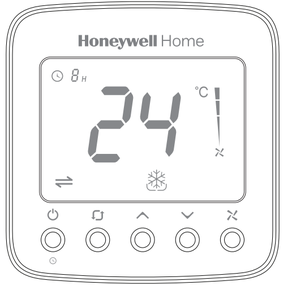
Honeywell Home

User Manual

TF428WNM/U Communicating Thermostat

Thermostat Appearance



Operating Your Thermostat

Power On/Off

Time Off

- Press ⏻ to switch on/off thermostat. When in off mode, "OFF" icon will display.
- Press 🕒 could set the automatical turn off time when the thermostat is working.

  Press 🕒 and hold for more than 3s, After timer icon flashes, press ∧ or ∨ to set turn off time, then press 🕒 button to save and exit.

Temperature Setting

In ❄ or ☀ or ❄☀ mode, press ∧ or ∨ to set the target room temperature.

Operating Mode

Ventilation Heating Cooling

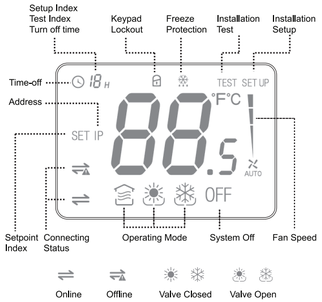
Auto

Fan Speed

AUTO

Auto Low Speed Medium Speed High Speed

LCD Display



Trouble Shooting Tips

If....	Then....
☀ Doesn't work	· Set the mode to ☀ (heating mode) by press 🔄. · Make sure the temperature is set above the room temperature. · Make sure ☀ shows on the display. · Wait 5 minutes for the system to respond.
❄ Doesn't work	· Set the mode to ❄ (cooling mode) by press 🔄. · Make sure the temperature is set below the room temperature. · Make sure ❄ shows on the display. · Wait 5 minutes for the system to respond.
🔄 Doesn't work	· Make sure keypad is unlocked. · Check the thermostat is on.
∧∨ Doesn't work	· Make sure keypad is unlocked. · Make sure the system isn't in 🕒 mode. · Check the thermostat is on.
The system turns off automatically	· Make sure the memorized turn off time value isn't set to "0".
Display ⇄	· Check the Modbus address and Baud rate, use master to read registers. · Check the wiring.
4 Pipes Valve doesn't work	· Check ISU setup. · Check the wiring.

Installation Guide

Must be installed by a trained and experienced installer

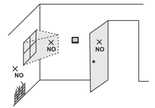
Read instruction carefully. Failure to follow instruction will damage the product or cause a hazardous condition.

Caution: ELECTRICAL HAZARD can cause electrical shock or equipment damage. Disconnect power before installation, reparation and detachment.

Installation Tips

TF428WNM/U is designed for standard 75x75x50mm wall mounting box .

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

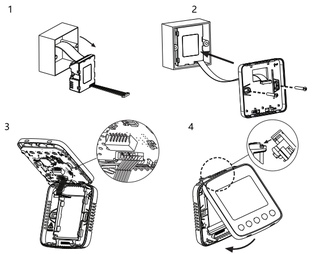


Do not install in locations where the thermostat can be affected by:

- Dead spots behind doors and in corners
- Hot or cold air from ducts
- Sunlight or radiant heat from appliances
- Concealed pipes or chimneys

Wiring and Installation

The screw must be locked tightly to avoid wire break off from the terminal.
The wire should not be tangled and stucked between front case assembly and back case.
Request Shielded Twisted Pair(STP) wire for RS485 communication.
Separate the low voltage and high voltage wiring.
Max 32 pcs in one loop, do not connect to unauthorized devices.
Select proper terminal resistor based on application environment.



Modbus Requirements

Physical layer	EIA485
Protocol	Master-Slave
Baudrate	**9600 (Default)** /4800/19200
Parity	None
Signal Transmission	RTU
Error Checking Mechanism	CRC

resideo

Pittway Sarl, Z.A. La Pièce 4,
1180 Rolle, Switzerland

www.resideo.com Country of origin: China

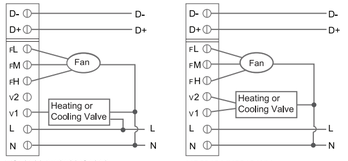
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R32347283-001 Rev.B
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Terminal Designations

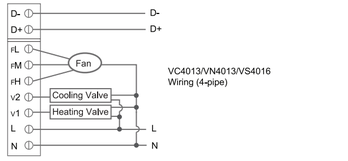
Terminal	Symbol	Description
1	D-	Modbus 485-
2	D+	Modbus 485+
3	FL	Low speed fan
4	FM	Medium speed fan
5	FH	High speed fan
6	V2	2-pipe-VC6013:Valve close 4-pipe-VC4013:Cooling Vavle open
7	V1	2-pipe-VC4013/VC6013:Valve open 4-pipe-VC4013:Heating Vavle open
8	L	Live wire
9	N	Neutral wire

* The temperature of mounting box and wall should be in the operating temperature range.



VC4013/VN4013/VS4016
Wiring (2-pipe)

VC6013/VN6013 Wiring
(2-pipe)



VC4013/VN4013/VS4016
Wiring (4-pipe)

ISU (Installation Setup)

3s → Enter or Exit Installation Setup Mode

ISU Code	Description	Options
0	Modbus Address	1~64 **1(Default)**
1	System Type	0-Heat only
		1-Cool only
		2-2-pipe manual (Default)
		4-4-pipe manual
		5-4-pipe auto change over
2	Temperature Scale	0-℉ **1-℃ (Default)**
3	Fan Control Type	0-Auto only
		1-Manual only (3 speed:Low→Med→High→Low)
		2-Users can choose auto or cycle (Default)
4	Switching Differential For 4-pipe Auto Changeover Eith Single Setpoint	1°C (2°F)
		1.5°C (3°F) (Default)
		2°C (4°F)
		3°C (5°F)
5	CPH Value (Heat)	1~12 **4(Default)**
6	CPH Value (Cool)	1~6 **3(Default)**
7	Display Temperature Adjustment	-2~2°C, Step 0.5°C **0°C (Default)** (-4~4° F, Step 1°F **0°F (Default)**)
8	Temperature Display	**0-Room temperature (Default)**
		1-Setpoint
9	Heating Range Stops	10~32 ℃ **32 ℃ (Default)** (50~90 °F **90 °F (Default)**)
10	Cooling Range Stops	10~32 ℃ **10 ℃ (Default)** (50~90°F **50 °F (Default)**)
11	Keypad Lockout	**0-All keys are available (Default)**
		1-System button is locked
		2-Fan and System button are locked
		3-All buttons are locked except power button
		4-All buttons are locked
12	Freeze Protection	0-Disable **1-Enable (Default)**
13	Power Recovery Status	0-OFF **1-Previous status (Default)**
14	Modbus Baudrate	**0-Baudrate 9600 (Default)**
		1-Baudrate 4800
		2-Baudrate 19200

NOTE: When the thermostats are intergrated into building automation sysytem, user is able to change the setting value above in "Communicating Parameter Setting" list as well.

Communicating Parameter Setting

When the thermostat is integrated into building automation system, you can make configutation refer below list.

Addr	Configuration Parameters	Significance and adjustment	Properties
1	Power	0-OFF; 1-ON	R/W
2	Room Temp	Room temperature	R
3	Temperature Scale	0-℉; 1-℃	R/W
4	Setpoint	Setpoint	R/W
5	Fan Speed	0-Auto; 1-Low speed; 2-Med speed; 3-High speed	R/W
6	System Mode	0-Ventilation; 1-Heat; 2-Cool; 3-Auto	R/W
7	V1 Valve Status	0-Closed; 1-Open	R
8	V2 Valve Status	0-Closed; 1-Open	R
9	Error Code	0-None; 1-Sensor; 2-EEprom; 3-Sensor+EEprom	R
10	Fan Operation Status	0-Off; 1-Low speed; 2-Med speed; 3-High speed	R
25	Time Off Time	0~12; Unit: hour	R/W
26	Remain Time To Turn Off	0~12; Unit: hour	R
Internal settings (User is able to change the setting value of below parameters on site, see details in "ISU" part)			
11	Address	1~64 **1 (Default)**	R/W
12	System Type	0-Heat only; 1-Cool only; **2-2-pipe heating/cooling manual(Default);** 4-4-pipe manual; 5-4-pipe Auto changeover	R/W
13	Fan Control Type	0-Auto; 1-Manual; **2-Auto+Manual (Default)**	R/W
14	Switching Differential For 4-Pipe Auto Change Over With Single Setpoint	2-1°C (2°F); **3-1.5 °C (3°F) (Default);** 4-2°C (4°F); 5-3°C (5°F)	R/W
15	CPH Valve For Heat	1~12 **4 (Default)**	R/W
16	CPH Valve For Cool	1~6 **3 (Default)**	R/W
17	Display Temp. Adjustment	0~8 (-2~2°C) Step 1 (0.5°C) **4 (Default)** 0~8 (-4~4°F) Step 1 (1°F) **4 (Default)**	R/W
18	Temp. Display	**0-Room Temp.(Default);** 1-Setpoint	R/W
19	Heating Range Stops	100~320 (10~32°C) Step 5 (0.5°C) **320 (Default)** 500~900 (50~90°F) Step 10 (1°F) **900 (Default)**	R/W
20	Cooling Range Stops	100~320 (10~32°C) Step 5 (0.5°C) **100 (Default)** 500~900 (50~90°F) Step 10 (1°F) **500 (Default)**	R/W
21	Keypad Lockout	**0-All Keys are available (Default)**	R/W
		1-System button locked	
		2-Fan and system button locked	
		3-All button locked except power button	
		4-All button are locked	
22	Freeze Protection	0-Disable; **1-Enable (Default)**	R/W
23	Power Recovery Status	0-OFF; **1-Previous status (Default)**	R/W
24	Modbus Baudrate	**0-9600 (Default);** 1- 4800; 2-19200	R/W