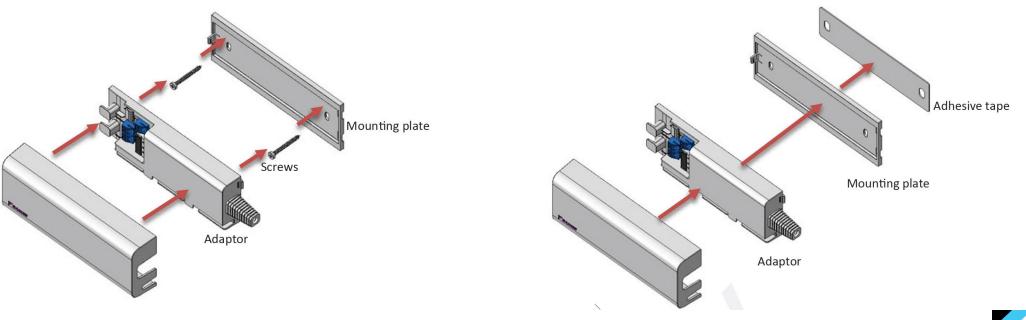


Installing Translation Adaptor

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Mounting the translation adaptor.

- Mount using screws or adhesive tape.
 - Never use screws to mount to an indoor unit.
 - If using adhesive tape, you can mount to the surface of the indoor unit.
 - Clean the surface prior to mounting.
 - Apply pressure for a minimum of 20 seconds to the adaptor for adhesion to take place.



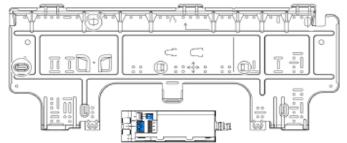


Installing Translation Adaptor

Wall mounted indoor unit

- Mount Translation adaptor inside piping chase to conceal it, or on the outside of the indoor unit.
- For the wall-mounted unit, the front cover is optional if the adaptor is mounted inside the piping chase.

Translation adaptor Dimensions: 2.7" x 7.3" x 1.3" Operating Temperature: -40°F to 140°F Operating Humidity: 20 to 95%RH (non-condensing)





Other Indoor units

 Translation adaptor can be mounted on the side and top of the indoor unit, or above the ceiling using supplied double-sided adhesive tape.













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Commissioning Daikin One+

Dealer Navigation

Homeowner Navigation

Commissioning Daikin One+

- Start-up screen is displayed upon powering the thermostat.
- The welcome screen displays preferences to choose from.
- Select (P1P2) before moving to the setup screen, the Warning message will show up

to 5 min after clicking

continue.

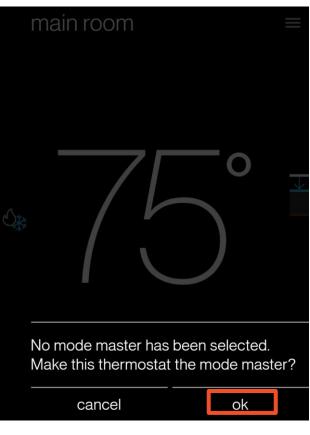
Click "continue" to begin setup.

V DAIKIN	< VDAIKIN	< V DAIKIN	< VDAIKIN	< V DAIKIN	< VDAIKIN
welcome	equipment type	equipment type	equipment type	equipment type	setup
Choose the language you would like to use to set up your Daikin	This setting will affect the equipment detected by your thermostat.	This setting will affect the equipment detected by your thermostat.	This setting will affect the equipment detected by your thermostat.	This setting will affect the equipment detected by your thermostat.	The Daikin smart thermostat saves each step as you proceed. You can always go back and change your settings.
thermostat.	unitary	unitary	unitary	unitary	с, у
english O	single/multi-split (S21)	single/multi-split (S21)	single/multi-split (S21)	single/multi-split (S21)	
español O	VRV,SkyAir,single/multi-split (P1/P2)	VRV,SkyAir,single/multi-split (P1/P2)	VRV,SkyAir,single/multi-split (P1/P2)	Mode master controls the system mode	
français O		Are you sure you want to change		for all thermostats connected to the outdoor unit.	begin setup >
use large font		equipment type? Some system data will be permanently changed. This may take		Do you want to set this thermostat as	setup options
continue >	continue >	several minutes.	continue >	the mode master?	learn more



Mode Master/Master controlled

If the mode master was not selected on the pervious step, The ONE+ will keep requesting to set the changeover mode master indoor unit.



This message will keep showing up until the master selected.

Note: Releasing the changeover mode master from the dealer navigation menu.



Smart thermostat setup

- Starts the five steps set-up process:
 - 1. Communication.
 - 2. Personalization.
 - 3. Equipment Set-up.
 - 4. System Optimization.
 - 5. Preferences.
- Note: All steps must be completed and reviewed before completing set-up to ensure the system is configured properly and ready for the homeowner to use.

For detailed menu settings https://daikinone.com/smart_thermostats/oneplus/pros/







Step 1 - Communication

- Configures Communication Networks.
- With Wi-Fi configured, the system can check the software version and update software to the latest version automatically.



- Select home Wi-Fi to search for networks.
- Wireless router must be password protected.
 - Compatible with 2.4Ghz & 5Ghz routers
 - Equipment type displays the equipment selected on start up.

communica

equipment type

previous ster

home wifi

- If there is no Wi-Fi connection:
 - The ONE+ will not receive Over The Air (OTA) updates
 - The AUX heat will not interlock with outdoor temp as it use weather service
 - Date and Time need to be manually configured.

atior	1	< communica	tion
	S21 >	equipment type	P1/P:
	disconnected >	home wifi	disconnected
	disconr	ected >	



Step 2 - Personalization

- Tapping the personalization tab allows you to edit default information.
- Personalization displays:
 - Language.
 - English Spanish French
 - Large font selection.
 - Date & Time.
 - If Wi-Fi is connected, date & time sets automatically.
 - Thermostat Name.
 - Degree Units.

Note: A green check mark appears next to items reviewed from the set-up menu.

DAIKIN		<	personaliza	ation	
smart thermostat setup			language		english >
			use large font		
1 communication	\rightarrow		date & time	9/22/20	020, 6:22 PM >
2 personalization	\rightarrow				
3 equipment setup	\rightarrow		device name degree units		main room >
4 system optimization	\rightarrow				
5 preferences	\rightarrow				
complete setup	\rightarrow				
			previous ste	eb	next step



Step 3 - Equipment Set-up

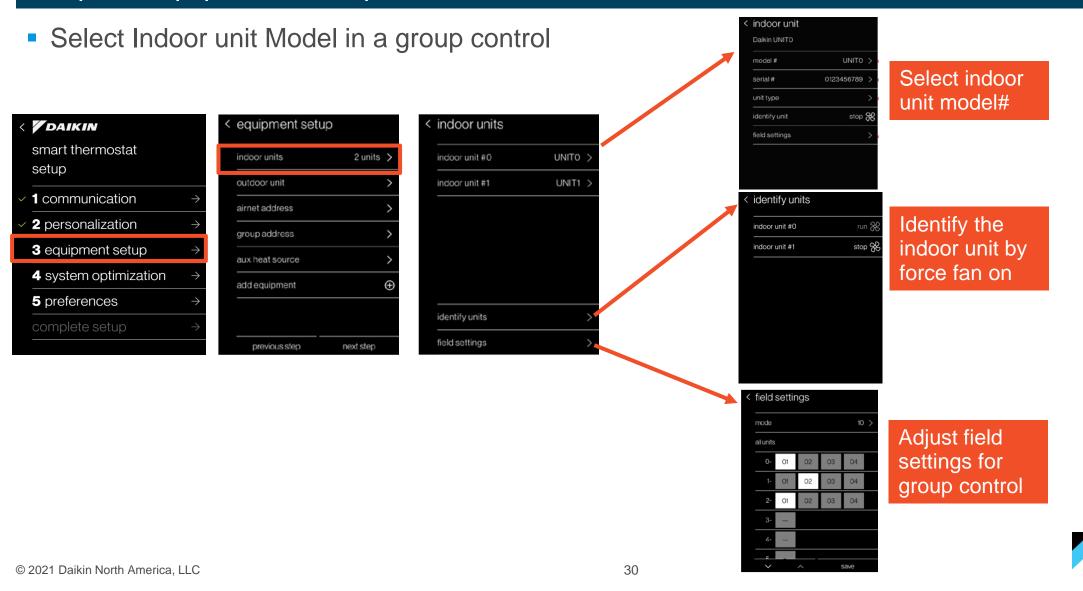
 Select Indoor unit Model

setup 1 communication 2 personalization 3 equipment setup 4 system optimization 5 preferences complete setup model # CXTQ FXAQ	VDAIKIN smart thermostat		Daikin UNITO
1 communication → 2 personalization → 3 equipment setup → 4 system optimization → 5 preferences → → aimet address aimet address → standard filter → y ∧ previous step next step v ∧ Prodel # CXTQ48TASBLU CXT048TASBLU O CXT048TASBLU O CXT048TASBLU O PXEQ >	setup	→ indoor unit >	
2 personalization → 3 equipment setup → 4 system optimization → 5 preferences → complete setup → model # CXTQ → FXAQ →	1 communication \rightarrow		
3 equipment setup → 4 system optimization → 5 preferences → → → standard filter → × ∧ previous step next step model # CXTQ CXTQ ∧ FXAQ ∧ FXAQ ∧ FXEQ ∧ FXEQ ∧ FXFQ ∧ FXHQ ∧ FXHQ ∧		→ outdoor unit >	
4 system optimization → 5 preferences → ≤ complete setup → previous step next step CXTQ FXAQ CXTQ36TASBLU CXTQ48TASBLU CXTQ48TASBLU CXTQ48TASBLU CXTQ48TASBLU CXTQ48TASBLU CXTQ48TASBLU CXTQ60TASBLU CXTQ60TASBLU FXAQ FXAQ CXTQ60TASBLU CXTQ60TASBLU GXTQ60TASBLU FXHQ XHQ		aux heat source >	
5 preferences - - -		group address >	
complete setup image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter image: standard filter		airnet address	field settings
model # < CXTQ			
CXTQ > FXAQ > FXDQ > FXEQ > FXFQ > FXFQ > FXHQ > FXHQ > FXEQ > FXFQ > FXHQ > FXHQ >			
CXTQ CXTQ24TASBLU 4-ton Cased "A" Coil for VRV FXAQ CXTQ36TASBLU model # CXTQ48TASBLU > FXDQ CXTQ48TASBLU serial # > FXEQ CXTQ60TASBLU unit type concealed ducted unit FXFQ stop % FXHQ	model #	< CXTQ	< indoor unit #0
FXDQ > CXTQ48TASBLU • <td>схта ></td> <td>CXTQ24TASBLU</td> <td></td>	схта >	CXTQ24TASBLU	
FXEQ > FXFQ > FXFQ > FXHQ > FXHQ >	FXAQ >	CXTQ36TASBLU	model # CXTQ48TASBLU >
FXFQ > FXHQ > FXHQ >	FXDQ >	CXTQ48TASBLU O	serial # >
FXHQ > field settings	FXEQ >	CXTQ60TASBLU O	unit type concealed ducted unit
FXHQ > field settings >	FXFQ >		identify unit stop &
	FXHQ >		
	FXLQ >		

Note: the indoor unit type is automatically identified



Step 3 - Equipment Set-up



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Step 3 - Equipment Set-up

Load residential field settings by clicking "next step" or click on "equipment setup"

< equipment setup						
indoor units 2 units > outdoor unit >	<	equipment s	setup		< equipment se	etup
airnet address		indoor unit	CXTQ48TASBL		indoor unit	CXTQ48TASBLU
aux heat source >		load residential fie		>	load residential field	
	*	- outdoor unit		>	outdoor unit	RXSQ48TAVJU
previous step next step		aux heat source			standard filter	
smart thermostat setup		group address		>	add equipment	
ommunication →		airnet address		>	Are you sure you w residential field set	
2 personalization \rightarrow 3 equipment setup \rightarrow		standard filter		<u>></u>	overwrite some exi indoor units.	
4 system optimization \rightarrow		previous step	next step	D	cancel	load
5 preferences → complete setup →						



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Residential field settings

Step 3 - Equipment Set-up

 When the "load residential field settings" action is selected in the UI, the UI writes all residential field setting values (shown in red in the table below) to the P1P2 software using a group write (mode 10).

Mode	First Code	Description	Second Code No.						
No.	No.	Description	1	2	3	4			
	2	Priority of thermistor sensors for space temperature control	The return air thermistor is primary and the remote controller thermistor Is secondary	Only the return air thermistor will be utilized	Only the remote controller thermistor will be utilized				
10(20)	3	Display time to clean air filter calculation (Set when filter sign is not to be displayed)	Display	No Display					
10(20)	5	Room temperature value reported to multizone controllers	Return air thermistor	Thermistor designated by 10-2 above	-				
	6	The remote controller thermistor is used in Remote Controller Group	No	Yes					
11(21)	8	Compensation of temperature around human body	Floor sensor does not work	Higher priority on the return air temperature	Standard	Higher priority on the floor temperature			
	2	Thermo-On/Off deadband (Note 4)	2F (1C)	1F (0.5C)					
12(22)	3	Fan Speed in Heating Thermo- Off	Ш	User set	Off				
	6	Fan Speed in Cooling Thermo- Off	Ц	User set	Off				
14(24)	5	Dry Mode(FXTQ_TAVJU)	Set Point = Room Temperature	Set Point became same as cooling mode set point					



Change individual field settings

Field settings

The indoor unit field setting can also be configured by selecting the indoor unit → Field Settings → select mode → select unit number → change the field settings.



Note: Refer to the field settings table for explanation of the field settings



Field Setting Availability by Indoor Unit Type

Availability of Indoor Unit Field Settings (Control Related) - As of 05/09/2018

- Indoor unit models shaded in grey are obsolete
- Factory default value is indicated in parenthesis.
- Field settings highlighted in orange may not be available in units manufactured before 9/1/2009.
- Field settings highlighted in purple may not be available in units manufactured before 1/1/2007.
- Field settings highlighted in blue may not be available in units manufactured before 1/1/2013.
- Field settings highlighted in green may not be available in units manufactured before 1/1/2015.

Mode No.	10 12											
First Code No.		2		5	6	8	0	1	2 ¹	3		6
Second Code No.	01	02	03	01/02	01/02	01/02	01/03/04	01/02	01/02	01/02	03	01/02/03
FXSQ_MVJU	Х	Х	X ³	X ³	Х	n/a	Х	Х	X (02)	Х	X ³	X ²
FXSQ_TAVJU	Х	Х	Х	Х	Х	Х	Х	Х	X (01)	Х	Х	Х
FXMQ_M∀JU	Х	Х	X ²	X ²	Х	n/a	Х	Х	X (02)	Х	X ²	X ²
FXMQ72/96MVJU FXMQ_PAVJU FXMQ_PBVJU FBQ_PVJU	x	х	x	x	x	n/a	x	x	X (02)	×	x	×
FXDQ_MVJU	Х	Х	Х	Х	Х	n/a	Х	Х	Х	Х	Х	X 4
FXTQ_PVJU FTQ_PAVJU FTQ_PBVJU FXTQ_PAVJU FXTQ_TAVJU	n/a	х	x	×	x	n/a	х	x	X (02)	х	х	х
BEQ_MVJLR1(FXOQ)	Х	Х	×	Х	х	n/a	х	Х	X (02)	Х	Х	X ²
FXLQ_MVJU	Х	Х	X ²	X ²	~	n/o	×	×	X (02)	×	X ²	X ²
FXLQ_MVJU9	Х	Х	Х	Х	×	n/a	х	×	X (02)	Х	Х	Х
FXNQ_MVJU	Х	Х	X ²	X ²	×		×	X	N (00)	V	X ²	X ²
FXNQ_MVJU9	Х	Х	Х	Х	×	n/a	х	×	X (02)	×	Х	Х
FXAQ_MVJU FAQ_MVJU	х	х	X ²	X ²	х	n/a	n/a	х	X (01)	х	X ²	n/a
FAQ_PVJU	Х	Х	X ²	X ²	Х	n/a	n/a	Х	X(01)	Х	X ²	X ⁵
FXAQ_PVJU	Х	Х	Х	Х	Х	n/a	n/a	Х	X(01)	Х	Х	X ⁵
FXZQ_M7VJU		Х	X ²	X ²							X ²	X ²
FXZQ MVJU9	×	Х	Х	Х	×	n/a	х	×	X (01)	х	Х	Х
FXZQ_TAVJU	Х	Х	Х	Х	Х	Х	Х	Х	X(01)	Х	Х	Х
FXFQ_MVJU FCQ_MVJU FCQ_PVJU	x	х	n/a	n/a	n/a	n/a	x	х	X (01)	х	n/a	n/a
FXFQ_PVJU FCQ_PAVJU FXFQ_TVJU	x	х	×	х	х	x	x	x	X (01)	х	×	×
FXHQ_MVJU FHQ_PVJU FHQ_MVJU	X ⁵	х	X ⁵	X ⁵	X ⁵	n/a	х	×	X (01)	х	X ⁵	X ⁵
FXUQ_PVJU	Х	Х	Х	Х	Х	Х	n/a	Х	X(01)	Х	Х	Х
FXEQ_PVJU	Х	Х	Х	Х	Х	n/a	Х	Х	X(01)	Х	Х	Х
CXTQ_ TASBLU	Х	Х	X	Х	Х	Х	Х	Х	X(01)	Х	X	X



Field Settings Indoor Units

Mode	First		Second Code No. (Note 2) (Cells in bold are factory default setting					
No. (Note 1)	Code No. Description		01	02	03	04		
10(20)	2	Priority of thermistor sensors for space temperature control	The return air thermistor is primary and the remote controller thermistor Is secondary.	Only the return air thermistor will be utilized.	Only the remote controller thermistor will be utilized.			
	5	Room temperature value reported to multizone controllers	Return air thermistor	Thermistor designated by 10-2 above (Note 3)				
	6	The remote controller thermistor is used in Remote Controller Group	No	Yes				
	0	KRP1B71 X1-X2 status output	Indoor unit Thermo- On/Off status		Indoor unit Operation On/Off status	Indoor unit Alarm status		
12(22)	1	Indoor unit T1-T2 input	Forced Off Closed Contact-Indoor unit is forced off and Central Control icon is displayed. Unit cannot be turned on manually. Operation can be overridden by central control. Open Contact-Indoor unit can resume normal operation. Unit must be turned on manually or by central control.	On/Off Closed Contact-Indoor unit is turned on. Open Contact-Indoor unit is turned off. Unit responds to last command, i.e., unit can be turned on manually or by central control after circuit has opened. Operation is prohibited when remote controller On/Off control is restricted by a multizone controller.	External Protection Device Closed contact-Unit shall resume normal operation. Open contact-Unit shall shut down and generate an A0 error.			
	2	Thermo-On/Off deadband (Note 4)	2F (1C)	1F (0.5C)				
	3	Fan Speed in Heating Thermo-Off	LL	User set	Off			
	6	Fan Speed in Cooling Thermo-Off	LL	User set	Off			
	8	Return air sensor offset	2C	None (for remote sensor)				

- 1. Field settings are normally applied to the entire remote control group, however if individual indoor units in the remote control group require specific settings or for confirmation that settings have been established, utilize the mode number in parenthesis.
- 2. Any features not supported by the installed indoor unit will not be displayed.
- 3. When mode 10-2-01 is selected, only the return air temperature value is reported to the multi-zone controller.
- 4. The actual default dead band value will depend upon the indoor unit model.



Step 3 - Equipment Set-up

Select outdoor unit

	→ model #	RXSQ_TAVJU >	RXSQ24TAVJU
< equipment setup	serial #	RZQ_TAVJU >	RXSQ36TAVJU
indoor unit CXTQ48TASBLU >		RZR_TAVJU >	RXSQ48TAVJU
load residential field settings		RXL_QMVJU >	RXSQ60TAVJU
→ outdoor unit		RX_UMVJU >	
		RX_RMVJU >	
aux heat source >		MXS >	
group address			
airnet address >			
standard filter	< nodel #	< outdoor unit	< outdoor unit
	RXSQ_TAVJU RXSQ48TAVJU >	Daikin RXSQ48TAVJU 4.0 T Residential VRV	Daikin RXSQ48TAVJU 4.0 T Residential VRV
previous step next step	RZQ_TAVJU >	model # RXSQ48TAVJU >	model # RXSQ48TAVJU >
	RZR_TAVJU >	serial #	serial # ser987654321 >
Note: If the outdoor unit is not shown in the list, select the	RXL_QMVJU >		
down arrow then "others"	RX_UMVJU >		
menu, then manually type the	RX_RMVJU >		
outdoor unit model.	MXS >		

< outdoor unit

< model #

< RXSQ_TAVJU

AIR INTELLIGENCE

Step 3 - Equipment Set-up

 The AUX heat can be setup as primary or the secondary source of heat. Once it setup, the Emergency heat mode will also be added to the operational mode menu.

Setup "aux heat source"

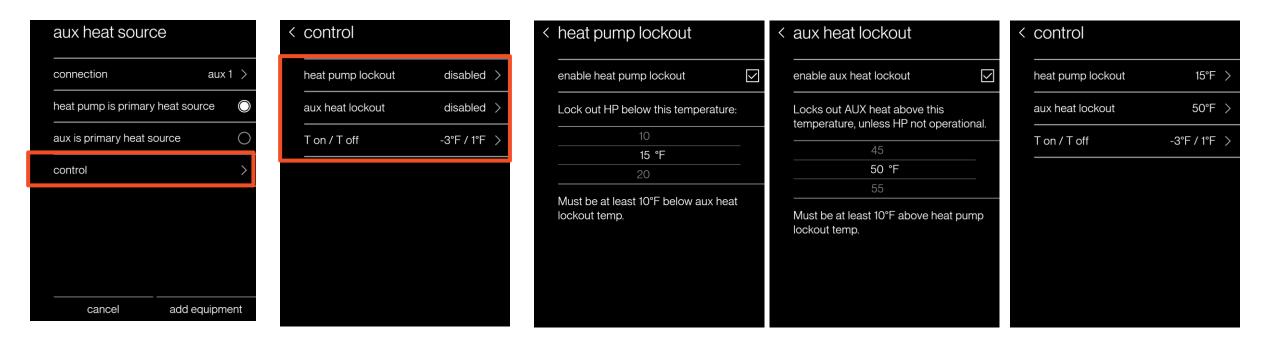
- Click on Add equipment / aux heat source
- Select Connection: select aux1 or aux 2 based on Wiring connection to AUX heater
- Default: heat pump is primary heat source.
- Select control to adjust parameters

< VDAIKIN		< equipment setup		< add equipment		aux heat source	9	< equipment se	etup
smart thermostat		→ indoor unit	>	air quality sensor	>	connection	aux 1 >	indoor unit	CXTQ48TASBLU >
setup 		load residential field settings	>	aux heat source	>	heat pump is primary h	eat source	load residential field	d settings >
I communication	\rightarrow	→ outdoor unit	>	filter box	>	aux is primary heat sou	ırce 🔿	outdoor unit	RXSQ48TAVJU >
2 personalization	\rightarrow	standard filter	>	HEPA filter	>	control	>	aux heat source	>
3 equipment setup	\rightarrow	add equipment	Ĥ					group address	 >
4 system optimization	\rightarrow		0					airnet address	
5 preferences	\rightarrow							standard filter	· · · · · · · · · · · · · · · · · · ·
complete setup	\rightarrow								/
		previous step next	step			cancel	add equipment	previous step	next step



Step 3 - Equipment Set-up

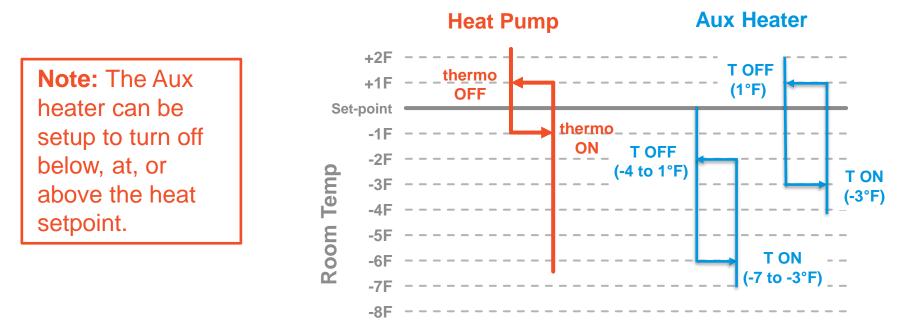
- Heat pump is primary heat source
 - Note: the heat pump lockout and the aux heat lockout are based on the ambient temperature data. The Ambient temperature data is communicating to the ONE+ through the weather service, therefore the Wi-Fi connection is necessary for aux heat logic to execute.





Heat pump is primary heat source

- Heat pump lockout adjustable from -20°F to 65°F in 5°F increments. (default:15°F)
- Aux heat lockout adjustable from -10°F to 75°F in 5°F increments. (default: 50°F)
- Aux heat demand
 - Ton differential -7°F to -3°F in 1°F increments (default -3°F)
 - T off differential -4°F to 1°F in 1°F increments (default 1°F)



Step 3 - Equipment Set-up

Aux is primary heat source

а	ux heat sourc	е				
	onnection	6	aux1 >			
he	heat pump is primary heat source					
a	ux is primary heat sc	ource	\bigcirc			
CC	ontrol		>			
				•		
_	cancel	add equ	ipment			

	= >
setpoint differential -2°F	
	- >
T on / T off -1°F / 1°F	= >

heat pump lockout	
enable heat pump lockout	\checkmark
Lock out HP below this temperature:	
10	
15 °F	
20	
	Lock out HP below this temperature: 10 15 °F



Aux heat is the primary heat source

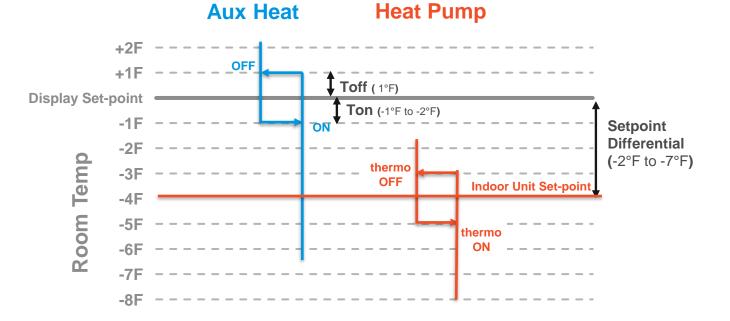
- Heat pump lockout adjustable from -20°F to 65°F in 5°F increments. (default 15°F)
- Setpoint differential -9°F, -7°F, -4°F, and -2°F (default -2°F)

Aux heat demand

- Ton differential -1°F to -2°F (default -1°F)
- Toff differential 1°F fixed

Note: When the Aux heater is engaged; the P1P2 indoor unit will:

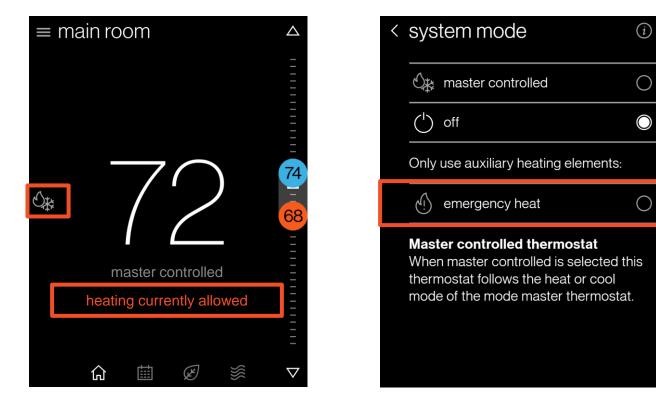
- Turn ON
- Heat mode (thermo-off)
- Fan follows field settings 12(22) 3
- IDU setpoint = display setpoint setpoint differential





Emergency heat:

 Once the Aux heat is set, The user will be allowed to turn on Emergency heat from the system mode menu regardless if the indoor unit is mode master or master controlled.

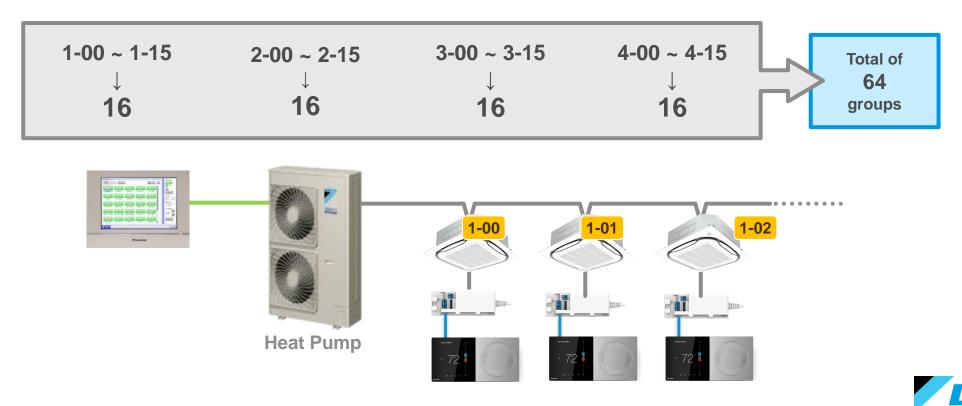


Note: The Emergency Heat mode will engage the AUX heater contact ONLY, however the IDU and the Fan will be OFF.



Group Addressing

- Required for multi-zone controllers
- 64 group addresses (up to 128 indoor units) can be assigned per iTM/BMS Gateways via the remote controller
- Addresses cannot be duplicated on the same DIII-Net communication bus
- Address numbers assigned to indoor units are:



IR INTELLIGENC

Step 3 - Equipment Set-up

- Set the indoor unit group address
 - Incase if multiple indoor unit in a group control, one group address can assign to all of them by using "assign same"
 - Select assign individually

< VDAIKIN smart thermostat setup			< e - ir
~ 1 communication	\rightarrow		lc — 0
2 personalization	\rightarrow		a a
3 equipment setup	\rightarrow		g
4 system optimization	\rightarrow	l	a
5 preferences	\rightarrow		s
complete setup	\rightarrow		

< equipment se	tup	
indoor unit	CXTQ48TASBLU	>
load residential field	settings	>
outdoor unit	RXSQ48TAVJU	>
aux heat source)	>
group address	;	>
airnet address)	>
standard filter		>
~	^	
previous step	next step	

< group address	
assign same	>
assign individually	>

Assign a different group address to each indoor unit: indoor unit 0 1-00 > indoor unit 1 1-00 > indoor unit 2 1-00 > indoor unit 4

• Choose a group address:

Click "Save"

- 1-00:1-15
 2-00:2-15
 3-00:3-15
 4:00:4:15
 - M m ce

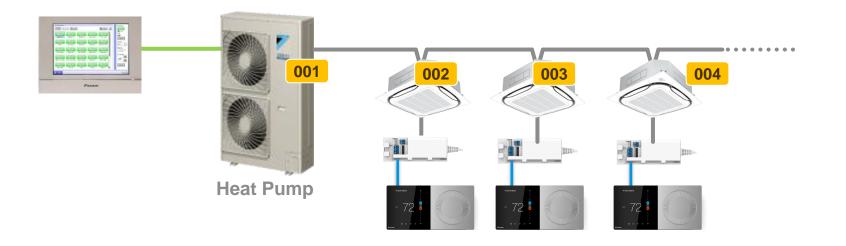
Note: the group address menu will show up only if a central controller (iTM, Service checker...etc. is connected to the DIII-Net.

i	ndo	or unit	0			
Ļ	Assign	a group ad	dresst	othisu	nit:	
	^ 1 ·	~ 00				
		•				
		cancel			save	



AirNet Address

- The AirNet address used in:
 - Identify the indoor unit when using service checker
 - VRV Operational data through the iTM
 - VRV D-Net service (remote monitoring service)
- Outdoor unit address range 1-31 set via outdoor unit control PCB
- Indoor unit address range 2-128 set via remote controller
- Duplicate AirNet address between indoor and outdoor units is allowed.



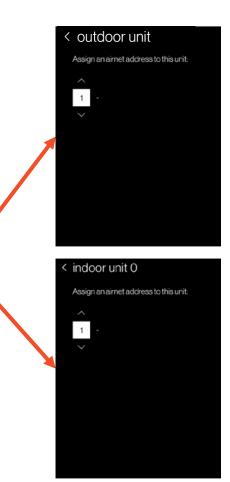


Step 3 - Equipment Set-up

- Set the Airnet Address for indoor and outdoor unit
 - Indoor unit (1-128)
 - Outdoor airnet address (1-63)

< VDAIKIN		< equipment setup
smart thermostat setup		indoor unit CXTQ48TASBLU)
· · · · · · · · · · · · · · · · · · ·		load residential field settings
I communication	\rightarrow	outdoor unit RXSQ48TAVJU >
 2 personalization 	\rightarrow	aux heat source
3 equipment setup	\rightarrow	group address
4 system optimization	\rightarrow	
5 preferences	\rightarrow	_ airnet address
		standard filter
complete setup	\rightarrow	× ^
		previous step next step







Step 4 – System Optimization

- System optimization displays:
 - Optional test
 - Error history
 - Logs alerts with an error code.
 - Calibration (Thermostat must be in OFF mode)
 - Wait 30 minutes before calibration for the thermostat to equalize.
 - Status
 - The status menu displays data for unit #0 Only.

< VDAIKIN		< system optimization	
smart thermostat setup		error history	>
		calibration	>
I communication	\rightarrow	status	>
2 personalization	\rightarrow		
 3 equipment setup 	\rightarrow		
4 system optimization	\rightarrow		
5 preferences	\rightarrow		
complete setup	\rightarrow		
		previous step next s	step





Step 4 – System Optimization

- Error history.
 - Logs alerts with an error code.
 - White = not critical
 - Yellow = critical
 - "Clear History" will clear the history log.

< system optimization		< error history
error history	>	Sep 22, 2020, 12:28 PM C6 – air handler
calibration	>	IDU PCB and fan PCB combination error
status	>	Sep 22, 2020, 12:26 PM UA – system Unspecified voltage between units or malfunctioning field setting switch or incorrect gas furnace connecting number
		Sep 13, 2020, 5:26 AM MU5 – system Transmission error between IDU & remote
previous step nex	kt step	✓ ∧ clear history



Step 4 – System Optimization

- Calibration \rightarrow Offsets the One+ thermistors temperature/humidity measurements
 - Offset temperature ± 7°F (default 0°F)
 - Offset relative humidity ±15% (default 0%)

			< humidity calibration
error history	temperature calibration 0°F >		
calibration >	humidity calibration 0% >	thermostat measured	\mathcal{D}_{α}
status >		68° display calibrated 71°	2%

Note: The system needs to be in the "off" mode during the calibration

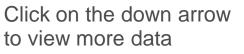


Step 4 – System Optimization

Status

- To view the indoor and outdoor unit data
- The displayed data depends on the indoor unit type

system optimization		< indoor		< indoor		< outdoor	
error history	>	fan tap	exists	anti-freeze control	off	fan tap	4
calibration	>	louvre setting	11 / 16	FLOAT	off	compressor frequency	
status	>	fan speed (rpm)	360	T1/T2	off	EEV open degree (pulse)	
		EEV open degree (pulse)	212	suction temp	80°F	solenoid valve	
		drain pump	on	heat exchanger temp	65°F	outdoor air temp	
		electric heater	off	gas pipe temp	59°F	heat exchanger temp	
		humidifier	off	discharge air temp	73°F	discharge temp	
previous step ne	xt step	~	~"·····		~		



AIR INTELLIGENCE

Step 5 - Preferences

- There are four preference settings to choose from in order to optimize your systems performance.
 - Cool/Heat
 - House settings
 - Dealer information
 - Reminders

Note:

- Dealer contact information and reminders should be inputted.
 - The homeowner cannot edit service reminders.

< VDAIKIN		< preferences
smart thermostat		cool/heat >
setup		house settings
 1 communication 	\rightarrow	dealer information
2 personalization	\rightarrow	reminders >
 3 equipment setup 	\rightarrow	
 4 system optimization 	\rightarrow	
5 preferences	\rightarrow	
complete setup	\rightarrow	
		previous step next step



Step 5 - Preferences

- Cool/heat:
- Min/max setpoints:
 - Min/max set points in 1°F increments:
 - Default: 61 to 90°F

< cool/heat		< min/max	setpoint	S
min/max setpoints	61–90°F >	$\overline{\bigcirc}^{\circ}$		
deadband / overcool	4°F/0°F >	90		
changeover settings	>			
				\bigcirc



Step 5 - Preferences

- Cool/heat:
- Deadband
 - Minimum differential between cooling and heating set point in auto mode.
 - Default: 4°F
 - 2 to 9°F in 1°F increments

Overcool

- Default: 0°F
- 0 to 3°F in 1°F increments

	<	cool/heat		<	deadban
1		min/max setpoints	61–90°F >		Temperature
ג ו		deadband / overcool	4°F/0°F >		
		changeover settings	>		Overcooling a
					The overcool deadband, ine maintain mini of at least 2°.

< deadband / overcool

Temperature setpoint deadband:

3	
4 °F	
5	
vercooling allowed to dehumidify:	

he overcool value is overlayed on the leadband, increasing the range to naintain minimum cool/heat differential f at least 2°

0°F



Overcool Example

Thermo-ON/OFF when Overcool =2°F

75°F

74°F

70°

69°F

68°F

CSP

Cooling Thermo ON

Cooling Thermo OFF

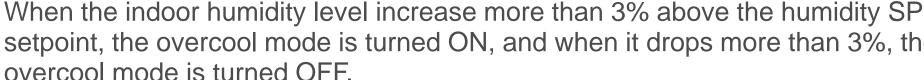
HSP

Over CSP 72º

Thermo-OFF

Over CSP is internally calculated and is not displayed on the Daikin One+

Thermo-ON

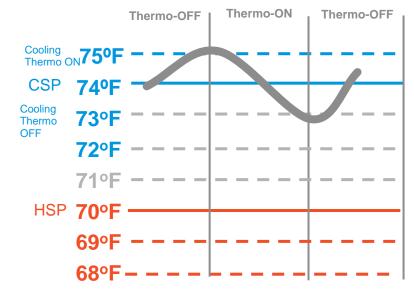


setpoint, the overcool mode is turned ON, and when it drops more than 3%, the overcool mode is turned OFF.

- When the overcool mode changes from ON to OFF, 2-hours guard timer is started
- The Thermo-ON/OFF deadband is based on field setting value (±1°F) for indoor unit.

Thermo-ON/OFF when Overcool =0°F

 CSP is the cooling setpoint that assigned by the user and displayed on the Daikin One+





When overcool mode changes from ON to OFF, 2-hours guard timer is started.

Thermo-OFF



Step 5 - Preferences

Cool/heat:

- Changeover settings
 - Start timer diff (1°F -4°F)
 - Forced changeover diff (1°F -4°F)
 - Changeover timer

< cool/heat		
min/max setpoints	61–90°F >	
deadband / overcool	4°F/0°F >	
changeover settings	>	

< changeover settings

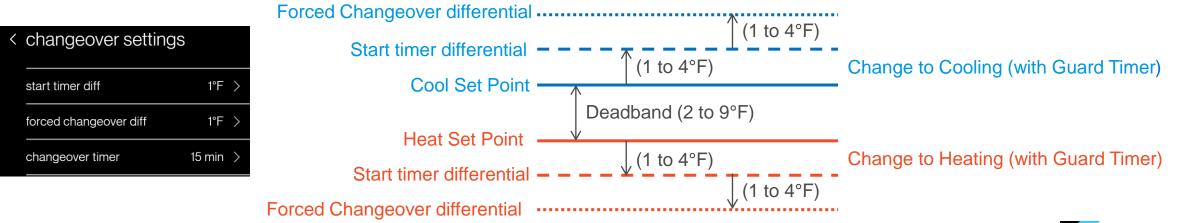
start timer diff	1°F >
forced changeover diff	1°F >
changeover timer	15 min 🗦



Auto changeover

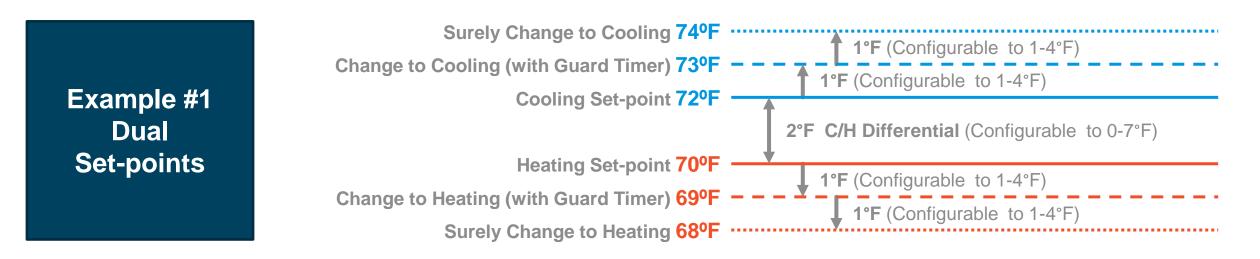
- At 1°F above cool or 1°F below heat setpoint (default)(Configurable between 1°F 4°F.)
 - Engages changeover timer (guard timer).
 - Another 1°F above cooling or 1°F below heating changeover points (default), Forced changeover ignores changeover timer (Configurable between 1°F – 4°F.)
 - Changeover timer to prevent frequent mode change.
 - 0 (default),15, 30, 45 or 60 minutes.
- Recommend leaving the default settings.

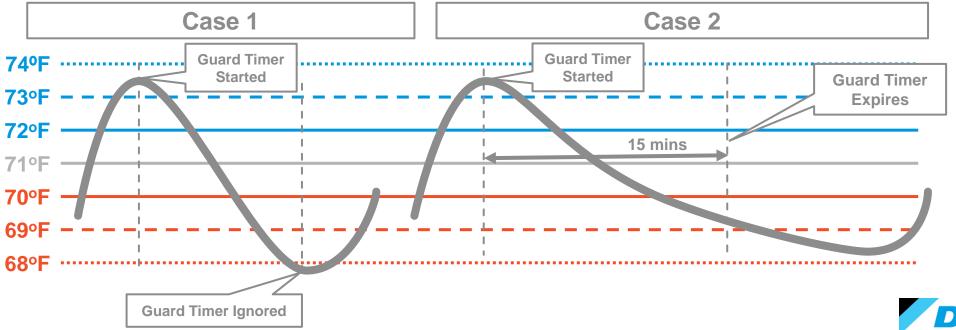
Same Logic As iTM and NAV.





Auto-changeover





AIR INTELLIGENCE

Dealer information

- Selecting allows you to enter and review the dealer's information.
- All the information imputed can be viewed by the homeowner.

<	preferences				< de
	cool/heat		>		nai
	house settings		>		ph
	force fan		>		em
	dealer information		>		we
	reminders		>	1	me
	previous step	next step			

< dealer information

>	name	best dealer ever >
>	phone	1-800-800-8000 >
,	email	service@bestdealer.com >
	website	www.bestdealer.com >
	message	Please contact us for gr >



Final step - Complete set-up

- Selecting complete set-up will conclude the full set-up of the thermostat and display normal mode for you to navigate and verify settings.
- Reminder: All steps must be reviewed before completing full set-up.

< VDAIKIN		< VDAIKIN
smart thermostat setup		smart thermostat setup
I communication	\rightarrow	\sim 1 communication \rightarrow
2 personalization	\rightarrow	\checkmark 2 personalization \rightarrow
 3 equipment setup 	\rightarrow	\checkmark 3 equipment setup \rightarrow
 4 system optimization 	\rightarrow	\checkmark 4 system optimization \rightarrow
5 preferences	\rightarrow	\checkmark 5 preferences \rightarrow
complete setup	\rightarrow	All required settings are complete.
		continue



Agenda

Daikin One+

System Configurations

Installing Daikin One+

Commissioning Daikin One+

Dealer Navigation

Homeowner Navigation

Dealer Navigation

Dealer edit

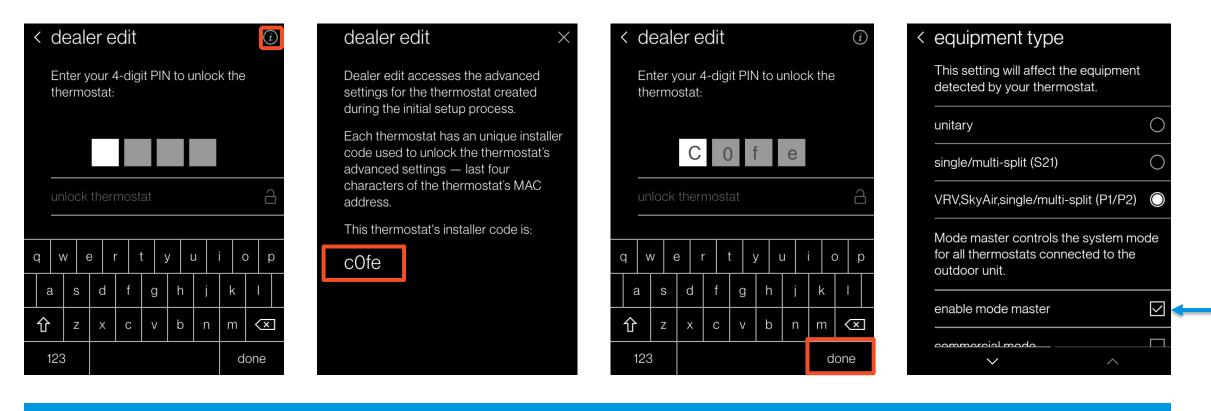
- Navigating to dealer edit will allow you to access or revisit the installer set-up screen.
- Advanced adjustments to the Daikin One+ will be made here.

downst	airs		\times main roc	om		< settings		< configuration	
			learn more		<i>(i)</i>		/		
		-	settings		ණ	air quality	>	dealer	
	$\overline{}$	70		70	=	humidity	> 	date & time	
	- 66	Ú.			energy thermostat	>	messages		
						equipment	>	Warning	
	mode master					support	>	This feature accesses features of your system	n. Any changes t
						dealer edit	>	the configuration can p operation.	prevent proper
ሴ		\bigtriangledown	ŵ	ti Ø		\checkmark	^	cancel	continue



Dealer Navigation

- Acknowledging the prompt enables you to tap the learn more icon.
- The icon displays the installer code, giving you access to the installer set-up screens.



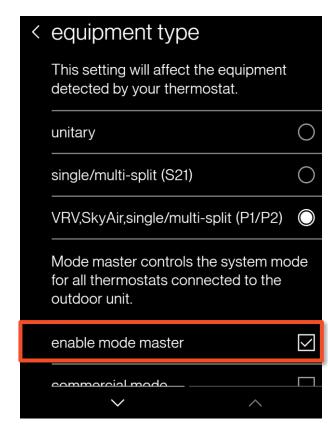
Note: Releasing the changeover master by uncheck "enable mode master"



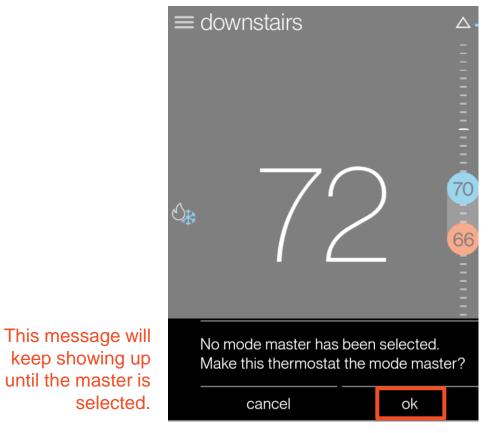
Dealer Navigation

Releasing the mode master

Uncheck the tick mark



 The ONE+ will keep requesting to set the changeover mode master indoor unit.

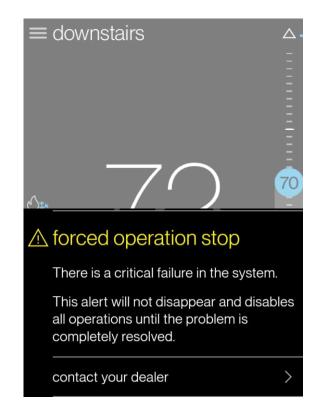




Other Screens

External Stop - T1T2

 The following message will display when T1T2 contact of the indoor unit close.



Test operation

 When Test operation is performed from the ODU, this screen will display



This message will disappear after

completion.



Agenda

Daikin One+

System Configurations

Installing Daikin One+

Commissioning Daikin One+

Dealer Navigation

Homeowner Navigation

Normal Mode

- Normal mode allows you to view messaging, temperature, and access settings to adjust parameters
 placed by the installer.
- Navigating is accomplished by tapping icons or turning the analog dial.
- Note: Analog turn dial is used to adjust temperature only. Pressing the dial returns to the home screen.





Adjust control

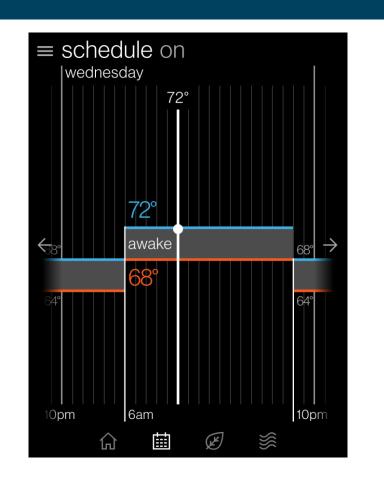
- Tapping the system mode icon allows you to select:
 - Auto. (cool & heat)
 - Cool.
 - Heat.
 - Off.
- Change setpoints by rotating the dial, touching and holding the setpoint to drag the desired temperature setpoint, or use the up and down setpoint arrows





Schedule

- The schedule is presented as 7 days, displaying one day at a time, with 24 hours fitting on the screen.
- You can use the drop-down menu to enable schedule editing.
- Copy and paste is a feature that makes scheduling seamless.
- Note: Scheduling requires saving edits before exiting the mode.



tuesday ~	×
awake 6:00 am	
sleep 10:00 pm	
copy day	
to:	
s m t w	t f s
cancel	paste



Away

- The away screen displays the current state (on/off) and the away cooling/heating setpoints used when away is on.
 - on/off is selected from drop down menu.
- User can change the values of the setpoints by dragging the numbers or the comfort range up and down.
- With the mobile app., enabling geofencing will automatically switch to energy savings when outside the radius.

≡ away on		<	away
	82°		Use aw save er the loca
			on
indoor 70°			off
\square			away te
	61°		The sys away m of the [
			receive
命 [}		

vay mode whenever you want to ergy or automatically based on ation of your phone.

	on O			
	off O			
	away temperatures 61°/82° >			
61°	The system can automatically toggle away mode using the geofencing feature of the Daikin One Home mobile app.			
	receive geofencing events			



Air quality

Indoor air quality is based on filter life cycle and humidity values.

Homeowner Navigation

- Fan settings
 - Adjust fan speed
 - Adjust louver position
 - Enable/disable draft protection.

temp and humidity (when the ONE+ is connected to the internet [weather Service] and paired with the app.)

The air quality screen displays indoor air

quality levels and the outdoor air quality,



(K)

١

.78°

63%

<u>}</u>

air quality

good

filter ok

indoor

5

outdoor

仚

	<	fan settings		
		cooling fan speed	medium high)
		cooling vertical position	oscillate	,
>		cooling horizontal positio	on fixed	,
		heating fan speed	auto	,
>		heating vertical position	fixed	,
		heating horizontal position	on auto	,
		draft protection		<u>\</u>

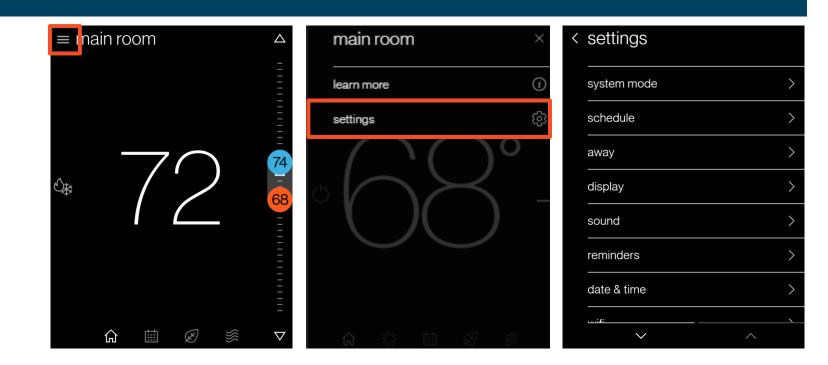
< position Select position by number: 5

Note: The availability of the fan speed and louver control are based on the selected indoor unit model



Settings

- Settings gives you access to additional supporting features:
 - Display.
 - Adjust and enable visual features.
 - Comfort.
 - Set target humidity.
 - Configuration.
 - App. account setup
 - Dealer information
 - Date & Time
 - Enable messages/view alerts
 - System components
 - Home Wi-Fi

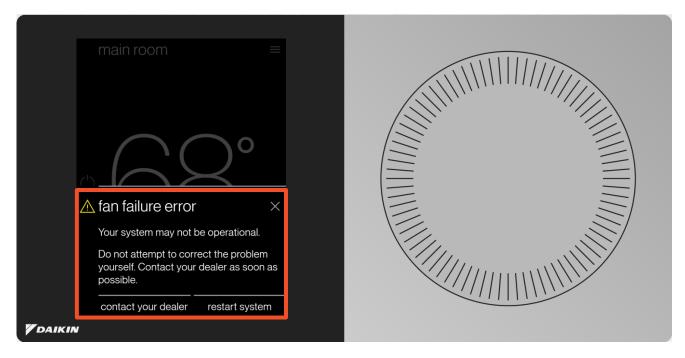




Daikin One+

Messaging

The homeowner/user can temporarily dismiss the message or restart the system; however, some alerts may remain until the issue is resolved by a dealer.



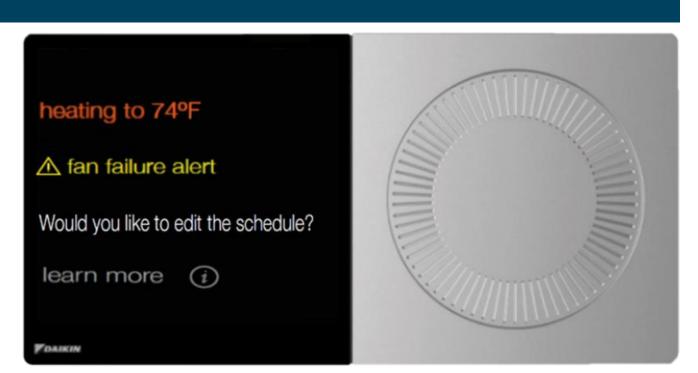
Note: Daikin error code will not show up on the home screen, however it will show up on the error history menu



Daikin One+

Smart Messaging

- Daikin One's messaging updates, confirms, and informs about selections you make during set-up and operation.
- There are four types of messages:
 - Status
 - Alerts
 - Reminders and Prompts
 - Learn more/tips



Note: Alerts have priority over all other messages in the system.







1. How many fan coils can the Daikin One+ connect to on P1P2?

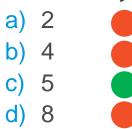


- 2. Is the Daikin One+ able to be daisy chained on the P1P2 bus with other local controllers on an existing job?
 - a) Yes b) No
- 3. What is needed to connect the Daikin One+ to P1P2?
 - a) Just wire directly to P1P2
 - b) Translation adaptor
 - c) Transformer





- 4. What is the max distance of wiring between the Daikin One + and the Translator?
 - a) 20 ft
 b) 50 ft
 c) 100 ft
 d) 125 ft
- 5. The Daikin One+ should not be installed near which of the following?
 - a) Drafts of dead spots
 - b) Hot or cold air from diffusers or fans
 - c) Radiant heat from sun or appliances
 - d) All the above
- 6. How many steps are there in the set-up process?





- 7. Which equipment type must you select for FFQ indoor Unit?
 - a) Unitary.
 - b) Single zone/Multi zone (P1/P2).
 - c) Equipment type selection is not required.
 - d) VRV/SkyAir



- 8. Never use screws when mounting the translation adaptor to an indoor unit.
 - a) True
 - b) False
- 9. If power wires are reversed the PWR LED will flash green.
 - a) True
 - b) False

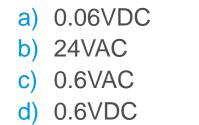


- 10. When commissioning the Daikin One+ through full setup, what steps need to be reviewed before completing the setup?
 - a) All steps.
 - b) Communication and system optimization.
 - c) Personalization, communication, and preferences.
 - d) Equipment setup and communication.

11. The Thermo-ON/OFF deadband is a fixed value of _____ for mini and multi split indoor unit.



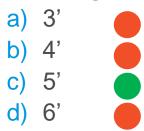
12. Measurement between data line 1 and 2 should read







13. How high on an interior wall should the Daikin One+ be mounted?



14. Do not install the Daikin One+ where it can be affected by radiant heat from the sun or appliances.



15. Error history logs alerts that are color coded, ____ being non-critical and ____being critical.

- a) Green, Yellow
- b) Blue, White
- c) White, Yellow
- d) Yellow, Red





16. What is needed to create a mobile account?

- a) The Daikin One+, a Tablet, and a valid email address.
- b) A mobile device, the Daikin One+ connected to Wi-Fi that is wired to an S21 or P1P2 system and a valid email address.
- c) An indoor unit, an outdoor unit and the Daikin One+.
- d) A mobile device connected to connected to Wi-Fi, an indoor unit and an outdoor unit.

17. The ONE+ can display the outdoor Air temperature through:

- a) The outdoor unit temp sensor.
- b) Wireless outdoor air sensor
- c) Weather Services
- d) Any of the Above.





