

Daikin One+ Smart Thermostat Installation & Commissioning (S21)



Technical Training Module TRC-4



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Agenda

Daikin *One+*

System Configurations

Installing Daikin *One+*

Commissioning Daikin *One+*

Full Set-up

Dealer Navigation

Homeowner Navigation

Mobile Apps

Daikin One+ Smart Thermostat

- 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 user will be able to control the indoor unit remotely through the Daikin One Home app.



Daikin One+ Smart Thermostat

- Offers communication when combined with Single and Multi-Zone indoor unit models (S21 only).
- Is a cloud-connected hub and controller for communicating HVAC systems.



Daikin One+ Smart Thermostat

Daikin One+ Interface

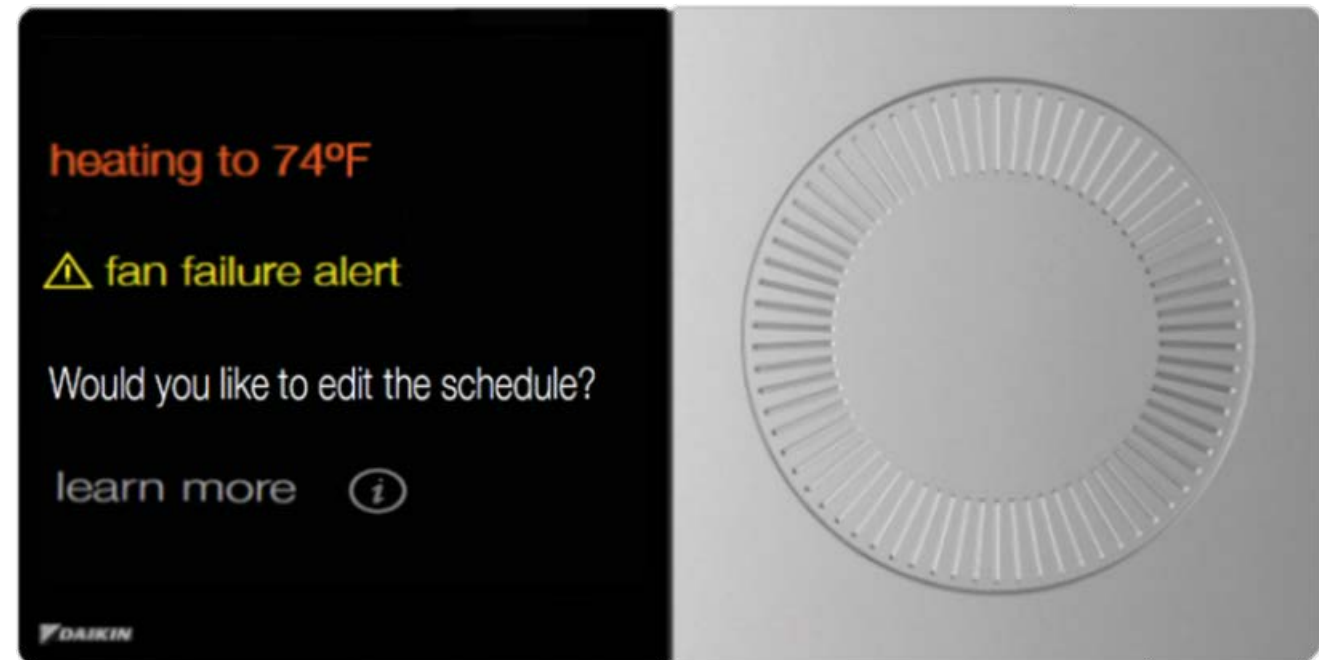
- The thermostat has a physical dial on the right used for manual setpoints adjustments.
- Pressing the center of the dial at any time during normal mode acts as a home button, displaying the primary screen.
- The high-resolution touch screen on the left supports tactile-based interactions.
- Navigating to each screen is done by tapping an icon.



Messaging

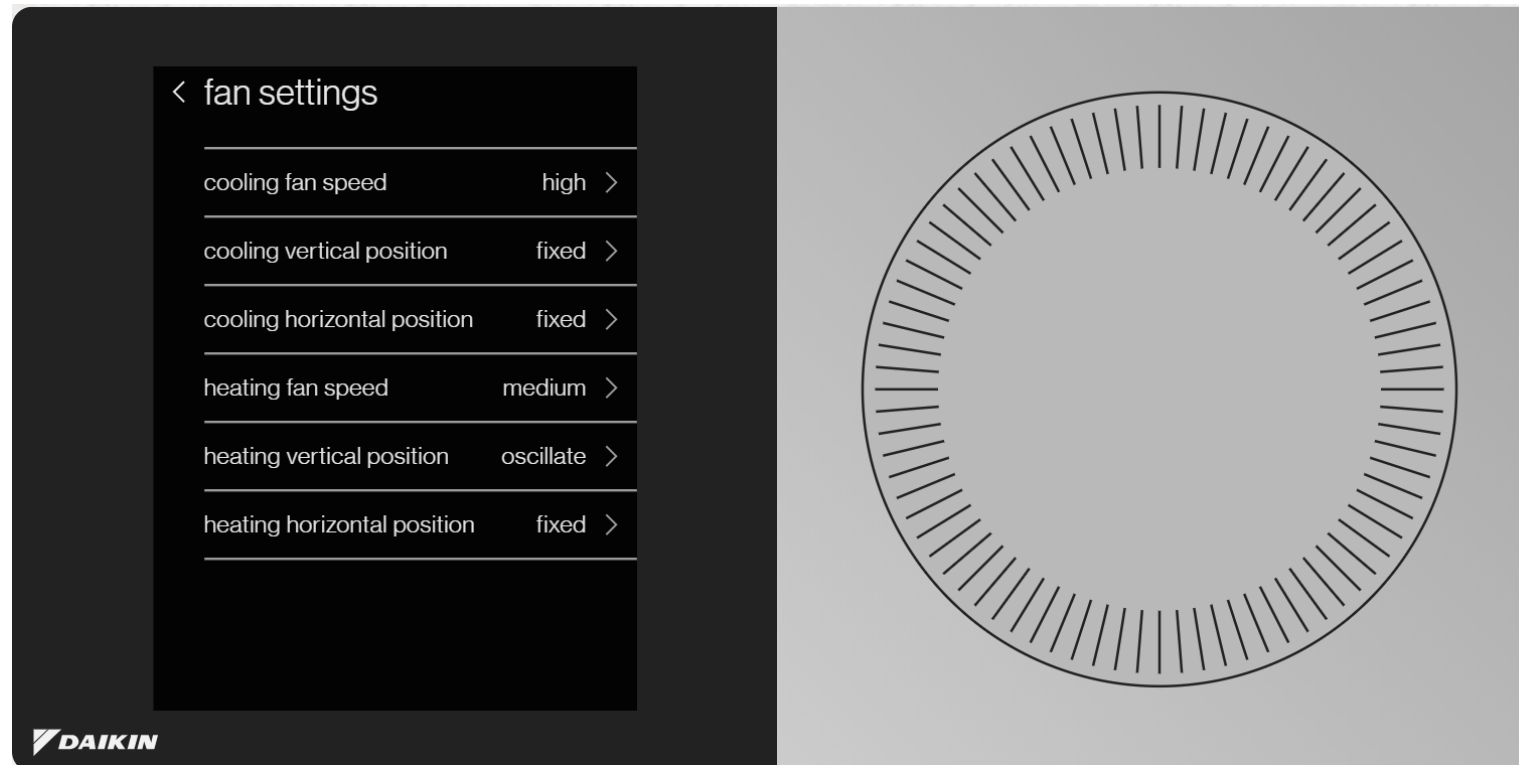
- Daikin One's messaging updates, confirms, and informs about selections you make during set-up and operation.
- There are four types of messages:
 - Status
 - Alerts
 - Reminders and Prompts
 - Learn more/tips

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



Messaging

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



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.
- Optional trim plate.

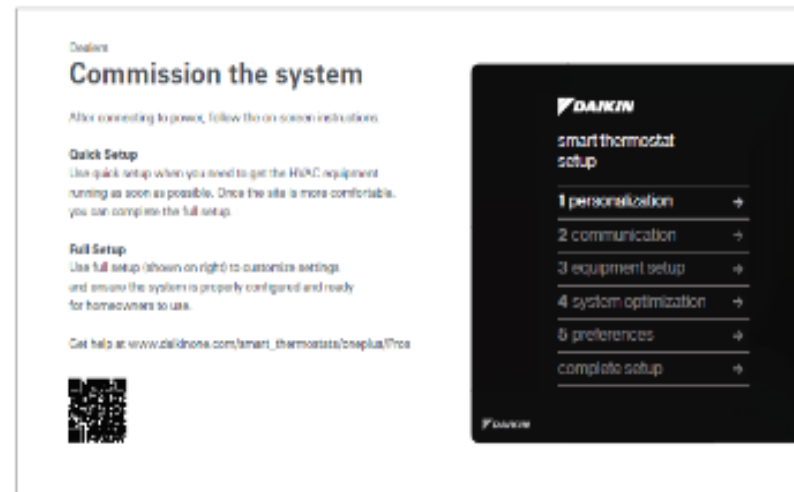
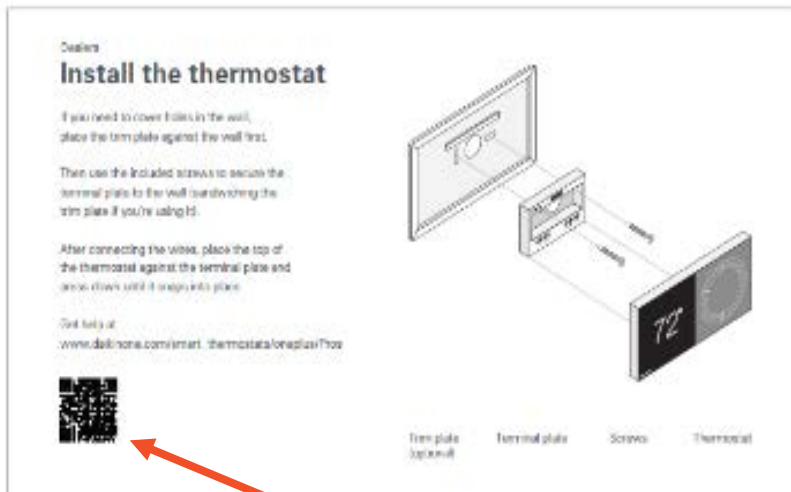


Daikin One+ Smart Thermostat

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.



https://daikinone.com/smart_thermostats/oneplus/pros/

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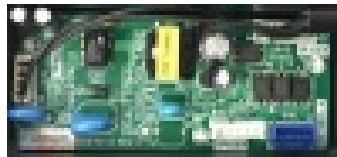
Mobile Apps

Daikin One+ Smart Thermostat for S21 Indoor Units

Indoor units that have S21 Interface



Indoor units that do not have S21 Interface



■ Click to add text



Notes: the Daikin One+ is not compatible with:
handheld IR remote controller – BRC944 – KRP928

Indoor Unit Models (require interface adaptor)	Required Interface Adaptor
FTXM09VVJU, FTXM12VVJU, FTXM18VVJU, FTXM24VVJU	KER087A41
FTX09NMVJU, FTX12NMVJU	KRP067A41E
FTX15NMVJU	KRP980B2E

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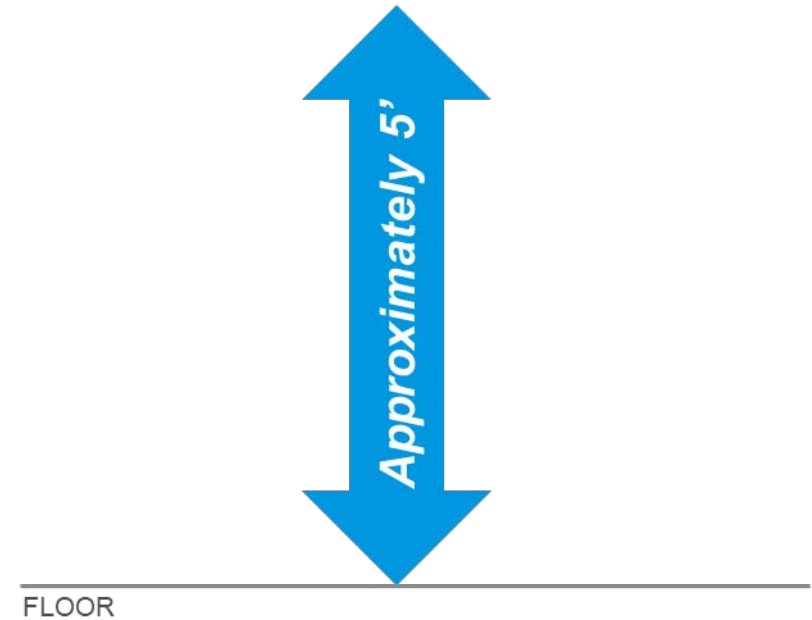
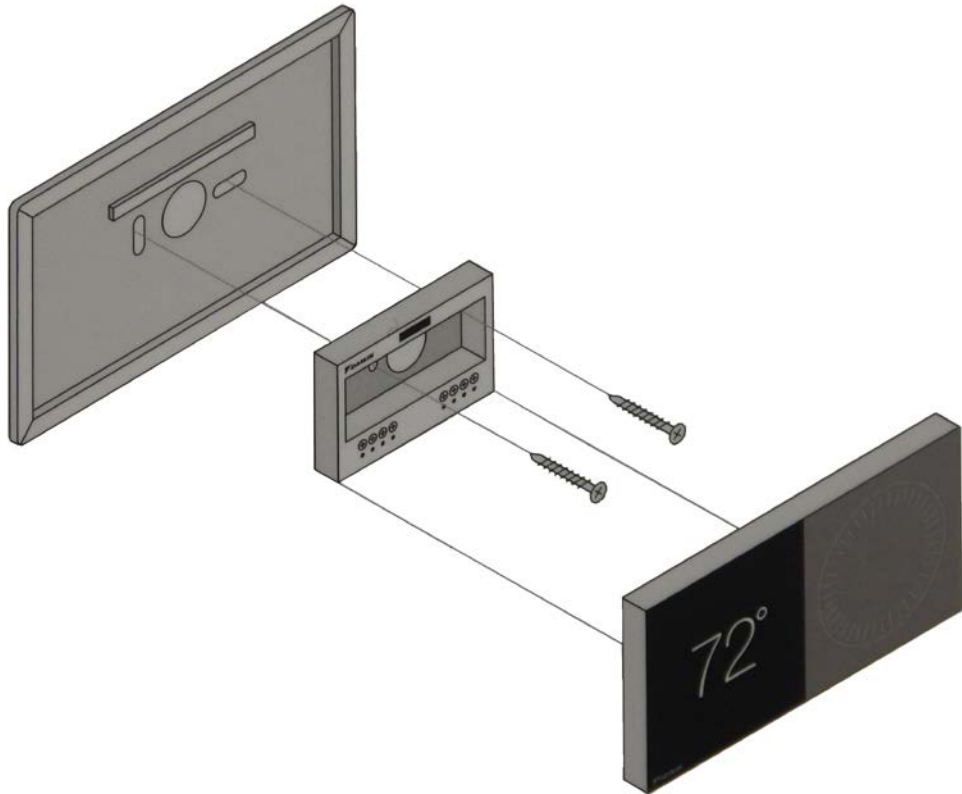
Dealer Navigation

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Mobile Apps

Installing Daikin *One+* Smart Thermostat

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



Installing Daikin *One+* Smart Thermostat

- Maximum wire distance between the Daikin *One+* and the translation adaptor should not exceed **125 feet using four conductor 18-gauge field supplied wire.**
- **Check for proper voltage before and after wiring is installed.**
 - 0.6VDC between Data 1 and 2.
 - 24VDC between R and C.
 - Refer to system I/O manual for proper voltage.

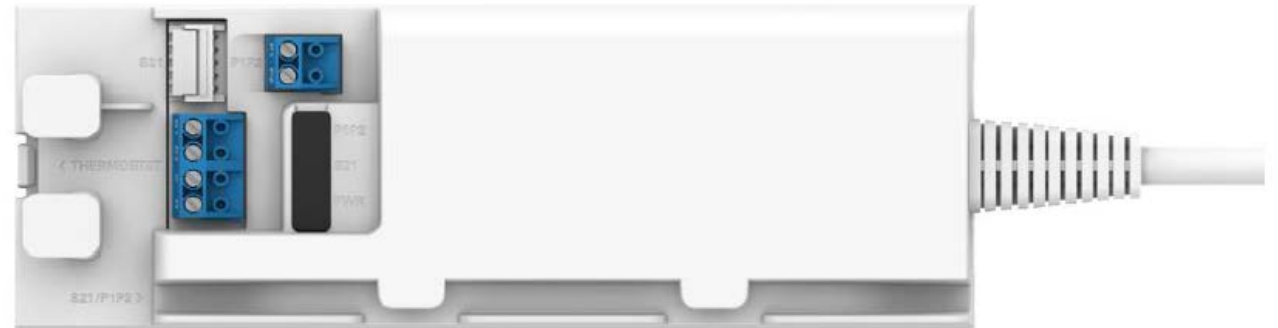
Note: If wired incorrectly, you will receive an error.

- If power wires are reversed the PWR LED will flash green.



- ① Data Line 1
- ② Data Line 2
- Ⓒ 24 volt common
- Ⓓ 24 volt power

Aux1 to Aux 1C and Aux 2 to Aux 2C connections are 24V AC Dry contacts.



Installing Daikin *One+* Smart Thermostat

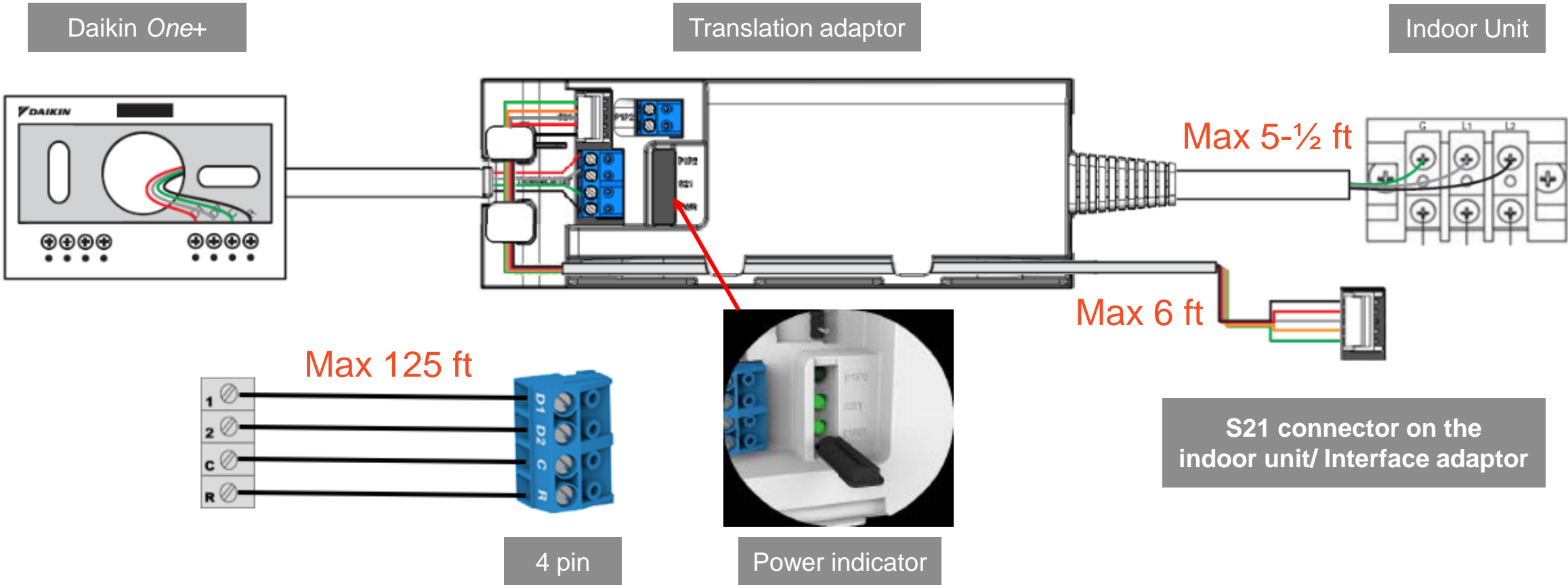
DO NOT Install The Thermostat Where It Can Be Affected By:

- 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 Daikin One+ Smart Thermostat

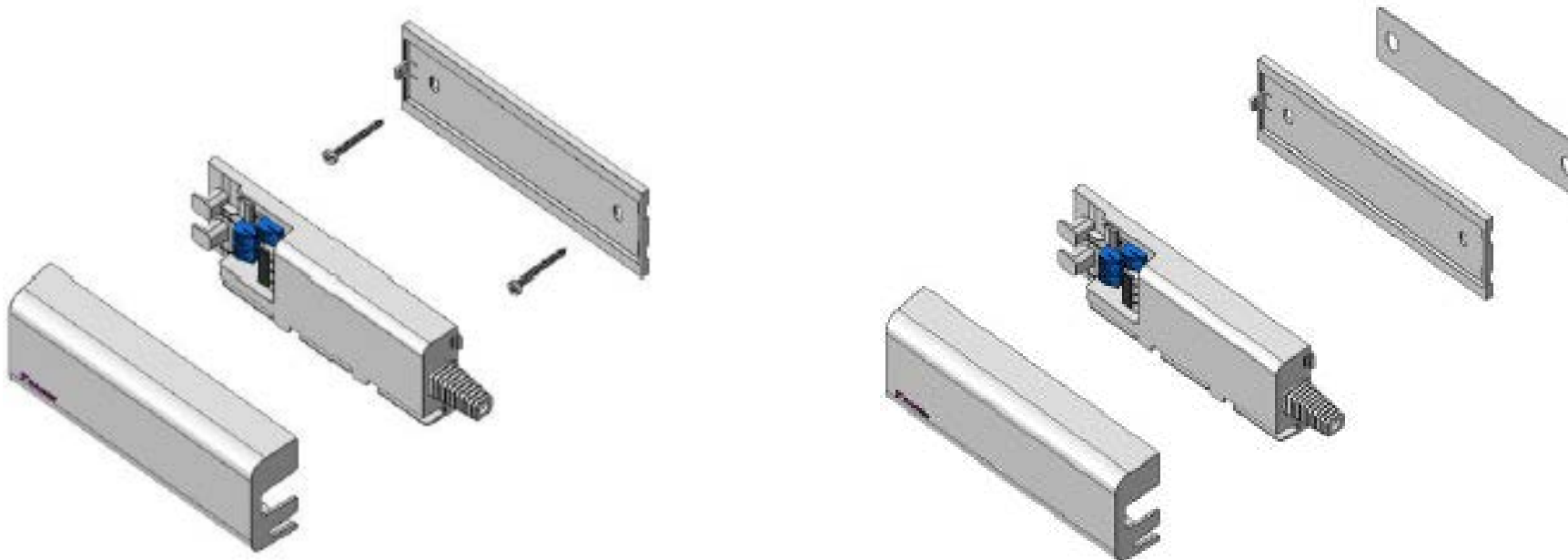
Wiring thermostat to a translation adaptor



Installing Translation Adaptor

Mounting the translation adaptor.

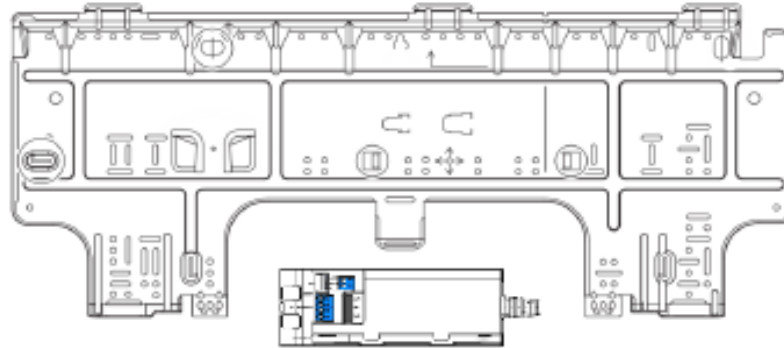
- Mount using screws or adhesive tape.
 - Never use screws to mount to an indoor unit.
 - If using adhesive tape, you can mount to the surface of the indoor unit.
 - Clean the surface prior to mounting.
 - Apply pressure for a minimum of 20 seconds to the adaptor for adhesion to take place.



Installing Translation Adaptor

Wall mounted indoor unit

- Translation adaptor can be mounted inside piping chase to conceal it, or on the outside of the indoor unit.



Ducted indoor unit

- 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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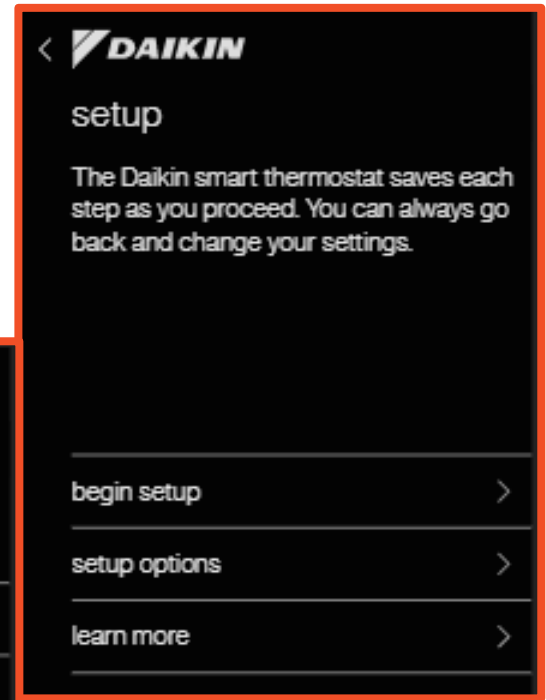
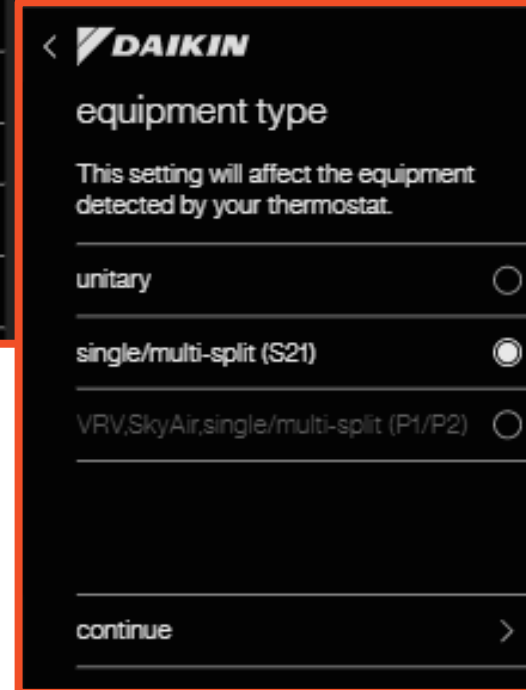
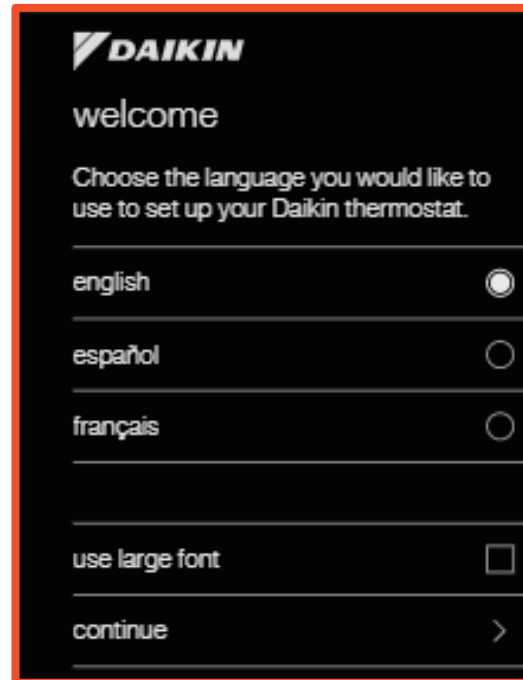
Commissioning Daikin *One+* Smart Thermostat

- Begin set-up: walks installers through the entire commissioning process to ensure the system is configured properly and ready for the homeowner to use.
 - Enables random access to any setting.
 - Remembers settings as they are entered.
 - Individual may stop and restart as needed.
- The screens are populated based on the model numbers of the equipment, matched to a database of device configuration settings.



Commissioning Daikin *One+* Smart Thermostat

- Start-up screen is displayed upon powering the thermostat.
- The welcome screen displays preferences to choose from.
- Select Single/Multi-split (S21) before moving to the setup screen.
- Version of the thermostat is displayed on the learn more screen.



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Start-up

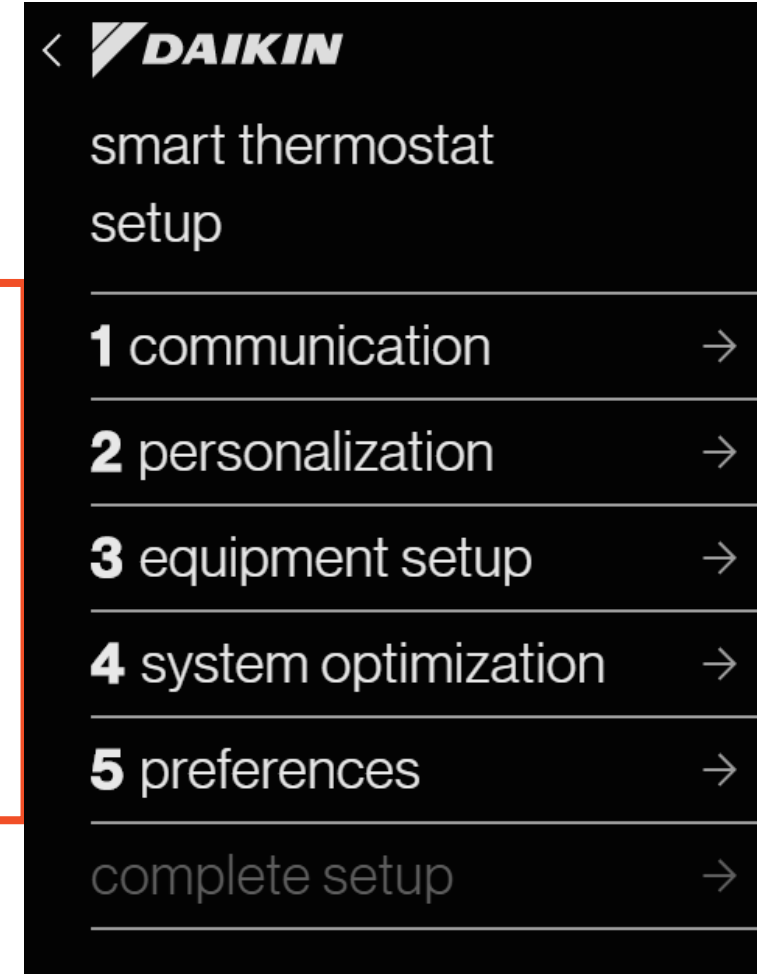
- **Tapping begin set-up starts the five step set-up process:**

- Communication.
- Personalization.
- Equipment Set-up.
- System Optimization.
- 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/



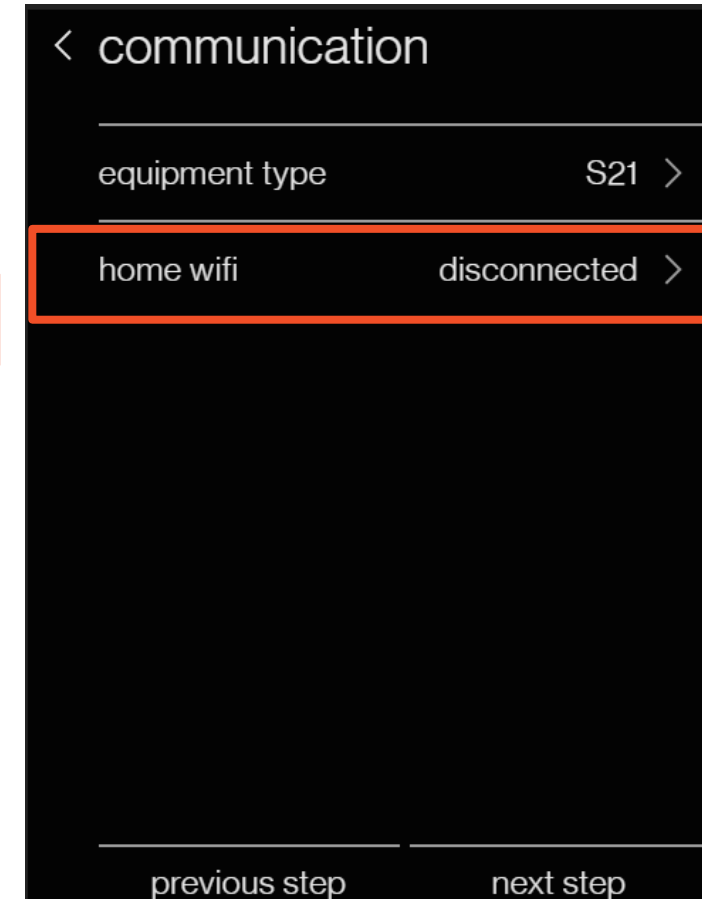
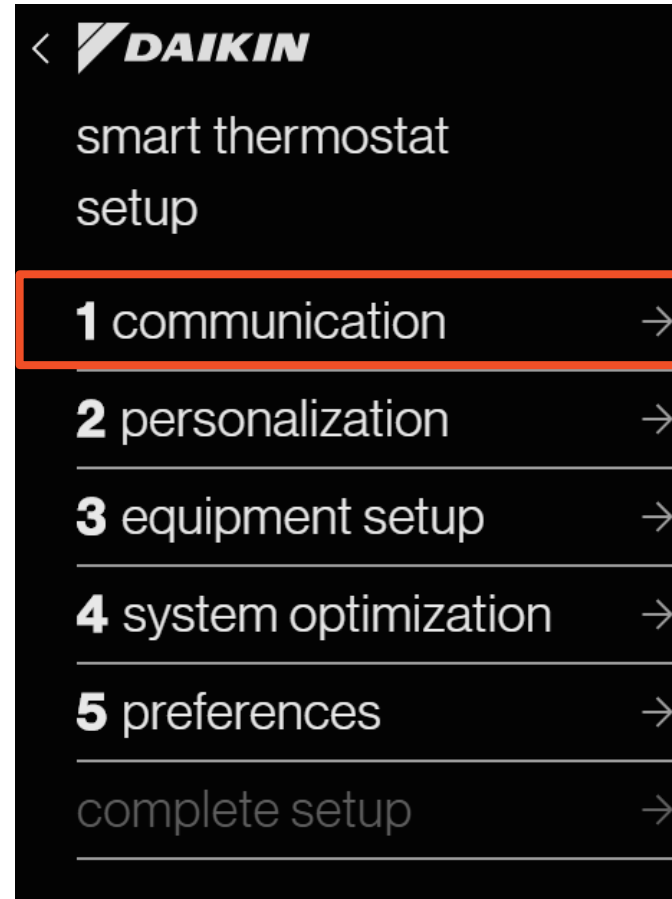
Full Set-up

Step 1 - Communication

- Configures **Communication Networks**.
- Select home Wi-Fi to search for networks.
- With **Wi-Fi configured**, the system can check the software version and update software to the **latest** version **automatically**.

Note:

- Wireless router must be password protected.
 - Compatible with 5Ghz routers which supports 2.4Ghz
- Equipment type displays the equipment selected on start up.

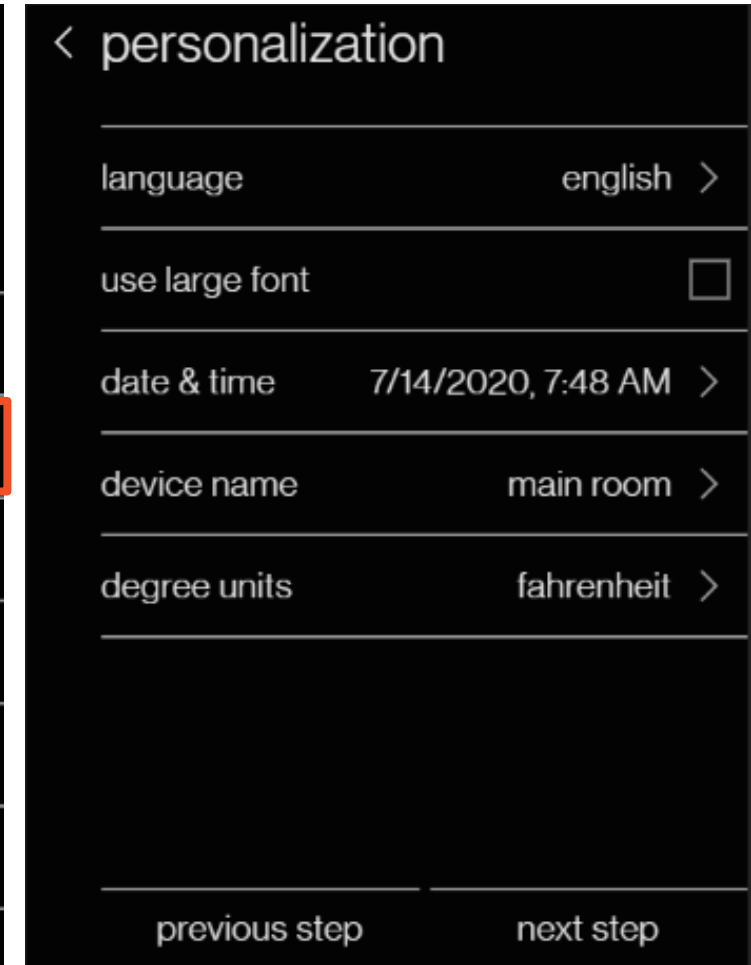
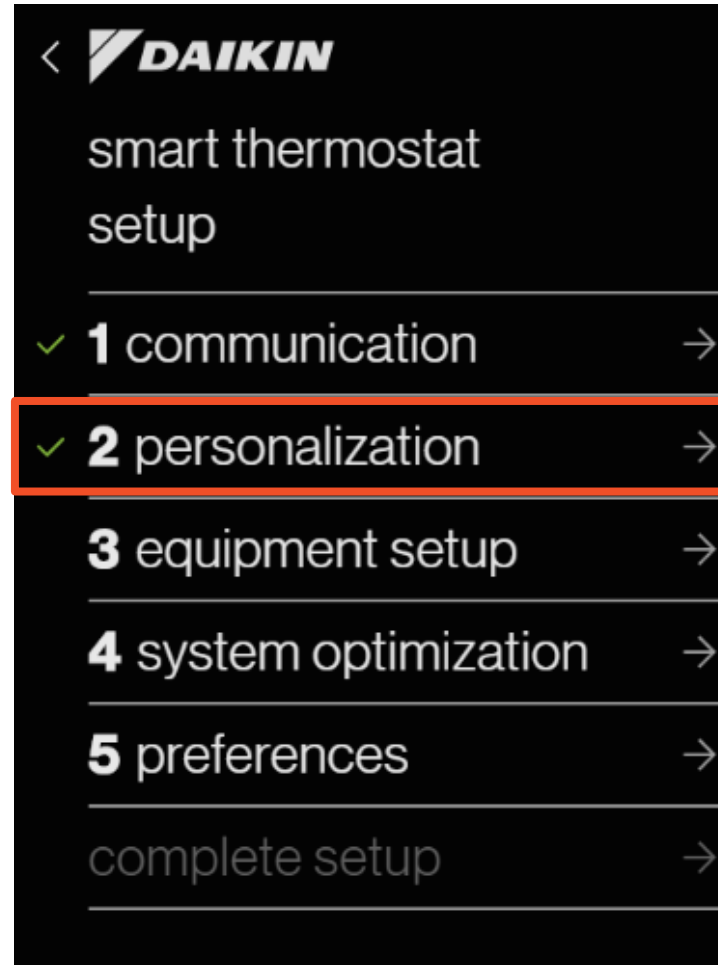


Full Set-up

Step 2 - Personalization

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

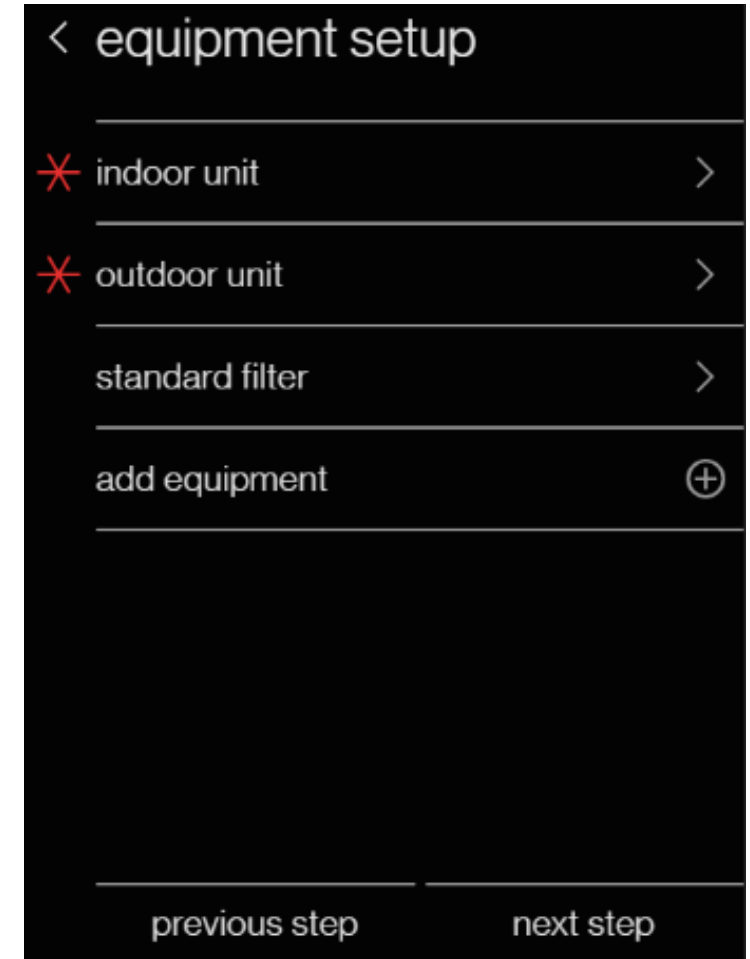
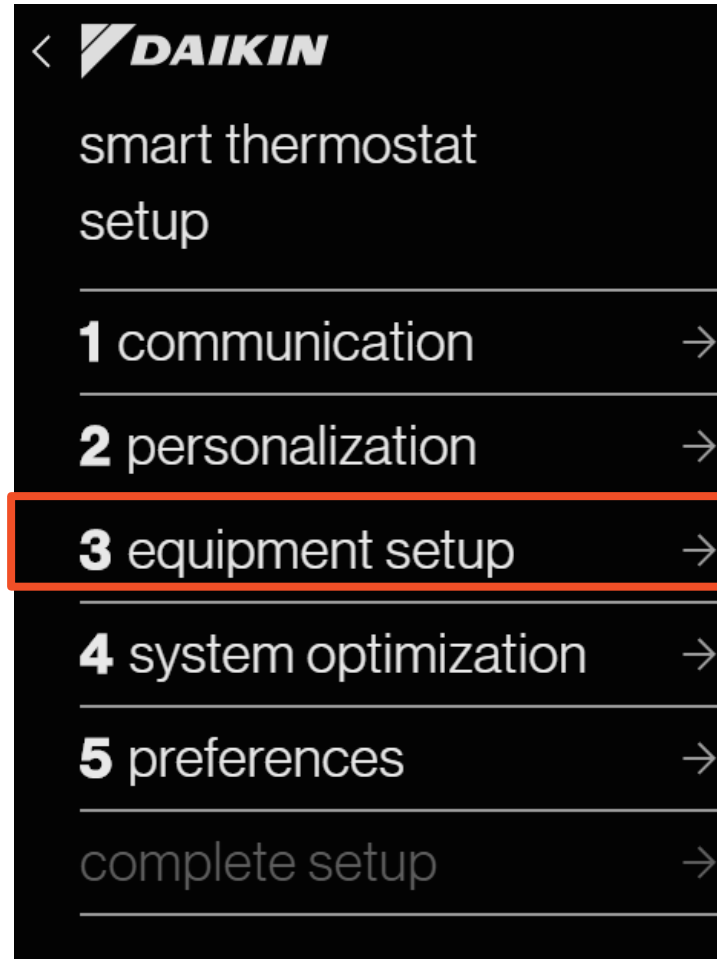
Note: A green check mark appears next to items reviewed from the set-up menu.



Full Set-up

Step 3 - Equipment Set-up

- Provides a list of equipment and accessories to add or remove from.
 - You must manually enter the equipment serial number to the indoor and outdoor unit after the model number is selected.



Step 3 - Equipment Set-up

For the indoor unit, you must select unit type if you manually enter a model number.

< equipment setup

✖ indoor unit >

✖ outdoor unit >

standard filter >

add equipment (+)

previous step

next step

< indoor unit

✖ model # >

serial # >

✖ unit type >

< serial #

1234

1	2	3	4	5	6	7	8	9
-	/	:	;	()	\$	&	@
#+=	.	.	?	!	'	<	>	
abc								d

< model #

CDXS >

CTXS >

FDXS >

FTK >

FTX >

TXG >

TXR >

TXV >

< unit type

wall-mount unit ☒

four-way ceiling cassette ☐

one-way blow cassette ☐

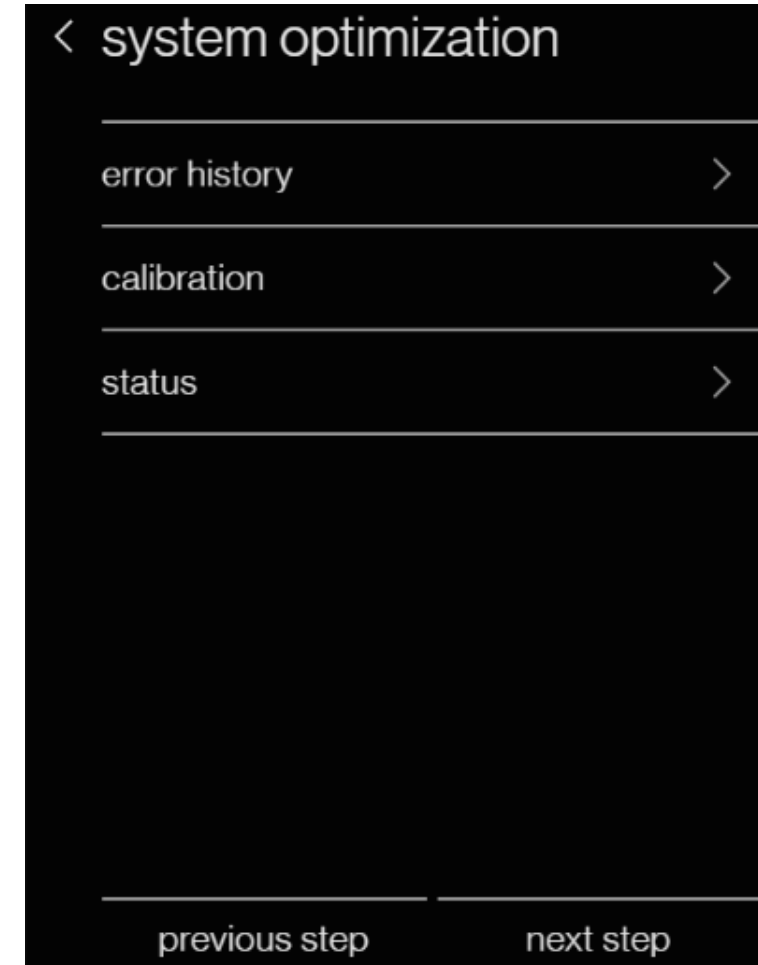
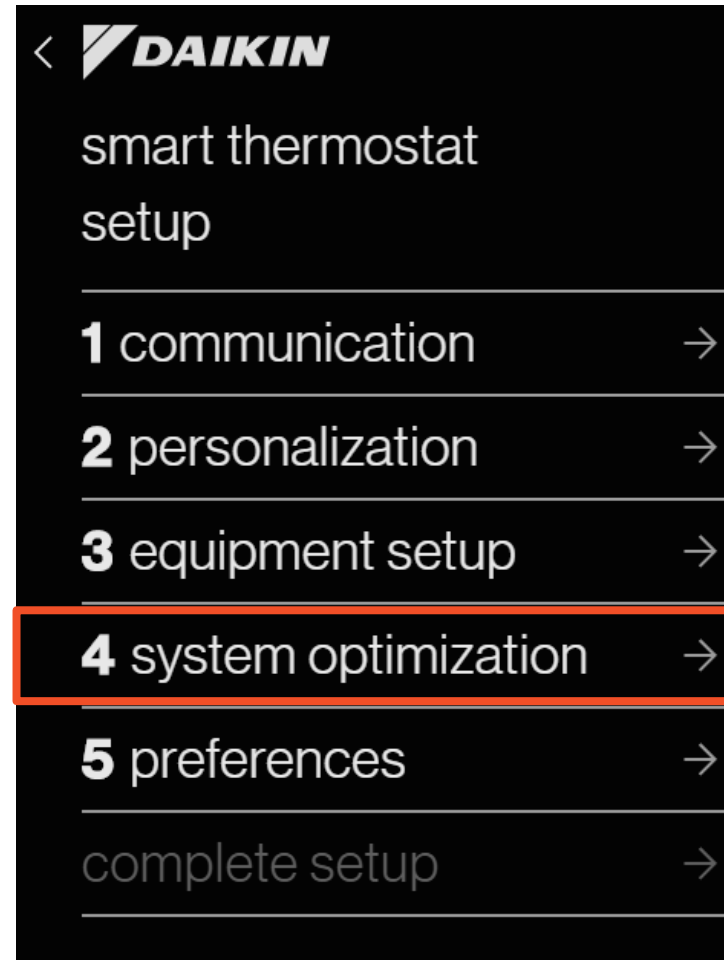
floor-mount unit ☐

concealed ducted unit ☐

Full Set-up

Step 4 – System Optimization

- System optimization displays:
 - Error history.
 - Logs alerts with an error code.
 - **White = not critical**
 - **Yellow = critical**
- Calibration. **Thermostat must be in OFF mode.**
 - **Wait 30 minutes before calibration for the thermostat to equalize.**
- Status.
 - The status menu displays data pertaining to the selected equipment.



Full Set-up

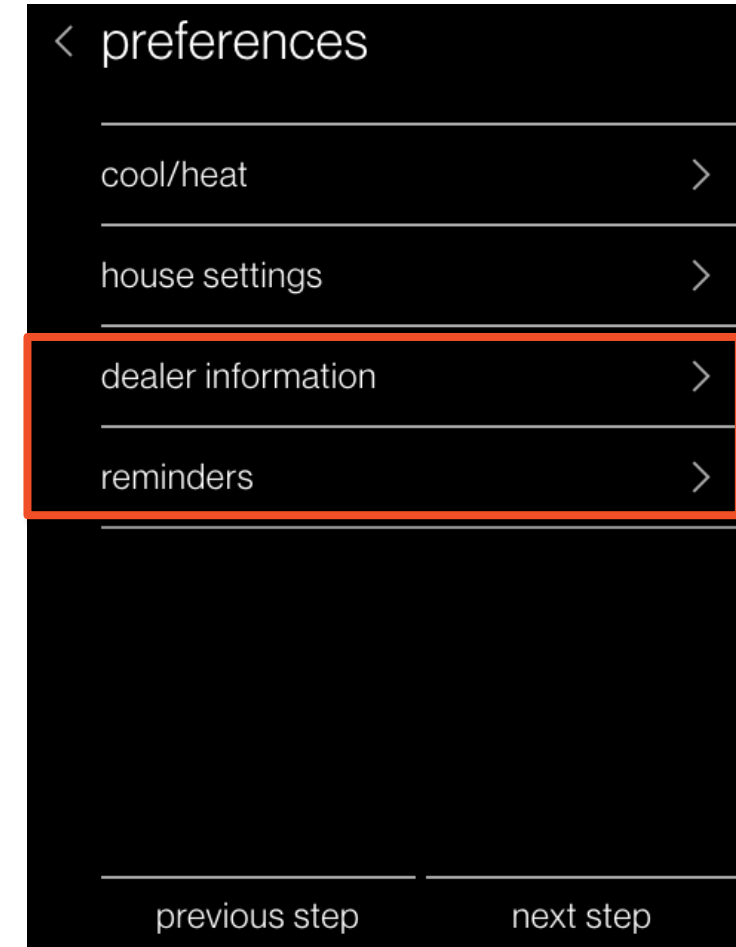
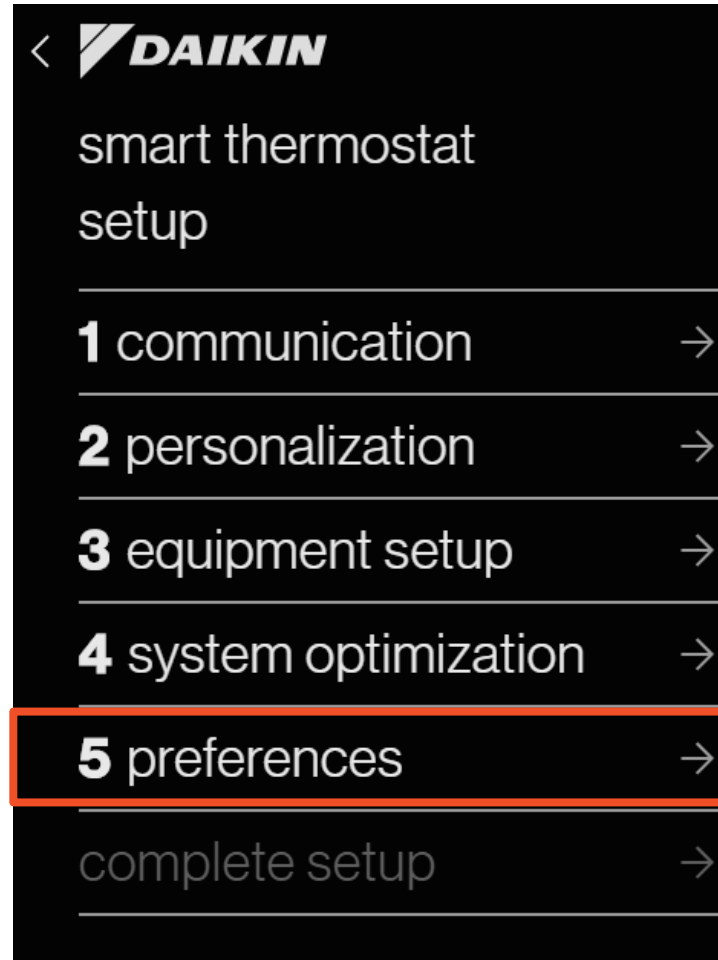
Step 5 - Preferences

- 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.

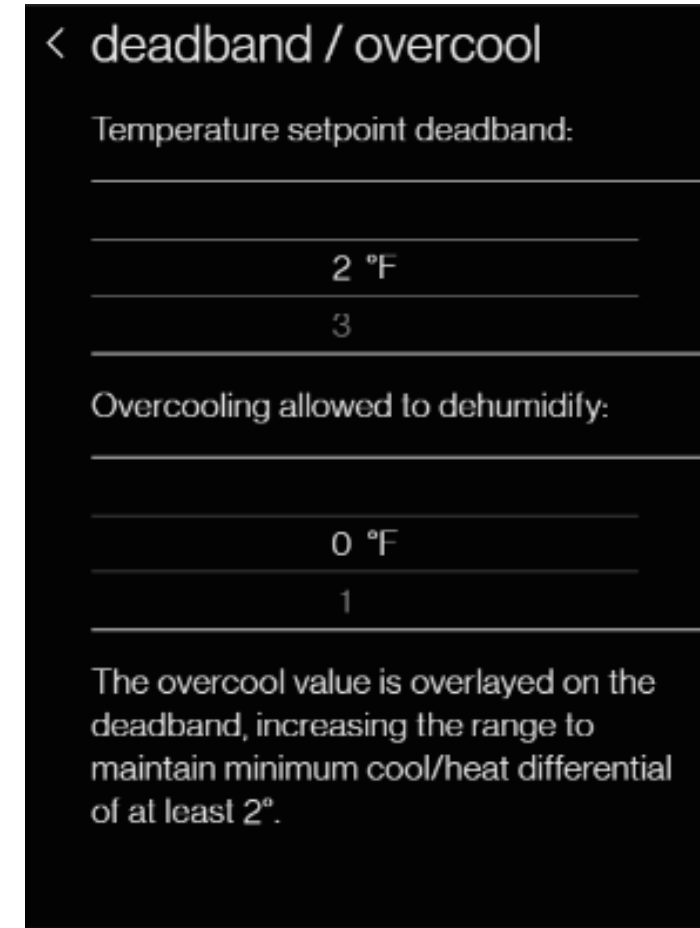
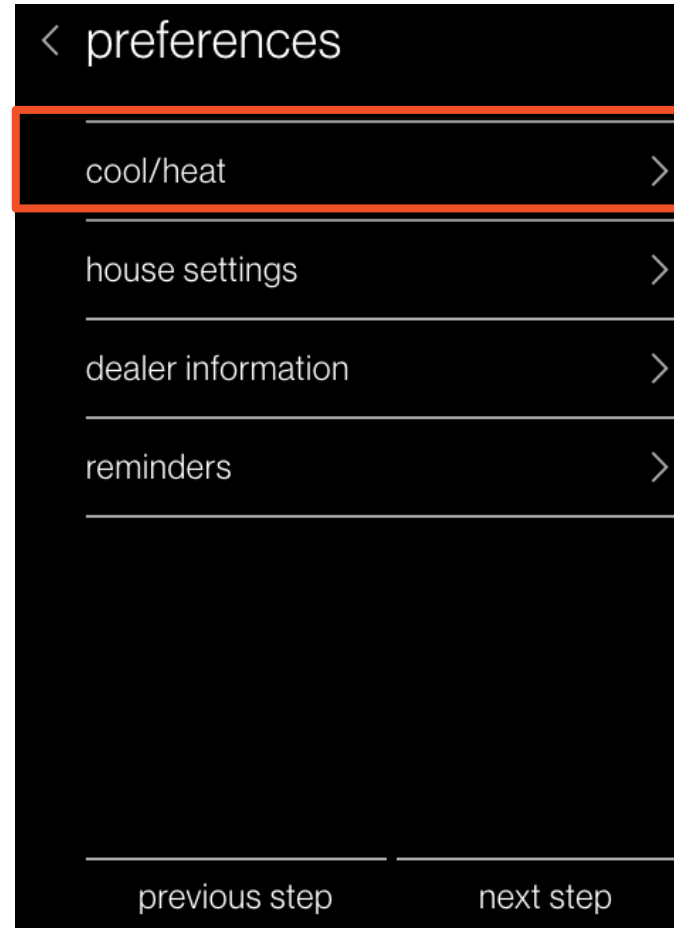


Full Set-up

Step 5 - Preferences

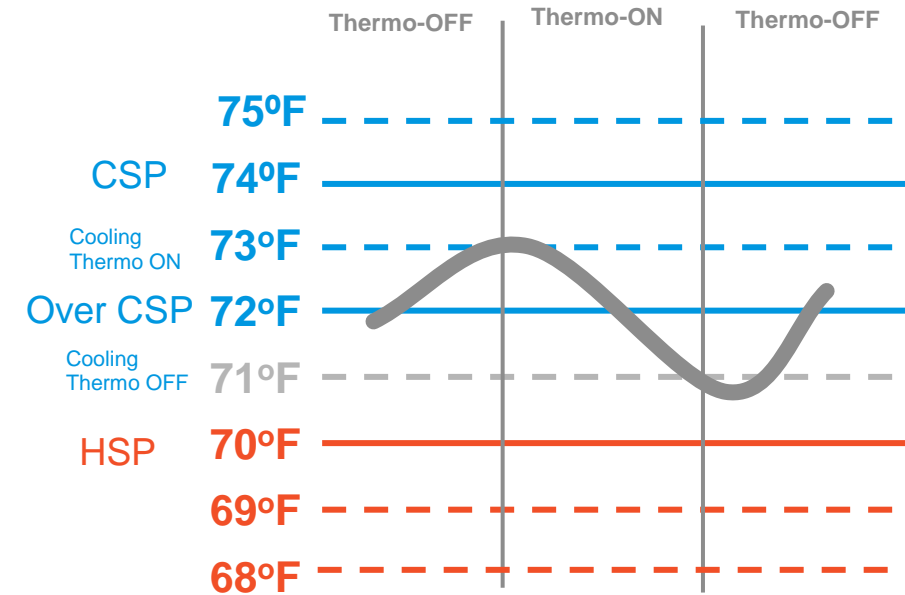
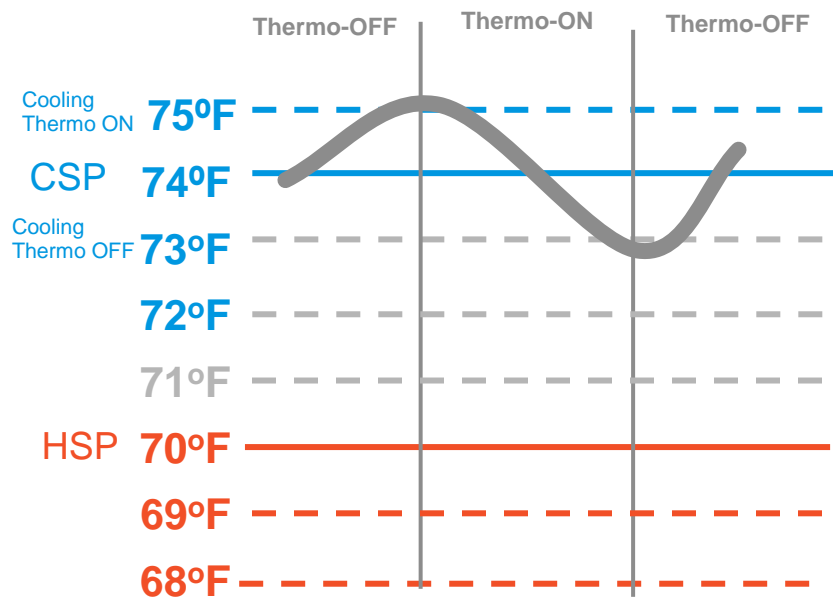
Cool/heat:

- Min/max set points in 1°F increments:
 - heating: 57 to 86
 - cooling: 64 to 90
- Deadband
 - Differential between cooling and heating set point in auto mode.
 - Default: 4°
 - 2°F to 9°F in 1°F increments
- Overcool
 - Default: 0°
 - 0°F to 3°F in 1°F increments



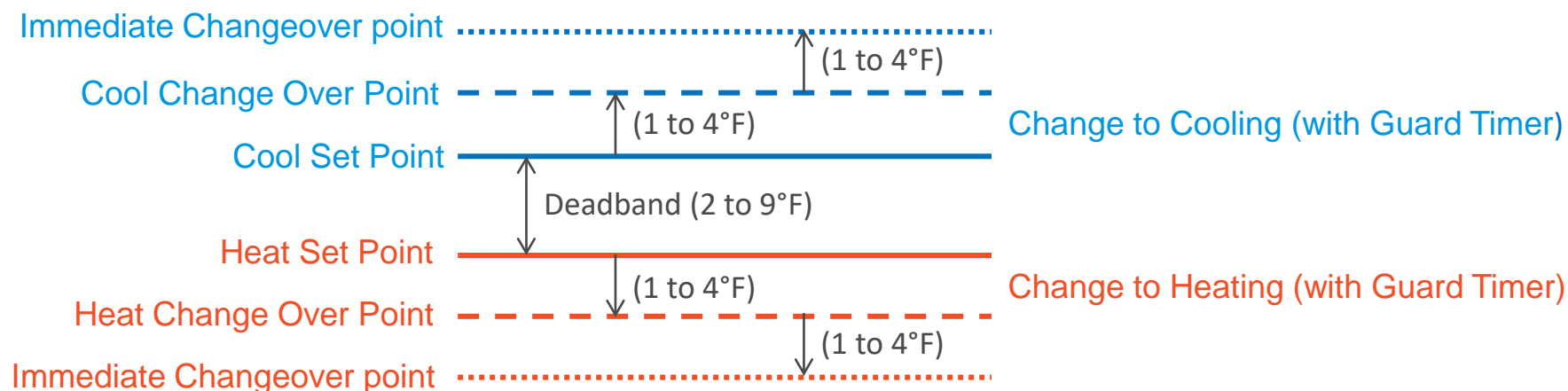
Overcool Example

- The Thermo-ON/OFF deadband is a fixed value ($\pm 1^{\circ}\text{F}$) for mini and multi split indoor unit.
- Thermo-ON/OFF when Overcool =0
 - CSP is the cooling setpoint that assigned by the user and displayed on the Daikin *One+*
- Thermo-ON/OFF when Overcool =2
 - Over CSP is internally calculated and is not displayed on the Daikin *One+*



Step 5 - Preferences

- Auto changeover methods:
 - 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(C-COP/H-COP)(default), immediate 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.**



Dealer information

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

< preferences

cool/heat >

house settings >

dealer information >

reminders >

previous step

next step

< dealer information

name some dealer >

phone (123) 456-7890 >

email hello@example.com >

website http://www.example.com >

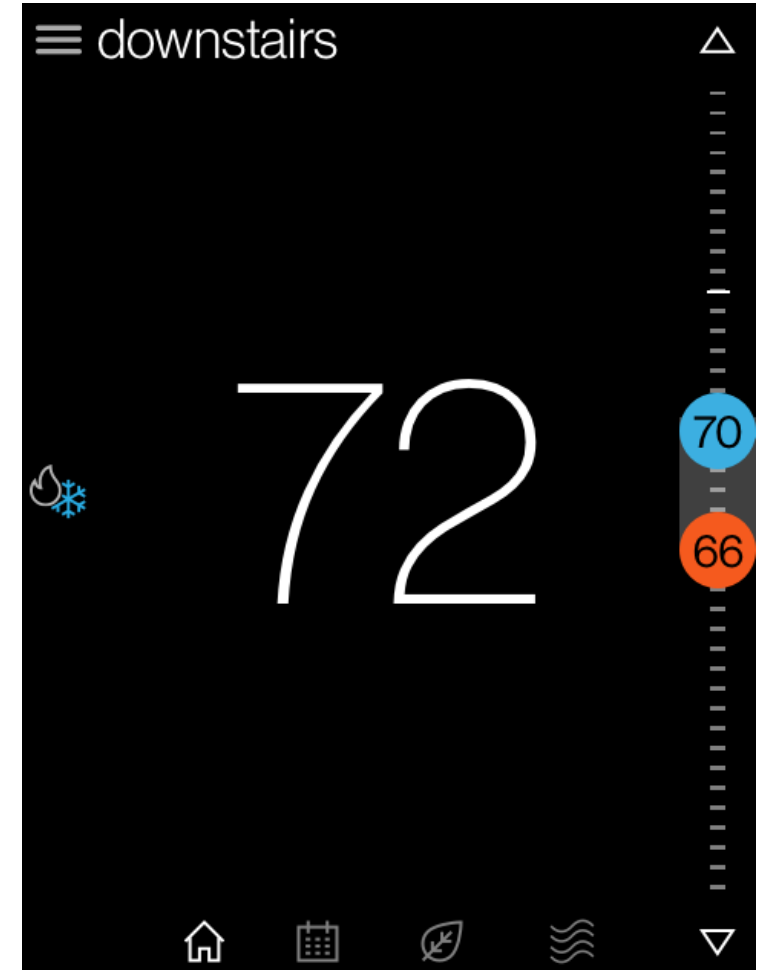
message Thanks for choosing so... >

Full Set-up

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.



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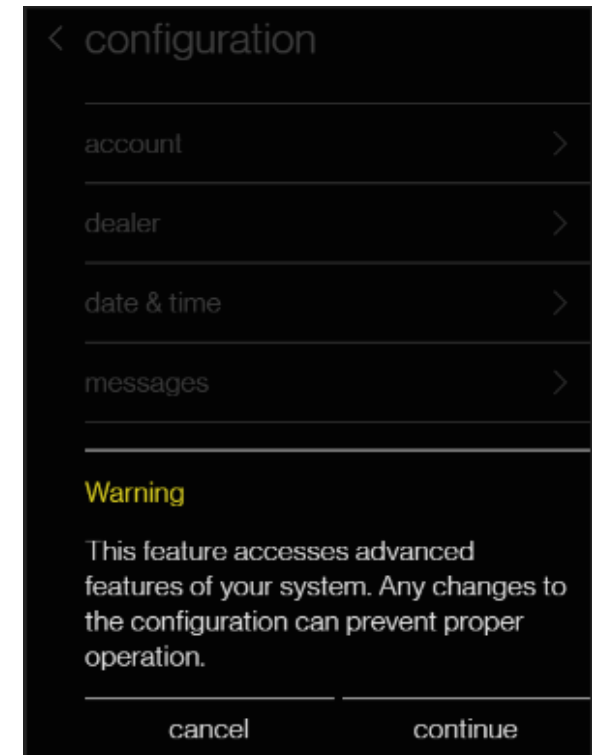
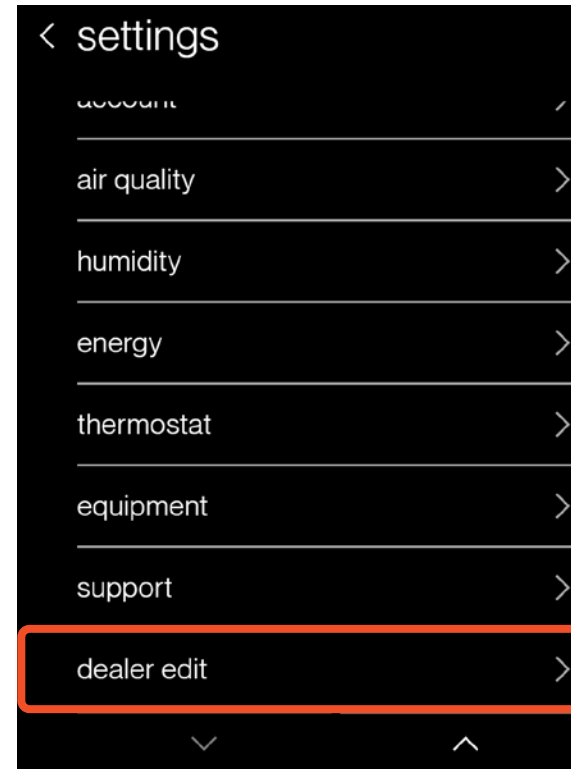
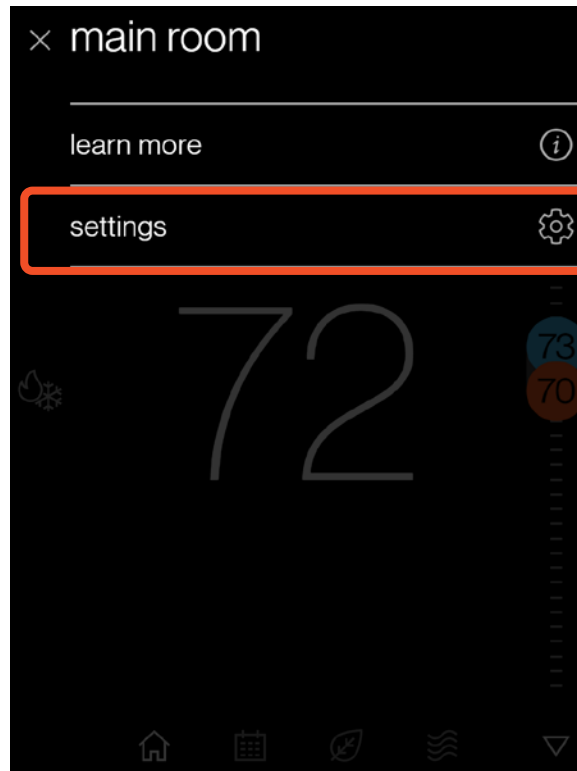
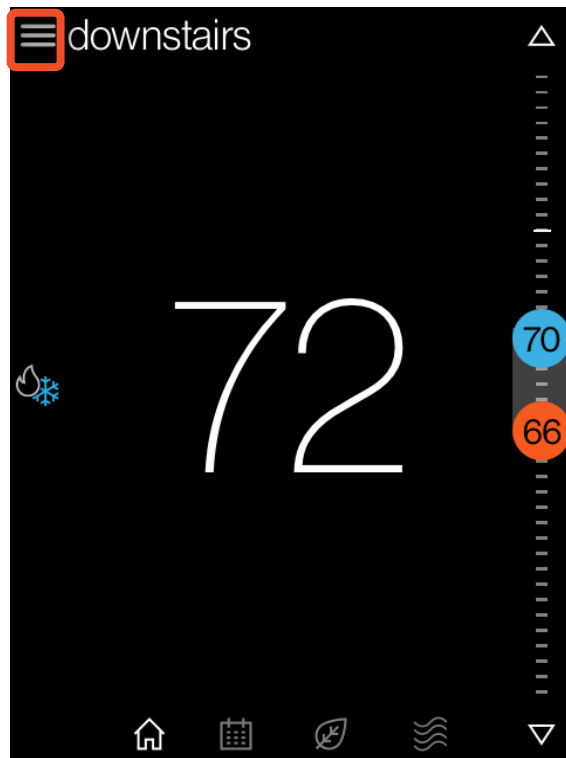
Homeowner Navigation

Mobile Apps

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.




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.

< dealer edit 

Enter your 4-digit PIN to unlock the thermostat:

unlock thermostat 

q	w	e	r	t	y	u	i	o	p
	a	s	d	f	g	h	j	k	l
↩	z	x	c	v	b	n	m	⌫	
123								done	

dealer edit 

Dealer edit accesses the advanced settings for the thermostat created during the initial setup process.

Each thermostat has a unique installer code used to unlock the thermostat's advanced settings — last four characters of the thermostat's MAC address.

This thermostat's installer code is:

c0fe

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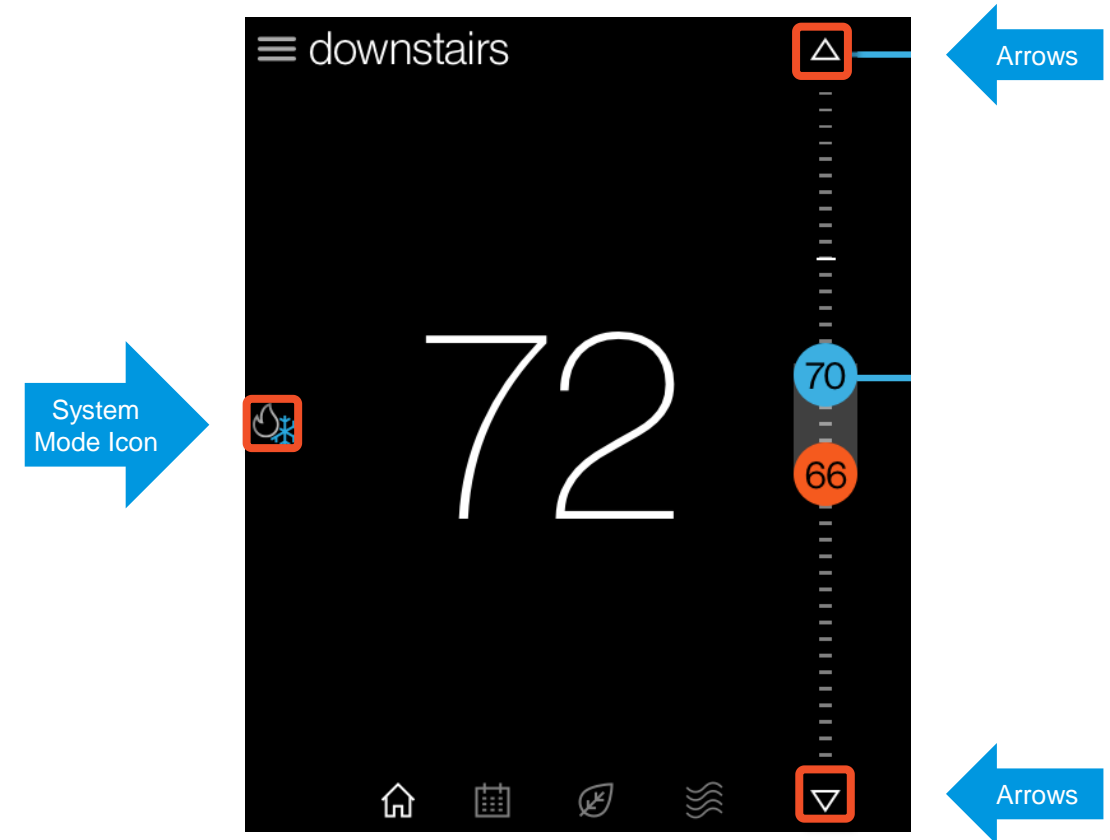
Normal Mode

- 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.
 - Emergency heat. (heat pump only)
- Tapping the arrow icons or rotating the dial will adjust setpoints that are displayed. You can also slide the setpoints to the desired temperature.

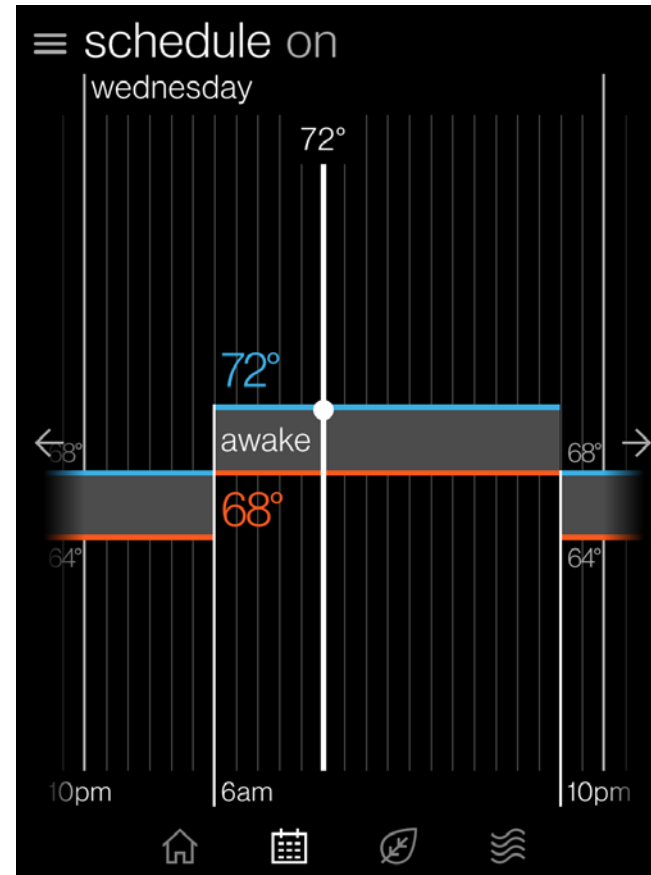


Homeowner Navigation

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 or swipe to enable schedule editing.
- Copy and paste is a feature that makes scheduling seamless.

Note: Unlike other screens, scheduling requires saving edits before exiting the mode.

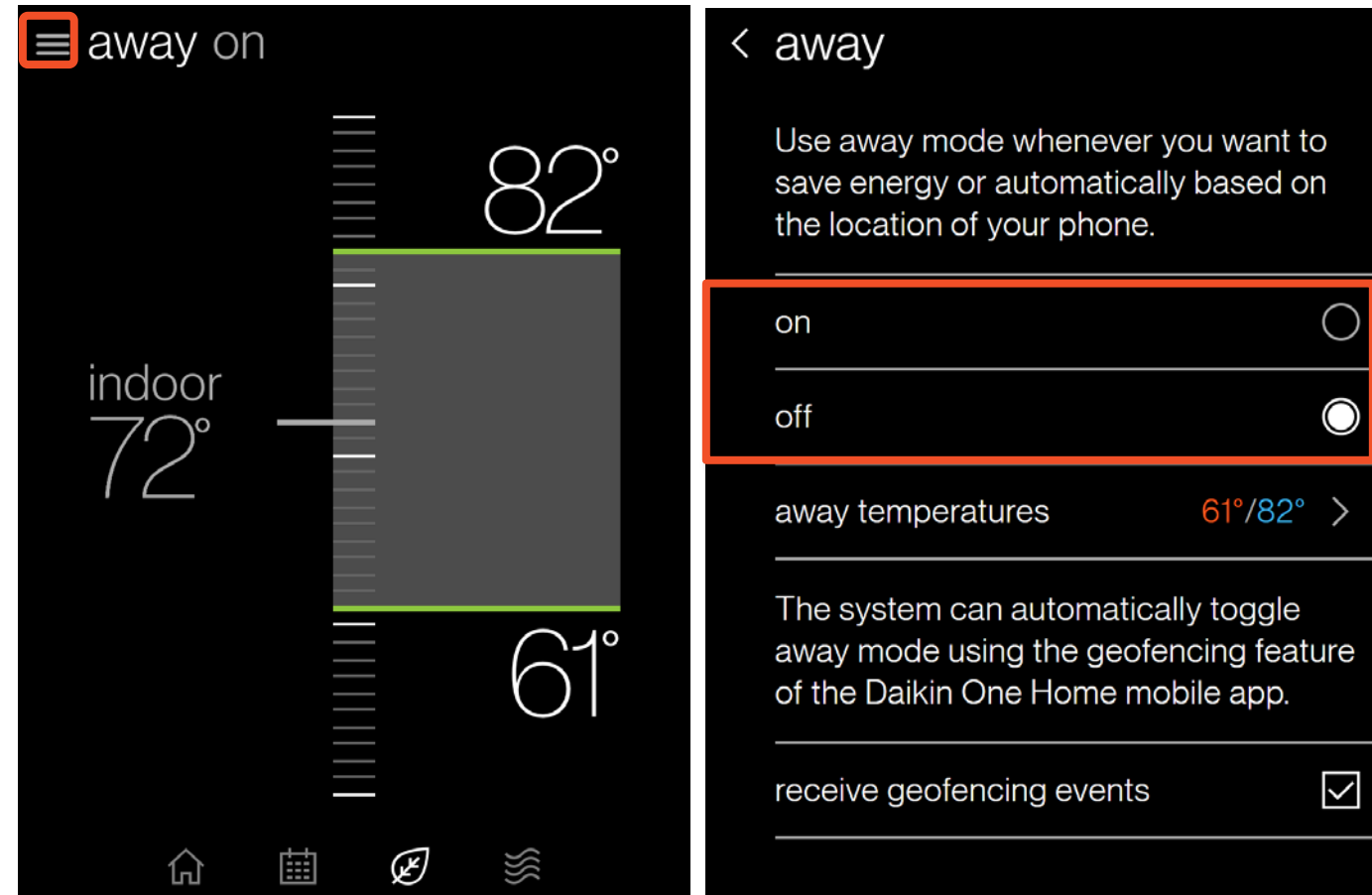


The screenshot shows the 'copy day' screen. At the top, it says 'tuesday' with a dropdown arrow and a close button. Below, there are two sections: 'awake' with a time of 6:00 am and a temperature range of 68°/72°, and 'sleep' with a time of 10:00 pm and a temperature range of 64°/68°. Each section has a right arrow. At the bottom, there is a 'copy day' section with a 'to:' label and a row of seven buttons labeled 's', 'm', 't', 'w', 't', 'f', 's'. Below these buttons are 'cancel' and 'paste' buttons.

Homeowner Navigation

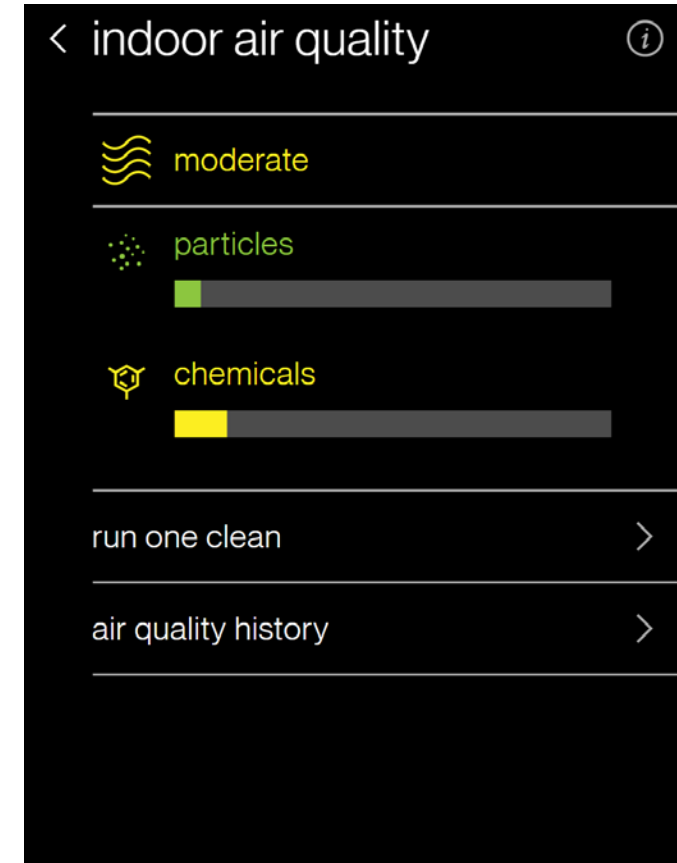
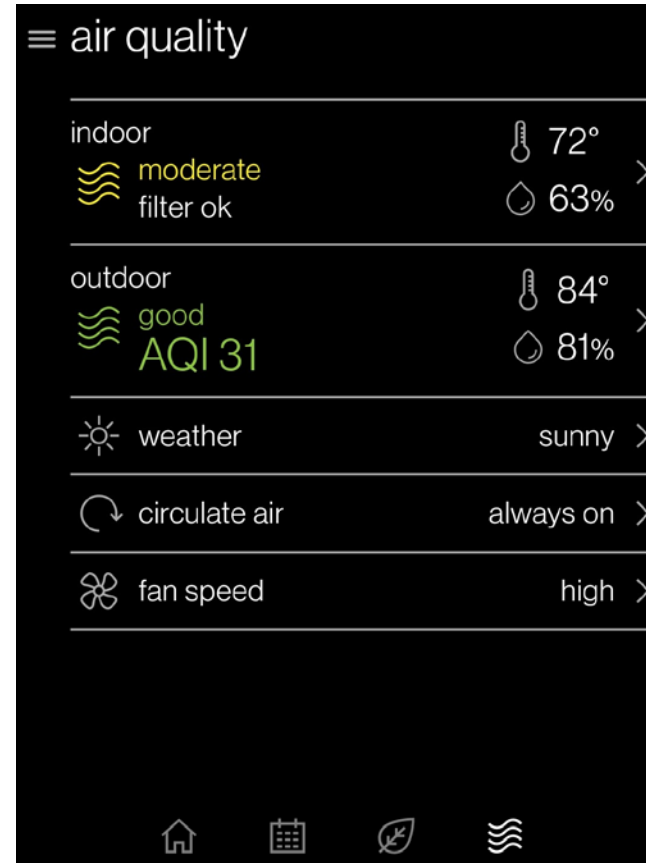
Away

- 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 application, enabling geo-fencing will automatically switch to away mode when **outside** the radius.
 - Settings must be configured in the mobile application.



Air quality

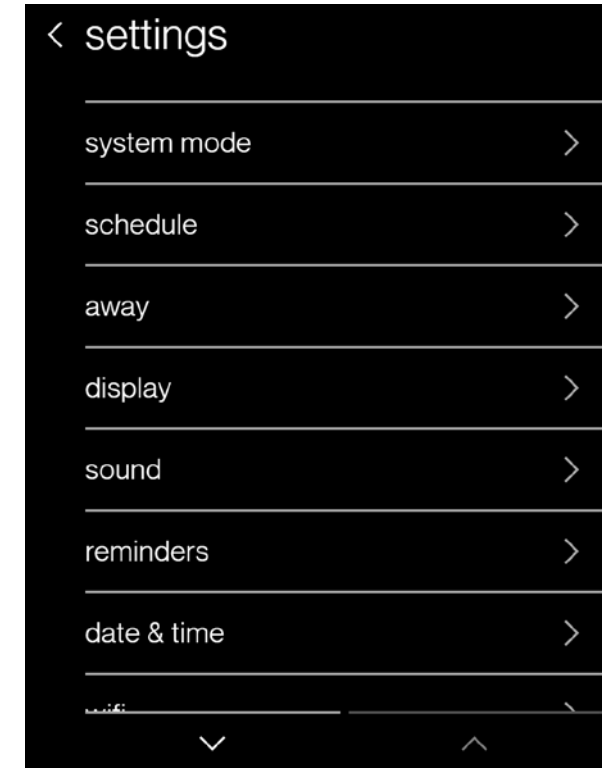
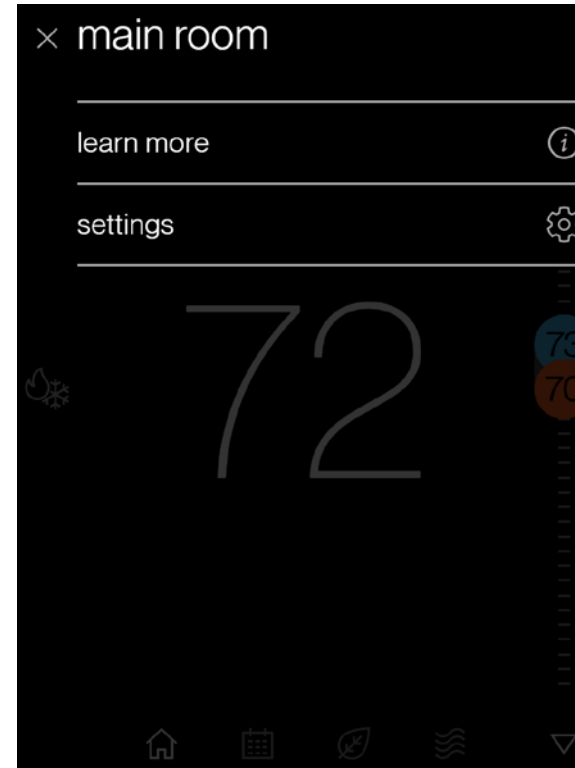
- The air quality screen displays **indoor air** quality levels, **outdoor air** quality, and **weather** (when connected to the internet and paired with the app.)
- If air quality sensors **are not** installed, indoor air quality is based on filter life cycle and humidity values.
- Selecting indoor air quality from the air quality screen allows you to access **one clean** and **air quality history**.
 - **One clean** runs the fan, at high speed for three hours, to circulate and filter the indoor air.



Homeowner Navigation

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



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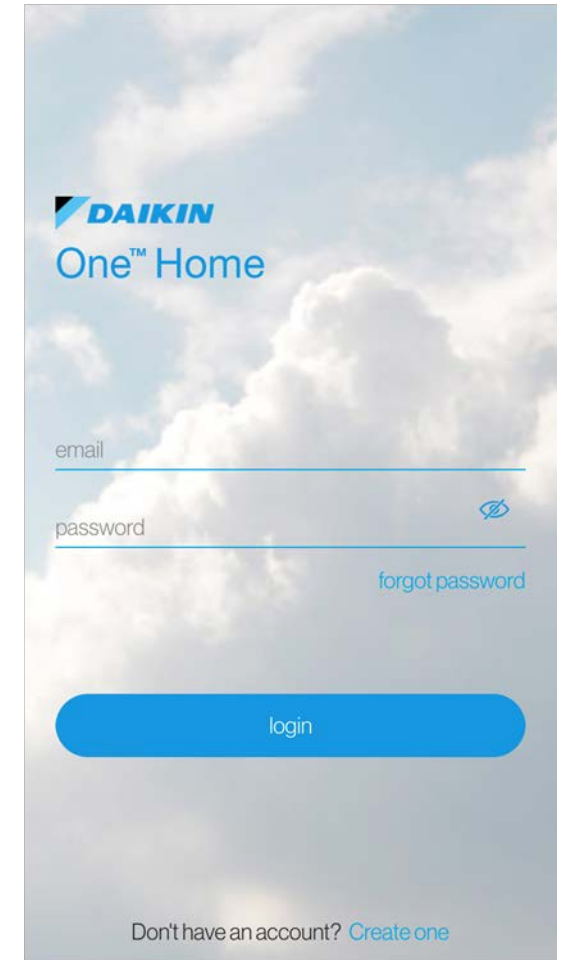
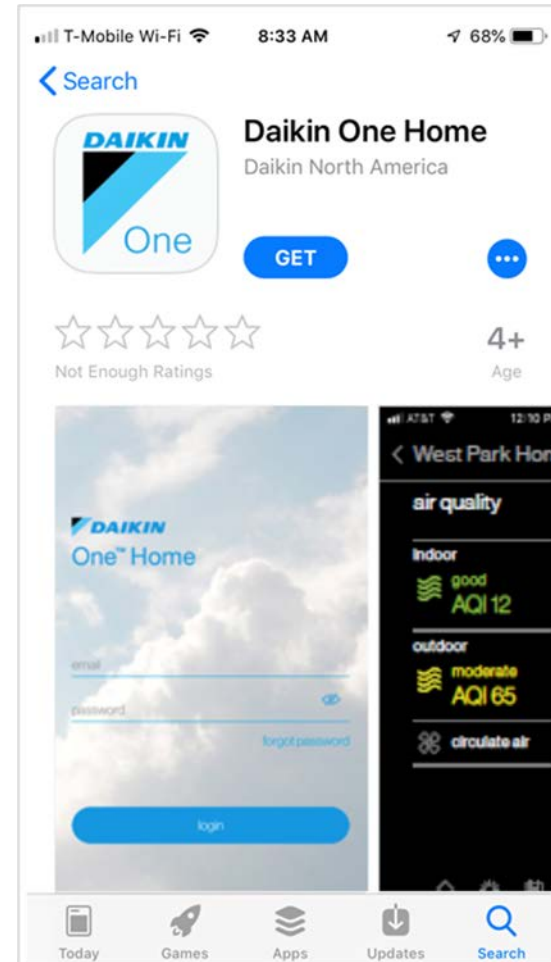
Homeowner Navigation

Mobile Apps

Account set-up

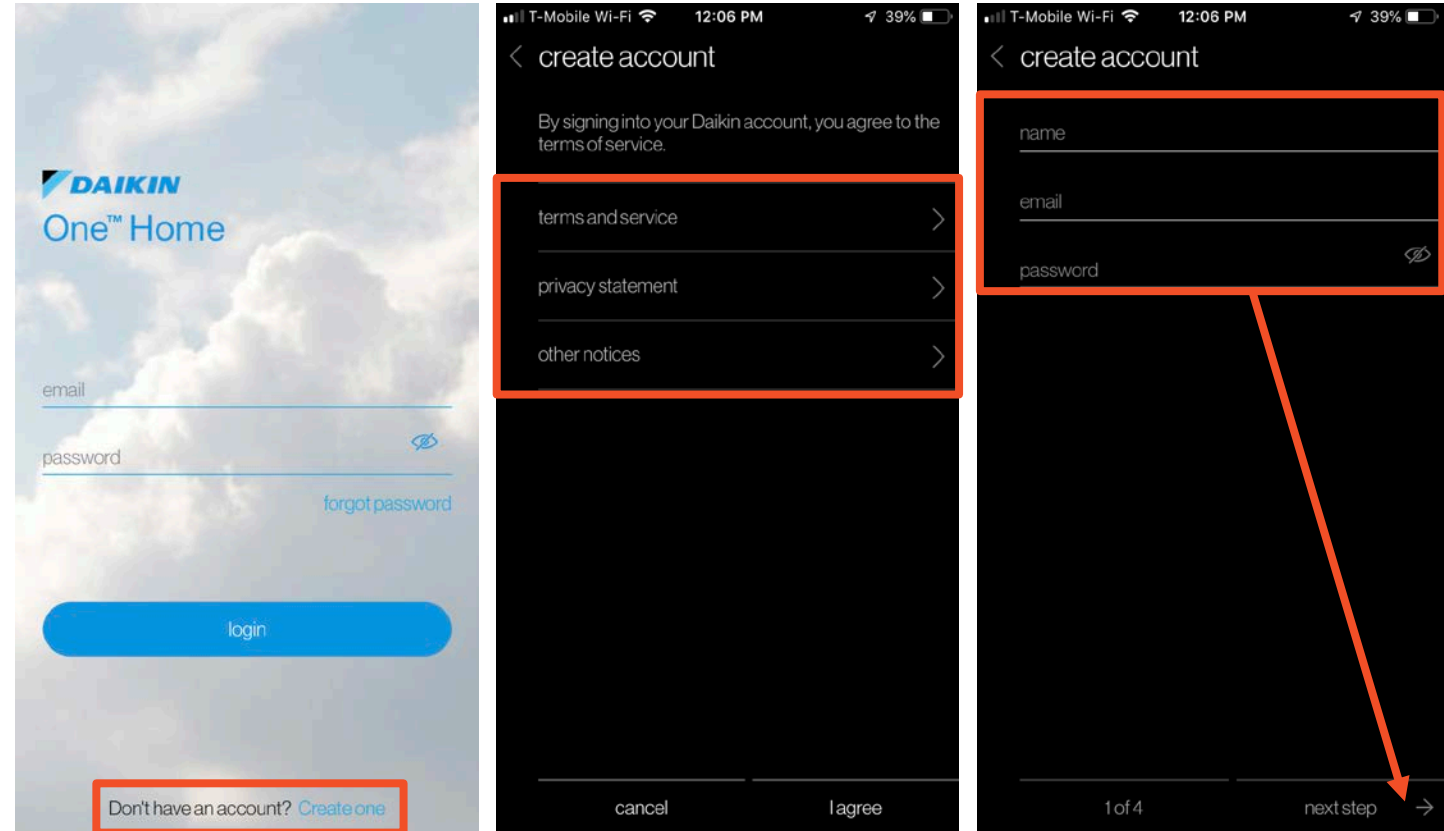
- Setting up an account is a four-step process.
 1. Downloading the application from your IOS or Android application store.
 - Creating the account.
 2. Confirming your account.
 3. Adding the thermostats' location.
 4. Connecting the app to the thermostat.

Note: A mobile device, the **Daikin One+** connected to **Wi-Fi** that is wired to an **S21 system** and a valid **email address** is needed to create a mobile account.



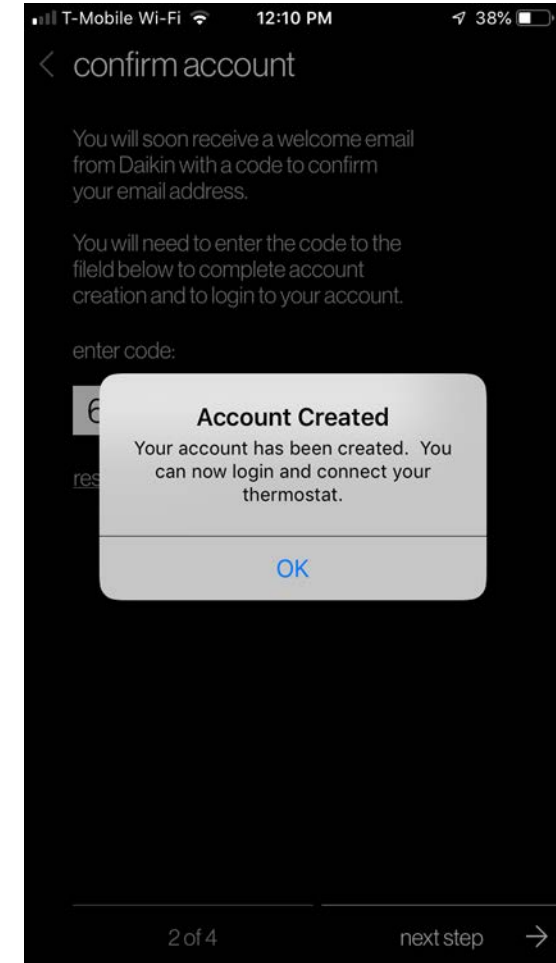
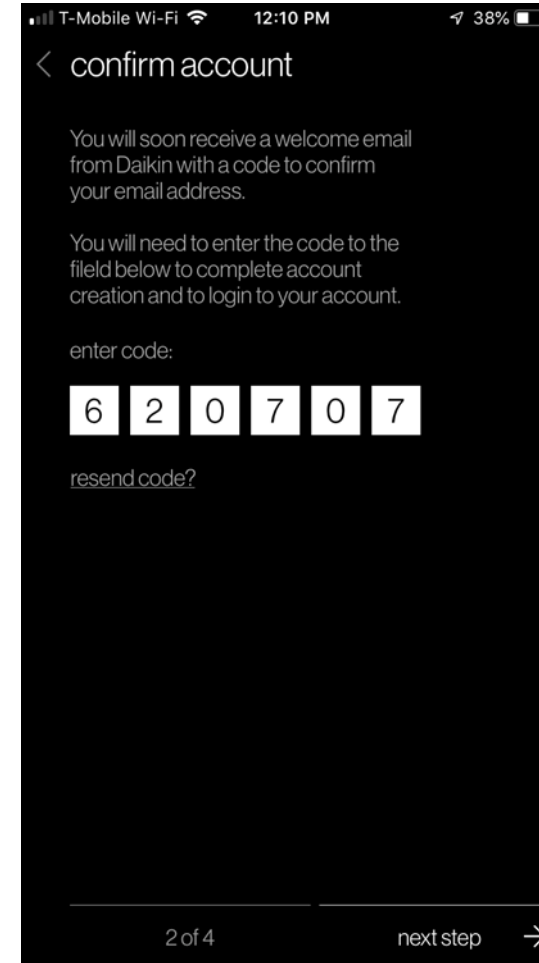
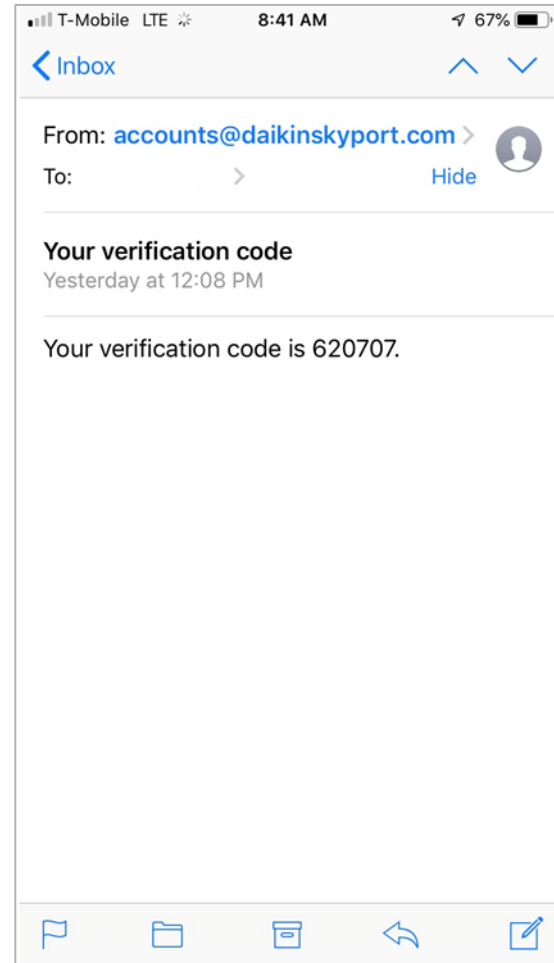
Step 1 - Create the account

- Tapping **create one** at the bottom right corner of the login screen will start the process.
- **Before** agreeing, read the terms and service, privacy statement, and other notices.
- Fill in your name, valid email address, and password.



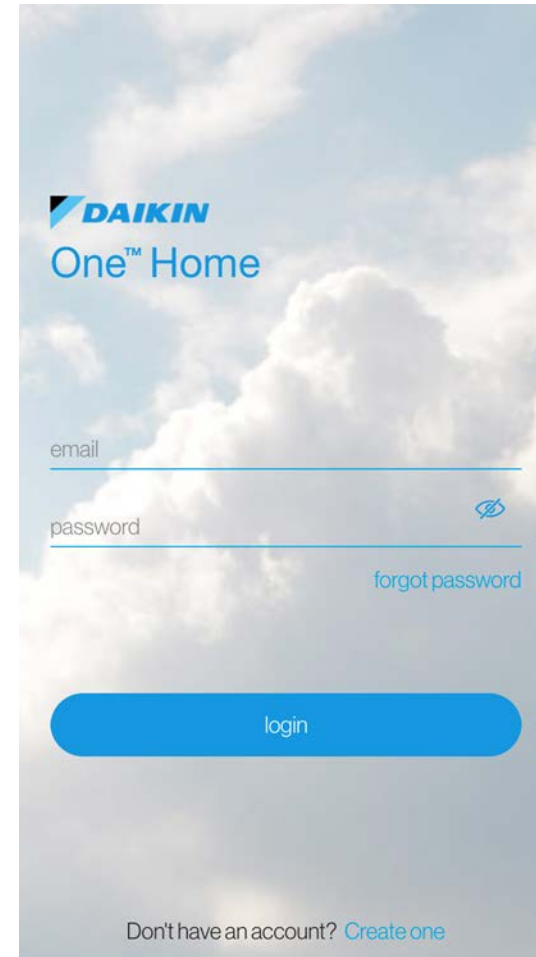
Step 2 - Confirming the account

- You will be prompted to access the **email address** you provided when creating the account.
- A welcome email will appear in your inbox providing a **six-digit** code.
- Entering the six-digit code on your phone app. will allow you to continue.



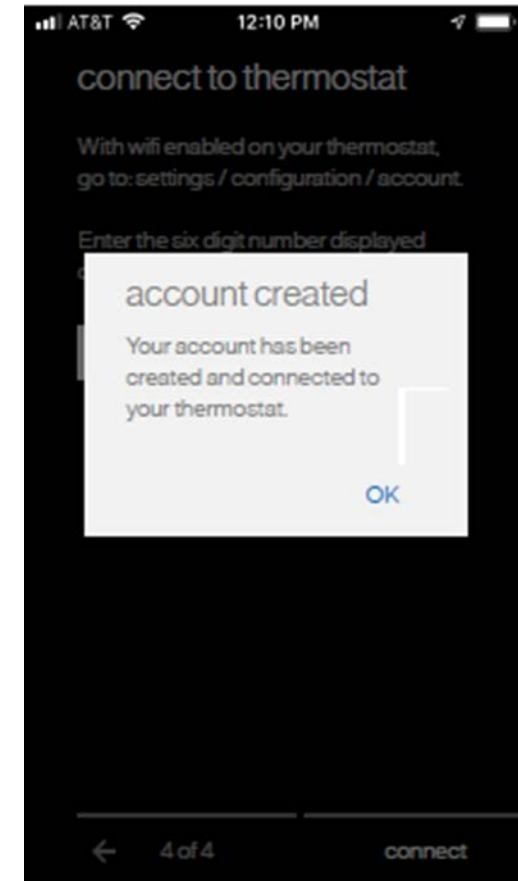
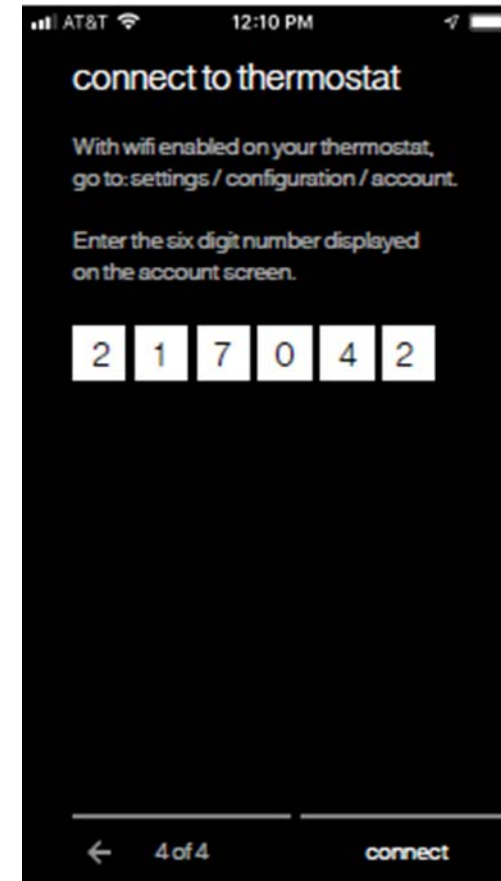
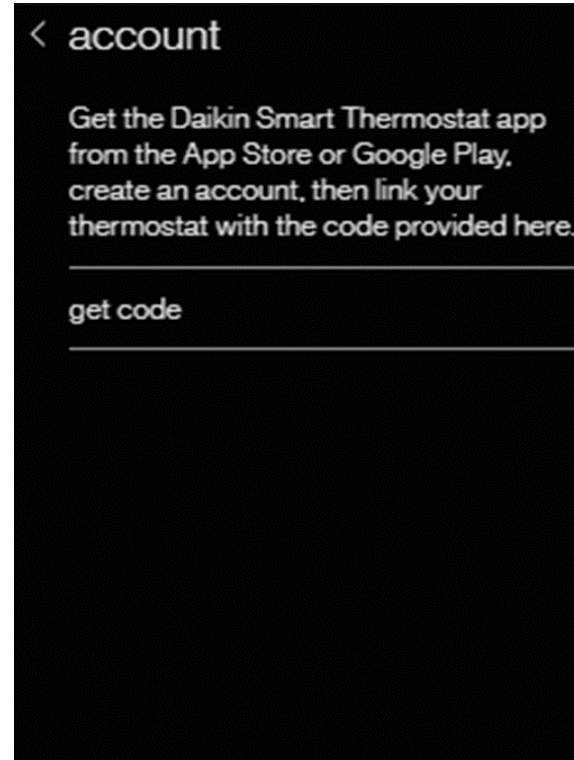
Step 3 - Adding the thermostats location

- Enter the email and password associated to your mobile account and tap the login button.
 - If you have forgotten your password, tap the forgot password link to recover information via email.
- Type the address of where the thermostat is located to gather accurate information.

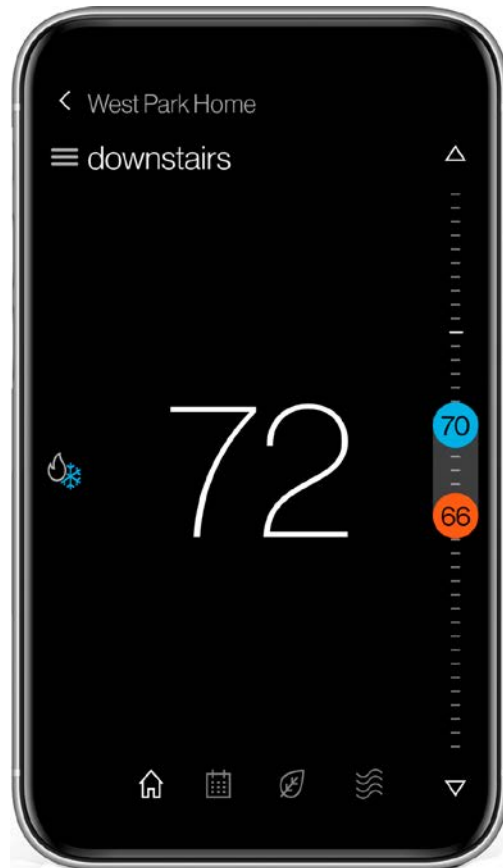


Step 4 - Connecting the App to the thermostat

- With wifi enabled on your thermostat, access your account to retrieve the six-digit code.
- Type the six-digit code displayed on your thermostat into the space provided on the mobile app.
- Tap connect to continue and operate the Daikin One+ from your mobile device.



Mobile Apps



Visit Daikinone.com for additional information

