Daikin One+ Installation & Commissioning

Technical Training Module TRC-3
Daikin One+

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Daikin One+

- **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.
Daikin One+

- Offers two-way communication when combined with Daikin’s smart inverter HVAC systems.
  - Daikin FIT system air conditioners and heat pumps, residential inverter air conditioners and heat pumps, two stage air conditioners and heat pumps.
  - Also includes the Daikin One ecosystem of indoor air quality modules, which provide an integrated solution for temperature control and air quality.
- Serves as a cloud-connected hub and controller for communicating HVAC systems.
Daikin One+ Interface

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

- Set service reminders to maintain your system.
- Preset reminder options include:
  - Filter replacement/clean
  - Air quality
  - UV bulbs
  - Dehumidification Filter
  - Humidifier Pad
  - Fall service
Daikin One+

Messaging

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

**Notes:** Alerts have priority over all other messages in the system
Quick reference cards are packaged with the thermostat to help answer questions during the installation and commissioning.

Scanning the bar code using a QR app on the bottom left corner will link you to a website related to the title of the card.
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Valid System Configurations

**Communicating indoor unit**
- Air handler.
- Furnace.
- EEV coil

**Communicating outdoor units**
- Air conditioning.
- Heat pump.

**Outdoor units**
- 24V single-stage air conditioning
Installing Daikin One+

- Mounting the thermostat will be **leveled**:
  - Approximately 5’ from the floor.
  - On a **interior wall** using the included screws.
Installing Daikin One+

- Maximum wire distance between the Daikin One+ and the indoor unit should not exceed 100 feet using 18 gauge wire.

- Wiring communicating indoor unit to communicating outdoor units
  - Connect 1, 2, C and R from the Daikin One+, to 1, 2, C and R at the indoor unit.
  - Connect wires 1 and 2 from the indoor unit to 1 and 2 at the outdoor unit.

- Wiring communicating indoor unit to non-communicating outdoor units.
  - Connect 1, 2, C and R from the Daikin One+, to 1, 2, C and R at the indoor unit.
  - Connect wire Y1 from the indoor unit to Y1 at the outdoor unit.

1. Data Line 1
2. Data Line 2
C. 24 volt common
R. 24 volt power
Installing Daikin One+

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.
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Commissioning Daikin One+

- Two paths for commissioning a system:
  - Quick set-up
  - Full set-up.

- **Quick set-up** enables installers to run emergency heating or cooling before completing the full set-up process.

- **Full 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 commissioning workflow uses the **auto-discovery** process, on the ComfortNet, to identify equipment in the home.

- The screens are populated based on the model numbers of the discovered devices, matched to a database of device configuration settings.
Commissioning Daikin One+

- Start-up screen is displayed upon powering the thermostat.
- The welcome screen displays basic instructions.
- An explanation of two set-up options is displayed on the learn more screen.
- Demo mode displays a quick video of the full set-up and a few home owner navigation features.
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Quick Set-up

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Quick Set-up

Start-up

- Tapping **begin quick set-up automatically** searches for properly connected equipment.
- Quick set-up enables the installer to get the system running with **default settings**.
- Identifies the installed equipment. Units that are equipped with **inverters** will go through a **system test**.
- With no changes to the equipment list or their settings, the dealer finishes quick set-up.

### equipment setup

- heat pump DZ20VC
- air handler DV25PECB14AA
- media filter
- add equipment
- continue quick setup
Quick Set-up

System Test

- The system verification test should be run for the inverter units before proceeding to complete set-up and can run approximately for 5-15 minutes.

Note: You cannot stop the system test. There is no system test for 2 stage.
Quick Set-up

- A prompt for charge mode will appear.
- When the thermostat is configured, tapping **complete quick set-up** will display the primary screen.

**Note:** Once the thermostat is commissioned using the quick set-up option with default settings, you should return to the **full set-up** option in order to ensure that the system is properly commissioned.
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Full Set-up

Start-up

- Tapping **full set-up** starts the five step set-up process:
  - Personalization.
  - Communication.
  - Equipment Set-up.
  - System Optimization.
  - Preferences.

- Full set-up ensures the system is configured properly and ready for the homeowner to use.

**Note:** All steps must be reviewed before completing full set-up.
Full Set-up

Step 1 - Personalization

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

**Note:** Tapping Daikin logo returns to welcome screen.

```
< personalization

<table>
<thead>
<tr>
<th>language</th>
<th>english</th>
</tr>
</thead>
<tbody>
<tr>
<td>date &amp; time</td>
<td>2/19/2019, 1:17 PM</td>
</tr>
<tr>
<td>device name</td>
<td>main room</td>
</tr>
<tr>
<td>units</td>
<td>fahrenheit</td>
</tr>
</tbody>
</table>

previous step  next step
```
Full Set-up

Step 2 - 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.
Full Set-up

Step 3 - Equipment Set-up

- Displays equipment found by searching the *communication network*, or by adding/removing equipment and accessories from the preset list.

- There are options to view and optimize settings that apply to the installed units.
  - View unit Specifications.
  - Configure
    - Cool settings
    - Heat Settings.
    - Heat Pump Settings
    - Humidifier Relay
    - Aux alarm
    - Heater Kit
Full Set-up

Added Equipment

- The Daikin One+ thermostat is compatible with multiple accessories.

- Dehumidifier
- Humidifier
- *Daikin One™ Air Cleaner*
- UV Lights for Coil Treatment
Full Set-up

Step 4 – System Optimization

- System optimization displays:
  - System test.
    - Inverters only.
  - Charge mode.
    - Inverters only.
  - Optional test.
  - Error history.
    - Logs alerts with an error code.
      - White=not critical, Yellow=critical
  - Calibration.
  - Status

Note: (*)Indicates step not completed.
Full Set-up

System Test

- The system verification test should be run for the inverter units before proceeding to complete set-up.

- To proceed through the set-up process, the system test needs to be completed without any errors.

- When the tests are completed, the run test screen is displayed.
Full Set-up

Charge Mode

- Selecting **charge mode** allows for a steady system operation for approximately 1 hour to allow for refrigerant charging of the system via the suction charge port.

- The system will stop after completion.
Full Set-up

Optional Tests

- Each optional test has a short description.
- Optional tests display a **stop test** button while test is running.

**Note**: Scroll through lists by tapping the up and down arrows.
Full Set-up

Status

- The status menu displays data pertaining to the selected equipment.
- The scrollable list can be accessed any time by returning to the installer set-up screen.
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:** Changing preferences is not required, but reminders and dealer contact information should be inputted.
Full Set-up

Reminders

- The number of reminders are based on the installed equipment with accessories.
- Once the equipment has been added, a 1 – 24 month service reminder can be selected for the installed equipment.

Note: The homeowner cannot edit service reminders.
Full Set-up

Dealer information

- Selecting allows you to enter and review the dealers information.
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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Normal Mode

- Normal mode allows you to view messaging, temperature, and access settings to make adjustments within the parameters placed by the installer.
- Navigating is accomplished by tapping icons or turning the analog dial.
- When away, a screen saver will appear until the proximity sensor identifies a nearby object.

Note: Analog turn dial is used to adjust temperature only. Pressing the dial returns to the home screen.
Homeowner Navigation

Adjust control

- Tapping the system mode icon allows you to select:
  - Auto. (cool & heat)
  - Cool.
  - Heat.
  - Off.
  - Emergency heat. (heat pump only)

- Adjustments to setpoints are displayed by tapping the adjust icon or turning the analog dial.

- Change setpoints by rotating the dial or touching the screen to drag and drop to your desired temperature.

Note: If the setpoint is lower or higher than the current temperature a temperature direction arrow is displayed.
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.
Homeowner Navigation

**Away**

- The away screen displays the current state (on/off) and the away cooling/heating setpoints used when away is on.
- 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.
Homeowner Navigation

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 circulate air allows you to access **one clean**.
  - **One clean** runs the fan, at high speed for three hours, to circulate and filter the indoor air.

A clean, healthy home environment requires circulation and filtration of the air on a regular schedule.

- **circulate air** always on
- **fan speed** low
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 wifi.
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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 **wifi** that is wired to an **indoor** and **outdoor** unit and a valid **email address** is needed to create a mobile account.
Mobile Apps

**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.
Mobile Apps

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.
Mobile Apps

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.
Mobile Apps

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