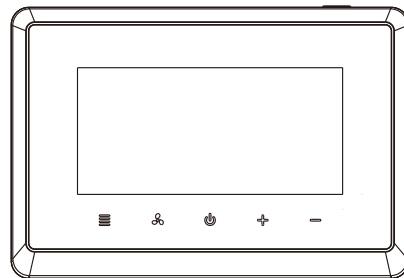


T29MTW-7-S-BACnet

OPERATION
INSTRUCTION | A1

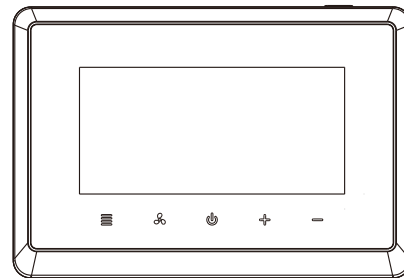
OPERATION
INSTRUCTION



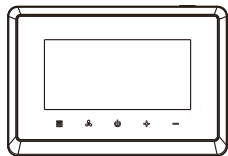
T29MTW-7-S-BACnet

Product Introduction	
Specifications -----	02
Thermostat's Appearance -----	03
Installation and Programming	
Thermostat Installation -----	04
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T29MTW-7-S-BACnet



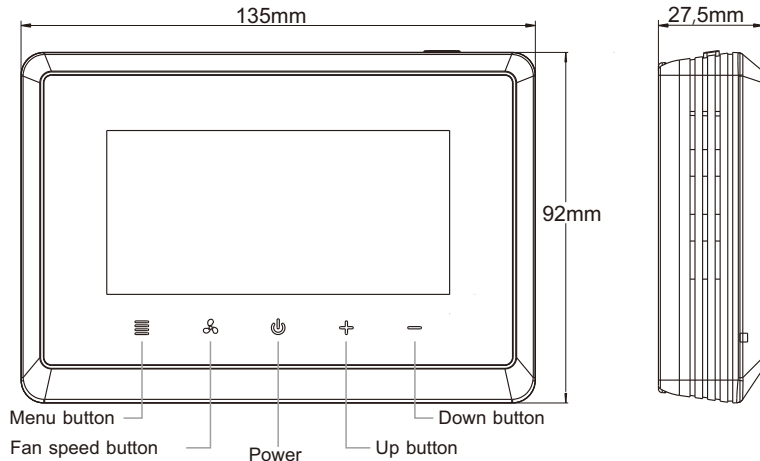
Specifications



(T29MTW-7-S-BACnet)
thermostat

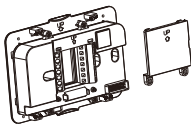
- Power source : 100-240VAC 50/60Hz
18-30VAC 50/60Hz
- IP Rating : IP21
- Temperature setting range : 5°C~35°C
- Temperature setting accuracy:0.5°C
- Temperature display range :0°C~50°C
- Temperature accuracy : 0.1°C
- Operation temperature range : 0°C~50°C
- Shipping & storage temperature : -10°C ~ 60°C
- Output : Fan Relay Load I_{max} 250V/8(5)A
Compressor/Valve Relay Load I_{max} 250V/5(3)A

Thermostat's appearance

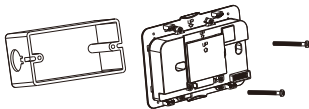


Thermostat Installation

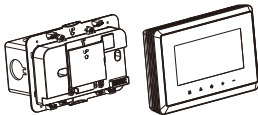
1. Unscrew terminal protective jacket then wiring.



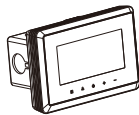
2. After wired the terminal, put back protective jacket and install the screw.



3. Install and secure the base, then attach the cover panel.

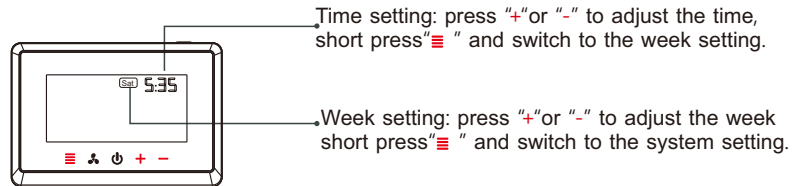


4. Installation finished.



First Time Setting

Set the current actual time and week.



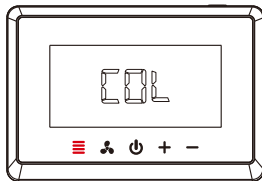
System Setting

(Multistage system)



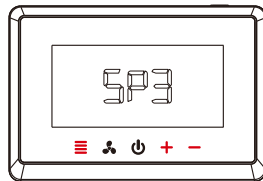
1.press "+" or "-" to select the primary system .

CP1:single stage DX system
CP2:two stage DX system
FAN:Fan coil system

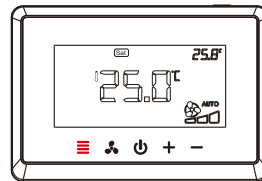


2.press "≡" to confirm the selection and switch to secondary system selection.

COL:cooling system
ALL:heat /cool system



3.Select secondary and tertiary systems in the same way as above.
(If there is a need to select the tertiary system)
SP1:single speed fan
SP3:3 speed fan



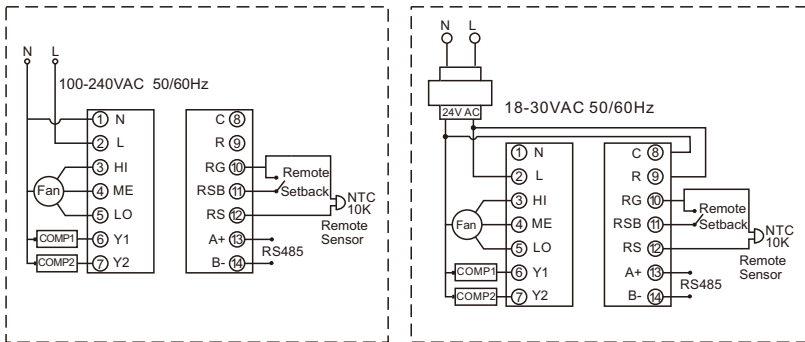
4.System setup completed, press "≡" to return to the main interface

The Wiring Diagram

Different wiring diagram correspond to different systems

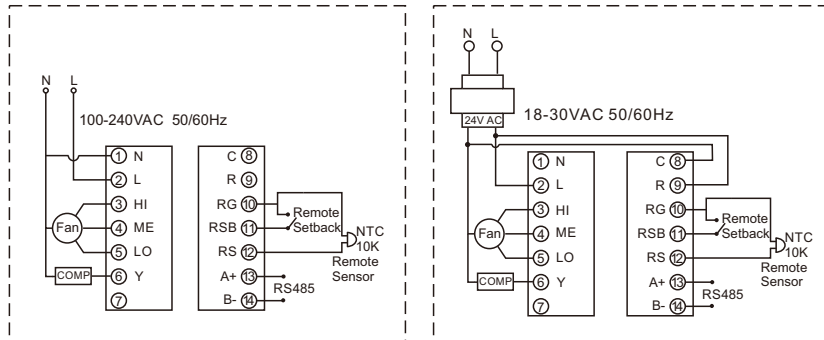
Application 1: 3 speed fan / two stage DX system

(system selection: **CP2-COL-SP3**)



Application 2: 3 speed fan / single stage DX system

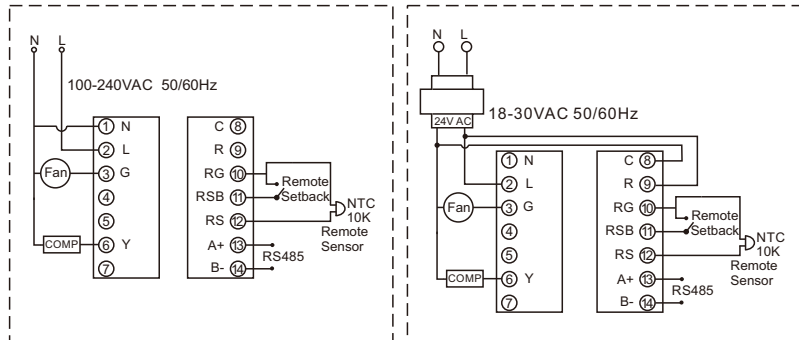
(system selection: **CP1-SP3**)



Application 3:

single speed fan / single stage DX system

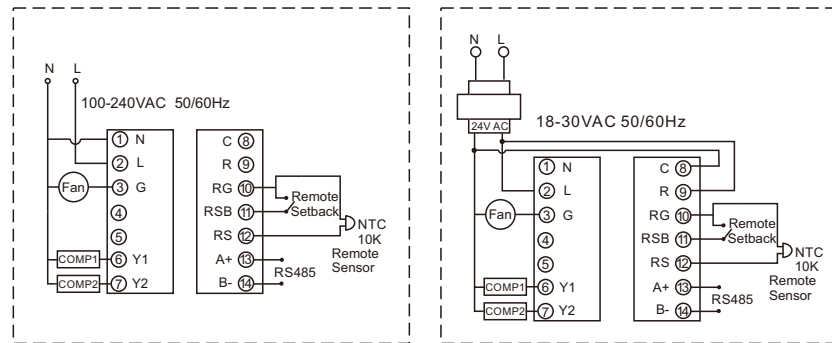
(system selection: **CP1-SP1**)



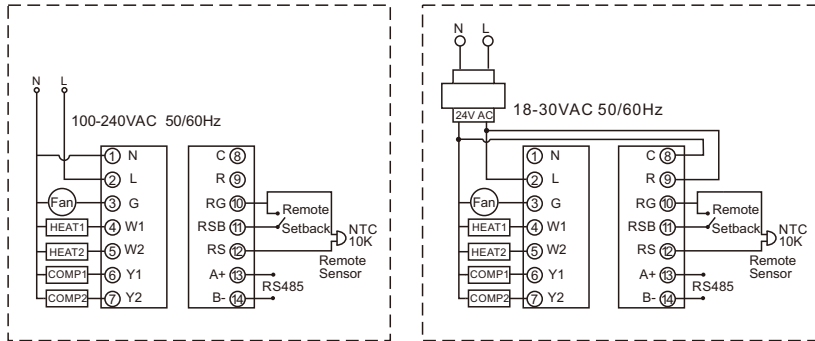
Application 4:

single speed fan / two stage DX system

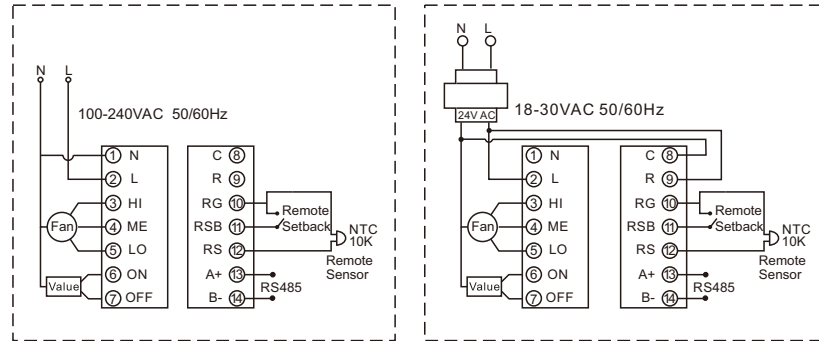
(system selection: **CP2-COL-SP1**)



Application 5:
single speed fan / 2 heat / cool system
(system selection: **CP2-ALL**)

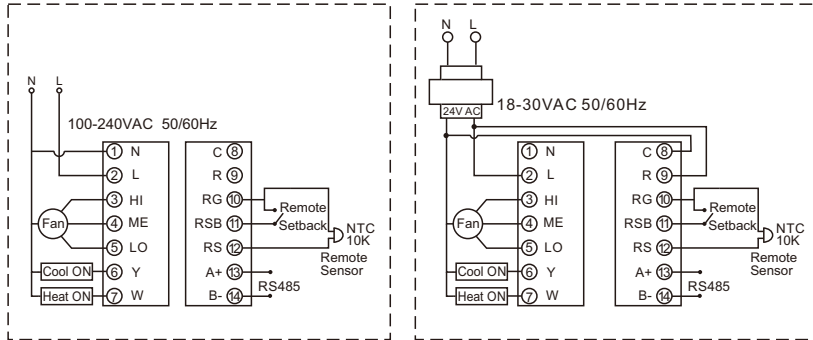


Application 6:
2 pipe/3 wire fan coil system
(system selection: **FAN-FA2**)



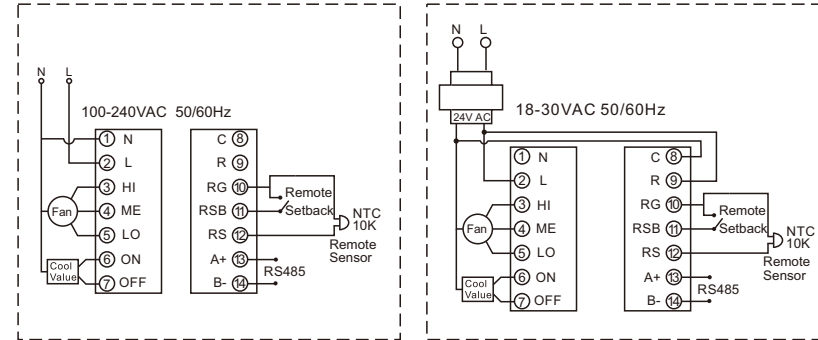
Application 7:

4 pipe / 2 wire fan coil system
(system selection: **FAN-FA4**)

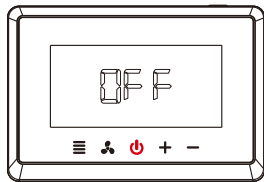


Application 8:

Cool only / 3 wire fan coil system
(system selection: **FAN-COL**)



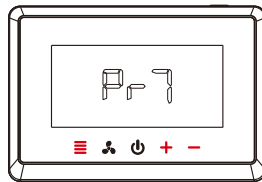
Programming Settings



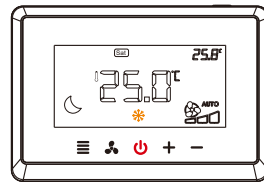
1.Short press the power button “”, and then the screen shows “OFF”.



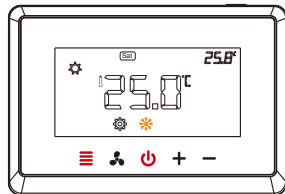
2.Long press the menu button “”for 5s until the system selection interface is displayed and select the system set up previously .



3.After system selection, select programming mode: press “+” or “-”for switch the programming mode(Pr0/Pr2/Pr7),and press “”to confirm and save the options.
 Pr0:Non-programmable
 Pr2:Work days+Friday&Saturday
 Pr7:7 days individually programming



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

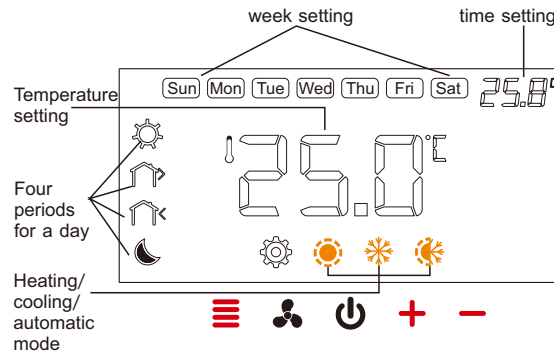


5. Long press the menu button "≡" for 5s to enter the programming setting.
please Keep all the buttons lights on before performing this operation, if not, please press "⏻"

7 days programming-Time/temperature setting

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

There are 4 periods each day by default



1. Week setting
2. Time setting
3. Temperature setting

press "+" "-" to adjust the week / time / temperature, 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)

week periods	Sun	Mon	Tue	Wed	Thu	Fri	Sat
 6:00 Morning	22°C	22°C	22°C	22°C	22°C	22°C	22°C
 8:00 Out door	16°C	16°C	16°C	16°C	16°C	16°C	16°C
 18:00 Back home	22°C	22°C	22°C	22°C	22°C	22°C	22°C
 22:00 Night	16°C	16°C	16°C	16°C	16°C	16°C	16°C



Exit programming settings : short press power button "  "

Return to the previous step : short press fan speed button "  "

Default setting (cooling)

week periods	Sun	Mon	Tue	Wed	Thu	Fri	Sat
 6:00 Morning	25°C	25°C	25°C	25°C	25°C	25°C	25°C
 8:00 Out door	28°C	28°C	28°C	28°C	28°C	28°C	28°C
 18:00 Back home	25°C	25°C	25°C	25°C	25°C	25°C	25°C
 22:00 Night	28°C	28°C	28°C	28°C	28°C	28°C	28°C

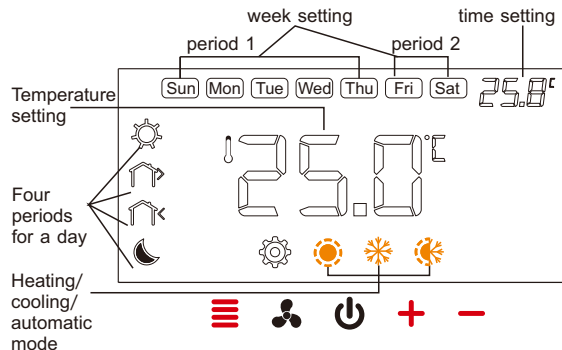


Restore default setting: long press " + " and " - " for more than 5s until the screen shows " **def** " and the " **def** " flash 3 times.

2 periods programming-Time/temperature setting

There are two time periods to program in a week (Pr2)
 (period 1:from Sunday to Thursday
 period 2:from Friday to Saturday)

There are 4 periods each day by default



- 1.Week setting
- 2.Time setting
- 3.Temperature setting

press "+" "-" to adjust the week / time / temperature, 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)

week periods	Sun	Mon	Tue	Wed	Thu	Fri	Sat
6:00 Morning	22°C					22°C	
8:00 Out door	16°C					16°C	
18:00 Back home	22°C					22°C	
22:00 Night	16°C					16°C	



Exit programming settings : press power button "⏻"

Return to the previous step : short press fan speed button "🌀"

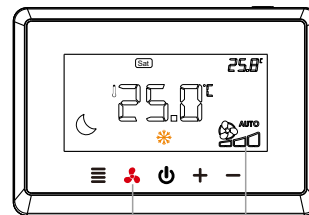
Default setting (cooling)

week periods	Sun	Mon	Tue	Wed	Thu	Fri	Sat
6:00 Morning	25°C				25°C		
8:00 Out door	28°C				28°C		
18:00 Back home	25°C				25°C		
22:00 Night	28°C				28°C		



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

Fan speed setting



Fan speed
button

mode
speed

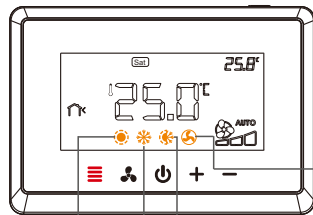
- Fan speed settings for the following systems (CP2-COL-SP3/CP1-SP3 /FAN-FA2/FAN-FA4/FAN-COL)

Short press "★" for switching "Auto/High /Med/Low" mode.

- Fan speed settings for the following systems (CP2-ALL/CP2-COL-SP1/CP1-SP1).

Short press "★" for switching "AUTO/ON" mode.

Cooling and Heating Mode



Heating mode Cooling mode Automatic mode

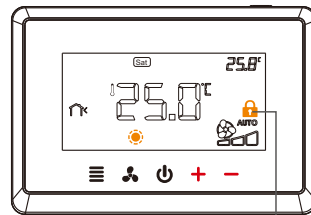
Short press the menu button "≡" for switching cooling mode "❄️" or heating mode "☀️", Ventilation mode "🌀" or automatic mode "☀️🌀".

Ventilation mode

★ For automatic mode "☀️🌀", it just apply to 4 pipe / 2 wire fan coil system (Application 7 **FAN-FA4**) and 2 pipe / 3 wire fan coil system (Application 6 **FAN-FA2**); Other systems do not have the automatic mode.

When the automatic mode "☀️🌀" is running, only 2 pipe / 3 wire fan coil system (Application 6 **FAN-FA2**) can be programmed; 4 pipe / 2 wire fan coil system (Application 7 **FAN-FA4**) cannot be programmed.

Child Lock



Child lock

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

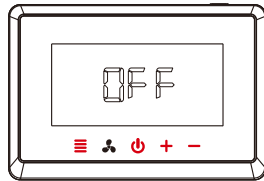
Configuration Menu

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 "⏻"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.

Configuration Menu-FAN coil system

Fan coil system:

Application 6: (page10)
2 pipe/3 wire fan coil system
(system selection:FAN-FA2)

Application 7: (page11)
4 pipe/2 wire fan coil system
(system selection:FAN-FA4)

Application 8: (page12)
Cool only/
3 wire fan coil system
(system selection:FAN-COL)

Parameter Item	Description	Parameter options	Default
3	Programming	Pr0:Non-programmable Pr2:Work days+Friday&Saturday Pr7:7 days individually program	Pr0
4	Temperature adjust value	-4°C~4°C	0
5	Maximum setting temperature	24°C~35°C	30°C
6	Minimum setting temperature	5°C~24°C	20°C
7	Power off memory	rE: power on recover rd: power on turn off	rE

Parameter Item	Description	Parameter options	Default
8	Display backlight mode	1:backlight is normal 2:backlight will keep on always	2
9	Fan stop option	ON OFF	ON
10	Energy-saving temperature for heating	5°C~18°C	18°C
11	Energy-saving temperature for cooling	25°C~30°C	28°C
12	Room card/window card mode	SC : activate the room card energy mode by open circuit OC : activate the room card energy mode by close circuit SCC : activate the window card energy mode by open circuit OCC : activate the window card energy mode by close circuit OO : cancel the room/window card function	SC
13	The valve start dead band options	1°C~5°C	1°C

Parameter Item	Description	Parameter options	Default
14	The valve stop running options	1°C~5°C	1°C
15	Energy-saving dead band value	1°C~10°C	10°C
16	The address of 485	1~254	1
17	The address of BACnet	1~127	1
18	BACnet baud rate	9600 / 19200 / 38400 / 76800	19200

★ There is no **item 10** (Energy-saving temperature for heating) for Cool only / 3 wire fan coil system(Application 8, **FAN-COL**)
 For **item 15**(Energy-saving dead band value),just apply to automatic mode for 4 pipe / 2wire fan coil system(Application 7, **FAN-FA4**)
 For **item 16**(The address of 485),In BACnet communication, it can only be set to 1 by default. If it is set to other values, it cannot communication.

Configuration Menu-Single compressor system

Single compressor system:

Application 2: (page8)

3 speed fan/

single compressor system

(system selection: **CP1-SP3**)

Application 3: (page9)

single speed fan/

single compressor system

(system selection: **CP1-SP1**)

Parameter Item	Description	Parameter options	Default
3	Programming	Pr0:Non-programmable Pr2:Work days+Friday&Saturday Pr7:7 days individually program	Pr0
4	Temperature adjust value	-4°C~4°C	0
5	Maximum setting temperature	24°C~35°C	30°C
6	Minimum setting temperature	5°C~24°C	20°C
7	Power off memory	rE: power on recover rd: power on turn off	rE

Parameter Item	Description	Parameter options	Default
8	Display backlight mode	1:backlight is normal 2:backlight will keep on always	2
9	Energy-saving temperature for cooling	25°C~30°C	28°C
10	Room card/window card mode	SC : activate the room card energy mode by open circuit OC : activate the room card energy mode by close circuit SCC : activate the window card energy mode by open circuit OCC : activate the window card energy mode by close circuit OO : cancel the room/window card function	SC
11	The valve start dead band options	1°C~5°C	1°C
12	The valve stop running options	1°C~5°C	1°C

parameter Item	Description	Parameter options	Default
13	Compressor restart delay cycle setting	0min~5min	3min
14	The address of 485	1~254	1
15	The address of BACnet	1~127	1
16	BACnet baud rate	9600 / 19200 / 38400 / 76800	19200

★ For item 14(The address of 485),In BACnet communication, it can only be set to 1 by default. If it is set to other values, it cannot communication.

Configuration Menu-two compressor system

Two compressor system-cooling:

Application 1: (page8)

3 speed fan/

two compressor system

(system selection:CP2-COL-SP3)

Application 4: (page9)

single speed fan/

two compressor system

(system selection:CP2-COL-SP1)

parameter Item	Description	Parameter options	Default
4	Programming	Pr0:Non-programmable Pr2:Work days+Friday&Saturday Pr7:7 days individually program	Pr0
5	Temperature adjust value	-4°C~4°C	0
6	Maximum setting temperature	24°C~35°C	30°C
7	Minimum setting temperature	5°C~24°C	20°C

parameter Item	Description	Parameter options	Default
8	Power off memory	rE: power on recover rd: power on turn off	rE
9	Display backlight mode	1:backlight is normal 2:backlight will keep on always	2
10	Energy-saving temperature for cooling	25°C~30°C	28°C
11	Room card/window card mode	SC : activate the room card energy mode by open circuit OC : activate the room card energy mode by close circuit SCC : activate the window card energy mode by open circuit OCC : activate the window card energy mode by close circuit OO : cancel the room/window card function	SC
12	The first compressor start dead band options	1°C~5°C	1°C

parameter Item	Description	Parameter options	Default
13	The first compressor stop running options	1°C~5°C	1°C
14	The first compressor restart delay cycle setting	0min~5min	3min
15	The second compressor start dead band options	1°C~5°C	1°C
16	The second compressor stop running options	1°C~5°C	1°C
17	The second compressor restart delay cycle setting	0min~5min	3min
18	The second compressor start delay cycle setting	1min~5min	1min
19	The address of 485	1~254	1

Parameter Item	Description	Parameter options	Default
20	The address of BACnet	1~127	1
21	BACnet baud rate	9600 / 19200 / 38400 / 76800	19200

★ For items 15 and 16, the stop running temperature can not be greater than the starting dead band temperature

For item 19 (The address of 485), In BACnet communication, it can only be set to 1 by default. If it is set to other values, it cannot communicate.

Two compressor system-heating/cooling:

Application 5: (page 10)

single speed fan / 2 heat/cool system

(system selection: CP2-ALL)

Parameter Item	Description	Parameter options	Default
3	Programming	Pr0: Non-programmable Pr2: Work days + Friday & Saturday Pr7: 7 days individually program	Pr0
4	Temperature adjust value	-4°C ~ 4°C	0
5	Maximum setting temperature	24°C ~ 35°C	30°C
6	Minimum setting temperature	5°C ~ 24°C	20°C
7	Power off memory	rE: power on recover rd: power on turn off	rE

Parameter Item	Description	Parameter options	Default
8	Display backlight mode	1:backlight is normal 2:backlight will keep on always	2
9	Energy-saving temperature for heating	5°C~18°C	18°C
10	Energy-saving temperature for cooling	25°C~30°C	28°C
11	Room card/window card mode	SC : activate the room card energy mode by open circuit OC : activate the room card energy mode by close circuit SCC : activate the window card energy mode by open circuit OCC : activate the window card energy mode by close circuit OO : cancel the room/window card function	SC
12	The first compressor start dead band options	1°C~5°C	1°C

Parameter Item	Description	Parameter options	Default
13	The first compressor stop running options	1°C~5°C	1°C
14	The first compressor restart delay cycle setting	0min~5min	3min
15	The second compressor start dead band options	1°C~5°C	1°C
16	The second compressor stop running options	1°C~5°C	1°C
17	The second compressor restart delay cycle setting	0min~5min	3min
18	The second compressor start delay cycle setting	1min~5min	1min
19	The address of 485	1~254	1

Parameter Item	Description	Parameter options	Default
20	The address of BACnet	1~127	1
21	BACnet baud rate	9600 / 19200 / 38400 / 76800	19200

★ For **item 19**(The address of 485),In BACnet communication, it can only be set to 1 by default. If it is set to other values, it cannot communication.

Error Warning

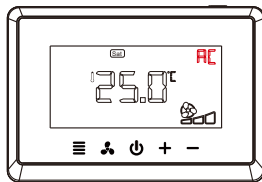


Room Temp(inside room sensor) broken or short cut,the thermostat will have “Err”

Window/Room Card

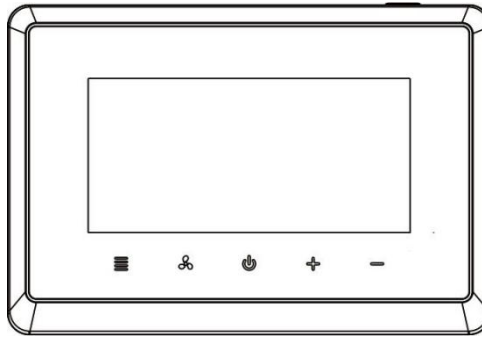


Window card function open,
the thermostat will have "ASB "



Room card function open,
the thermostat will have "AC "

T29MTW-7-S-BACnet Communication protocol



Analogue Inputs

Object name	Object ID	Description	Unit	Writeable
Room temperature	Analog Input,1	Room temperature	°C	No
Read temperature setting valve	Analog Input,2	Setting temperature	°C	No
Remote external sensor temp	Analog Input,3	Remote sensor temp	°C	No

Analogue Value

Object name	Object ID	Description	Unit	Writeable
Setting temperature valve	Analog_Value, 1	Setting temperature	°C	Yes

Binary input

Object name	Object ID	Description	Values	Writeable
Sys On/OFF state	Binary input, 1	System On/OFF state	Active/ Inactive	No
Room card	Binary input, 2	Room card	Active/ Inactive	No
Window card	Binary input, 3	Window card	Active/ Inactive	No

Binary value

Object name	Object ID	Description	Values	Writeable
Sys On/OFF state set	Binary value, 1	Sys On/OFF state set	Active/ Inactive	Yes

Multistate input

Object name	Object ID	Description	Values	Writeable
Sys mode	Multistate input, 1	Mode read	In the FAN system under 2-pipe and 4-pipe control: 1: Cooling 2: Heating 3: Ventilation 4: Auto In the FAN system under COOL mode: 1: Cooling 3: Ventilation In the CP2 system under ALL mode: 1: Cooling 2: Heating In the CP2 system under COL mode: 1: Cooling In the CP1 system mode: 1: Cooling	No
Fan mode	Multistate input, 2	Fan mode	In the FAN system under 2-pipe, 4-pipe, and COOL mode: 1: Auto 2: High speed 3: Medium speed 4: Low speed In the CP1&CP2 system under SP3 : 1: Auto 2: High speed 3: Medium speed 4: Low speed In the CP1&CP2 system under SP1 or ALL : 1: Auto 2: ON	No

Fan working status	Multistate input, 3	Fan working status	01:OFF 02:High 03:Medium 04:Low	No
Compressor and refrigeration valve state	Multistate input, 4	Cooling output status	In the FAN system under Cooling mode: 01 - Cooling valve output OFF 02 - Cooling valve output ON In CP1 and CP2 systems under Cooling mode: 01 - Y1 and Y2 OFF 02 - Y1 ON, Y2 OFF 04 - Y1 and Y2 ON	No
Heating valve	Multistate input, 5	Heating output status	In the FAN system under Heating mode: 01 - Heating valve output OFF 02 - Heating valve output ON In the CP1 and CP2 systems under Heating mode: 01 - W1 and W2 OFF 02 - W1 ON, W2 OFF 04 - W1 and W2 ON	No
Fan coil unit mode	Multistate input, 6	System read	01:FAN-2 02:FAN-COOL 03:FAN-4 04:CP1-SP3 05:CP1-SP1 06:CP2-COOL-SP3 07:CP2-COOL-SP1 08:CP2-ALL	No

Multistate value

Object name	Object ID	Description	Values	Writeable
Sys mode set	Multistate value, 1	Mode set	In the FAN system under 2-pipe and 4-pipe control: 1: Cooling 2: Heating 3: Ventilation 4: Auto In the FAN system under COOL mode: 1: Cooling 3: Ventilation In the CP2 system under ALL mode: 1: Cooling 2: Heating In the CP2 system under COL mode:1: Cooling In the CP1 system mode:1: Cooling	Yes
Fan mode set	Multistate value, 2	Fan mode set	In the FAN system under 2-pipe, 4-pipe, and COOL mode: 1: Auto 2: High fan speed 3: Medium fan speed 4: Low fan speed In the CP1 system under SP3 : 1: Auto 2: High fan speed 3: Medium fan speed 4: Low fan speed In the CP1&CP2 system under SP1 or ALL : 1: Auto 2: ON	Yes