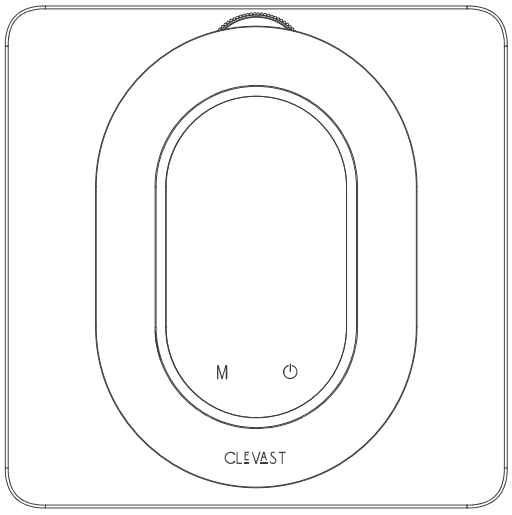
CLEVAST
– Touch smart life –

# Instruction Manual

## Smart Thermostat

Model No.: CL-ST01




Read this manual thoroughly before using and save it for future reference

# TABLE OF CONTENTS

# WE TAKE YOUR PRIVACY SERIOUSLY

We're committed to being open and honest about how we use data. We'll always ask for permission before sharing personal identifiable information like your email address, and we keep your data safe with industry standard security tools.

Clevast Smart thermostat will provide you with even and comfortable temperature control in every room.

Also be sure to have your thermostat installed by a professional and comply with all local regulations.

> ⚠ **NOTE:**
> 1. Please do not work with electricity on.
> 2. Check whether the voltage is 24V before installation. If not, your product cannot be used.

### WATCH THE VIDEO

To see how it's done, watch our installation video.

Installation video with C-cable

Installation video without C-cable

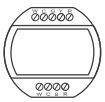
## OVERVIEW

Display

Base

Screws

Marking and pasting



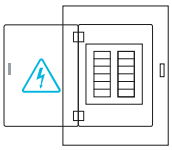
C line adapter
(Use without C-line)

Wires
(Use without C-line)

## INSTALLATION STEPS

### 1. SWITCH OFF POWER

This protects you and avoids blowing a fuse in your equipment. Adjust the temperature on your old thermostat to make sure your system is off.



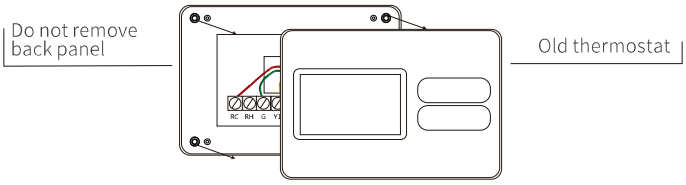
Breaker box

or

Switch

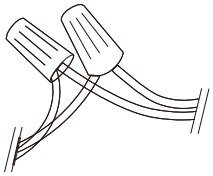
### 2. REMOVE COVER

Some covers pop off, while others need to be unscrewed.




## 3. CHECK YOUR SYSTEM

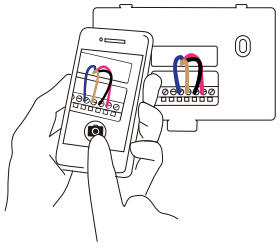
If your old thermostat is labeled 120V or 240V or has thick wires with wire nuts, your system is high voltage. Not sure? Contact support.



**CAUTION:** Do not connect Clevast Smart thermostat to high voltage wires.

## 4. TAKE PICTURE OF YOUR CURRENT THERMOSTAT WIRING

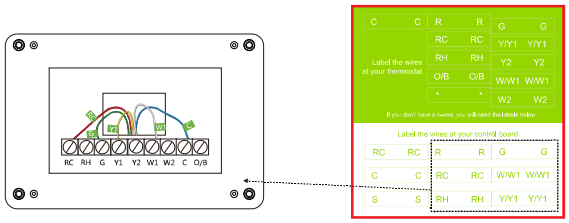
Don't forget to include the letters next to the terminals where the wires are inserted. This will be a helpful reference when wiring your thermostat. We'd greatly appreciate it if you shared your old wiring pictures with us so we can improve our training materials.



## 5. LABEL THE WIRES

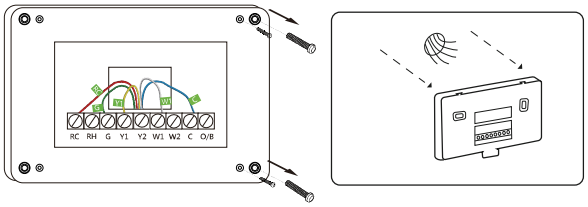
Using the old thermostat base as a guide, put the provided sticky label on each wire as you disconnect it. Make sure all wires are disconnected from the old thermostat.

> **NOTE:** Label wires according to old thermostat terminal designations, not by wire color.




## 6. DISCONNECT WIRES AND REMOVE THE BASE

After removing the base, we recommend gently wrapping the wires around a pen or pencil to ensure they don't fall back into the hole in the wall.



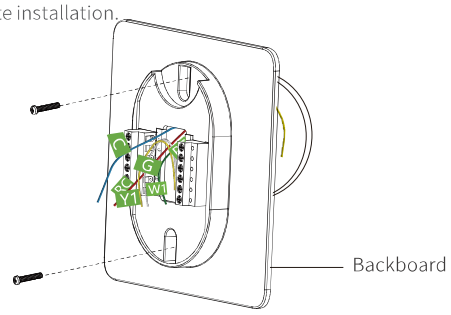

> **NOTE:** Remember, the power to your HVAC system must be off to avoid blowing a fuse in your equipment.

## 7. MOUNT YOUR CLEVAST SMART THERMOSTAT BACK PANEL

You can choose to use the trim plate which comes along with your thermostat. The trim plate is useful if you want to hide marks or holes left on the wall of your old thermostat.

• If the trim plate is to be used, then align the mounting holes on the trim plate and wall plate and press them together.

• Pull the wires through the hole in the middle of the wall plate and attach the wall plate to the wall using the screws sets (screw& anchor) to mount the new wall plate. Be sure to check the alignment of your wall plate before and after the wall plate installation.




**NOTE:** Make sure the wires have at least 1/4'' exposed for inserting into the back panel terminals.

## 8. CONNECT THE WIRES TO CLEVAST THERMOSTAT

Use the picture you took before as reference to wire, the following chart is a wiring diagram for common systems.

**NOTE:**
If you have a C line, refer to steps 8.1(8.1.1-8.1.2, page 05-08 )
If you do not have a C line, refer to step 8.2(8.2.1-8.2.2, page 09-12)

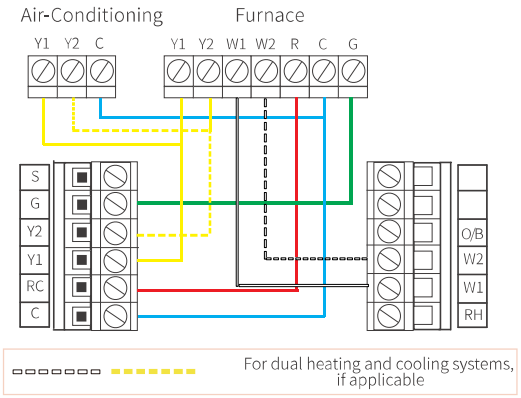
### 8.1 If C- wire exists in your system, check the instruction below:

| Terminal | Conventional System | Heat Pump System |
|---|---|---|
| RC | Power for cooling, 24V | Power for cooling, 24V |
| RH | Power for heating, 24V | Power for heating, 24V |
| C | Common wire, 24V | Common wire, 24V |

| | | |
|---|---|---|
| G | Fan | Fan |
| Y | 1st Stage Cool | 1st outdoor Stage Heat |
| Y2 | 2nd Stage Cool | 2nd outdoor Stage Heat |
| W2 | 2nd Stage Heating | Auxiliary Hear activated at W2 |
| W/E | 1st Stage Heat | Emergency Heat activated at W1 |
| O/B | ..... | Changeover (reversing valve) connection for heat pump |
| S (applicable to C-line adapter) | Combine Y and G to power the thermostat | Combine Y and G to power the thermostat |

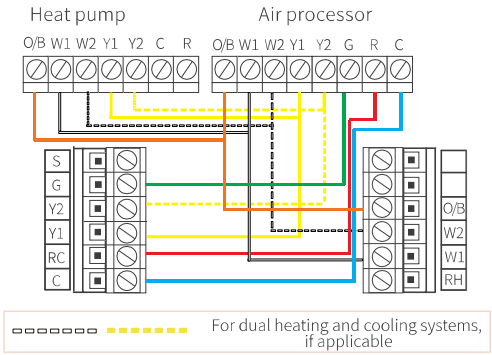
**8.1.1 Wiring diagrams for common HVAC equipment**

8.1.1.1 Conventional heating and cooling systems.



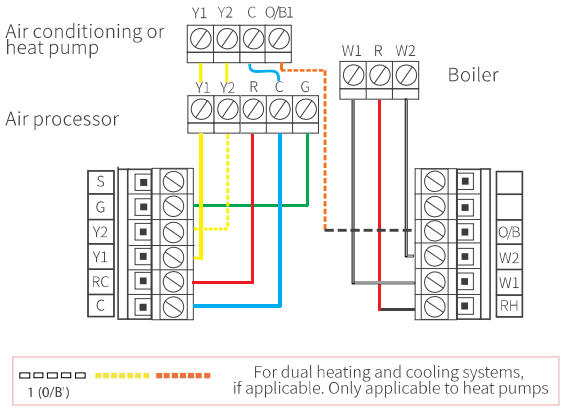

Remove the jumper between the RH, RC or R terminals and adjust the DIP switch to "Disconnect" if you connected both the RC wire and the RH wire on the back of the thermostat to the wall panel, otherwise switch it to "Connected" side.

8.1.1.2. Heat pump with auxiliary heat (air or geothermal).




Remove the jumper between the RH, RC or R terminals and adjust the DIP switch to "Disconnect" on the back of the thermostat if you have both the RC wire and the RH wire connected to the wall panel, otherwise switch it to "Connected" side.

8.1.1.3. Boiler or radiant system with air handler and traditional cooling or heat



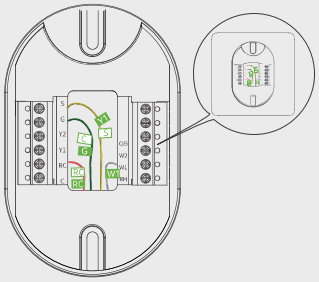
Remove the jumper between the RH, RC or R terminals and adjust the DIP switch to "Disconnect" on the back of the thermostat if you have both the RC wire and the RH wire connected to the wall panel, otherwise switch it to "Connected" side.

### 8.1.2 Connect wires

Insert your remaining wires into the side (not the front) of their corresponding terminal blocks. Pull wires to ensure wires are securely connected. When all wires are connected well, place excess part of the wires back to the wall.

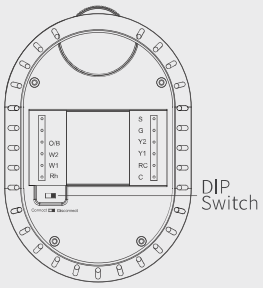
**⚠ NOTICE**

Connect the R or RC wire to the RC terminal and the other wires to the corresponding terminals.



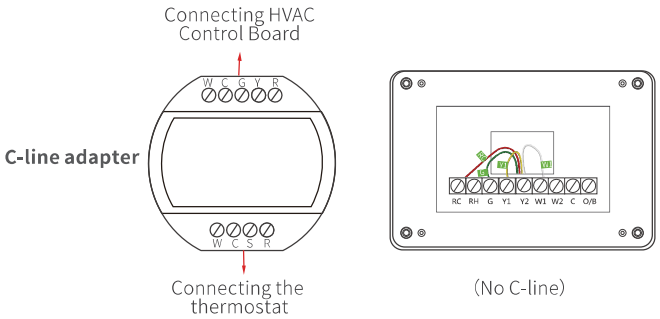
• DIP switch selection: If you connect the RC wire and Rh-Wire to the wall plate, adjust the Dip switch on the back of the thermostat to select Disconnected, otherwise switch it to Connected.

**Note:** RC represents the power supply of the cold-end equipment, and RH represents the power supply of the hot-end equipment. If they are separated, choose Disconnected, and if they are together, choose Connected.



## 8.2 If C- wire does not exist in your system, check the instruction below:

You need to use a C-line adapter for powering the thermostat. The adapter has two ends, the 4-port one is used to connect the thermostat circuit, and the 5-port one is used to connect the control board circuit.

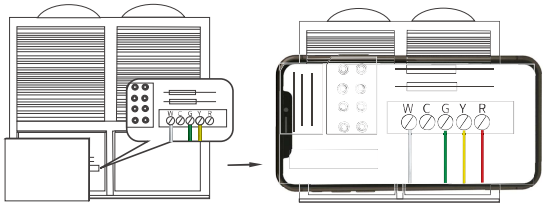



> **NOTE:** 4 wires: W/W1, Y/Y1, G and R (or RC or RH) or 3 wires: Y/Y1, G and R (or RC or RH), if you don't have these wires, your system may have incompatible power modules.

### 8.2.1 Install the C-line adapter

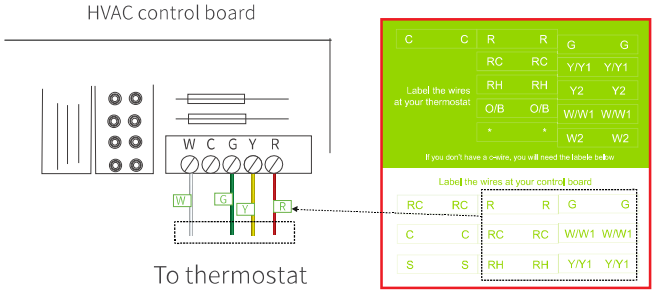
8.2.1.1 Find the HVAC port.

Find and open the HVAC system cover and take a photo of the wiring diagram, maybe you will need it later;



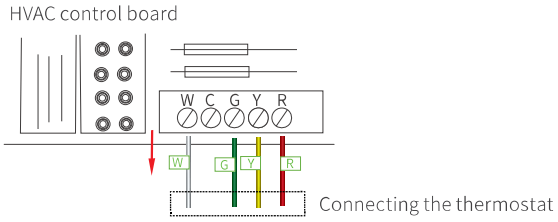
8.2.1.2 Mark the wiring.

Just label the wiring from the control board to the old thermostat;



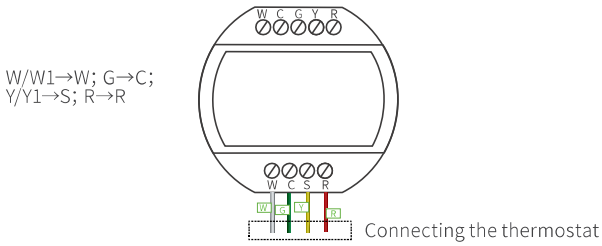

8.2.1.3 Disconnect the wiring.

Disconnect the wiring from the control board to W/W1, Y/Y1, and R of the thermostat;



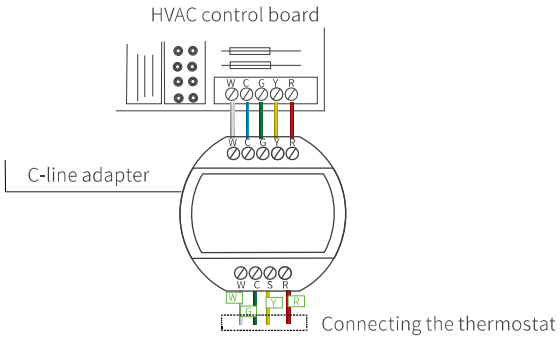

8.2.1.4 Connect the power module.

Connect the removed wiring to the 4-terminal power module: R→R, W/W1→W, G→C, Y/Y1→S;



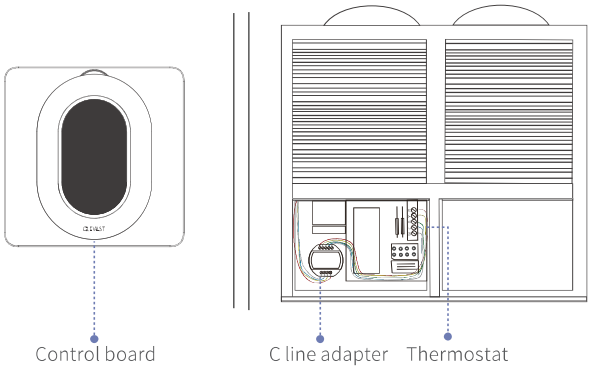

8.2.1.5 Connect the wires.

There are generally W, C, G, Y, and R terminals on the HVAC control board. Connect the 5 wires to the 5 terminals in sequence;



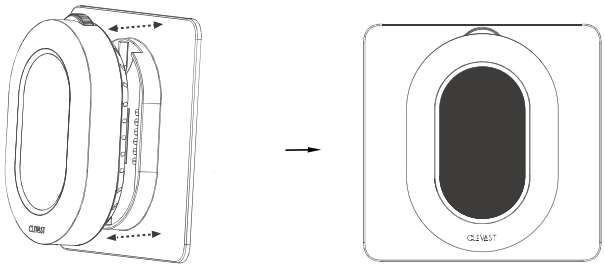

**8.2.2 Position the wiring module.**

The C-wire adapter should be installed between the thermostat and control board. Then install it in the correct position to securely close the HVAC cover and return it to the thermostat.




## 9. ATTACH THE DISPLAY

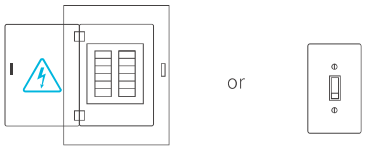
Press the display onto the base until it clicks.



## 10. SWITCH THE POWER BACK ON

Turn on the switch that controls your heating and cooling system, the thermo stat will be powered on and prompt you to start the setup. If you have any trouble installing the device or app, simply visit our website for installation

videos.




Breaker box Switch

## 11. SETUP AND CLEVAST ACCOUNT

The Clevast Thermostat will turn on and walk you through setup. Just turn the ring and press to select. During setup, you can connect the thermostat to Wi-Fi (2.4G network).


### 11.1 Downloading the free mobile app

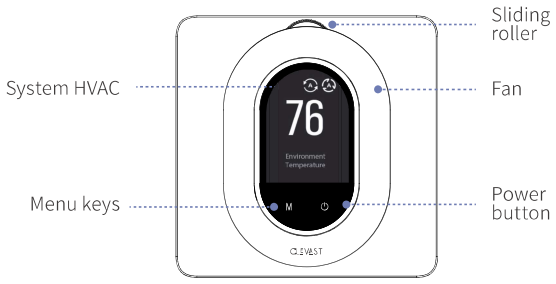
To download the Clevast App, please scan the QR code or search for "Clevast" in Apple App Store® (iOS) or Google Play Store(Android).

Download on the App Store

GET IT ON Google Play

**11.2 Congratulations, you did it!**

Say hi to your new thermostat! To complete , follow the instruction on your thermostat screen.




Main interface


Menu settings interface

After clicking the power button in the power-on state, on the main display interface, you can directly set the temperature by rotating the wheel. In the system automatic mode, the heating and cooling temperatures need to be set separately.


1. Press the M mode key/confirm key to enter the menu interface.
2. Rotate the wheel to select 5 functions in sequence (including Current Temp, State, System HVAC, Fan, and Settings).
3. Click the M mode key/confirm key on the menu interface to enter the next level submenu, rotate the wheel to select functions, and click the M mode key/confirm key to confirm the selection.
4. After setting, choose to exit and return to the previous menu. Click the power button twice to return to the main interface, or wait for 5 seconds to return to the main interface.

**11.3 Click the "M" button to enter the menu setting options:**


1. State



**State manual mode**
In this mode, set temporary settings in your application or confirm by pressing the control interface.


**Schedule weekly programming**
7 days per week, 4 programmable cycles.


**Temporary mode**
Set the temporary temperature on your application. This temperature will be valid until the start of the next programming cycle.

2. System HVAC

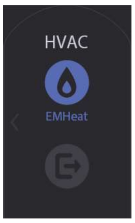


Off


Cool

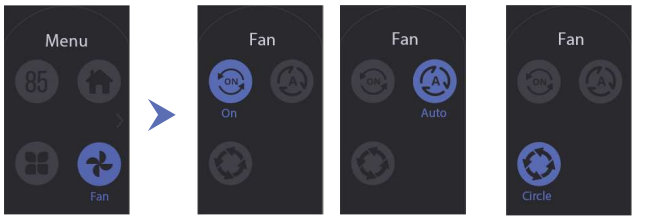

Heat


Auto




EMHeat

3. Fan

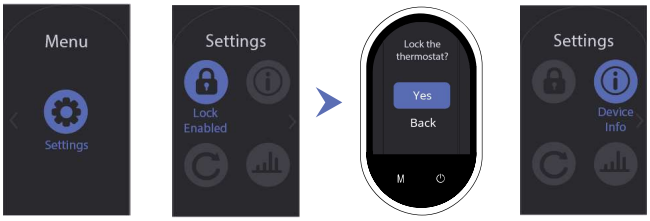



**On**
Continuous operation of the fan.

**Auto**
Automatically adjust the operating time of the fan according to the system.

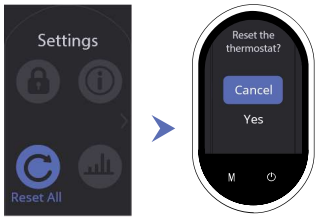
**Circle**
Running at intervals to circulate indoor air.

4. Settings




**Lock Enabled**
lock/unlock

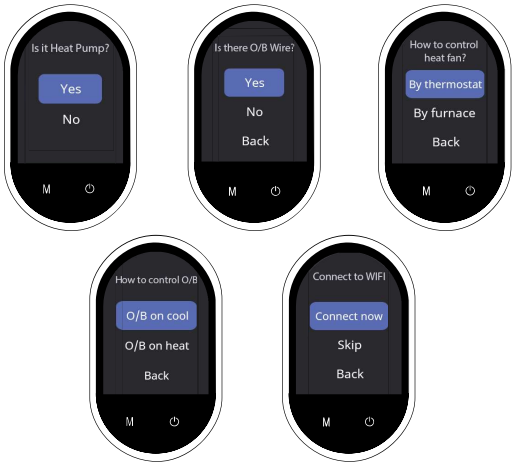
**Device info**

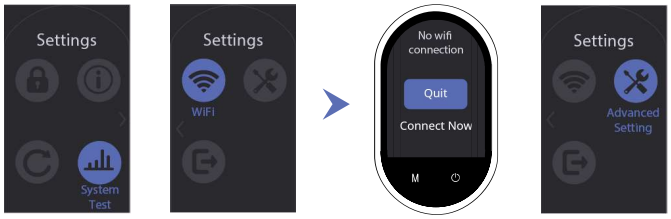



**Reset All**

After selecting Reset, there will be 5 options to choose and change:

1. Installation selection: horizontal /vertical
2. Is it used in a heat pump system?
3. Is there a O/B wire?
4. How to control fan heat dissipation? (Thermostat/boiler)
5. How to set up O/B? (O/B cold, O/B hot)




System Test Wi-Fi Advanced Setting

Advanced options parameters

| | |
|---|---|
| 1. Compensation temperature | -9 to 9, default -4 |
| 2. Standby brightness | 3% to 99%, default 20% |
| 3. Minimum setting temperature | °C: 5-15, °F:41-59, default °C:5, |
| 4. Maximum setting temperature | °C: 15-35°F:59-95, default °C:35, |
| 5. First-stage compressor delay time | 1-5, default 1 (min) |
| 6. Secondary compressor delay time | 1-5, default 1 (min)°F:41 |
| 7. Fan shutdown delay time | 1-5, default 1 (min) |
| 8. Cycle time of fan cycle mode | 1-11(5-55),default 2(10)min |
| 9. Compressor operation limit | Enable or disable, not enabled by default°F:41 |
| 10. Compressor outdoor minimum outdoor temperature setting | °C: 0-20, °F: 32-68, default °C: 2, °F:32 |
| 11. Auxiliary heat limitation enabled | Enable or disable, not enabled by default |
| 12. Turn on auxiliary heat and set outdoor maximum temperature. | °C: 0-20 °F:32-68, default°C:18,°F:64 |
| 13. The heat pump compressor and auxiliary heat are turned on at the same time | 0: No 1: Yes, default 1 |
| 14. Interval temperature | °C:2-5 °F:3-9, default °C:2, °F:3 |
| 15. °F&°C switch | °C or °F, default °F |
| 16. Dual energy turned on | Enable or disable, default is disabled |

# SPECIFICATIONS

| | |
|---|---|
| Voltage: | 24VDC/AC +10% |
| Current: | 1A (inductive relay) 3A (resistive relay) |
| Sensor: | NTC3950, 10K |
| Set Temperature Range: | 41-95°F (5~35°C) |
| Temperature Error: | 1°F (0.5°C) |
| Display Temperature: | 41~95 °F (5~35°C) |
| Ambient Temperature: | 32~113 °F (0~45°C) |
| Environment Humidity: | 5~95% RH (non condensing) |
| Storage Temperature: | 23~113°F (-5~45°C) |
| Inter-counting Error: | <1% |
| Power: | <1.5W |
| Material Shell: | PC+ABS (resistance) |
| Installation Method: | Wall Hanging |
| Protection Level: | IP20 |

# TROUBLESHOOTING

| Problems | Possible Causes | Solutions |
|---|---|---|
| No Heat/No Cool /No Fan (common problem) | Blown fuse or tripped circuit breaker. | Replace fuse or reset breaker. |
| | Furnace power switch to OFF. | Turn switch to ON. |
| | Furnace blower compartment door panel loose. | Replace door panel in proper position to engage safety interlock or door switch. |
| | Loose connection to thermostat or systemmatch. | Tighten connections. |
| No Cool | Thermostat not set to Cool. | Set thermostat to Cool. |
| | Loose connection to thermostator system. | Verify thermostat and system wires are securely attached. |
| | Cooling system requires service or thermostat Requires replacement. | Set Mode to Cool and lower setpoint below room temperature. Same procedures as diagnostic for "No Heat" condition except set the thermostat to Cool and lower the setpoint below the room temperature. There may be up to a five minute delay before the thermostat clicks in Cooling if the AC Protection feature is on. |
| No Heat | Thermostat not set to Heat. | Set thermostat to Heat. |
| | Loose connection to thermostator system. | Verify thermostat and system wires are securely attached. |
| | Heating system requires service or thermostat Requires replacement. | Set Mode to Heat and raise the setpoint above room temperature. Within five minutes the thermostat should make a soft click sound and the display should turn red. This sound indicates the thermostat is operating properly. If the thermostat does not click, try resetting the thermostat. If the thermostat does not click after being reset, contact your heating and cooling service person or place of purchase for a replacement. If the thermostat clicks, verify the heating system is operating correctly. |

| | | |
|---|---|---|
| Heat, Cool or Fan Runs Constantly | Possible short in wiring, thermostat, heat, cool or fan system. | Check each wire connection to verify they are not shorted or touching other wires. Try resetting the thermostat. |

## FCC STATEMENT

This device complies with the provisions of Part 15 of the FCC Rules. The operation is constrained by the following two factors.

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

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

• Reorient or relocate the receiving antenna.

• Connect the equipment into an outlet on a circuit different from that to which

the receiver is connected.

• Increase the separation between the equipment and receiver.

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

## FCC RADIATION EXPOSURE STATEMENT

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with FCC RF exposure compliance requirements, please follow operation instructions as documented in this manual. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body. The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

## WARRANTY INFORMATION

We grant 1 year warranty on the product commencing on the date of purchase. Within the guarantee period, we will eliminate any defects in the appliance resulting from faults in materials or workmanship. Please contact us at: **support@clevast.com** to launch a warranty claim.

This guarantee does not cover: damage due to improper use, normal wear or use as well as defects that have a negligible effect on the value or operation of the appliance. The guarantee becomes void if repairs are undertaken by unauthorized persons and if original product parts are not used.

## CUSTOMER SUPPORT

1. If you have any product questions or concerns, please don't hesitate to contact us directly at **support@clevast.com** or visit our website at: **www.clevast.com**.
2. We have a hassle-free warranty and customer service team for satisfactory solutions to any issue you might have.

## NOTES

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# FCC warning statements:

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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

The device has been evaluated to meet general RF exposure requirement This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.