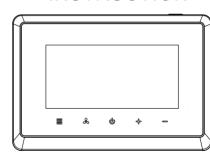
T29UTW-7-WIFI(TY)

OPERATING INSTRUCTION

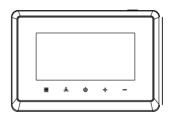
OPERATING INSTRUCTION



<u>T29UTW-7-WIFI(TY)</u>

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Specifications

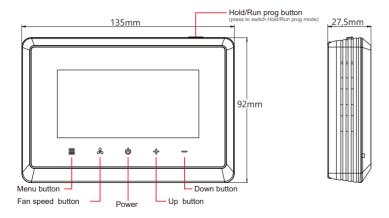


T29UTW-7-WIFI(TY)

thermostat

- Power source: 18-30VAC 50/60Hz
- IP Rating: IP21
- Temperature setting range: 41°F~95°F
- Temperature setting accuracy: 1°F
- Temperature display range :32°F~122°F
- Temperature accuracy: 0.1°F
- Operation temperature range: 32°F~122°F
- Shipping & storage temperature: 14°F ~ 140°F
- Output:Relay Load Imax 24V/(1A)
- Wifi Communication protocol: TCP/IP,MQTT
- Wifi Frequency: 2.412GHz-2.4848GHz

Thermostat's appearance



Mode button

- Under power on status, short press

 button to switch the mode, long press
 button to enter
 the programming settings. Under programming setting status, short press
 button to enter the
 next item.
- 2. Under power off status, long press ≡ button to enter the menu setting. Short press ≡ button under menu setting state to enter the next item.

5 Fan speed button

- 1.Under power-on status, short press & button to switch the wind speed mode. Long press button to enter time query. Under time query or setting status, short press button to enter the next time setting.
- $2. Under \ power \ off \ status, \ short \ press \ \textbf{\equiv} \ button \ in \ menu \ setting \ state \ to \ enter \ configuration \ menu.$

U Power button

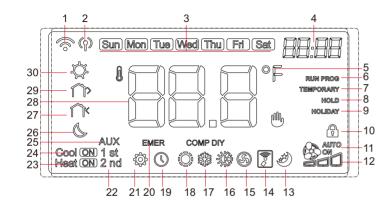
- 1.In power on, short press $\underline{0}$ to save and exist the time/program setting; short press $\underline{0}$ to enter into work state.
- Power off, long press to remove WIFI and enter into network pair state.

 2.In power off, short press to power on.

+ Increase button

- Decrease button
- * In power on, press increase button and decease button simultaneously to activate key lock.
- * Without holiday mode and hold mode

Note: long press: press for 5 seconds, short press: press for 1 seconds.



1: WIFI icon: Flashing indicates the WIFI in connection, static indicates successful connection

2: Fast blinking indicates the network configuration status,

* Ensure the thermostat in AP mode(Hot spot mode) How to get into AP mode?

Under power on status, Long press the power off button \bullet until the WIFI icon \diamondsuit is off and change to AP mode \diamondsuit . (Hot spot mode)

Quick blinking, (0.5 seconds per time), how do change to quick blinking mode? In power on status, long press the power off button buttil the AP mode icon of is off. (Please use quick blinking mode)

3: Week

4: Temperature setting, Time setting, Parameter setting

5: Temperature unit

Program run

7: Temporary mode

8: Permanent mode 9: Holiday mode

10: Key lock
11: Indicate Fan AUTO/ON

12: Indicate Filter alarm

13: Indicates leave home mode14: Indicate UV light alarm

15: Indicate fresh air output

16: Indicate Auto mode

17: Indicate cooling mode18: Indicate heating mode

19: Indicate clock

20: Indicate Emergency and Auxiliary Heat mode

21: Setting

22: 1 stage or 2 stage output

23: Heating Output24: Cooling Output

25: Assistant Heating Output26: Sleep

27: Return

28: Temperature Sampling

29: Leave

T29UTW-7-WIFI(TY) Intelligent voice control thermostat

Power supply: 24VAC (18-30VAC) power supply through RC or RH, C terminal (no C line can be transferred through four-wire to five-wire module) Support stages: 1H/0C,0H/1C,1H/1C,2H/1C,2H/2C,3H/2C,4H/2C

Terminal 1:RT+,RT-,S,G,Y1,Y2,O/B

RT+: External sensor + terminal input

RT-: External sensor - terminal input

S: Control terminal input (with G and Y collinear input)

G: Fan output

Y1: One stage cooling or heat pump heating output

Y2: Two stage cooling or heat pump heating output

O/B: Four-way directional valve output

Terminal2: C,RC,RH,W1,W2,AC-,AC+ (, AC-, AC+ function software and hardware design are reserved, not standard, follow-up optional)

C: 24VAC power supply common input

RC: 24VAC cooling or single power input

RH: 24VAC heating power input

W1: One stage heating output

W2: Two stage heating output

AC-: Single wire is empty, two wires are passive common output

AC+: Ventilator equipment output (24VAC output when single wire)

T510-45(Electric Control Module)

* Power supply: 24VAC(18-30VAC) 60Hz

* Ambient temperature: 32°F~122°F(0°C~50°C)

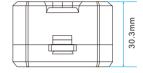
* Shipping temperature: $14^{\circ}F^{-140^{\circ}F(-10^{\circ}C^{-}60^{\circ}C)}$

* Output: Relay Load Imax 24V/(1A)

* IP rating: IP 21

* Color: white

* Size: 67.1*47.5*30.3mm



Five-core lead length 500mm (18#AWG) input: R,C,G,Y,G

R: Air conditioning equipment 24VAC power input

C: Air conditioning equipment 24VAC power supply public input

G: Air conditioner fan input

Y: Air conditioning equipment refrigeration compressor input

W: Air conditioning equipment heating input

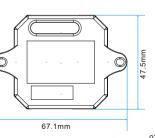
Terminal output: R,C,S,W

R: Converter 24VAC power output

C: Converter 24VAC power supply common output

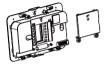
S: Converter control terminal (with G and Y collinear control)

W: Converter heating terminal



Thermostat Installation

1.Unscrew terminal protective jacket then wiring.



3.Install and fasten foundation, embed in display module.



After wiredlid the terminal protective jacketinstall the screw.



4.Installation finished.

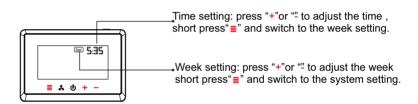


First Time Setting

Set the current actual time and week.

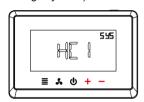
After power-on, press and hold the reset button, the screen blinks three times.

Press and hold the "-" button for three seconds to enter the time reset.



System Setting

(Multistage system)



1.press "+"or "- to select the primary system .

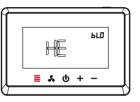
Parameter options:(CO1,CO2,HE1,HE2,HC1,HC2,HP1,HP2,HPA)

CO1:1 cool conventional CO2: 2 cool conventional HE1: 1 heat conventional HE2: 2 heat conventional

HC1: 1 heat/1 cool conventional HC2: 2 heat/2 cool conventional

HP1: 1 compressor heat pump,1-AUX

HP2: 2 compressors or 2 speed compressor heat pump,1-AUX HPA: 2 compressors or 2 speed compressor heat pump, 2-AUX



2.press"≣"to confirm the selection system

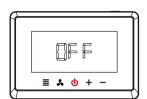
HE: Electric backup heat HA:Fossil fuel backup heat



3. System setup completed, press "

"to return to the main interface

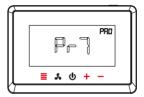
Programming Settings



1.Short press the power button "o", and then the screen shows "OFF".



2.Long press the menu button "≣"for 5s until the system selection interface is displayed and select the system set up previously.



3.After system selection, select programming mode: press "+" or "- "for switch the programming mode(Pr0/Pr7),and press "■"to confirm and save the options.

Pr0:Non-programmable
Pr7:7 days individually programming



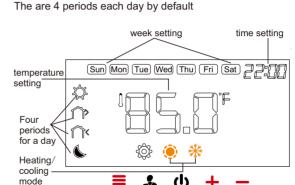
4.Short press the power button "o",and the screen shows "OFF",then short press the power button"o"again to enter the programming main interface



5.Long press the menu button
"≡"for 5s to enter the programming setting.
please Keep all the buttons lights on before performing this operation,if not, please press "o"

7 days programming-Time/temperature setting

Separate programming settings for each day (Pr7) (the programming setting are different from Sunday to Monday)



- 1.Week setting
- 2.Time setting
 3.Temperature setting
- press "+""-" to adjust the week / time / temperature, short short press"≣" to save the setting and switch to next period setting.



long press "≣" for 5s to switch the heating mode or cooling mode

Default setting (heating)

- h.							
periods Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
6:00 Morning	72°F						
8:00 Out door	61°F						
18:00 Back home	72°F						
22:00 Night	61°F						

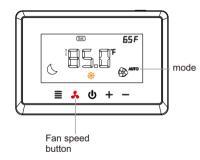
* Exit programming settings : short press power button "o"
Return to the previous step : short press fan speed button ".*"

Default setting (cooling)

periods Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
6:00 Morning	77°F						
8:00 Out door	82°F						
18:00 Back home	77°F						
22:00 Night	82°F						

Restore default setting: long press "+"and "- "for more than 5s until the screen shows "dEF" and the "dEF" flash 3times.

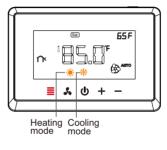
Fan speed setting



Fan speed mode setting: short press "*" for switching "AUTO" or "ON" mode.

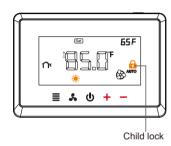
AUTO:Automatic mode ON:FAN ON mode

Cooling and Heating Modes



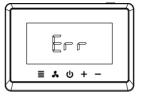
Short press the menu button
"≡"for switching cooling mode
"*"or heating mode "*" or
single speed fan mode "€"

Child Lock



Press the "+" and "-" buttons for 5s at the same time to open / close the child lock "...".

Error Warning



Room Temp(inside room sensor) broken or short cut,the thermostat will have "Err"

Configuration Menu

The configuration menu setting:

- 1.In the state of shutdown,long press menu button "≡"for 5s to enter the configuration parameter programming setting.
- 2.Press "+"or "-"to select the configuration parameter setting,then press "≡"to save and switch to the next item setting.
- 3.After all the parameters are set up, press power button "o"exit the setting and return to the OFF stage.



- * 1. The thermostat will exit the configuration parameter setting automatically and return to the shutdown state if there is no any operation whin 30s.
 - 2.Restore default setting: during setup, long press "+"and "-"for more than 5s until the screen shows "def"and the "def"flash 3times.

System type option(SYS)

HE1: 1 heat conventional

Parameter options:(CO1,CO2,HE1,HE2,HC1,HC2,HP1,HP2,HPA)

CO1:1 cool conventional CO2: 2 cool conventional

HC1: 1 heat/1 cool conventional HC2: 2 heat/2 cool conventional

HF2: 2 heat conventional

HP1: 1 compressor heat pump,1-AUX

HP2: 2 compressors or 2 speed compressor heat pump,1-AUX

HPA: 2 compressors or 2 speed compressor heat pump, 2-AUX

Factory default: HC1

Intelligent recovery option (rEC) First heating cycle rate(HCY) Parameter options:(OFF,ON) Parameter options:(1°F~6°F) OFF: Deactivate the intelligent recovery function Factory default:1°F ON: Activate the intelligent recovery function Second cooling cycle rate(C2S) Factory default:OFF Parameter options:(1°F~6°F) Manual/Autochangeover option(CHA) Factory default:1°F Parameter options: (OFF,ON) OFF: Manual changeover Second heating cycle rate(H2S) ON: Auto changeover Parameter options:(1°F~6°F) Factory default:OFF Factory default:1°F First cooling cycle rate(CCY) Emergency heat cycle rate(CrY) Parameter options:(1°F~6°F) Parameter options:(1°F~6°F) Factory default:1°F Factory default:1°F

Display backlight option(BLL) Compressor lockout delay option(dEL) Parameter options:(0~5) Parameter options:(1,2) To protect the compressor from short cycling, you can select compressor off-time cycle 1:No backlight display between 0~5 minutes 2:The backlight come on for approximately 30s when any button is touched Factory default:3 Factory default:2 * When the thermostat compressor time delay occurs, lockout. Temperature recalibration option(CAL) No heat pump heat type option(BLO) Parameter options:(HA.HE) Parameter options:(-8~+8°F) HA: Fossil fuel backup heat HE: Electric backup heat Factory default:0 Factory default:HE °F or °C readout option(FC) ★ HP1, HP2 and HPA system are Auxiliary heating Parameter options:(°F, °C) Factory default:°F 26

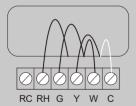
Program option(Pr0) UV lamp replacement run time option(UUL) Parameter options:(Pr7,Pr0) Parameter options:(ON,OFF) ON: It means starts to counting for 0 day to 400 day Pr7: 7-day program function for the thermostat OFF: It means cancel the function Pr0: non-program function for the thermostat Factory default:OFF Factory default:Pr7 Remote sensor option(SEn) [Only for HP1 HP2 HPA system] Filter replacement run time option(FIL) Parameter options:(00-12) Parameter options:(In,OU,ALL) This is a reminder to change or clean your air filter. This time can be set from 0 to In: No remote sensor 12 months in 1 month increments. OU: Outdoor control sensor (See Menu item 21 Heat pump temperature lockout) ALL: Indoor sensor, if the thermostat is installed with an indoor remote sensor, Factory default: 00 display will show the read temperature from the indoor sensor. 1. The thermostat will display the "all" after a set time of operation. Factory default: In 2. Selection of 00 will cancel the function. If the option is OU, ALL, please choose NTC-100 sensor.

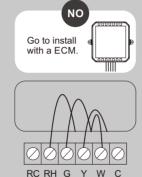
Auto changeover dead band option(dbA) Heat pump compressor lockout option(HPL) Parameter options:(0°F,15°F, 20°F,25°F,30°F,35°F,40°F) Parameter options:(4~8°F) 0: No heat pump compressor lockout Factory default:4°F 15°F, 20°F, 25°F, 30°F, 35°F, 40°F:heat pump compressor lockout temperature Factory default:0 O/B port selection direction(Ob) O: O/b terminal is output in cooling mode ★ This option apply only to HP1, HP2, HPA setting in system type option and only works when b: O/b terminal is output in heating mode remote sensor option (menu item 20) is set 2. Factory default: b Heat pump auxiliary heating temperature lockout option(AUL) Parameter options:(0°F, 40°F, 45°F, 50°F, 55°F, 60°F) ventilator(FAN) 0: No auxiliary heating temperature lockout 40°F, 45°F, 50°F, 55°F, 60°F: heat pump auxiliary heating temperature lockout 0~60 min Factory default: 0 Factory default:0 * This option apply only to HP1, Hp2, HPA setting in system type option and only works when remote sensor option (menu item 20) is set 2.

☑ CHECKPOINT:C WIRE

Do your have a C wire connected to you old thermostat?





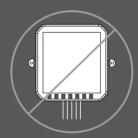


∹∯: TIPS:

The wiring on your old thermostat may look different, just check to see if there's a C wire.

Install your thermostat with a C wire

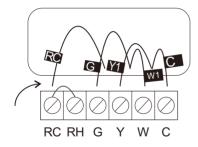
If you have a C wire, it will power your thermostat. you won't need the Electric Control Module included in the box.



🏗 TIPS:

TO install accessories(humidifier, dehumidifier or ventilator)please refer to the wiring diagrams at wiring.

Carefully disconnect and label the wires from your old thermostat one at a time, using the labels provided.

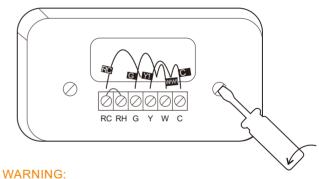


∹∭: TIPS:

If you have a jumper between RC,RH,OR R, leave it alone. Only label the wires that run from your wall into a terminal block.

STEP2

Unscrew the mounting plate of your old thermostat to remove it from the wall.



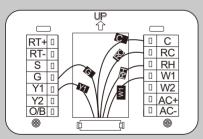
Be careful, as some thermostat may contain mercury. Recycle your old thermostat safely with your local hazardous waste facility.

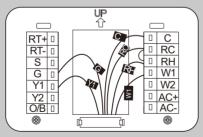
□ CHECKPOINT: INSERT YOUR R WIRE(S)

Do your have more than one R wire? (That includes R,RC,and RH)









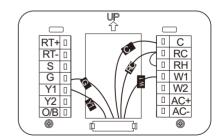
Note: Do not jumper RC or RH

STEP3

Insert your remaining wires into the side (not the front) of their corresponding terminal blocks.

STEP4

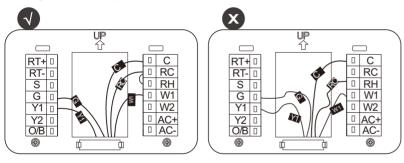
Tug on the wire gently to ensure they are securely connected.



TIPS:

- 1.Press the terminal block levers to insert the wires more easily.
 2.When a wire has been connected correctly, the level on the block will lower.

Carefully push any excess wires back into the hole and ensure there are no drafts coming from the hole(s) in the wall.



-\(\tilde{\pi}\): TIPS:

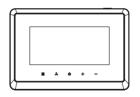
Large holes behind your thermostat will affect temperature readings. Prevent drafts by covering the holes.

STEP6

Turn the power to your HVAC system back on using the master switch or at the circuit breaker box.

Congratulations, you did it!

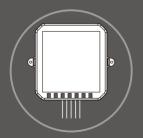
Say hi to your new thermostat! To complete your setup and registrations, follow the instructions on your thermostat screen.



Install your thermostat without a C wire

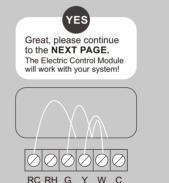
If you don't have a C wire, you will need to use the Electric Control Module included to reliable power your thermostat.

(Optional 4 to 5 wires)



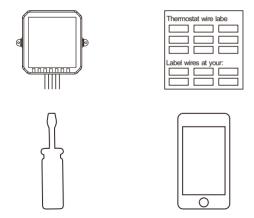
✓ CHECKPOINT: 4 WIRES

The Electric Control Module requires your system to have either of the following:4 wires W/W1,Y/Y1,G,and R(or RC or RH) Do you have these wires?



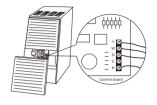


Take your Electric Control Module ,wire labels, tools, your smart-phone, and go to your HVAC system.



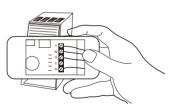
STEP2

Open your HAVC system's cover to reveal at control board.



STEP3

Take a picture of the wires connected to your control board. You may need to reference this photo later on.

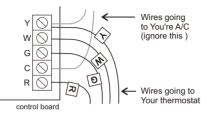


MARNING:

HVAC system contain high voltage wires. Use caution when working with the control board. If you'd rather leave it up to a professional.

Label only the R,Y,or Y1,G,and W or W1 wires with the matching labels provided.

If you have more than one wire going into these terminals, only label those going to your thermostat.



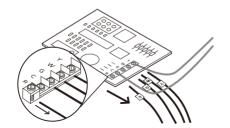
STEP5

Disconnect the wires labeled R,Y,G,and W from the control board.Then label it as follow:

* Important *

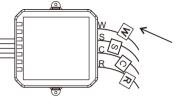
Attention please, at this time, you need to change the wire number. As follow:





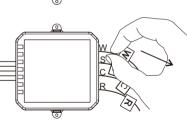
STEP6

Connect the wires you disconnected from the control board into their matching gray terminal blocks on the Electric Control Module.



STEP7

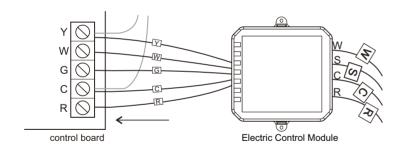
Tug on the wires gently to ensure they are securely connected.



∹∑: TIPS:

- 1. Press the buttons to insert the wires more easily.
- 2. When a wire has been connected correctly, the button on that block will lower.

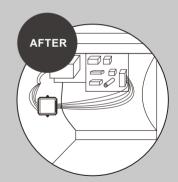
Connect the five white wires coming out of your Electric Control Module to their correspending terminals on the control board .



✓ CHECKPOINT: Electric Control Module

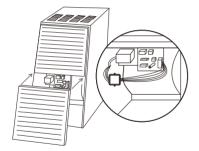
Check that you have installed the Electric Control Module correctly. It should be installed between your thermostat wiring and your control board.





Mount the Electric Control Module inside your HAVC system,taking care not to strain the wires.

Close the HVAC cover panel securely return to your thermostat.



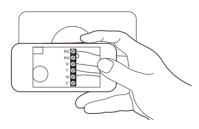


Make sure your HVAC panel is fully closed. Some systems will not turn on if the cover panel has not been closed properly.

STEP10

Back at your thermostat:

Carefully disconnect and label the wires from your old thermostat one at a time, using the labels provided. If you have a jumper between RC,RH,or R leave it alone. Only label the wires that run from your wall into a terminal block.



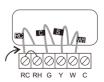
* Take a phone before disconnecting the wires from your old thermostat ,

You may need to reference this photo later on.

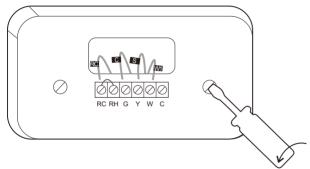
* Important *

Attention please, at this time, you need to change the wire number. As follow:





Unscrew the mounting plate of your old thermostat to remove it from the wall.

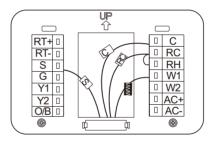




Be careful, as some thermostat may contain mercury. Recycle your old thermostat safely with your local hazardous waste facility.

STEP12

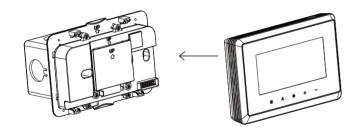
First, connect these 4 wires as show: RC,C,S,W1. Then connect any remaining wires to their corresponding terminal.





Press the terminal block levers to insert the wires more easily.

Gently press your thermostat into the backplate until it "clicks" into place.

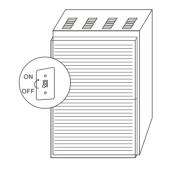


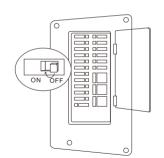
∹∑ TIPS:

If the thermostat "rocks" or is not flush with the wall, be sure the excess wires are $_{\rm 52}$ pushed all the way into the wall.

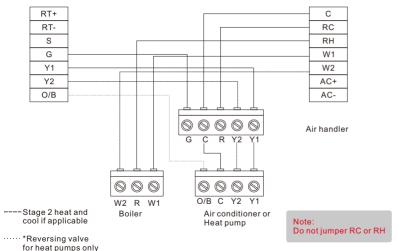
STEP14

Turn the power to your HVAC system back on using the master switch or at the circuit breaker box.





Boiler or radiant system with air handler and conventional cooling or heat pump.

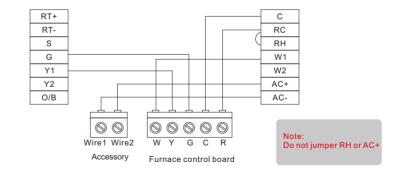


Accessory devices

The T29 can control an accessory HVAV device like a humidifier, dehumidifier, or ventilation device from its AC terminals

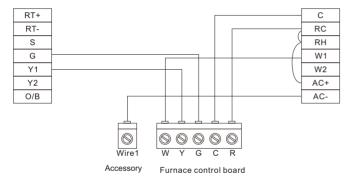
Note: You will need to configure the accessory device when you first power on your T29.

2-wire accessory (ventilator)



1-wire accesory

(ventilator)



T29 automatically connects Rc to AC- when 1-wire configuration is selected during accessory setup.



Warning: Damage may occur if accessory is connected to AC-

Wiring must comply with applicable codes, ordinances and regulations.

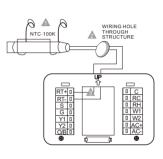
1. Wire the NTK100 Outdoor Sensor to the RT+/RT- terminals on the thermostat.

For an example of general wiring of the NTC-100K, see Fig. 2. Pigtail wiring can be used.

- 2. Mount the NTC-100K in its mounting clip.
- 3. Plug wiring hole using nonhardening caulk or putty.



Fig. 1. Typical locations for outdoor sensor.



- ▲ Use appropriate mounting means for the type of structure. A Plug wiring hole with non-hardening caulk or putty.
- A RT+/RT- terminal location varies with model.

Fig. 2. Wiring diagram for the NTC-100K Outdoor Sensor to the thermostat.

Optional sensor

SASWELL NTC 100K Room Sensor With 3 Meter Wiring

*Used for outdoor temperature detection when there is water pump protection.



FCC Radiation Exposure Statement:

FC FCC ID: 2AOIFT29UTW

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.

FCC Warning

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.

NOTE 1: 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Link APP



Click App store (click Android application market)



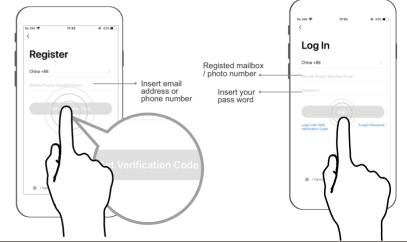
Search "TuyaSmart" and download.



Search " amazon alexa " and download.



When you finish the register, log in your mailbox and click on the link to activate your account, then can login thermostat's APP.



Add Thermostat

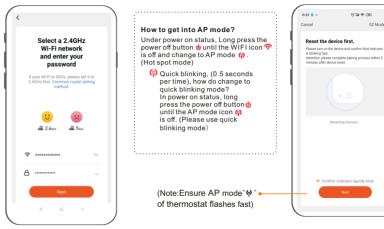


Click "+" on the top of right.



Click the list bar "Small Home AP" and select the thermostat in the right device list.

Distribution network in AP mode:



3 Confirm wifi account and enter wifi password, then click "Next" 4 Check the "Confirm indicator rapidly" then click "Next"

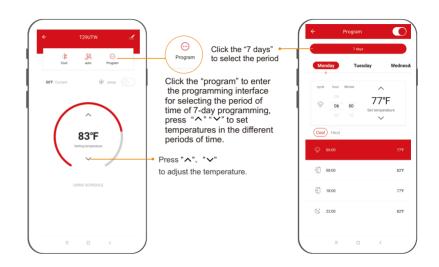
日本中国 EZ Mode =

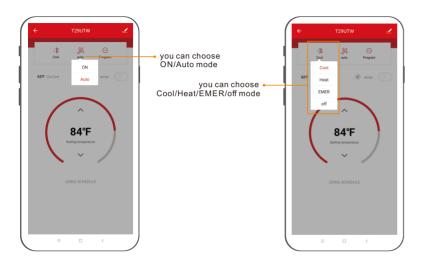


4 Enter automatic search and add devices, wait a few seconds



Device added successfully, click "Done".





Voice commands:

*Set the bedroom(Device name) to Cool/heat/auto/aux/off mode

* You can say "change/switch/turn/make bedroom to cool mode"

* Bedroom is the device name, you can name it yourself.

Amazon Alexa

*You can say such as follow:

"Alexa, change bedroom to Cool mode."

"Alexa, what is the temperature in the bedroom."

"Alexa, set the bedroom to 72 degrees."

"Alexa, raise the bedroom by 1 degree."

"Alexa,increase the bedroom by 1 degree ."

"Alexa, drop the bedroom by 1 degree."

"Alexa, resume my bedroom schedule."

Google Assistant

*You can say such as follow:

"Ok,google,turn on bedroom"

"Ok,google,turn off bedroom"

"Ok,google,set the bedroom to 16 degrees"

"Ok,google,change bedroom to Cool mode."

Tips:you need connect to the Google speaker

^{*} The temperature unit of thermostat and speaker must be the same.