

## Application

TX928-M is a cooling & heating thermostat with touch screen, suitable for the 2-pipe fan coil system. And this product includes three functions: ON/OFF state memory function, de-frost protection function and energy saving function.

## Features

- Super modern appearance design, suitable for office, hotel and residential building
- Slim design, direct installation on 86×86mm box
- 2-pipe integrated into one unit with easy configuration
- Big LCD display with English and icons
- Easy to install and set-up
- Time on/off function
- Room temperature or setpoint temperature display
- Manual or automatic fan speed selection
- Energy saving mode activation by button press or dry contact (key card)
- Adjustment of display room temperature
- Temperature unit either °C or °F
- User setting can be kept when power off
- Freezing protection function available
- Lock or unlock keys or part of keys in Installer Set-up ( ISU )
- Heat and cool setpoint limitation for energy saving
- 24VAC power supply
- 230VAC fan load, 4A resistive and 2A inductive switch rating

## Technical specification

Power supply : 24±10%VAC  
 Frequency : 50Hz  
 Modulating output : DC0~10V,Support  
 Relay life : 230±10%VAC,4(2)A 100,000,times  
 Wiring:Max 16AWG  
 Sensing element:10K(@25°C)NTC  
 Control algorithm:PI, Modulating output  
 Accuracy:±1°C at 25°C  
 Setpoint range:10~32°C  
 Display range:0~50°C  
 Protection Class :IP20  
 Operation temperature:-18~ 49°C  
 Shipping temperature:-35~65°C  
 Relative humidity:5~90%  
 Installed on 86×86 mm box

## Function

**Modulating Valve control** : Thermostat acquires the room temperature via its integrated sensor and maintains the setpoint by delivering modulating output.

**Heat/Cool/Vent** : Pressing the mode button to select heat, cool or vent mode.

**Fan Operation** : Fan can be selected as manual or automatic 3-speed operation. In Manual mode, the fan is switched to the selected speed via control output Gh, Gm, Gl.In automatic mode, fan speed depends on the difference between room temperature and setpoint. When room temperature reaches setpoint, valve will be closed and meanwhile, fan will be closed either.

**Temperature display** : The displayed temperature can display room temperature or setpoint.

**Time on/off** : When the thermostat is off, holding power button for 3 seconds, system will enter " Time on " mode. When the thermostat is on, holding power button for 3 seconds, system will enter " Time off " mode. The range of " Time on " or " Time off " is from 0 to 12 hours. The step is 1 hour and the default time is 0.

**Backlight** : Pressing any key will activate the backlight.

Backlight will turn off after 8 seconds. When in ISU mode, the backlight will turn off after 60 seconds without operation.

**Keypad lock** : The default status of " Keypad Lock " is all keys available and it can be changed in ISU mode.

Keypad lock has the following settings:

All keys are available (Default)

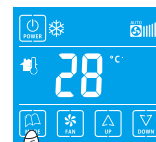
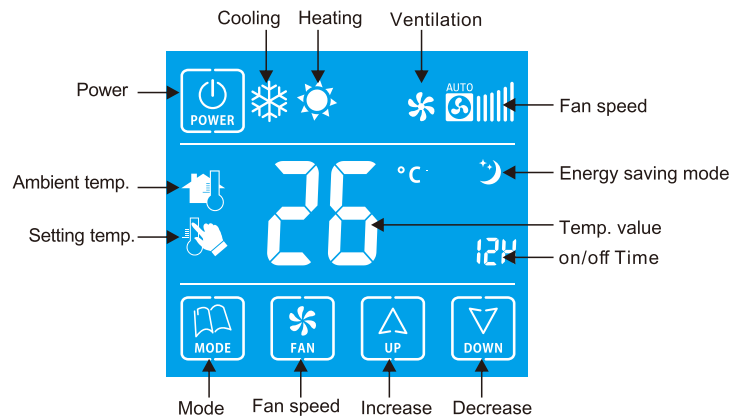
System button is locked out

Fan and System button are locked out

All buttons are locked



## Mechanical design and LCD display



PRESS THE MODE BUTTON TO SELECT HEAT, COOL OR VENT



PRESS THE FAN BUTTON TO SELECT LOW, MED, HIGH OR AUTO



INDICATES THERMOSTAT HAS BEEN SET TIME OFF

## Operating modes

The following operating modes are available:

**Comfort mode** : In comfort mode, the setpoint can be changed by pressing up or down button. Different applications include cool only, heat only and manual heat/cool changeover.

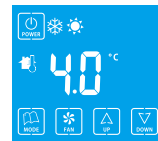
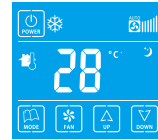
**Energy saving mode** : A potential-free dry contact (such as hotel key card) or button press (pressing mode button for 3 seconds) can activate the energy saving mode with icon appearing on screen. The dry contact can be selected as normal open or normal close type in ISU. If activated by dry contact, all buttons will be locked except the multi-key for ISU. If energy saving is activated by button press, pressing any button will stop energy saving mode.

For heating mode, if the energy saving function is enabled, the setpoint will change to remote setback heating setpoint. The range of remote setback heating setpoint is from 10°C to 21°C and default value is 18°C. The value may change in ISU with step of 0.5°C.

For cooling mode, if the energy saving function is enabled, the setpoint will change to remote setback cooling setpoint. The range of remote setback cooling setpoint is from 22°C to 32°C and default value is 26°C. The value may change in ISU with step of 0.5°C.

**Freezing protection mode** : Freezing protection can be disabled (default) or enabled. If freezing protection is enabled (It is not available in cool only application) and thermostat is in OFF mode while the room temperature is below 6 °C, the thermostat will open heating device before the temperature rises to 8°C.

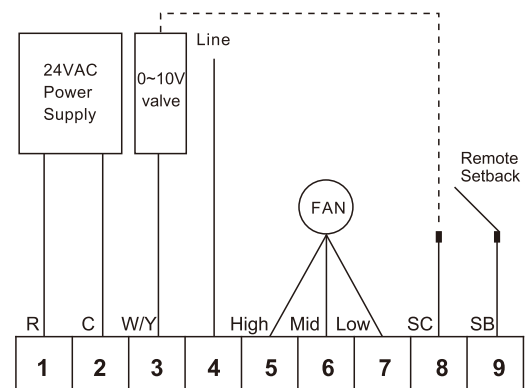
**On/off mode** : Pressing power button can turn on/ turn off the thermostat.



## Terminal Designations

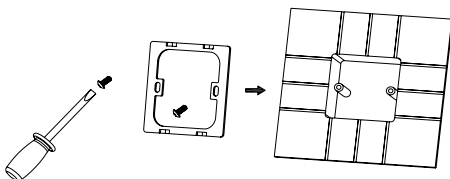
No	Terminal	Description
1	R	24VAC power
2	C	Common 24VAC
3	W/Y	DC 0~10V
4	L	230VAC operating voltage for the fan
5	Gh	High speed fan
6	Gm	Medium speed fan
7	Gl	Low speed fan
8	SC	Remote setback/Common for control output
9	SB	Common for remote setback

## Wiring diagrams

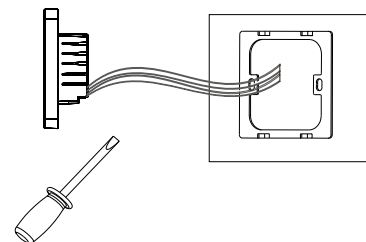


## Installation & Commissioning

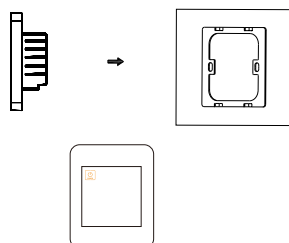
1. Fix the iron holder with screw and install it in the cassette on the wall.



2. Complete electrical connections correctly as to the wiring diagram.



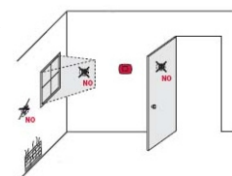
3. Insert the thermostat and stuck it into the iron holder.



Install the thermostat about 5 feet (1.5m) above the floor in an area with good air circulation at average temperature.

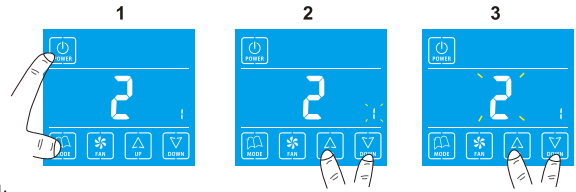
Do not install in locations where the thermostat can be affected by:

1. Drafts or dead spots behind doors and in corners
2. Hot or cold air from ducts
3. Sunlight or radiant heat from appliances
4. Concealed pipes or chimneys
5. Unheated/uncooled areas such as an outside wall



## Setup Function Settings & Options

1. Press "Mode" key then press "Power" key for 3 seconds to enter ISU setting mode.
  2. Press "Increase" key or "Decrease" key to select the setting items you want, press "Mode" key to confirm.
  3. Press "Increase" key or "Decrease" key to revise the values of the setting items, press "Mode" key to confirm.
  4. If want to revise the other setting items, please repeat above step 2 and step 3.
- While setting, press "Power" to exit, the setting items and values as below form shown.



ISU Code	Description	Possible Options
1	System Type	0 Heat only
		1 Cool only
		2 Two pipes 1H1C manual(Default)
2	Temperature scale	0 °F
		1 °C(Default)
3	Fan Control Type	0 Auto only
		1 Constant only
		2 Both(Default)
4	Keypad Lock out	0 All keys are available(Default)
		1 System button is locked out
		2 Fan and System button are locked out
		3 All buttons are locked
5	Remote setback enable method	0 Hotel card NO
		1 Hotel Card NC
		2 Button (Default)
6	Freeze Protection	0 Disabled (Default)
		1 Enabled
7	Display Temperature Adjustment	-2°C ( - 4°F)
		-1.5 °C( - 3°F)
		-1°C( - 2°F)
		-0.5°C( - 1°F)
		0 °C(0 °F)(Default)
		0.5°C(1°F)
		1°C(2°F)
		1.5°C(3°F)
		2 °C(4°F)
8	Remote setback heating setpoint	Range 10-21°C Default :18°C (Range 50-70°FDefault : 64°F)
9	Remote setback cooling setpoint	Range 22-32°CDefault : 26°C(Range 72-90°FDefault : 79°F)

## Troubleshooting Tips

If. . .	Then. . .
Heating system does not turn on.	<ul style="list-style-type: none"> <li>• Set the mode to Heat by pressing the Mode button.</li> <li>• Wait five minutes for the heating system to respond.</li> </ul>
Cooling system does not turn on.	<ul style="list-style-type: none"> <li>• Set the mode to Cool by pressing the Mode button.</li> <li>• Wait five minutes for the cooling system to respond.</li> </ul>
The fan doesn't work.	<ul style="list-style-type: none"> <li>• Check whether the Fan mode is set to Auto</li> <li>• Check whether the heating or cooling system works well.</li> </ul>
The Mode button doesn't work.	<ul style="list-style-type: none"> <li>• Check whether the keypad is locked or not.</li> <li>• Check whether the system is working in Energy saving mode.</li> <li>• Check whether the thermostat is off.</li> </ul>
The Fan button doesn't work.	<ul style="list-style-type: none"> <li>• Check whether the keypad is locked or not.</li> <li>• Check whether the system is working in Energy saving mode.</li> <li>• Check whether the thermostat is off.</li> </ul>
The Up or Down button doesn't work.	<ul style="list-style-type: none"> <li>• Check whether the keypad is locked or not.</li> <li>• Check whether the system is working in Energy saving mode.</li> <li>• Check whether the thermostat is off.</li> </ul>

## Dimension

