ecoer

EST01 Wi-Fi Programmable Thermostat

Install and User Guide

Appearance of the product may vary.

Features

- Compatible with most 24V controlled heating, cooling, and heat pump systems

- Set your temperature remotely from your smart phone

- Wi-Fi connectivity through App

- 4.3'' touch screen LCM display

- Quick connecting terminals to save installer's time

- Be able to control fan speed of E Series Air Handler for better dehumidification control

- 3-year limited warranty

Caution

ELECTRICAL HAZARD ⚠

Can cause electrical shock or equipment damage. Disconnect power before beginning installation.

EQUIPMENT DAMAGE HAZARD ⚠

Compressor protection is bypassed for Ecoer condensing units. To prevent equipment damage, set compressor protection accordingly for other brand condensing units.
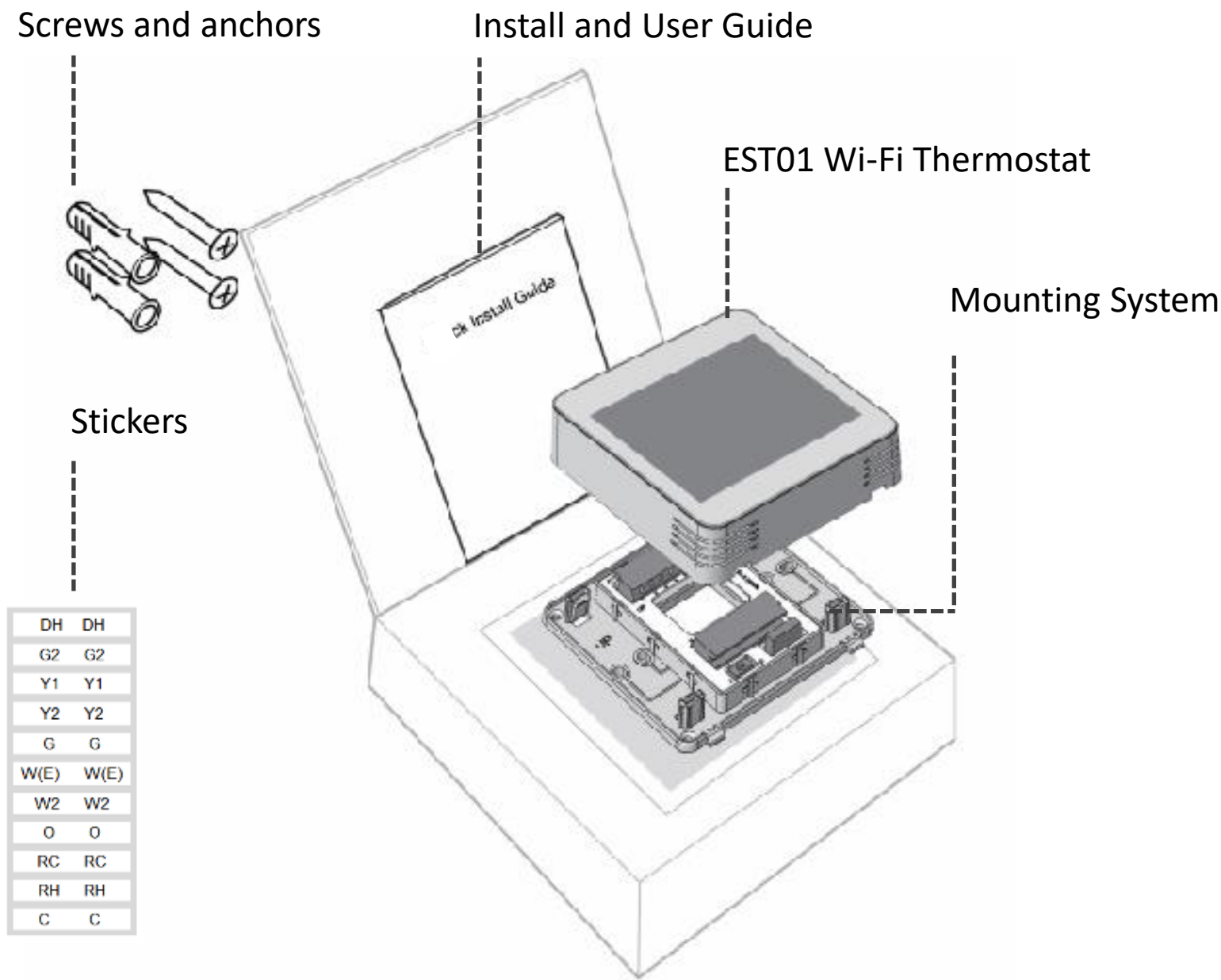
MERCURY NOTICE

If this product is replacing a control that contains mercury in a sealed tube, do not place the old control in the trash. Contact your local waste management authority for instructions regarding recycling and proper disposal.

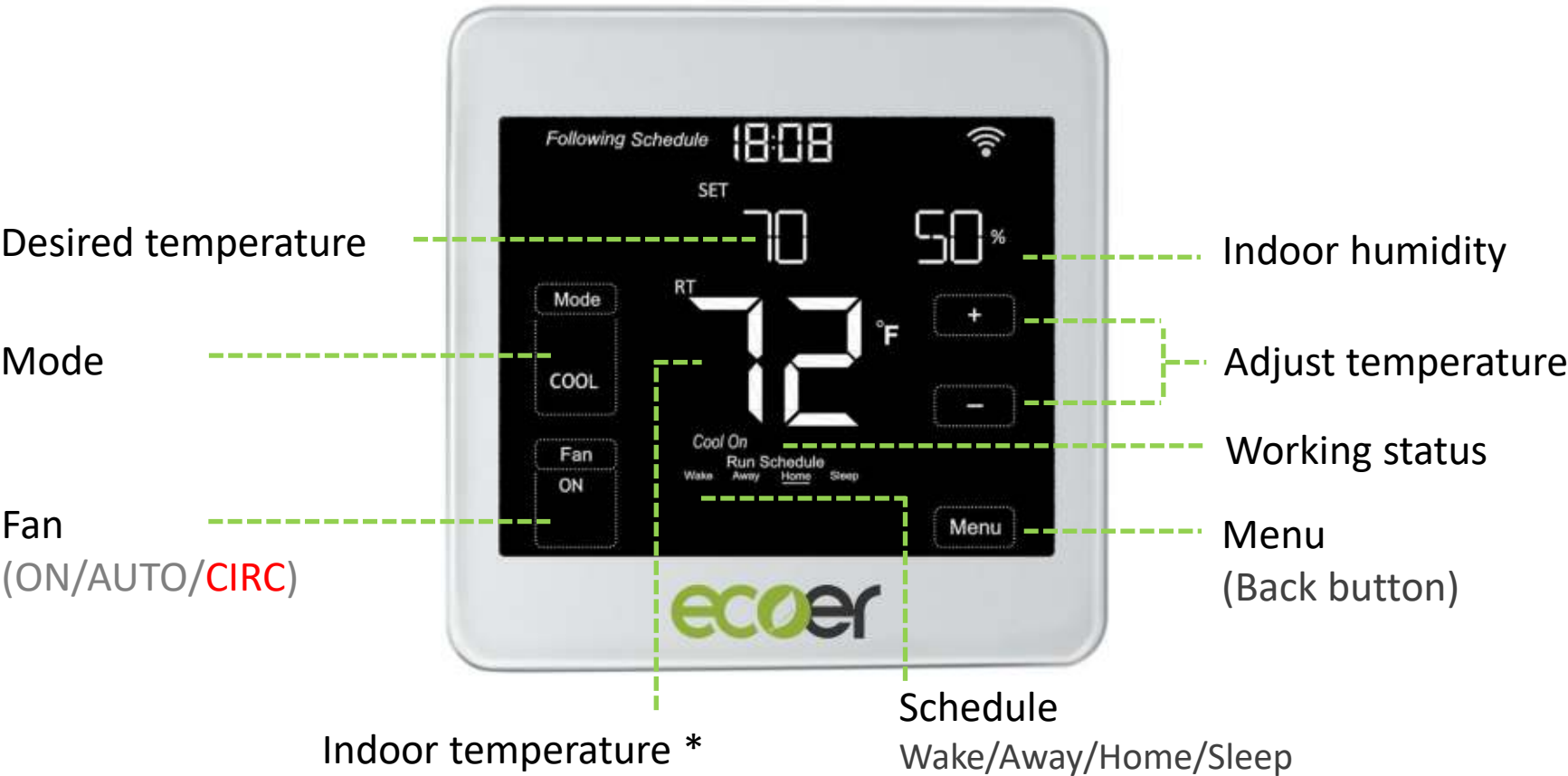**REQUIRED: 24 VAC POWER ("C" WIRE)**

1. Introduction

Parts in the packaging box

Screws and anchors

Install and User Guide

EST01 Wi-Fi Thermostat

Mounting System

Stickers

DH	DH
G2	G2
Y1	Y1
Y2	Y2
G	G
W(E)	W(E)
W2	W2
O	O
RC	RC
RH	RH
C	C

Power supply	AC 24V
Temp. Setting range	50°F to 90°F
Display	Tempered touch sensitive screen
Dimensions (W x H x D)	4in. x 4in. x 0.79in.

Thermostat Layout

Desired temperature

Mode

Fan
(ON/AUTO/CIRC)

Indoor humidity

Adjust temperature

Working status

Menu
(Back button)

Indoor temperature *

Schedule
Wake/Away/Home/Sleep

* The screen will wake up by touching the indoor temperature area

Mode: Select system mode **OFF, COOL, AUTO, HEAT** and **EM HEAT.**

Fan: **AUTO** Runs based on working condition of the compressor.

ON: Keeps running all the time.

CIRC: Circulate the air of indoor periodically when AC/HP stops.

Adjust temperature: Touch **+** or **–** icon to set your desired temperature.

Menu (Back Button): Time setting, working mode, Wi-Fi, Schedule and other settings.

2. Install your Thermostat

**Power off the system before remove your old thermostat.**

Look at the wires going out of the wall and take a photo for reference. Label each wire going into your old thermostat with the provided stickers.

The EST01 Wi-Fi thermostat

- Does not work for 120-240V systems.

- Does not work with millivolt systems.

- Required 24 VAC power supply ("C" wire)

- Does not need jumpers because RC and RH are connected already.

- Does not support universal input (S terminals) for indoor and outdoor sensors.

- Does not support universal relay (U terminals) for ventilation.

EST01 Wi-Fi Thermostat   Screws   Mounting System   Anchors   Wall

3.3in.
2.3in.
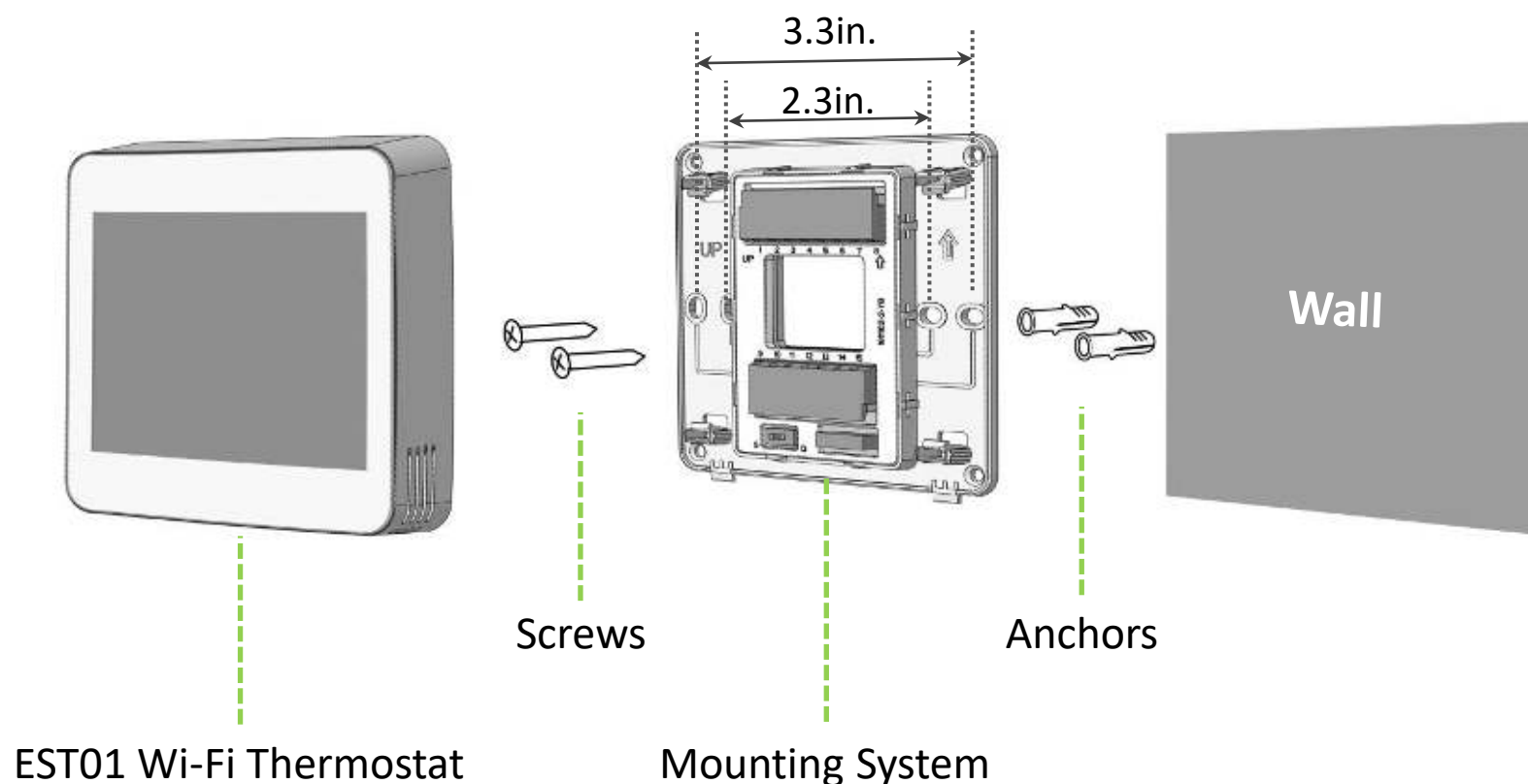
Wiring Terminals in Mounting System
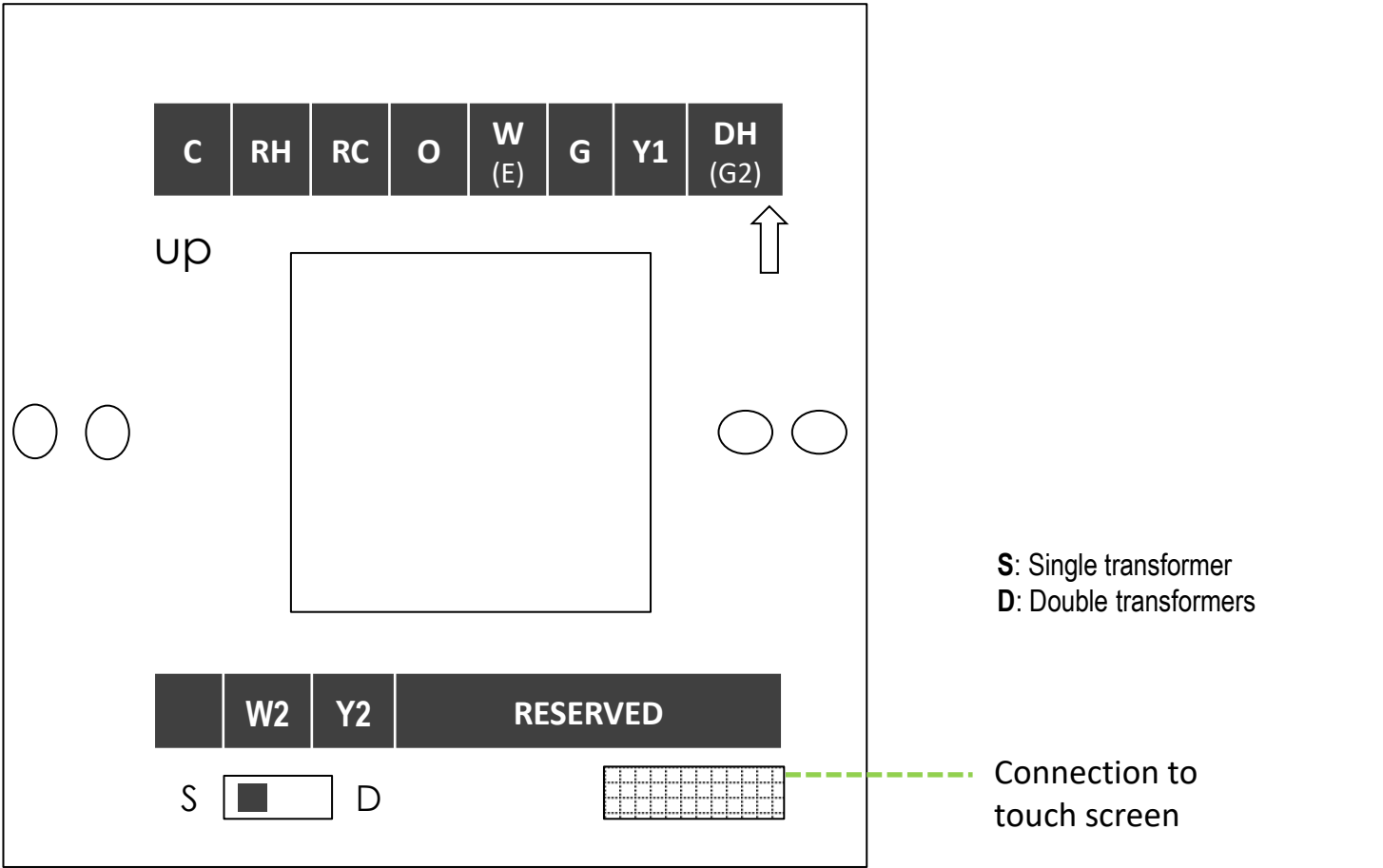
Terminal	Description
C	Common
RH / RC	24 VAC power (RH and RC are already connected each other - *Must Dial to S*)
O	Mode changeover
W (E)	First stage of auxiliary heat or emergency heat for heat pump systems
G	Fan for standard mode
Y1	First stage of cooling or first stage heat pump
DH (G2)	Fan for dry mode
W2	Second stage of auxiliary heat for heat pump systems
Y2	Second stage of cooling or second stage heat pump

3. Setup

3.1 Time Setting

I.   Press **Menu** at homepage, the screen will display **DATE TIME**.
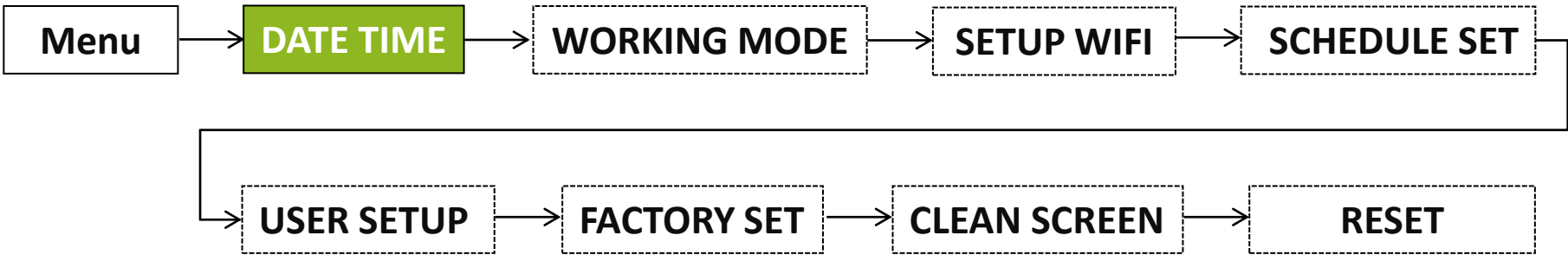
II.   Press **Edit**, the screen displays **SETUP YEAR**, press **+** or **-** to change.

III. Press **Next** to **SETUP MONTH / DATE / HOUR / MINUTE,** respectively.

IV.   Press **Done** to save time setting.

**NOTE:** Press **Menu** during setting will exit you directly and nothing will be saved.

3.2 Working Mode

I.   Press **Menu** at homepage, the screen will display **DATE TIME**, then press **Next** to **WORKING MODE.**
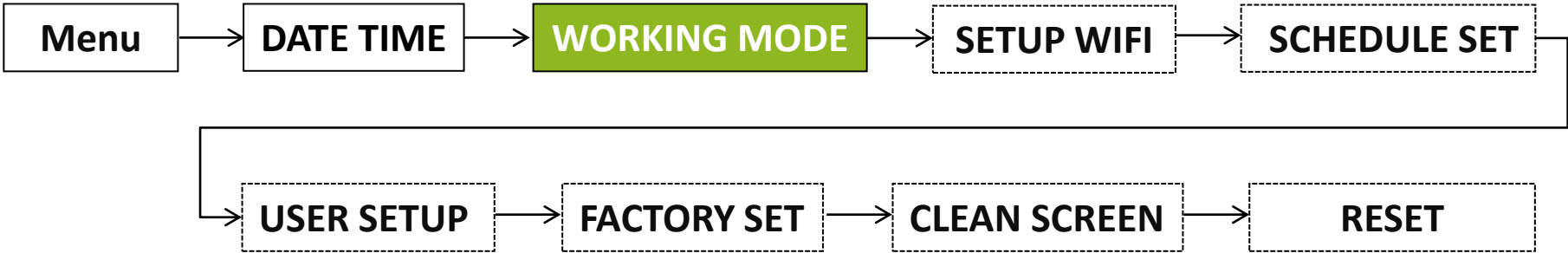
II.   Press **Edit**, the screen displays **HOLD**, press ⌃ or ⌄ to switch between **HOLD** and **SCHEDULE.**

III. Press **Done** to save.

**NOTE:** Press **Menu** during setting will exit you directly and nothing will be saved.
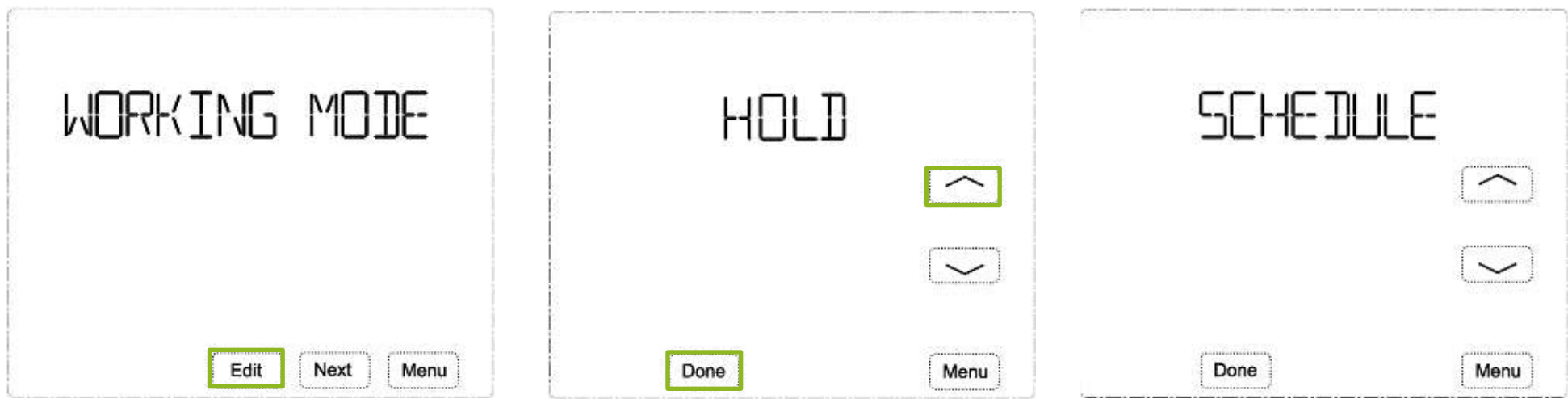
HOLD: Keeps the desired temperature set all the time.

SCHEDULE: Follows 7-day plan (4 time periods per day) *
* To activate the scheduling, it's required to choose AUTO at thermostat homepage or on Ecoer Home App control interface.

Activate 7-day Scheduling by Ecoer Home App

- Select Mode to **Auto**

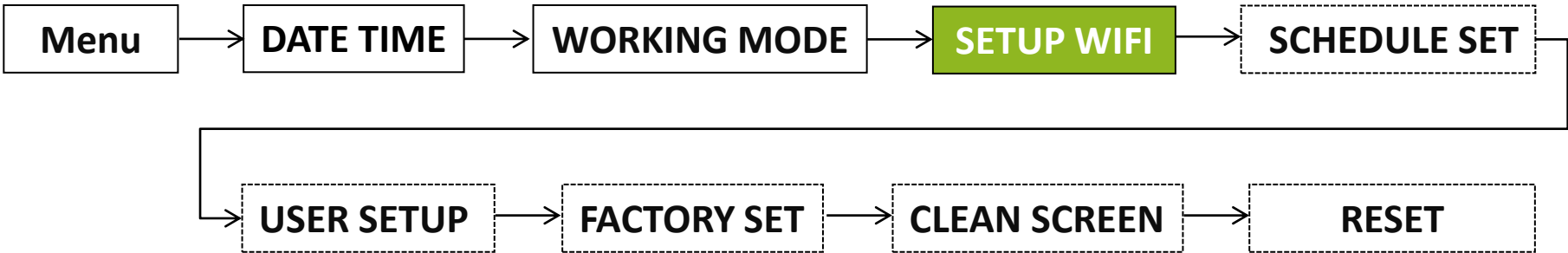- Turn ON Schedule (i.e. Choose '**Follow Schedule**')
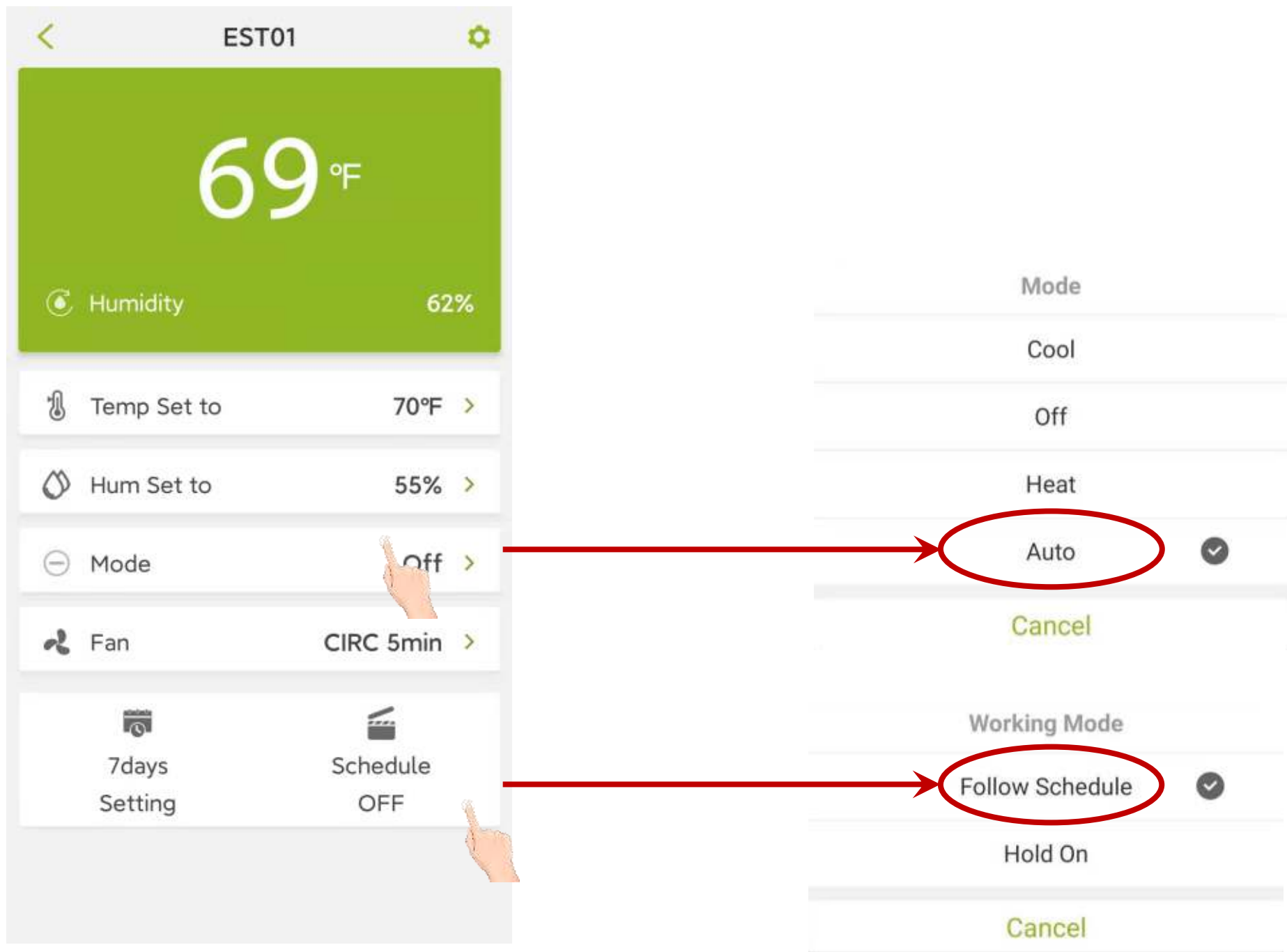
3.3 Setup Wi-Fi

Search **'Ecoer Home**' on Google Play or App Store to install the App.
Register with your phone number or email, log in App to add device.

I.   Press **Menu** at homepage, the screen will display **DATE TIME**, press **Next** twice to **SETUP WIFI.**

Menu	→	DATE TIME	→	WORKING MODE	→	SETUP WIFI	→	SCHEDULE SET

USER SETUP	→	FACTORY SET	→	CLEAN SCREEN	→	RESET

II.   Press **Edit**, the screen displays **SMART MODE***.

III. Press **Done**, then Wi-Fi icon   will blink **120 seconds** on the upper-right corner.

***You may need to try AP MODE** (Wireless Access Point) to connect device if **SMART MODE** does not work successfully.
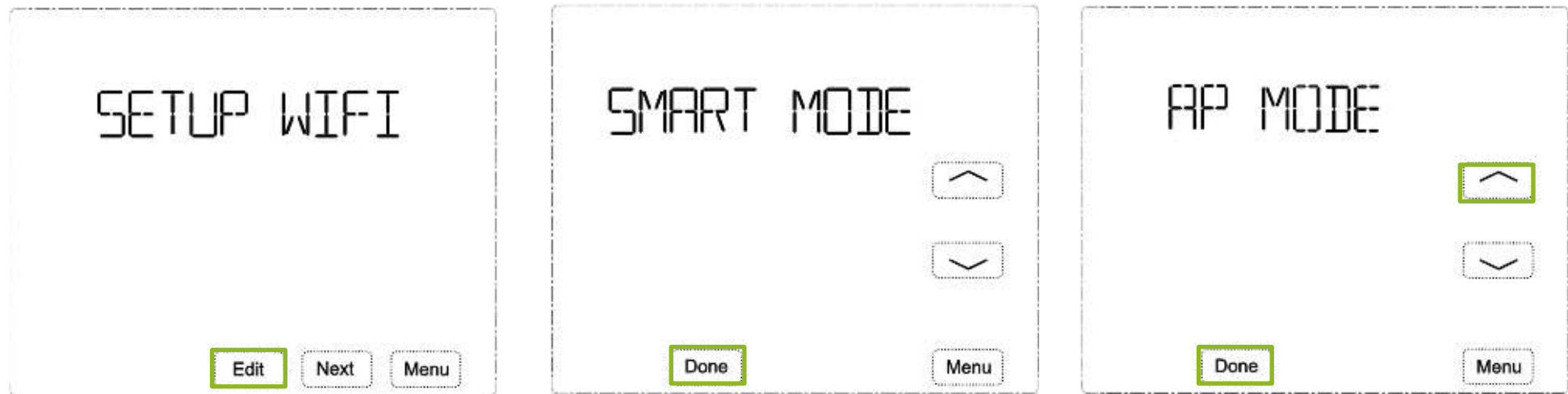
Add device on 'Ecoer Home' App

- Press **+** icon (see *Fig.1*) on the upper-right corner of the App.

- Touch "**Confirm signal icon is blinking**" (see *Fig.2*)

- Connect your smart phone to Wi-Fi (Select **2.4 GHz Wi-Fi** and input password), it takes 30 to 60 seconds to complete (see *Fig.3*). Touch "Help" to trouble shoot if you fail to make it online.
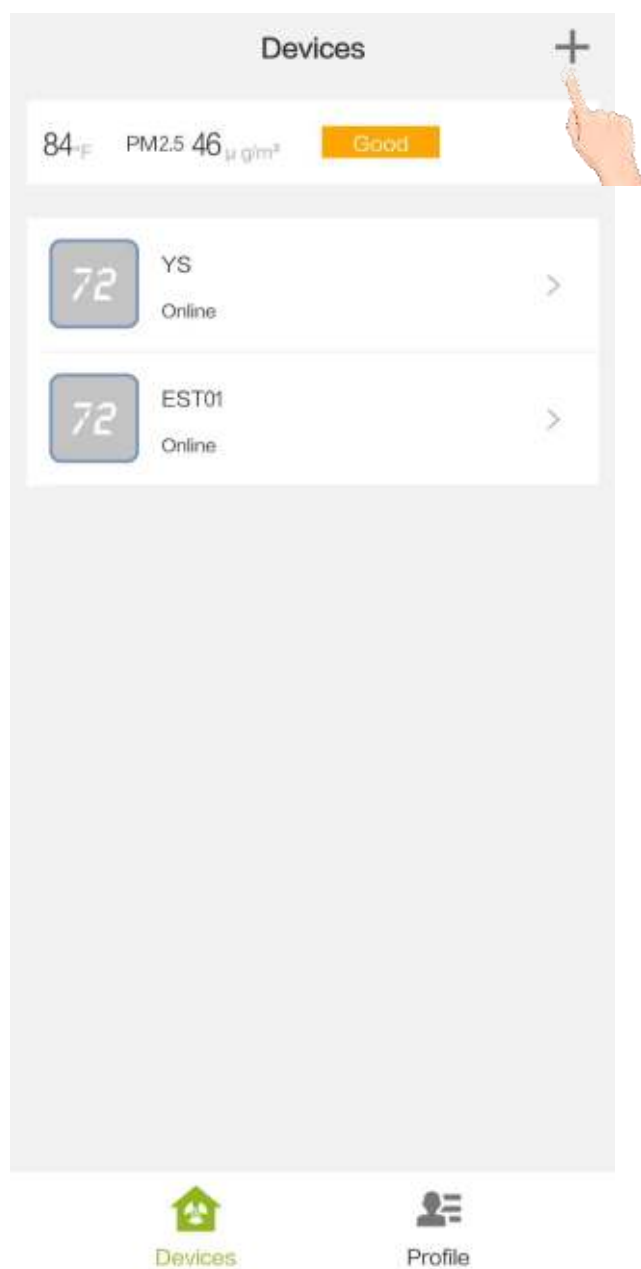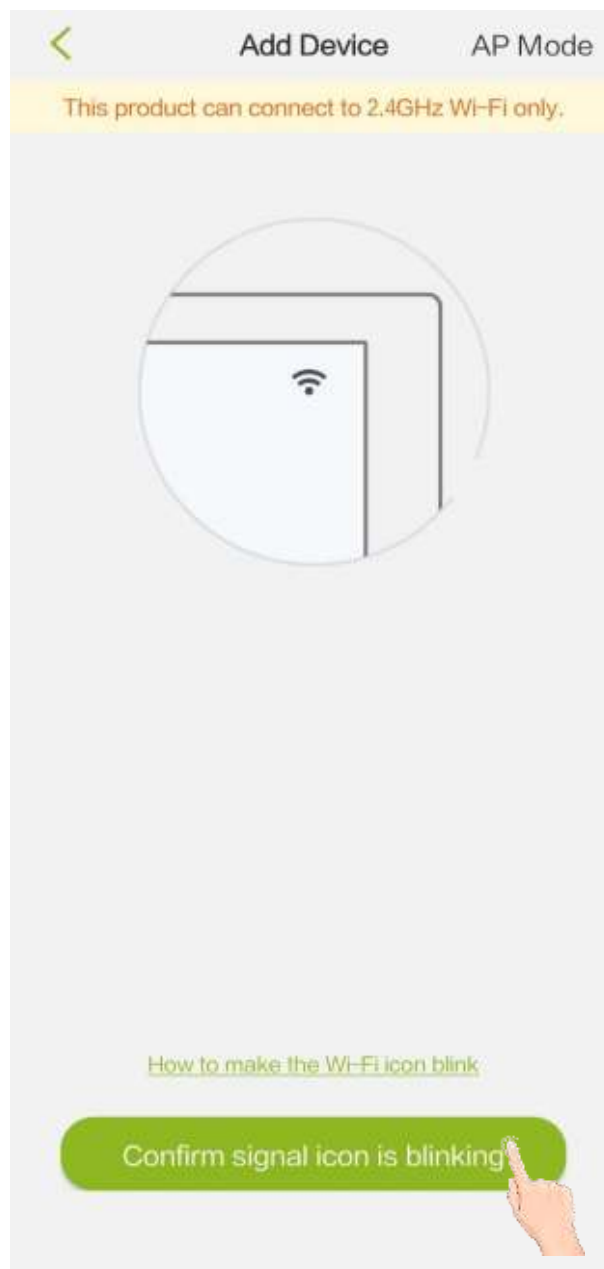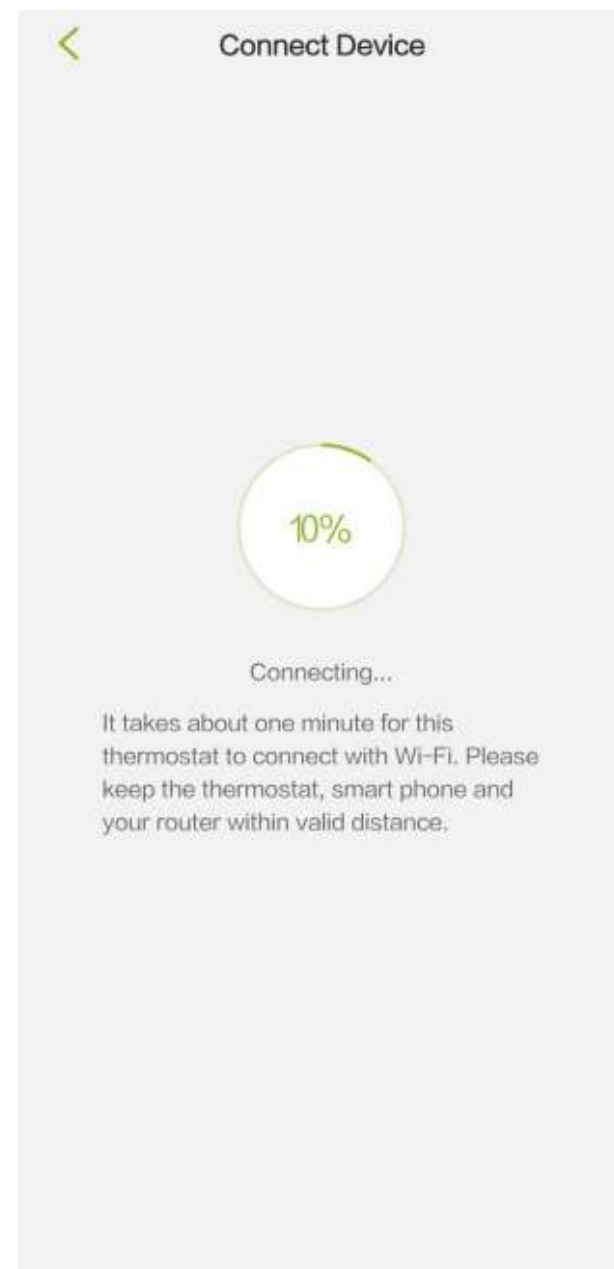

Fig. 1

Fig. 2

Fig. 3

* The design of Ecoer Home App may subject to change.

'Ecoer Home' App Control Interface

Settings
- Device ID
- Rename thermostat
- Temp. scale switch
- Firmware update

Display indoor temperature

Display indoor humidity

Set desired temp.

Set desired humidity

Change mode

Control fan
- On
- Auto
- **Circulate** indoor air when AC/HP stops
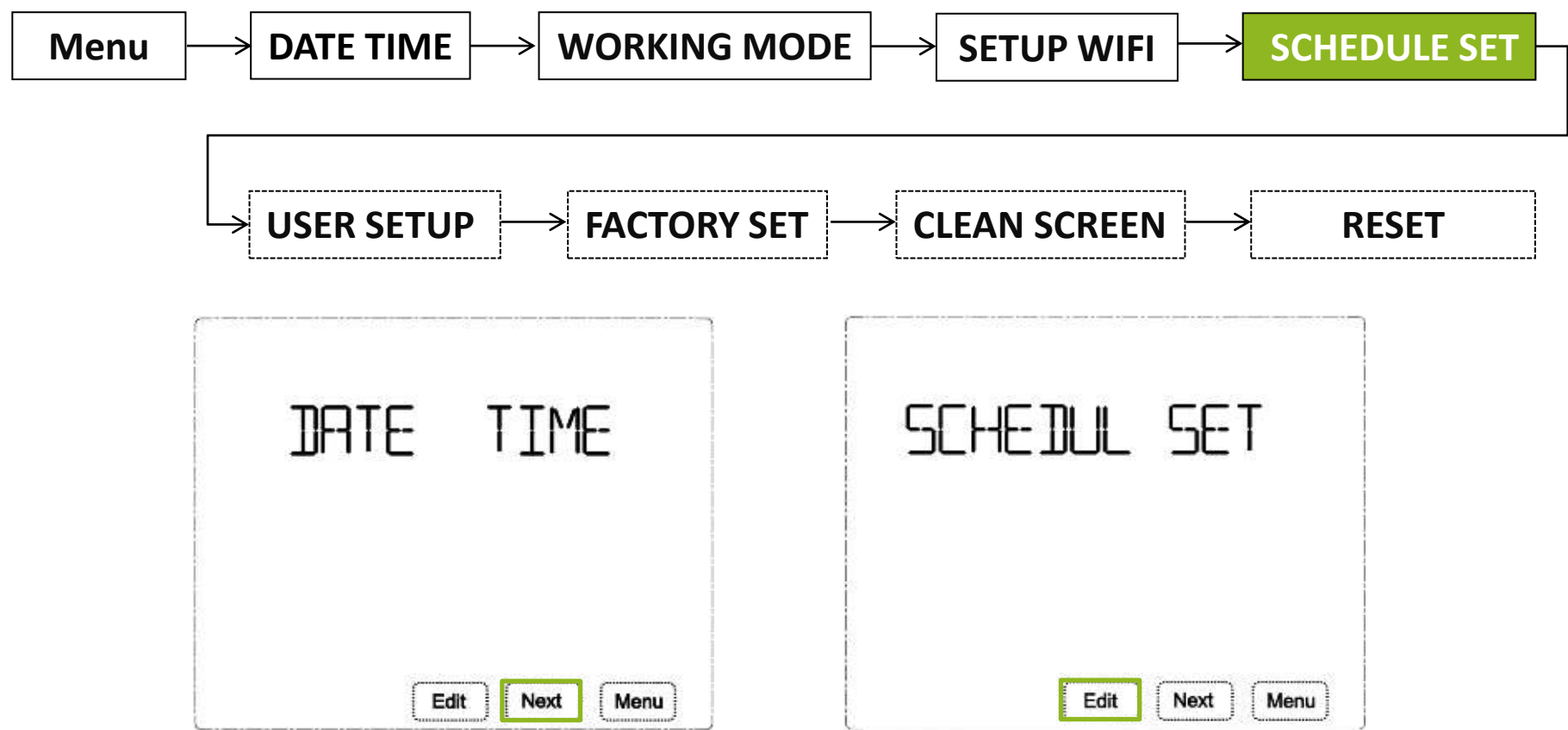
7-day scheduling (4 periods per day)

Schedule Status
- ON: Follow Schedule
- OFF: Hold On

* The design of Ecoer Home App may subject to change.

3.4 SCHEDULE SET

I.   Press **Menu** at homepage, the screen displays **DATE TIME**.

II.   Press **Next** until you see **SCHEDUL SET.**

```
┌────────┐     ┌─────────────┐     ┌───────────────┐     ┌──────────────┐     ┌──────────────┐
│  Menu  │ ──▶ │  DATE TIME  │ ──▶ │ WORKING MODE  │ ──▶ │  SETUP WIFI  │ ──▶ │ SCHEDULE SET │
└────────┘     └─────────────┘     └───────────────┘     └──────────────┘     └──────────────┘
                                                                                      │
      ┌──────────────┐     ┌──────────────┐     ┌───────────────┐     ┌──────────────┐
      │  USER SETUP  │ ──▶ │  FACTORY SET │ ──▶ │  CLEAN SCREEN │ ──▶ │    RESET     │
      └──────────────┘     └──────────────┘     └───────────────┘     └──────────────┘
```

```
┌─────────────────────────┐     ┌─────────────────────────┐
│                         │     │                         │
│   DATE   TIME           │     │   SCHEDUL SET           │
│                         │     │                         │
│                         │     │                         │
│     [Edit][Next][Menu]  │     │     [Edit][Next][Menu]  │
└─────────────────────────┘     └─────────────────────────┘
```

III.   Press **Edit** to set detailed schedule (Below table shows the default desired temperature from Monday to Sunday).

Mon-Sun	Wake 06:00 am	Away 08:00 am	Home 06:00 pm	Sleep 10:00 pm
Desired Temp. in cooling	78F	85F	78F	82F
Desired Temp. in heating	70F	62F	70F	62F

IV.   See the following page for detailed schedule setup, press **Done** to save it.

NOTE: Press **Menu** during setting will exit you directly and nothing will be saved.
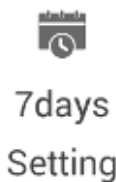
Detailed Schedule Setting at thermostat

I.   Press **+** or **-** to choose the group or the day ❶ of week.

If the schedules are the same on different days, it will be more convenient to set it by group.

II.   Press **Next** to set from the first period **06:00** of the selected day, press **+** or **-** to adjust time ❷ (15 minutes per interval).

   a)   Press **Next** to set desired **COOL** temperature ❸ by press **+** or **-** icon.

   b)   Press **Next** to set desired **HEAT** temperature ❹ by press **+** or **-** icon.

III. Press **Next** to set schedule for other period of the selected day.
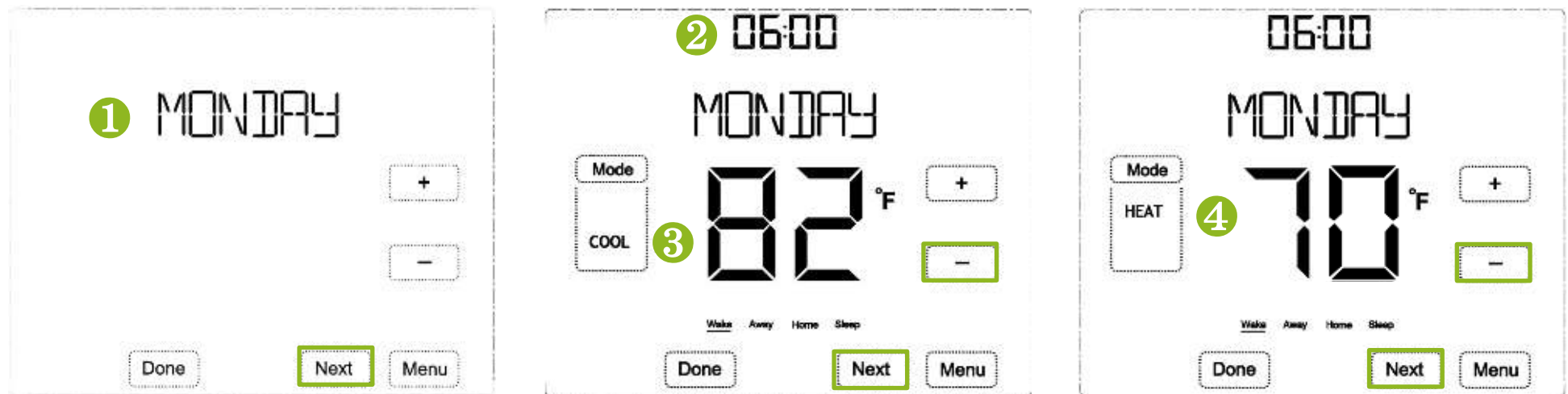
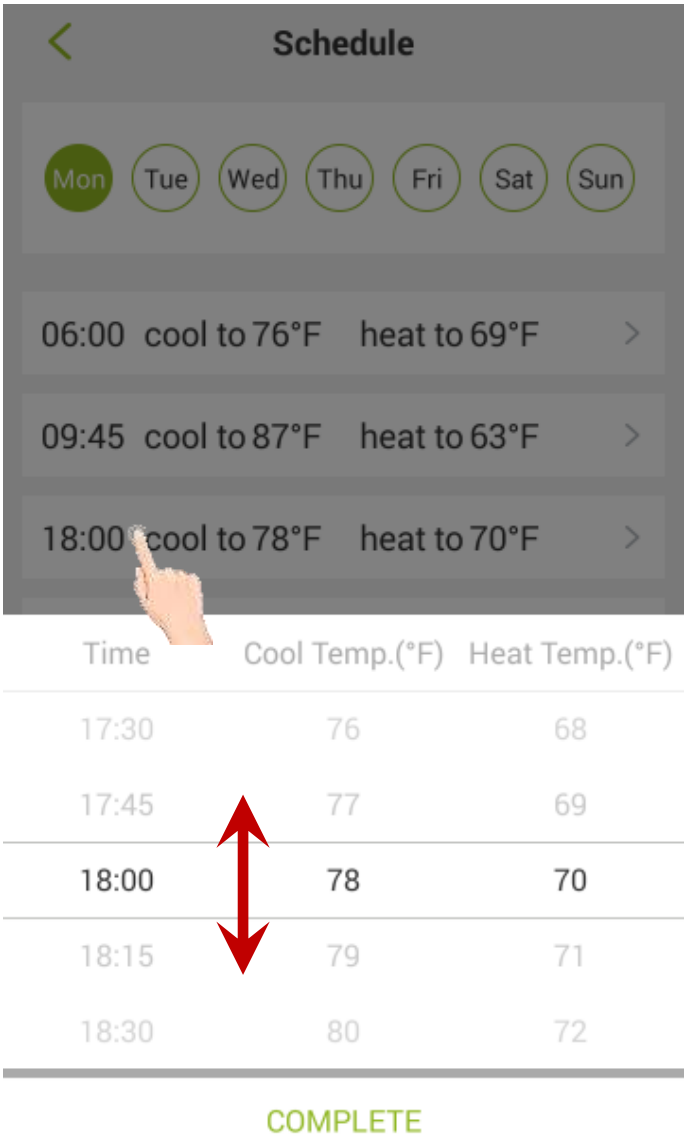IV.   Continue to set schedule for other day of the week.
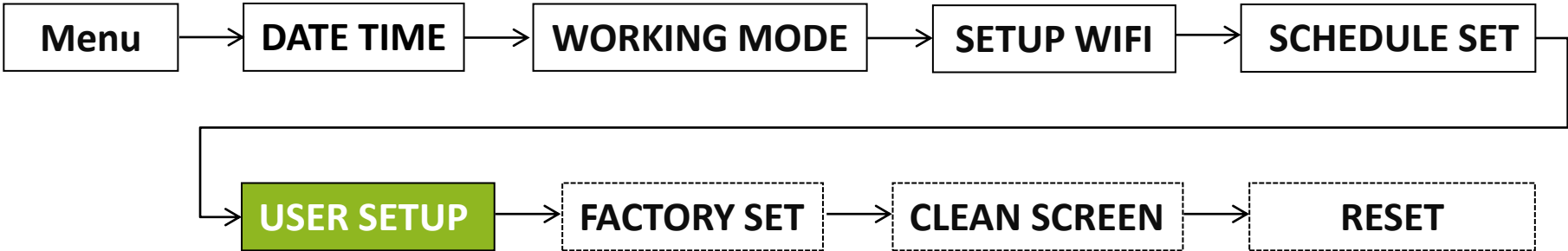
V.   Press **Done** to save.

Detailed Schedule Setting via 'Ecoer Home' App

I.   Click   7days Setting   to enter scheduling.

II.   Click the period you want to set, then scroll start Time, Cool Temp. and Heat Temp.

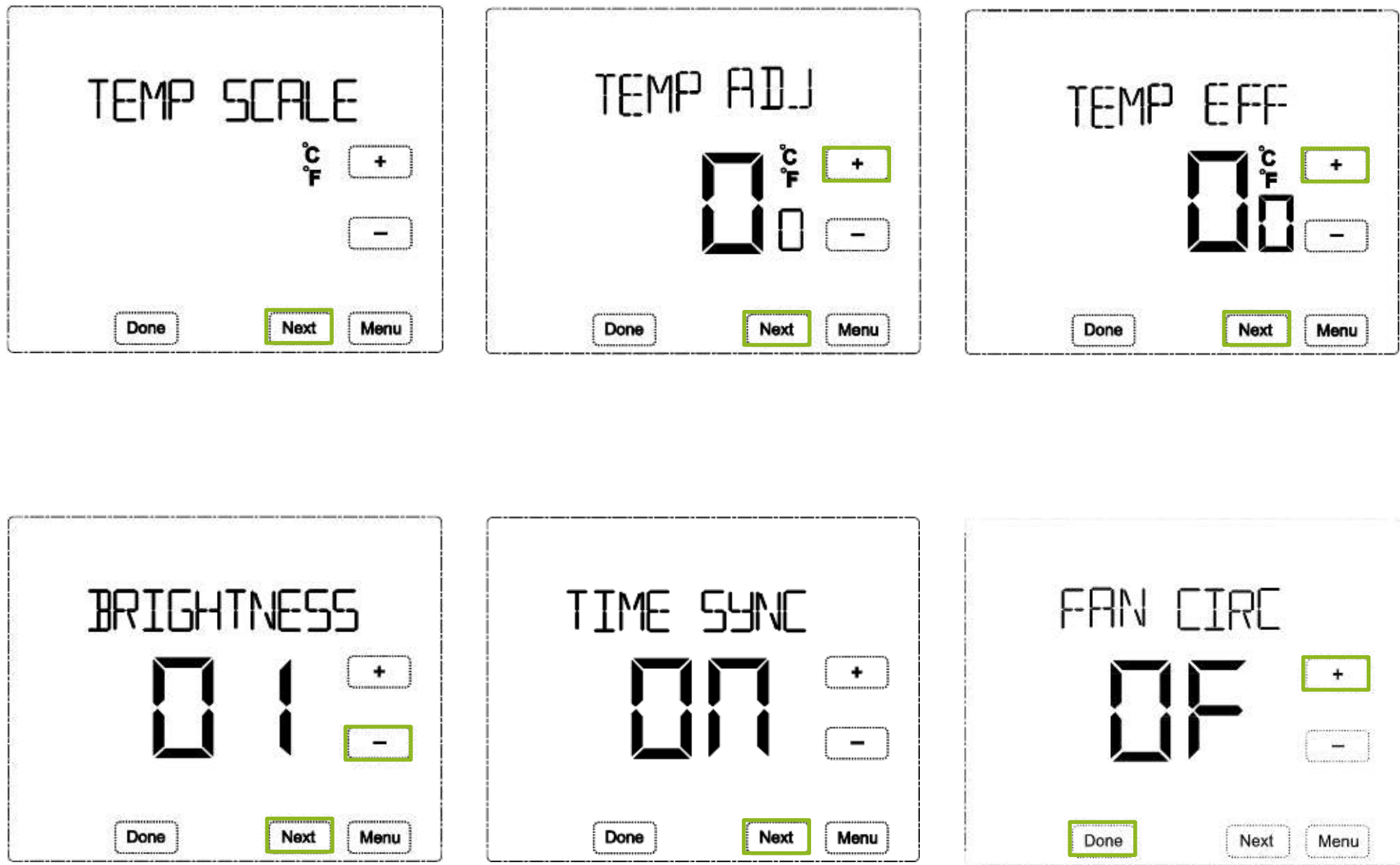III.   Touch "**COMPLETE**" to save your settings.

3.5 USER SETUP

I. Press Menu at homepage, the screen will display **DATE TIME**, then press **Next** until you see **USER SETUP**.

```
Menu ──▶ DATE TIME ──▶ WORKING MODE ──▶ SETUP WIFI ──▶ SCHEDULE SET ┐
                                                                     │
    ┌────────────────────────────────────────────────────────────────┘
    └──▶ USER SETUP ──▶ FACTORY SET ──▶ CLEAN SCREEN ──▶ RESET
```

II. Press **Edit** to enter into user setup interface.

Items	Range	Remarks
TEMP SCALE	F/C	Switch between Fahrenheit **(Default)** and Celsius
TEMP ADJ	-6F ~ 6F **(Default 0F)**	Adjust compensation for indoor temperature
TEMP EFF	1F ~ 4F **(Default 2F)**	Adjust temperature difference between indoor temp. and desired temp. to start **COOL** or **HEAT**
BRIGHTNESS	0 **(Default)**	Display current indoor temperature and local time when screen sleeps
	1	Darken brightness but display all contents (never sleeps)
	2	The screen keeps the top brightness (never sleeps)
TIME SYNC	ON/OF	**ON:** Synchronize local time when connect Wi-Fi **OF:** Do not synchronize local time
FAN CIRC *	OF/05/15/30	**OF**: Turn off CIRC function **(Default)** **05**: Turn on 5 minutes per hour **15**: Turn on 15 minutes per hour **30**: Turn on 30 minutes per hour

 * Circulate the ventilation when Air Conditioner or Heat Pump stops for a long period.

TEMP SCALE

°C
°F

[+]
[−]

[Done] [Next] [Menu]

TEMP ADJ

0 °C
°F
0

[+]
[−]

[Done] [Next] [Menu]

TEMP EFF

0 °C
°F
0

[+]
[−]

[Done] [Next] [Menu]

BRIGHTNESS

01

[+]
[−]

[Done] [Next] [Menu]

TIME SYNC

ON

[+]
[−]

[Done] [Next] [Menu]

FAN CIRC

OF

[+]
[−]

[Done] [Next] [Menu]

NOTE: Press **Menu** during setting will exit you directly and nothing will be saved.

FAN CIRC Setting by Ecoer Home App
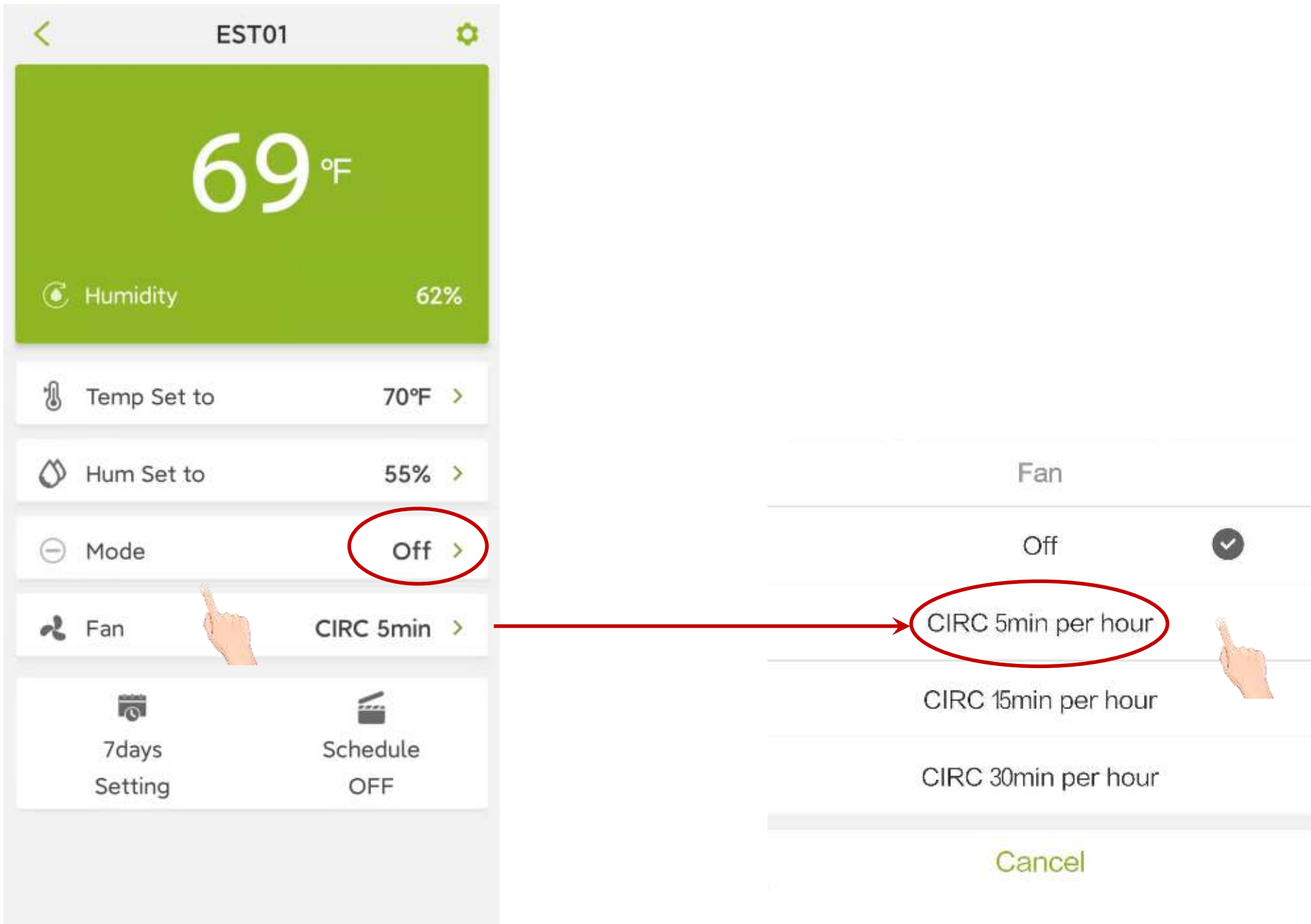
NOTE: App can set FAN CIRC* when Mode is Off (i.e. AC/HP stops).

* Circulate indoor air when Air Conditioner or Heat Pump stops for a long period.

3.6 FACTORY SET (Professional only)

I. Press **Menu** at homepage, the screen will display **DATE TIME**, then press **Next** until you see **FACTORY SET**.

```
Menu → DATE TIME → WORKING MODE → SETUP WIFI → SCHEDULE SET
                                                              ↓
        USER SETUP → FACTORY SET → CLEAN SCREEN → RESET
```
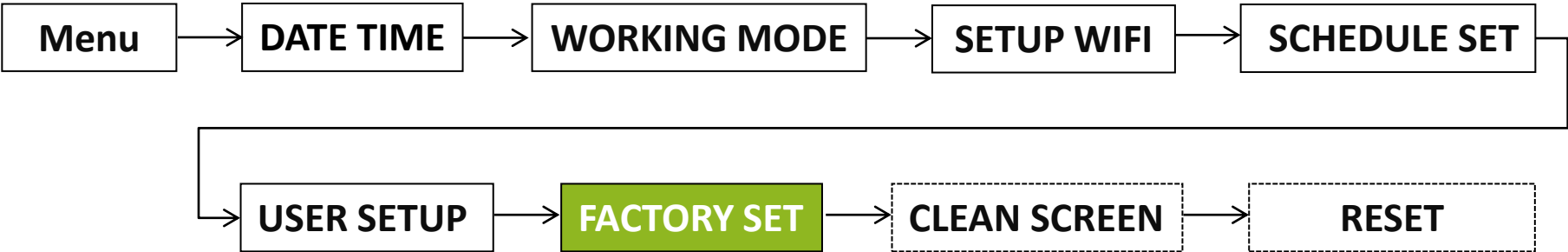
II. Press **Edit**, the screen will display **SYSTEM TYPE** (See the following pages for details)

III. Press **+** or **-** to set.
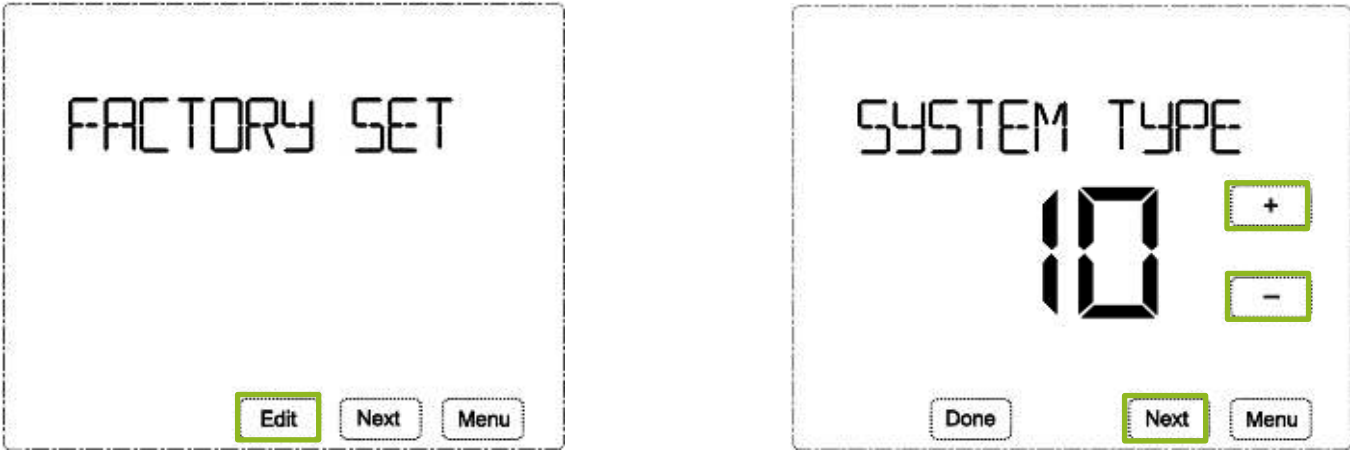
I. Press **Next** to set **COMP PROTECT** / **EM HEAT MODE** / **CHANGE OVER** etc. as of required.

O/B LOGIC	Reversing valve O（**Default**）/ B signal
COMP PROTECT	Delay 0 (**Default**) ~ 10min to start the compressor
EM HEAT MODE	ON / OF (**Default**)
CHANGE OVER	Enable or Disable AUTO mode **ON:** HEAT or COOL switch automatically (**Default**)
HUMI SET	Target humidity for two-stage fan control OF / 40 / 45 / 50 / 55(**Default**) / 60

II. Press **Done** to save the setting.

NOTE: Press **Menu** during setting will exit you directly and nothing will be saved.

System Types List

| Type	Descriptions	Application	Required Terminals
0	Cool only	ESI (AC only)	**C, RC, Y1, G,** *Y2
1	W (E) output	Furnace	**C, RH, W, G,** *W2
		Boiler	**C, RH, W,** *W2
2	Cool only + W	ESI (AC only) + Furnace	**C, RC, Y1, W, G,** *W2, *Y2
3	Cool only	ESI + Air Handler	**C, RC, Y1, O, G,** *Y2
4	Heat only	ESI + Furnace	**C, RH, Y1,** *O, **W, G ,** *W2
		ESI + Boiler	**C, RH, Y1,** *O, **W,** *W2
5	Heat only (2 Stage)	No	**C, RH, Y1, Y2 , O,** *W, **G,** *W2
6	1H/1C	ESI + Air Handler	**C, RH, Y1, O, G,** *W, *W2
7	2H/1C	No	**C, RH, Y1, Y2 , O, G,** *W, *W2
8	1H/1C	ESI + Air Handler	See following Pages
9	2H/2C	ESI + **E series** Air Handler	
10 **(Default)**	2H/1C	ESI + Air Handler ESI + Gas Furnace	
11	2H/2C - 4H/2C	ESI + **E series** Air Handler	
12	Cool only	AC only + **E series** Air Handler	
13	Cool only + W		

Remarks:

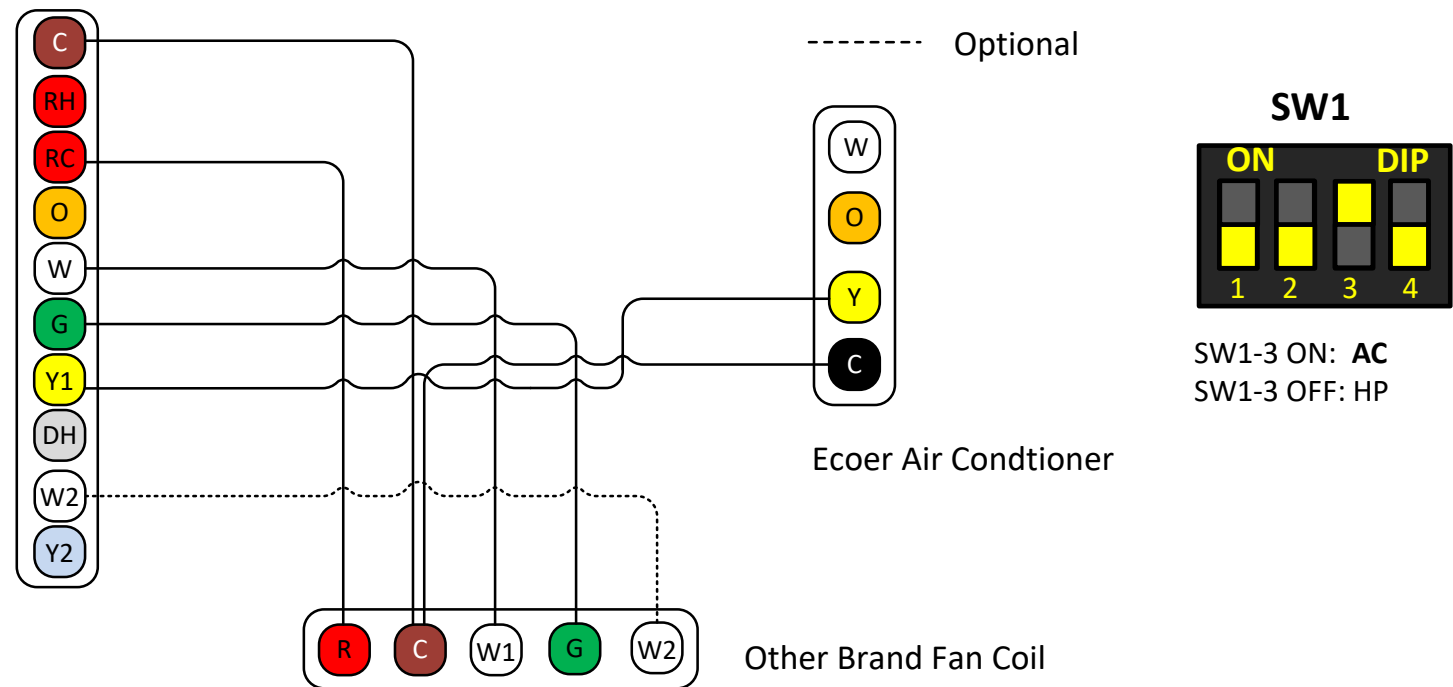ESI- Ecoer Smart Inverter condensing unit   * means optional connection

Type 0   Cool Only

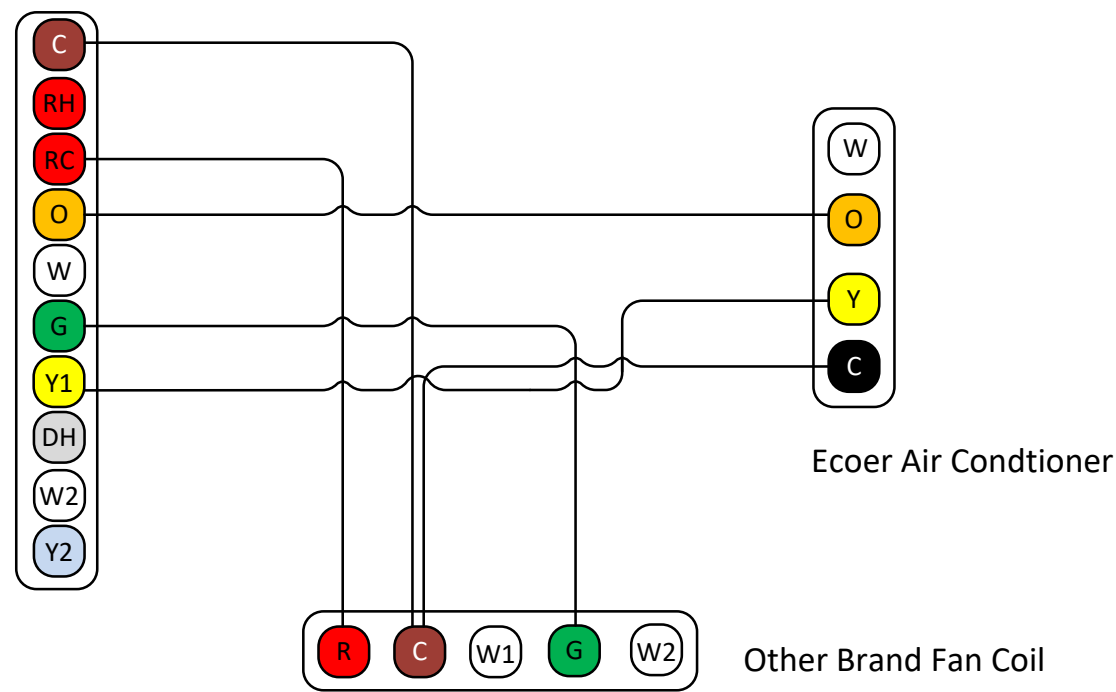Ecoer variable speed air conditioner matches with fan coil.

SW1

SW1-3 ON: **AC**
SW1-3 OFF: HP

Ecoer Air Condtioner

Other Brand Fan Coil
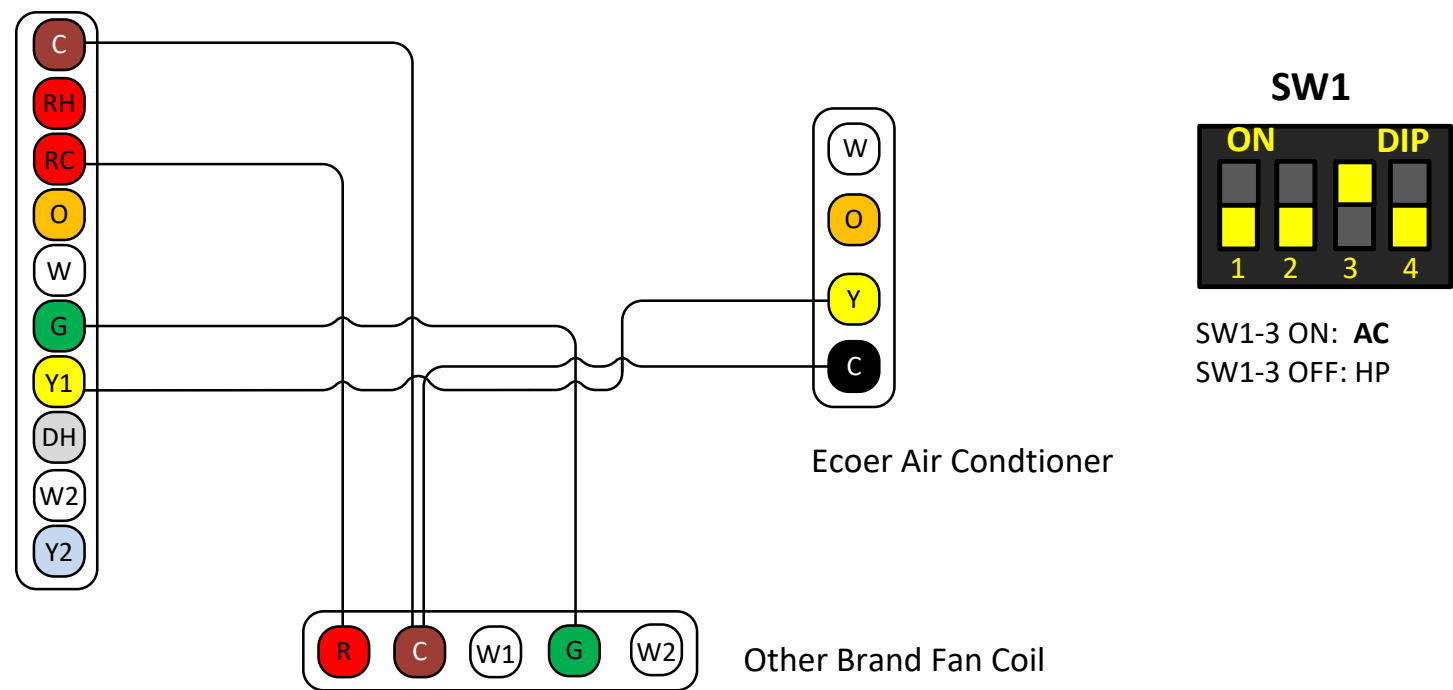
Type 2   Cool Only + W output

Ecoer variable speed air conditioner matches with gas or oil furnace.

-------- Optional

SW1

SW1-3 ON: **AC**
SW1-3 OFF: HP

Ecoer Air Condtioner

Other Brand Fan Coil

Type 3 Cool Only

Ecoer variable speed heat pump matches with fan coil.

Ecoer Air Condtioner

Other Brand Fan Coil

Type 4 Heat Only + W output

Ecoer variable speed heat pump matches with furnace (G required) or boiler.

Optional

Ecoer Heat Pump

Furnace
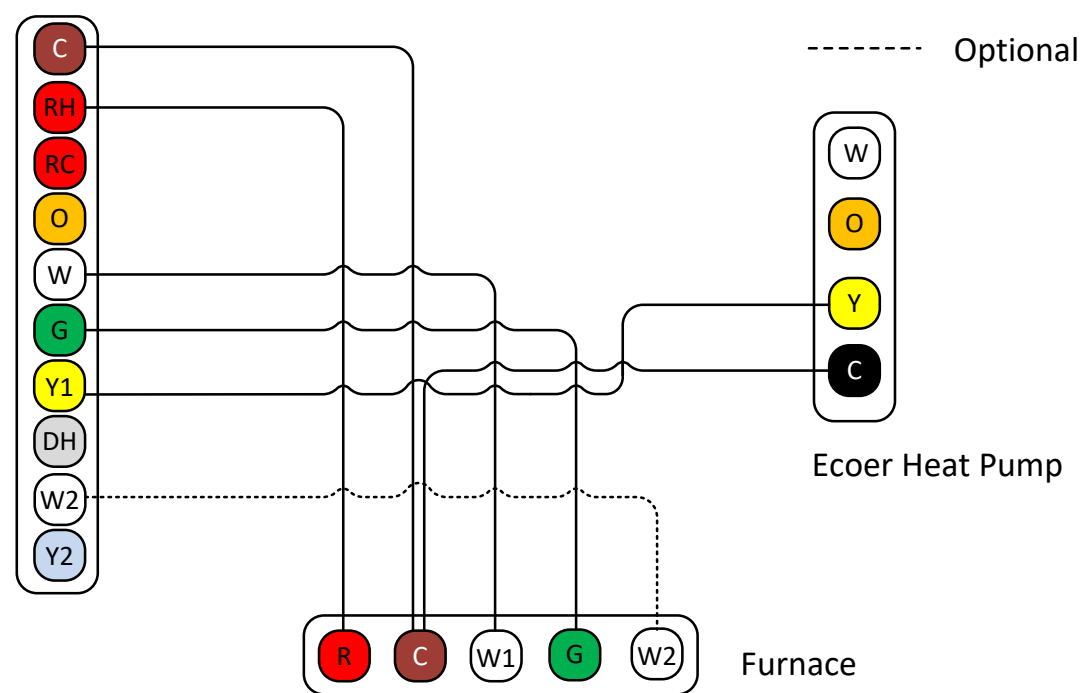
Type 6 1H/1C with constant indoor fan speed

Ecoer variable speed heat pump (Require O Signal input) matches with fan coil.
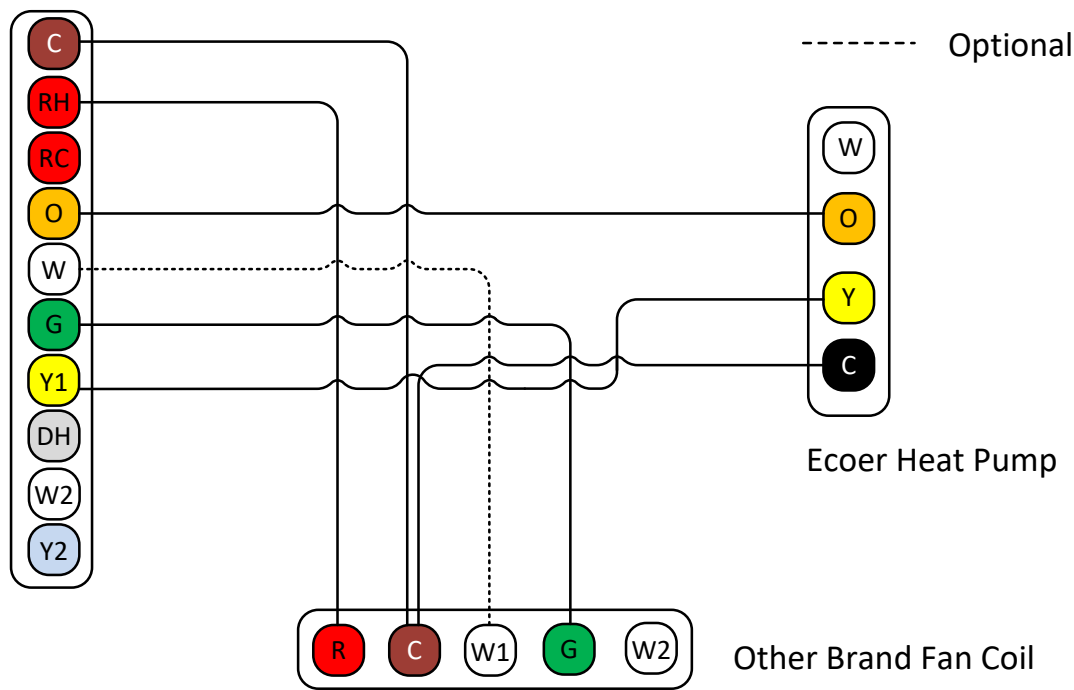
Ecoer Heat Pump

Other Brand Fan Coil

## Type 8 1H/1C with constant indoor fan speed

Ecoer variable speed heat pump matches with fan coil.

Ecoer Heat Pump

EST01

Other Brand Fan Coil

Manufacturer reserves the right to change specifications or designs without notice.

07 2022
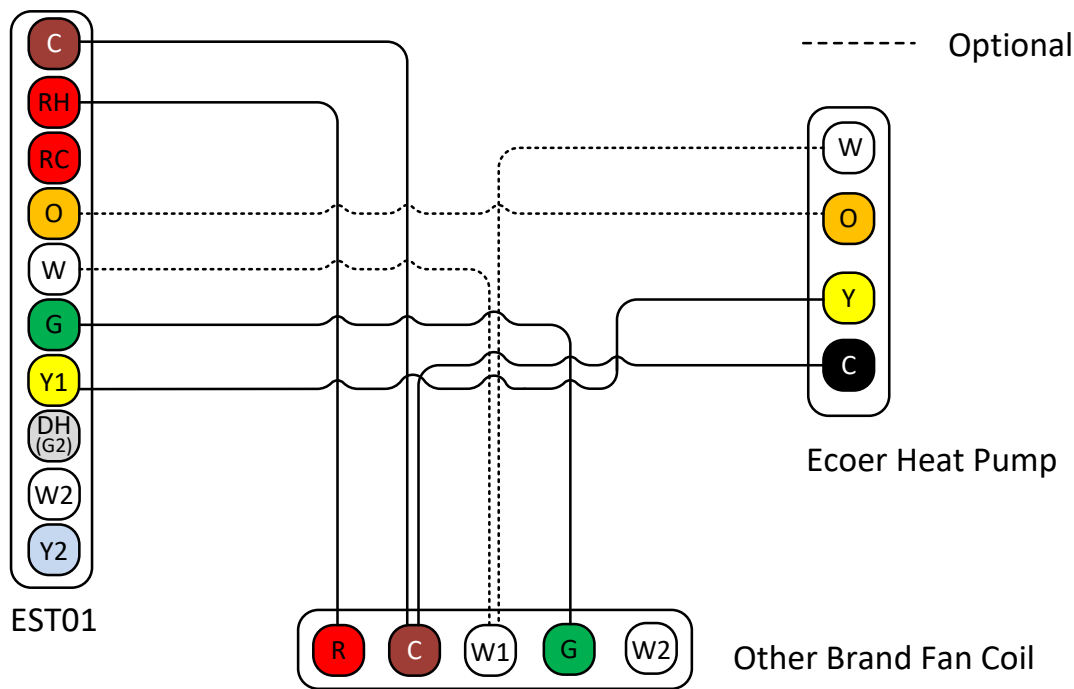
Type 9   1H/2C with two-stage fan control (G/ DH [G2]) in cooling
Ecoer variable speed heat pump matches with **E Series air handler**

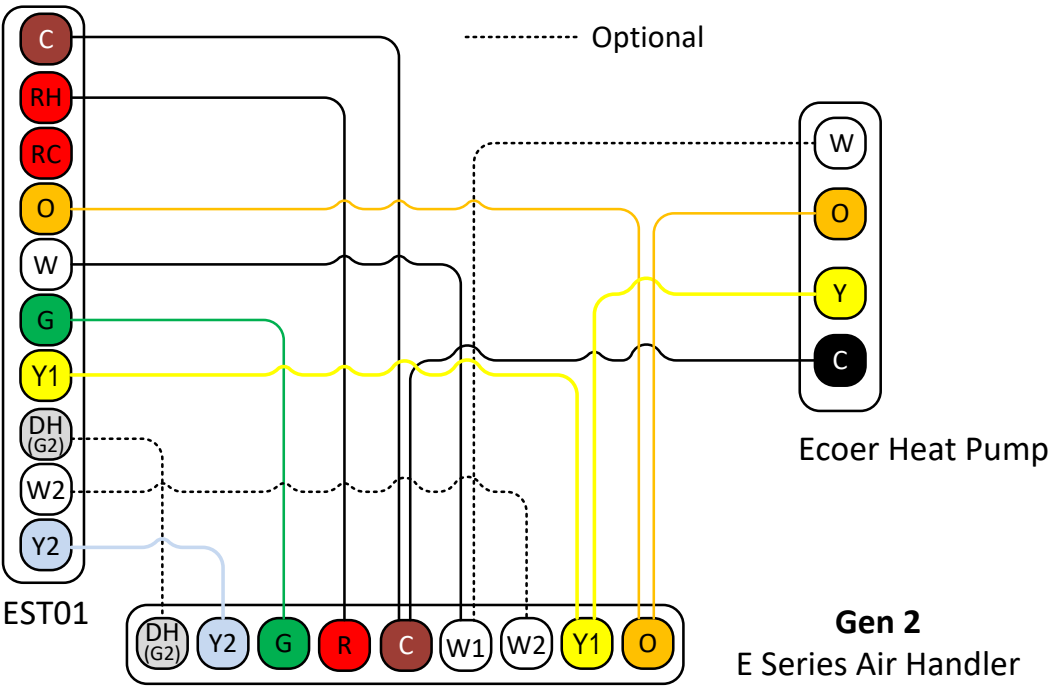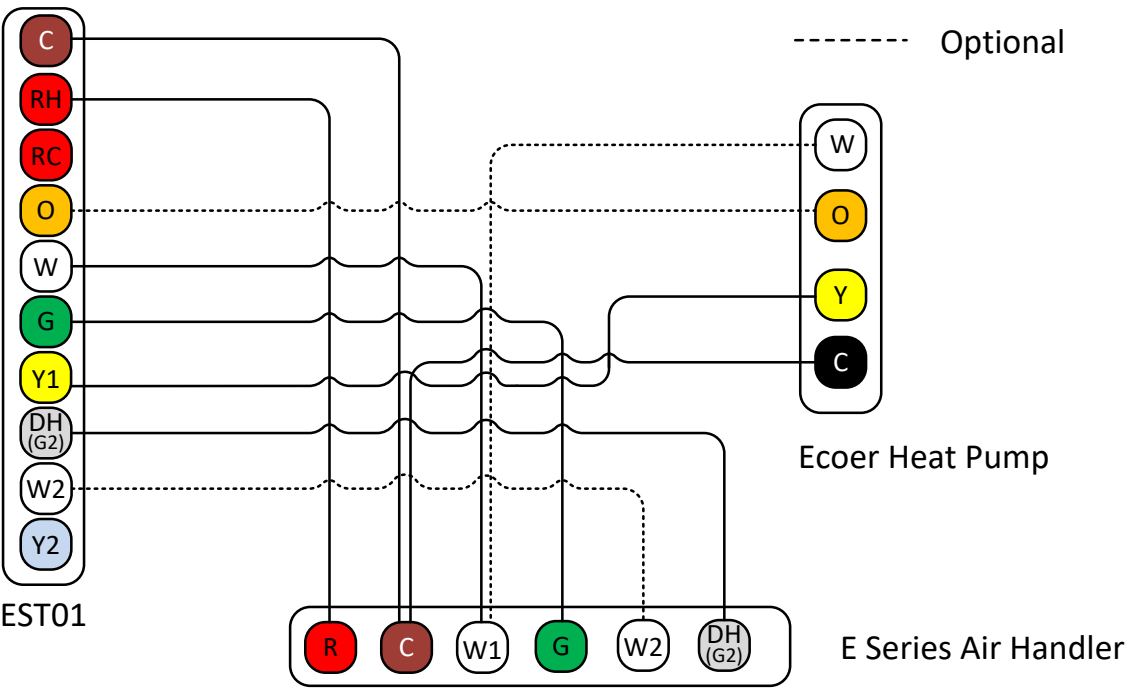
Ecoer Heat Pump

E Series Air Handler

EST01
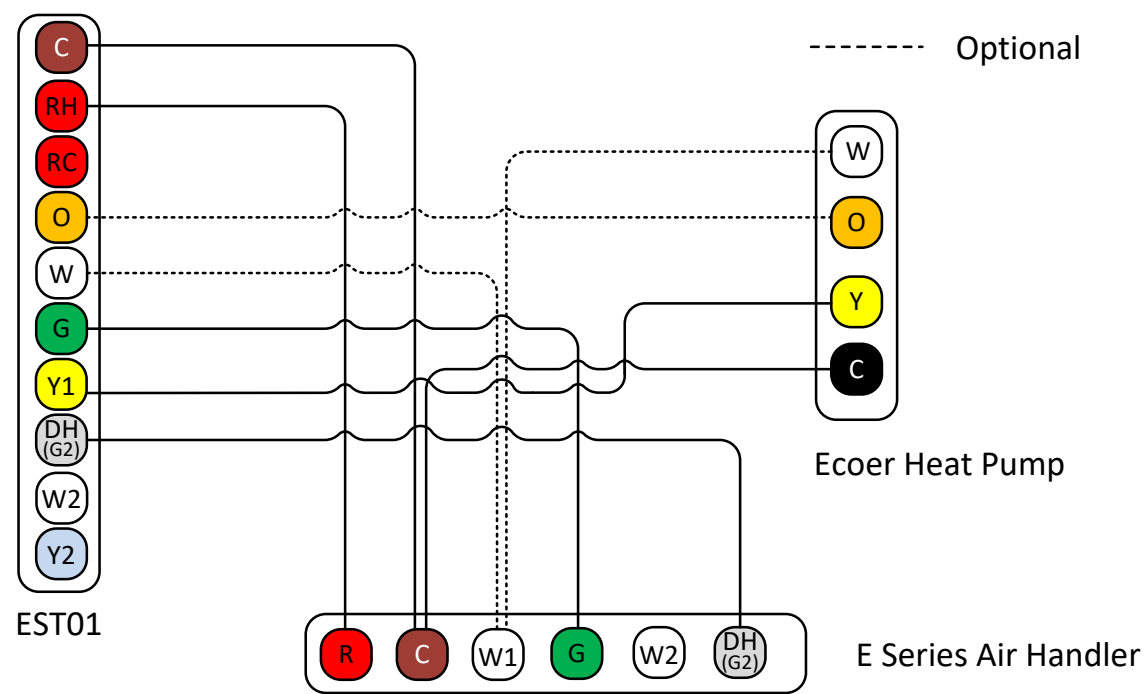
Type 10 2H/1C with constant indoor fan speed (Factory default)
Ecoer variable speed heat pump matches with fan coil for 2 stage heating
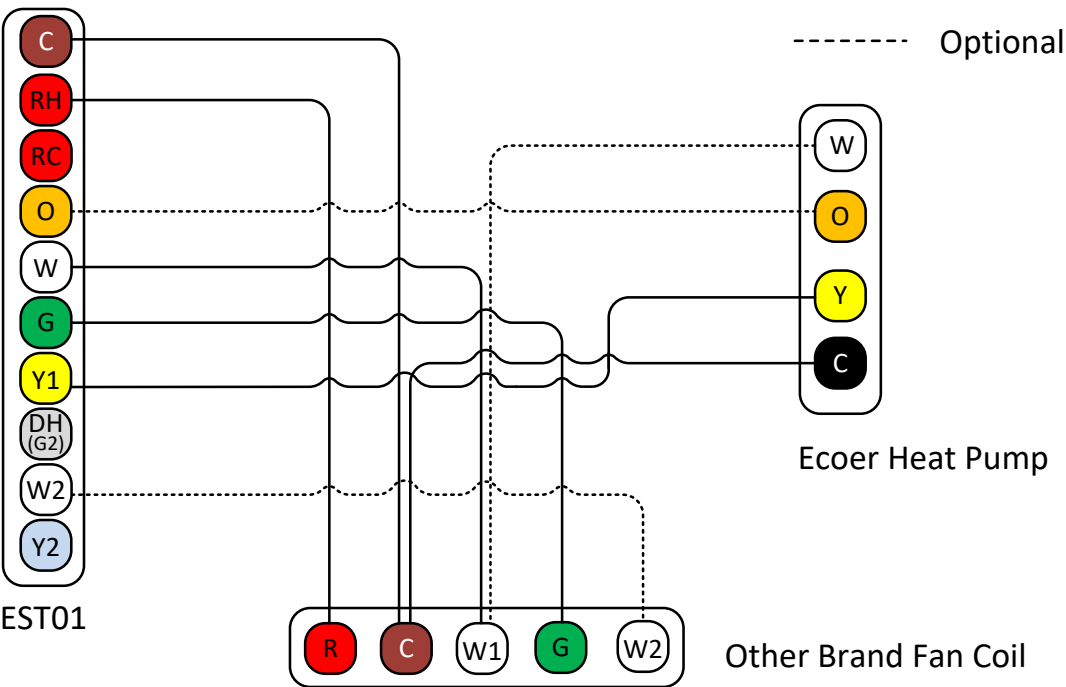
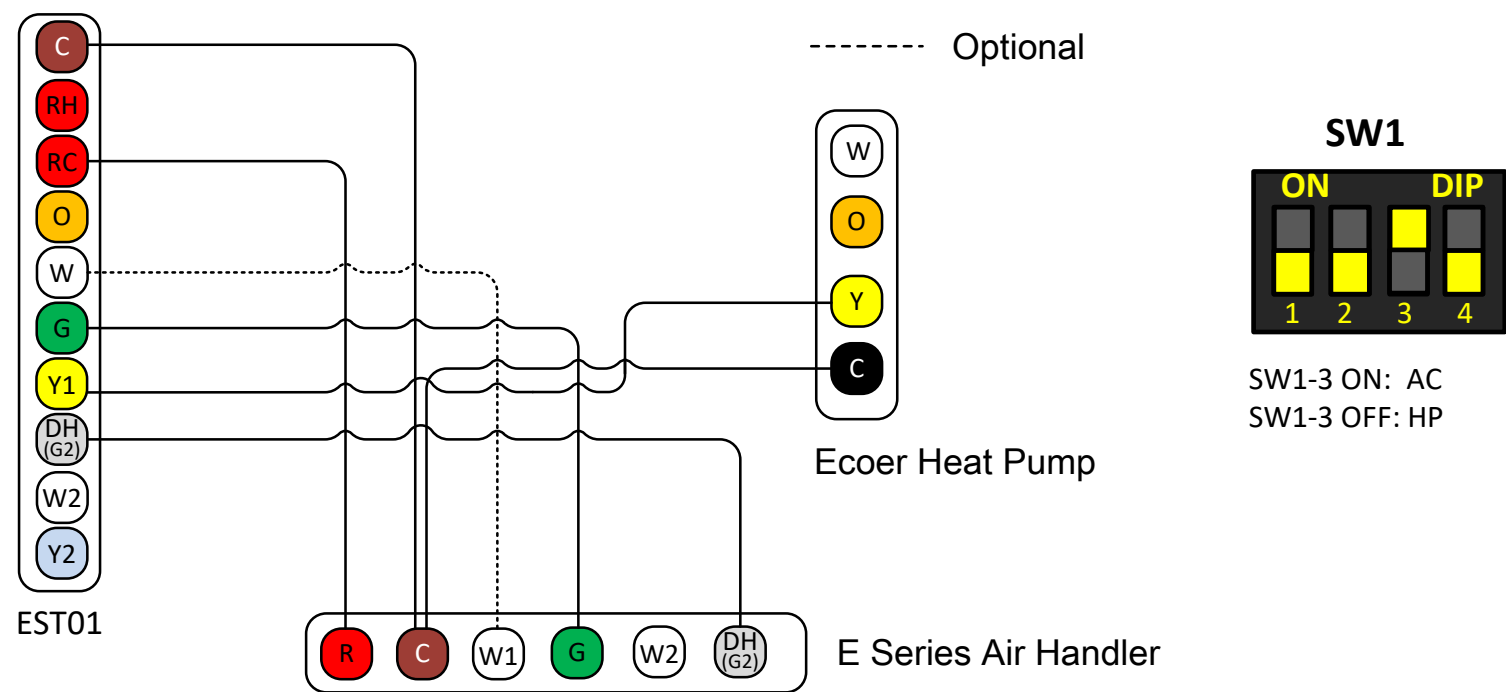## Type 11   2H/2C - 4H/2C with two-stage fan control (G/ DH [G2]) in cooling

Ecoer variable speed heat pump matches with **E series air handler** and electric heat (Dual-fuel).

## Type 12/13 Cool only with two-stage fan control (G/ DH [G2])
AC only (including Ecoer variable speed AC) matches with **E Series air handler** - Type 12

Ecoer Heat Pump

EST01

E Series Air Handler

SW1

SW1-3 ON: AC
SW1-3 OFF: HP

* Must set "**COMP PROTECT**" to "3" or higher for other brand AC

Type 13 Wiring between W terminal of EST01 to Air Handler W1 must be connected!

Ecoer Heat Pump

EST01

E Series Air Handler

SW1

SW1-3 ON: AC
SW1-3 OFF: HP
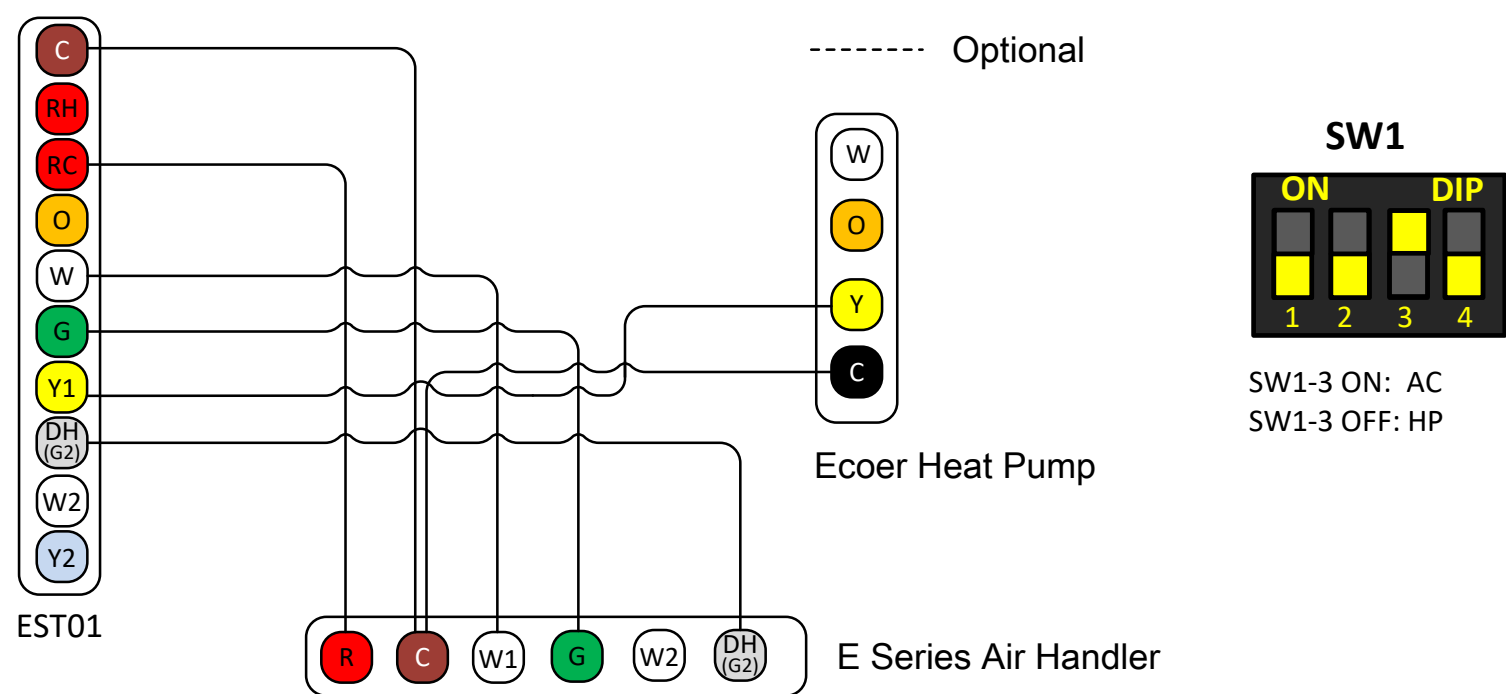
* Must set "**COMP PROTECT**" to "3" or higher for other brand AC

3.7 Clean Screen
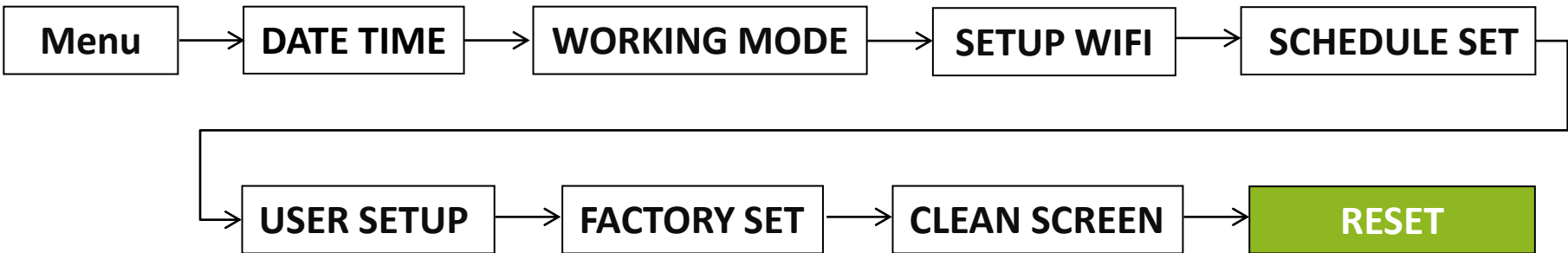
I.   Press **Menu** at homepage, the screen will display **DATE TIME**, then press **Next** until you see **CLEAN SCREEN**.

| Menu | → | DATE TIME | → | WORKING MODE | → | SETUP WIFI | → | SCHEDULE SET |

| USER SETUP | → | FACTORY SET | → | CLEAN SCREEN | → | RESET |
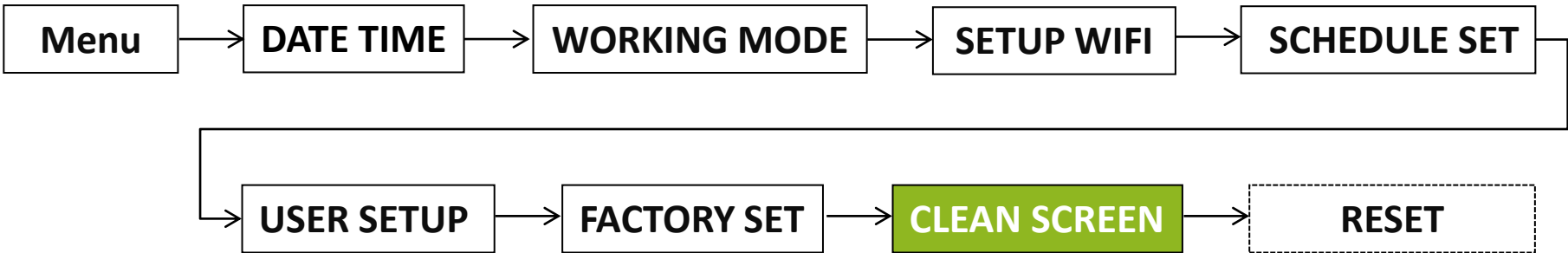
II. Press **Done** to allow the user to clean screen for 30 seconds without changing any settings.

3.8 Reset

I.   Press **Menu** at homepage, the screen will display **DATE TIME**, then press **Next** until you see **RESET**, press **Done** to enter.

| Menu | → | DATE TIME | → | WORKING MODE | → | SETUP WIFI | → | SCHEDULE SET |

| USER SETUP | → | FACTORY SET | → | CLEAN SCREEN | → | RESET |

II. **Press +** or **-** to **ON**, then press **Done**. The thermostat will be reset to factory default settings.
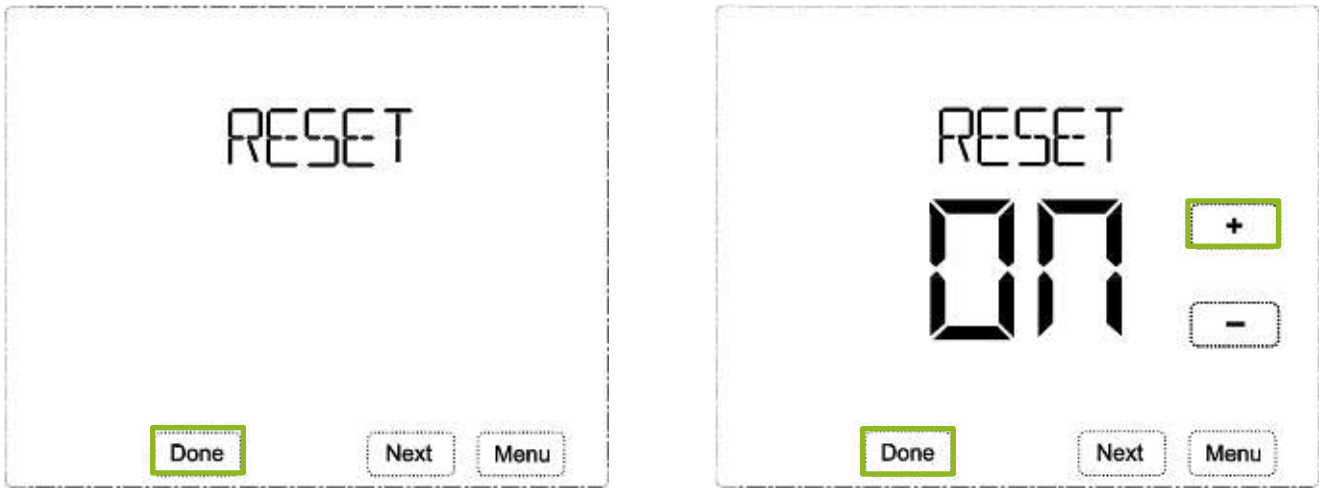
4. Warranty

Ecoer warrants this product, against failure due to defect in materials or workmanship under normal use and maintenance, for a period of three (3) years. All warranty periods begin on the date of purchase by the consumer. If at any time during the warranty period the product is determined to be defective or malfunctions, Ecoer shall repair or replace it (at Ecoer's option).

Call Ecoer Support Hotline at **(855) 598-4093** or email support@ecoer.com if the product is defective. They will be able to make the determination whether the product should be brought back to the distributor you purchased from.

If deemed a warranty claim, distributor/dealer should log onto Ecoer's website www.ecoer.com and select File Claim in the Portal. Fill out required information and follow the prompts to submit.

This warranty does not cover removal or reinstallation costs. This warranty shall not apply if it is shown by Ecoer that the defect or malfunction was caused by damage which occurred while the product was in the possession of a consumer.

5. Regulatory information

FCC Certificate No.: GTI20191265C

This device conforms FCC Rules and Regulations under Part 15 Subpart B requirements. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

FCC Warning (USA only)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.