ETNC24-FC-BAC-PIR-01

Owner's manual & Technician Settings

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ETNC24-FC-BAC-PIR-01
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Operating instructions

Turning the thermostat ON and OFF

- Press the [On/Off] button to turn the thermostat ON or OFF.

ON   **OFF**
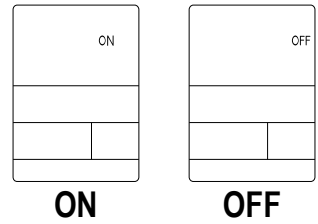
Selecting temperature scale

- Press and hold both [+] and [-] buttons for 5 seconds to switch between temperature scales.

25.0 °C   **77.0** °F

Celsius   **Fahrenheit**
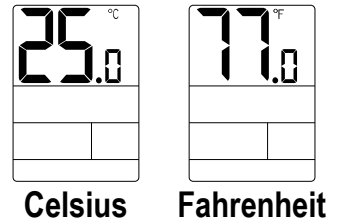
Adjusting the Set point temperature

In <u>One</u> set point configuration:

- Press the [+] or [-] buttons once to view the set point temperature.
- Press again to adjust the set point.

25 °C SET
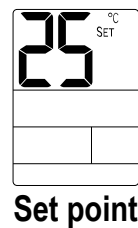
Set point

In <u>Two</u> set points configuration:

- Press the [+] or [-] buttons once – "CL" and the set point temperature for cooling will appear on display.
- Use the [+] or [-] buttons to adjust the set point for cooling.
- Press the [Mode] button or wait 3 seconds – "Ht" and the set point temperature for heating will appear on display.
- Use the [+] or [-] buttons to adjust the set point for heating.

23 °C SET CL   **22** °C SET Ht

Set point   **Set point**
For cooling   **For heating**
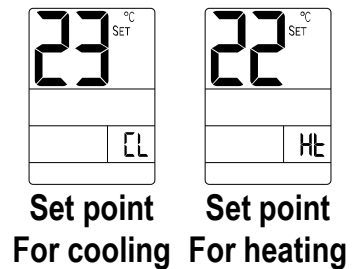
Note: The set point for cooling must be higher than the set point for heating.

Operating instructions (Cont')

Selecting system mode

- Press the [Mode] button to switch between system modes.

  Notes:

  1. During demand for cooling or heating, the active mode will flash.
  2. In Auto mode, the active mode icon (Cool or Heat) will appear on display.
  3. Auto mode is not available in 2-Pipe system configuration.
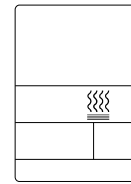
Cool   **Heat**
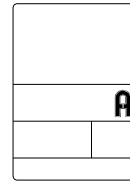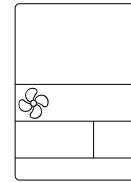
Auto   **Fan only**

Selecting Fan speeds (for 2 and 3 fan speeds configuration)

- Press the [Fan] button to switch between fan speeds.

  Notes:

  1. In Auto speed, the active fan speed icon will appear on display.
  2. Medium speed available in 3 speeds config.
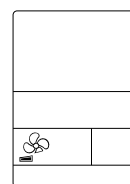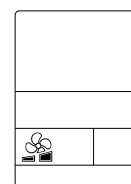
Low   **Medium**
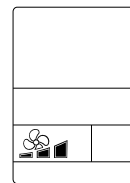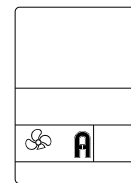
High   **Auto**

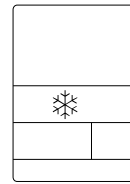## Turning Auto fan ON or OFF (fan on demand)

In 1 speed configuration:

- Press the [Fan] button to turn Auto fan ON or OFF.

In 2 and 3 speeds configuration:

Press and hold the [Fan] button for 5 seconds to turn Auto fan ON or OFF.

- When ON, the fan will run on demand for cooling or heating,
- When OFF, the fan will run continuously.

  Note: Auto fan cannot be selected in Fan only mode.
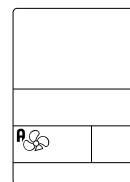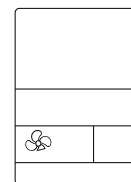
Auto fan OFF   **Auto fan ON**

Resetting filter alarm

- Press and hold the [Fan] button for 15 seconds to reset filter alarm.

Operating instructions (Cont')

Locking the thermostat buttons

- Press and hold both [Mode] and [On/Off] buttons for 5 seconds to lock or unlock the thermostat buttons.
- When locked, the lock icon will appear on display and the letters "LC" (lock indication) will flash with any attempt to press the buttons.
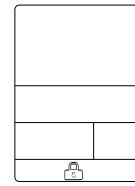
Lock mode
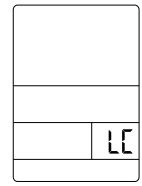
Lock indication

Sleep mode

- Press and hold the [mode] button for 5 seconds to activate sleep mode.
- Press the mode button again (short press) to deactivate sleep mode.
- When sleep mode is activated, the thermostat will use comfort set point temperatures offset set by technician.
  Please refer to objects "SleepCoolSetpointOffset" and "SleepHeatSetpointOffset" in the technician setting section of this manual.
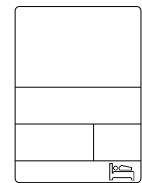
Sleep mode

Economy mode

- Economy mode can be activated by triggering the window contact or the PIR sensor (passive infrared sensor).
- When Economy mode is active, the thermostat will use special economy set points for cooling and heating set by technician.
 *Please refer to objects "EconomySetpointinHeat" and "EconomySetpointinCool" in the technician setting section of this manual.*
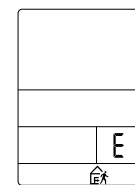
Economy by window contact
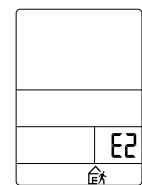
Economy by PIR

Freeze Protection

The Freeze protection feature will not allow the room temperature to drop below predefined cut-in temperature. Depending on which configuration the system is operating under (W/WO Heat pump) this feature will force the system to operate in heat mode and activate the fan. This feature will take effect when the thermostat is either ON or OFF. When the room temperature rises above the predefined cut-out temperature, the thermostat will return to its previous state.

When freeze protection is activated, the display alternates between "AL" and room temperature.

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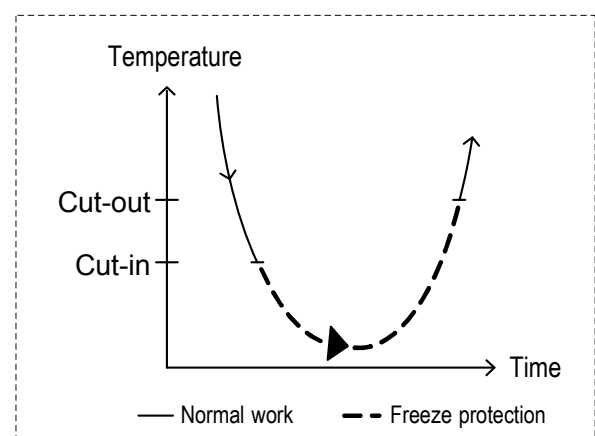
Installation

The ETNC24 is designed for wall mounting in the room to be controlled. It should be located where the occupant can easily read the LCD display and use the controls and where the built in PIR occupancy sensor can easily detect any movement in the room (consider PIR detection are below). If the built in temperature sensor is being used to measure room temperature, the module should be placed where the temperature is representative of the general room conditions. Cold or warm air draughts; radiant heat and direct sunlight should be avoided.

General points to follow:

- Disconnect power to the main board before installing the unit.
- The standard height to install this unit is 1.5 meter (5 feet) from the floor.

Installation procedure:

A. Separate the front panel from back panel by pressing the tongue located in the top of the unit and pull the back panel out.

B. Line the back panel up against the wall or flat surface. Install three screws as required.

C. Make electrical connections as shown on enclosed electrical wiring diagram.

D. Install the cove to the back panel; first the two bottom tabs and then the top tongue. Push until tight against the wall.

PIR detection area

Horizontal (Top view)

90°

Vertical (Side view)

20°

1.5m / 5ft

5m / 16ft

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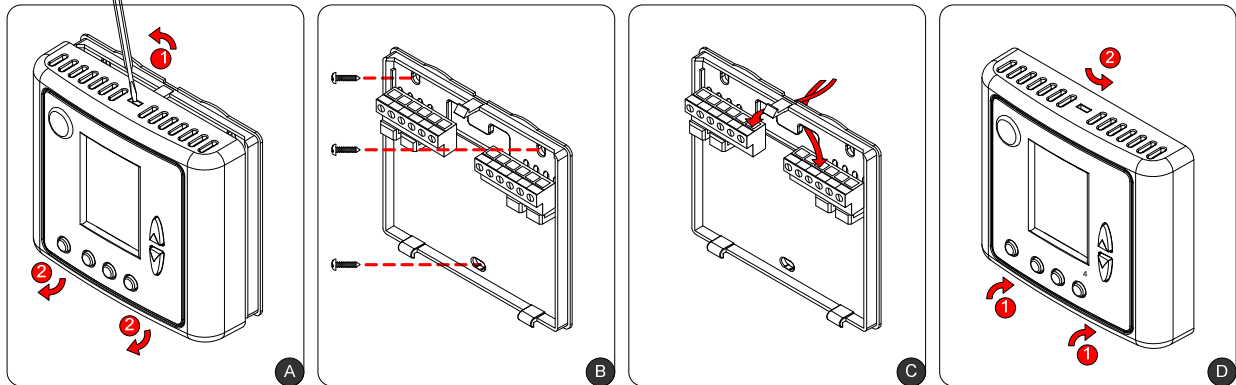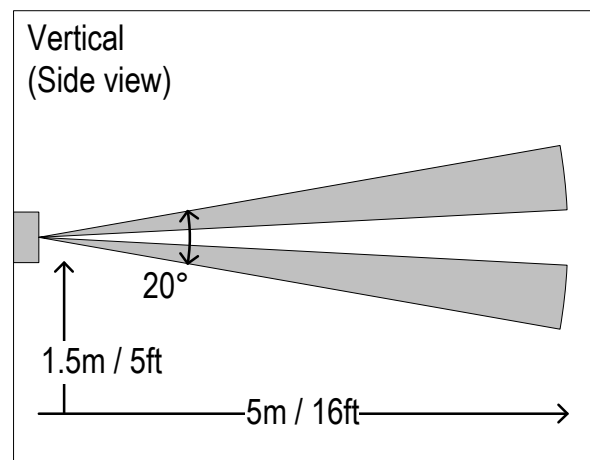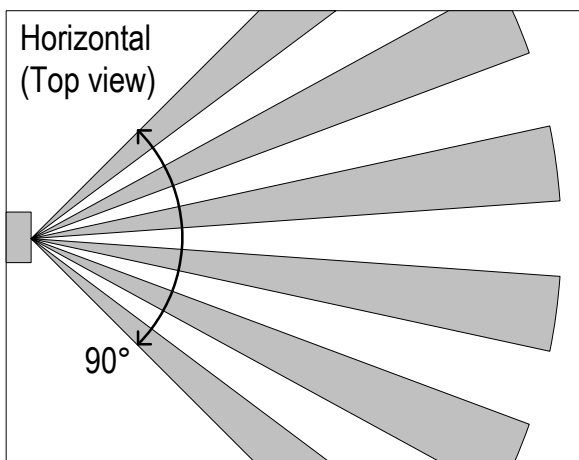
Wiring

	4-Pipe system **(with auto change over mode)**		**2-Pipe system** **(without auto change over mode)**
11	High speed	**11**	High speed
12	Medium speed	**12**	Medium speed
13	Low speed	**13**	Low speed
14	Heat element	**14**	Heat element
T1 **0**	**External sensor / Soft start sensor / Door switch*	**T1** **0**	**External sensor / Soft start sensor / Door switch*
B **A**	Communication RS485 BACnet protocol	**B** **A**	Communication RS485 BACnet protocol
IN1 **0**	***Sensor / Remote switch / External PIR*	**IN1** **0**	***Sensor / Remote switch / External PIR*
15	Cool valve	**15**	Cool/Heat valve
16	Heat valve	**16**	Not in use
C **R**	Main supply 24VAC	**C** **R**	Main supply 24VAC

All outputs 24VAC, 0.5A max.

Selection of 2-Pipe or 4-Pipe system by DIP switch
(See DIP switch SW1 configuration)

*Options for T1,0 terminals:
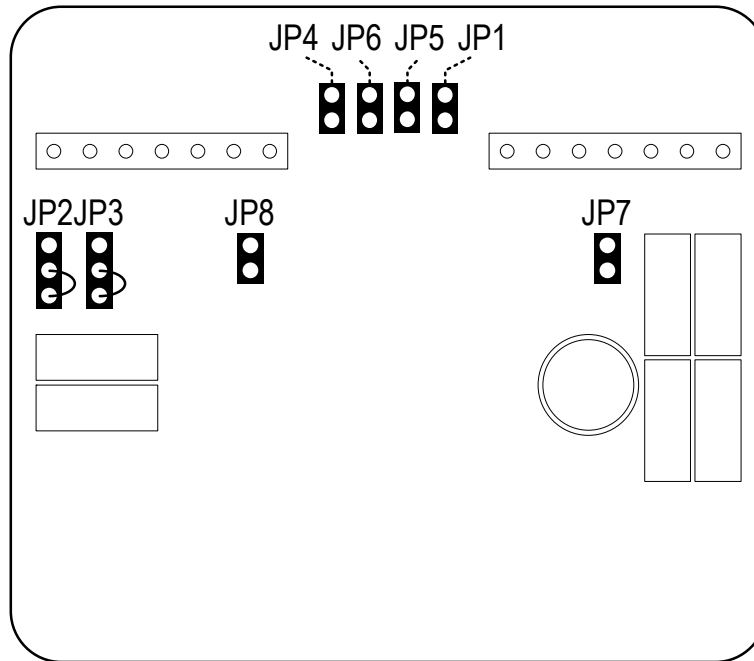- Not in use
- External sensor
- Soft start in heat sensor
- Door switch (Hotel mode)

(See "P08" section in technician settings)

**Options for IN1,0 terminals:
- Not in use
- T2 (Change over sensor)
- T3 (Soft start in heat sensor)
- Remote On/Off switch
- Remote Economy switch
- External Passive Infrared detector (PIR)
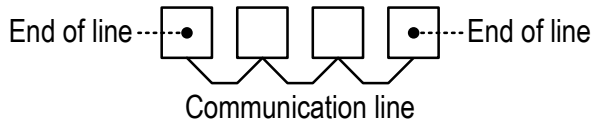
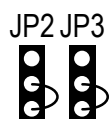*(See "P09" section in technician settings)*

Jumpers

JP1 - End of line resistor (120Ω)

Open	-	Not End of line
Close	-	End of line

JP2, JP3 – Not in use

Must remain at factory default position

JP4 – Temperature display

Open	-	Ambient & Set point
Close	-	Set point only

JP5 – Enable/Disable PIR detector

Open	-	Enable PIR detector
Close	-	Disable PIR detector

JP6 – No valve configuration

Open	-	Disable No valve configuration
Close	-	Enable No valve configuration

Note: in no valve configuration, the fan will run only on demand for cooling or heating.

JP7 – Chilled beam configuration

|		
Open	-	Disable Chilled beam configuration
Close	-	Enable Chilled beam configuration

Note: in Chilled beam configuration, the fan will remain OFF in cooling mode.

JP8 – Floor heating configuration

Open	-	Disable Floor heat configuration
Close	-	Enable Floor heat configuration

Note: in Floor heat configuration, the fan will remain OFF in 1st stage heating (floor heating).

DIP switch SW1 - configuration
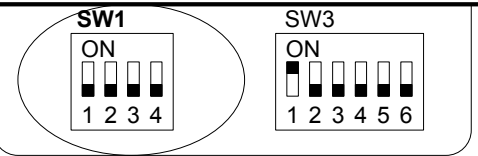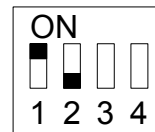

Number of fan speeds
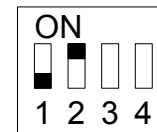
- Use DIP Switches SW1.1 and SW1.2 to select number of fan speeds:
- 1 speed: SW1.1 – ON   SW1.2 – OFF
- 2 speeds: SW1.1 – OFF   SW1.2 – ON
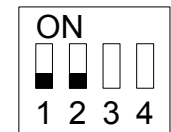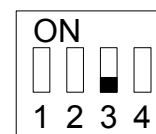- 3 speeds: SW1.1 – OFF   SW1.2 – OFF

Default = 3 Speeds

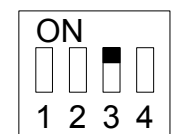### 2-Pipe (without auto change over mode) or 4-Pipe (with auto change over mode) system

- Use DIP Switch SW1.3 to select between 2-Pipe and 4-Pipe system configuration:
- 2-Pipe: SW1.3 – OFF
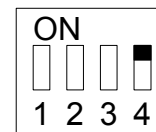- 4-Pipe: SW1.3 – ON

Default = 2-Pipe

Enable/Disable Electric heater on 2nd stage heating

- Use DIP Switch SW1.4 to enable or disable the operation of electric heater on 2nd stage heating.
- Enable: SW1.4 – ON
- Disable: SW1.4 – OFF

Default = Disable

Enable 2nd stage heat   **Disable 2nd stage heat**
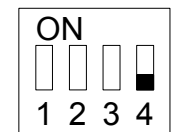
DIP switch SW3 – MAC Address

- Use DIP Switches SW3.1...SW3.8 to define unique communication MAC address for each unit in communication line (range 1 to 256).

Examples:

MAC Address 1:   1 – ON   2...8 – OFF
MAC Address 2:   2 – ON   1, 3...8 – OFF
MAC Address 3:   1,2 – ON   3...8 – OFF

Use the following MAC address table for all combinations.

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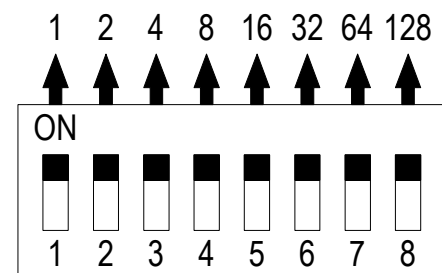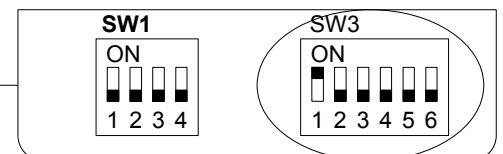
MAC Address table (1-127)

Switch patterns (■ = switch ON, □ = switch OFF), positions 1 2 3 4 5 6 7 8:

#	Switches ON	#	Switches ON	#	Switches ON	#	Switches ON
0	Not in use	32	□□□□□■□□	64	□□□□□□■□	96	□□□□□■■□
1	■□□□□□□□	33	■□□□□■□□	65	■□□□□□■□	97	■□□□□■■□
2	□■□□□□□□	34	□■□□□■□□	66	□■□□□□■□	98	□■□□□■■□
3	■■□□□□□□	35	■■□□□■□□	67	■■□□□□■□	99	■■□□□■■□
4	□□■□□□□□	36	□□■□□■□□	68	□□■□□□■□	100	□□■□□■■□
5	■□■□□□□□	37	■□■□□■□□	69	■□■□□□■□	101	■□■□□■■□
6	□■■□□□□□	38	□■■□□■□□	70	□■■□□□■□	102	□■■□□■■□
7	■■■□□□□□	39	■■■□□■□□	71	■■■□□□■□	103	■■■□□■■□
8	□□□■□□□□	40	□□□■□■□□	72	□□□■□□■□	104	□□□■□■■□
9	■□□■□□□□	41	■□□■□■□□	73	■□□■□□■□	105	■□□■□■■□
10	□■□■□□□□	42	□■□■□■□□	74	□■□■□□■□	106	□■□■□■■□
11	■■□■□□□□	43	■■□■□■□□	75	■■□■□□■□	107	■■□■□■■□
12	□□■■□□□□	44	□□■■□■□□	76	□□■■□□■□	108	□□■■□■■□
13	■□■■□□□□	45	■□■■□■□□	77	■□■■□□■□	109	■□■■□■■□
14	□■■■□□□□	46	□■■■□■□□	78	□■■■□□■□	110	□■■■□■■□
15	■■■■□□□□	47	■■■■□■□□	79	■■■■□□■□	111	■■■■□■■□
16	□□□□■□□□	48	□□□□■■□□	80	□□□□■□■□	112	□□□□■■■□
17	■□□□■□□□	49	■□□□■■□□	81	■□□□■□■□	113	■□□□■■■□
18	□■□□■□□□	50	□■□□■■□□	82	□■□□■□■□	114	□■□□■■■□
19	■■□□■□□□	51	■■□□■■□□	83	■■□□■□■□	115	■■□□■■■□
20	□□■□■□□□	52	□□■□■■□□	84	□□■□■□■□	116	□□■□■■■□
21	■□■□■□□□	53	■□■□■■□□	85	■□■□■□■□	117	■□■□■■■□
22	□■■□■□□□	54	□■■□■■□□	86	□■■□■□■□	118	□■■□■■■□
23	■■■□■□□□	55	■■■□■■□□	87	■■■□■□■□	119	■■■□■■■□
24	□□□■■□□□	56	□□□■■■□□	88	□□□■■□■□	120	□□□■■■■□
25	■□□■■□□□	57	■□□■■■□□	89	■□□■■□■□	121	■□□■■■■□
26	□■□■■□□□	58	□■□■■■□□	90	□■□■■□■□	122	□■□■■■■□
27	■■□■■□□□	59	■■□■■■□□	91	■■□■■□■□	123	■■□■■■■□
28	□□■■■□□□	60	□□■■■■□□	92	□□■■■□■□	124	□□■■■■■□
29	■□■■■□□□	61	■□■■■■□□	93	■□■■■□■□	125	■□■■■■■□
30	□■■■■□□□	62	□■■■■■□□	94	□■■■■□■□	126	□■■■■■■□
31	■■■■■□□□	63	■■■■■■□□	95	■■■■■□■□	127	■■■■■■■□

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MAC Address table (128-255)

Switch pattern shown for switches 1 2 3 4 5 6 7 8 (■ = ON, □ = OFF)

#	Switches ON (1–8)	#	Switches ON (1–8)	#	Switches ON (1–8)	#	Switches ON (1–8)
128	□□□□□□□■	160	□□□□□■□■	192	□□□□□□■■	224	□□□□□■■■
129	■□□□□□□■	161	■□□□□■□■	193	■□□□□□■■	225	■□□□□■■■
130	□■□□□□□■	162	□■□□□■□■	194	□■□□□□■■	226	□■□□□■■■
131	■■□□□□□■	163	■■□□□■□■	195	■■□□□□■■	227	■■□□□■■■
132	□□■□□□□■	164	□□■□□■□■	196	□□■□□□■■	228	□□■□□■■■
133	■□■□□□□■	165	■□■□□■□■	197	■□■□□□■■	229	■□■□□■■■
134	□■■□□□□■	166	□■■□□■□■	198	□■■□□□■■	230	□■■□□■■■
135	■■■□□□□■	167	■■■□□■□■	199	■■■□□□■■	231	■■■□□■■■
136	□□□■□□□■	168	□□□■□■□■	200	□□□■□□■■	232	□□□■□■■■
137	■□□■□□□■	169	■□□■□■□■	201	■□□■□□■■	233	■□□■□■■■
138	□■□■□□□■	170	□■□■□■□■	202	□■□■□□■■	234	□■□■□■■■
139	■■□■□□□■	171	■■□■□■□■	203	■■□■□□■■	235	■■□■□■■■
140	□□■■□□□■	172	□□■■□■□■	204	□□■■□□■■	236	□□■■□■■■
141	■□■■□□□■	173	■□■■□■□■	205	■□■■□□■■	237	■□■■□■■■
142	□■■■□□□■	174	□■■■□■□■	206	□■■■□□■■	238	□■■■□■■■
143	■■■■□□□■	175	■■■■□■□■	207	■■■■□□■■	239	■■■■□■■■
144	□□□□■□□■	176	□□□□■■□■	208	□□□□■□■■	240	□□□□■■■■
145	■□□□■□□■	177	■□□□■■□■	209	■□□□■□■■	241	■□□□■■■■
146	□■□□■□□■	178	□■□□■■□■	210	□■□□■□■■	242	□■□□■■■■
147	■■□□■□□■	179	■■□□■■□■	211	■■□□■□■■	243	■■□□■■■■
148	□□■□■□□■	180	□□■□■■□■	212	□□■□■□■■	244	□□■□■■■■
149	■□■□■□□■	181	■□■□■■□■	213	■□■□■□■■	245	■□■□■■■■
150	□■■□■□□■	182	□■■□■■□■	214	□■■□■□■■	246	□■■□■■■■
151	■■■□■□□■	183	■■■□■■□■	215	■■■□■□■■	247	■■■□■■■■
152	□□□■■□□■	184	□□□■■■□■	216	□□□■■□■■	248	□□□■■■■■
153	■□□■■□□■	185	■□□■■■□■	217	■□□■■□■■	249	■□□■■■■■
154	□■□■■□□■	186	□■□■■■□■	218	□■□■■□■■	250	□■□■■■■■
155	■■□■■□□■	187	■■□■■■□■	219	■■□■■□■■	251	■■□■■■■■
156	□□■■■□□■	188	□□■■■■□■	220	□□■■■□■■	252	□□■■■■■■
157	■□■■■□□■	189	■□■■■■□■	221	■□■■■□■■	253	■□■■■■■■
158	□■■■■□□■	190	□■■■■■□■	222	□■■■■□■■	254	□■■■■■■■
159	■■■■■□□■	191	■■■■■■□■	223	■■■■■□■■	255	■■■■■■■■

ETNC24-FC-BAC-PIR-01
Owner's manual & Technician Settings

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Technician Settings

Enter technician settings mode:

- Press and hold the [-] button and while holding it, press and hold the [Mode] button for 7 seconds to enter technician settings mode.
- "P01" will appear on display.

View objects and make adjustments:

- Use the [Mode] button to step forward between different objects (parameters).
- Use the [Fan] button to step backward between different objects (parameters).
- Press the [On/Off] button to exit technician settings and return to normal display.
- If no button is pressed for 60 seconds, the thermostat will automatically exit technician settings and return to normal display.
- Use the [+] and [-] buttons to make adjustments when required.

P01 – **Offset for temperature readings calibration**
        Range: -6…+6°C / -9…+9°F.
        Default: 0°C / 0°F.

Offset (°C)	Offset (°F)
00.0 °C SET — P01	00.0 °F SET — P01
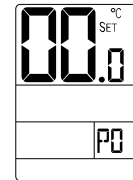
P02 – **Set point limit for cooling**
        Range: 5…35°C / 41…90°F.
        Default: 5°C / 35°F.
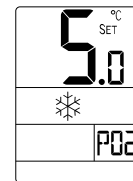
Limit cool (°C)	Limit cool (°F)
5.0 °C SET ❄ P02	35.0 °F SET ❄ P02
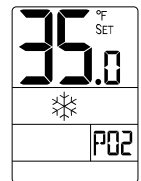
P03 – **Set point limit for heating**
        Range: 5…35°C / 41…90°F.
        Default: 35°C / 90°F.

Limit heat (°C)	Limit heat (°F)
35.0 °C SET 〜 P03	90.0 °F SET 〜 P03

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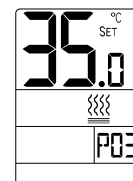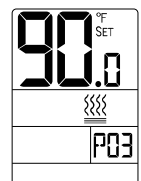
P04 – Lock the [Fan] button

"LF" + "ON"   [Fan] button Locked

"LF" + "OFF"   [Fan] button unlocked
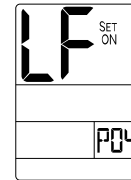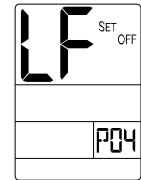
LF SET ON	LF SET OFF
P04	P04
[Fan] locked	**[Fan] unlocked**

P05 – Lock the [Mode] button

"L1" + "ON"   [Fan] button Locked

"L1" + "OFF"   [Fan] button unlocked
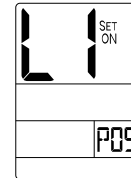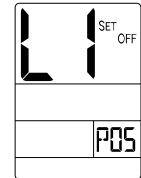
L1 SET ON	L1 SET OFF
P05	P05
[Mode] locked	**[Mode] unlocked**

P06 – Lock the [On/Off] button

"L0" + "ON"   [On/Off] button Locked

"L0" + "OFF"   [On/Off] button unlocked
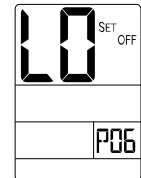
L0 SET ON	L0 SET OFF
P06	P06
[On/Off] locked	**[On/Off] unlocked**

P07 – Lock the [+] and [-] buttons (Set buttons)

"LS" + "ON"   [+] and [-] buttons Locked

"LS" + "OFF"   [+] and [-] buttons unlocked
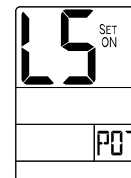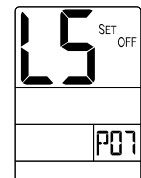
L5 SET ON	L5 SET OFF
P07	P07
[+] and [-] locked	**[+] and [-] unlocked**

P08 – Functionality of T1 terminals and Office or Hotel configuration

"00", "01", "02" - Office config.:

"00" -   T1 terminals are not in use

"01" -   External sensor

"02" -   Soft start in heat sensor

"03" - Hotel config.:

"03" -   Door switch
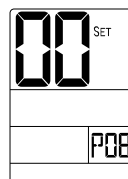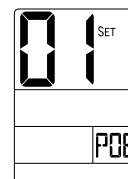
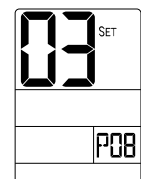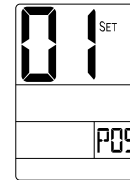| 00 SET	01 SET	02 SET	03 SET
P08	P08	P08	P08
T1 terminals Not in use	**T1 sensor (External sensor)**	**Soft start sensor**	**Door switch (hotel config.)**
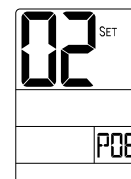
Technician Settings (Cont')

P09 – Functionality of IN1,0 terminals

- "00" - IN1,0 terminals are not in use
- "01" - T2 (Change over sensor)
- "02" - *T3 (Soft start in heat sensor)
- "03" - Remote On/Off switch
- "04" - Remote Economy switch
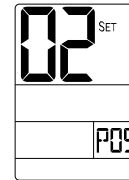- "05" - External Passive Infrared detector (PIR)

* Where T1 terminals are used for external sensor, the IN1,0 terminals can be used for T3 sensor.
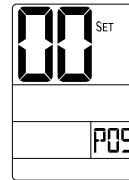
00 SET P09	01 SET P09	02 SET P09
"IN1,0" terminals Not in use	T2 sensor (change over)	T3 sensor (Soft start)
03 SET P09	04 SET P09	05 SET P09
Remote On/Off	Remote Economy	External PIR sensor

P10 – Window contact (terminals In1,0) polarity

- "01" - Normally open
- "00" - Normally close
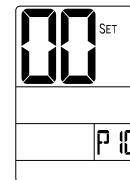
00 SET P10	01 SET P10
Win. contact Normally close	Win. contact Normally open
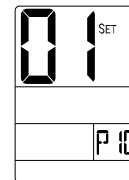
P11 – Window contact delay time
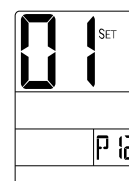
Range: 0…999 seconds.
Default: 60 seconds.
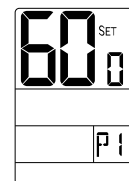
60 0 SET P11
Window contact delay time (sec.)

P12 – Door switch (terminals T1,0) polarity

- "01" - Normally open
- "00" - Normally close
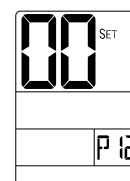
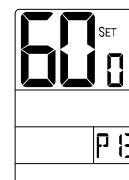| 00 SET P12	01 SET P12
Door switch Normally close	Door switch Normally open

P13 – Door switch delay time

Range: 0…999 seconds.
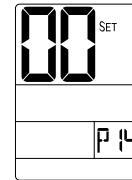Default: 180 seconds.

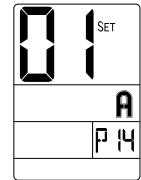| 60 0 SET P13 |
|---|
| Door switch delay time (sec.) |

Technician Settings (Cont')

P14 – Enable/Disable Auto change over mode
"00" - Disable Auto change over mode

"01" - Enable Auto change over mode

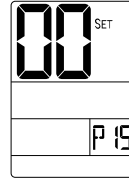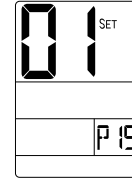|	
00 SET P 14	**01** SET A P 14
Disable Auto mode	**Enable Auto mode**

P15 – Occupancy sensor logic (PIR)
"00" - Thermostat turns off when unoccupied and back on when re-occupied.

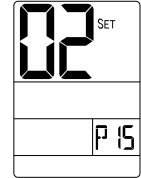"01" - Thermostat turns off when unoccupied and remains off when re-occupied.

"02" - Thermostat uses economy set points.

00 SET P 15	**01** SET P 15	**02** SET P 15
Unocc. – Off Re-occ. - On	**Unocc. – Off Re-occ. - Off**	**Economy set points**

P16 – Enable/Disable Occupancy sensor
"00" - Disable

"01" - Enable
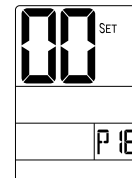
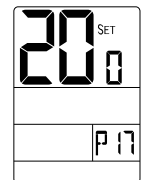|	
00 SET P 16	**01** SET P 16
Disable occ. sensor	**Enable occ. sensor**
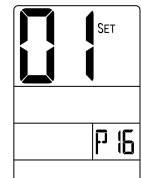
P17 – PIR (occupancy sensor) delay time before switching to unoccupied mode (ON delay)
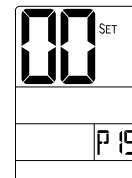Range: 0…900 minutes.

Default: 20 minutes.

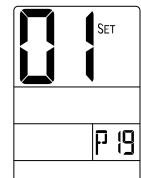| |
|---|
| **20** SET 0   P 17 |
| **PIR ON delay (sec.)** |

P19 – PIR (Occupancy sensor) polarity
"00" - Normally open

"01" - Normally close

00 SET P 19	**01** SET P 19
PIR Normally open	**PIR Normally close**

ETNC24-FC-BAC-PIR-01
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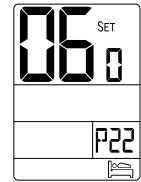Fax: +972-3-9626620
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Technician Settings (Cont')

P22 – Sleep mode time delay
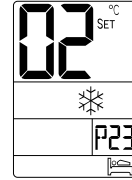Range: 0…600 minutes

Default: 60 minutes

Sleep mode time delay (minutes)

P23 – Sleep mode offset in cooling
Range: 0…9°C / 0…18°F

Default: 2°C / 2°F
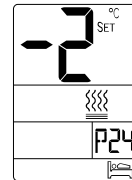
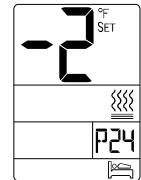**Sleep offset in cooling (°C)** | **Sleep offset in cooling (°F)**

P24 – Sleep mode offset in heating
Range: -9...0°C / -18…0°F

Default: -2°C / -2°F

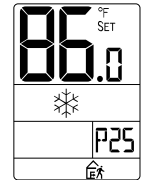**Sleep offset in heating (°C)** | **Sleep offset in heating (°F)**

P25 – Economy set point for cooling
Range: 5…35°C / 41…90°F.

Default: 30°C / 86°F.

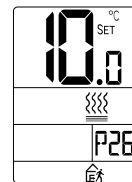**EC set point In cooling (°C)** | **EC set point In cooling (°F)**
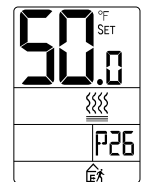

P26 – Economy set point for heating
Range: 5…35°C / 41…90°F.

Default: 10°C / 50°F.
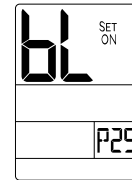
EC set point In heating (°C) | **EC set point In heating (°F)**
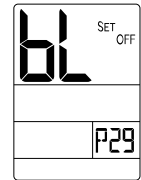
Technician Settings (Cont')

P29 – LCD Backlight ON or OFF
    "bL" + "ON"   LCD Backlight ON
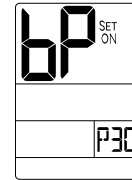   "bL" + "OFF"   LCD Backlight OFF
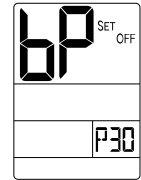
Backlight ON   **Backlight OFF**

P30 – Beeper ON or OFF
    "bP" + "ON"   Beeper ON
    "bP" + "OFF"   Beeper OFF
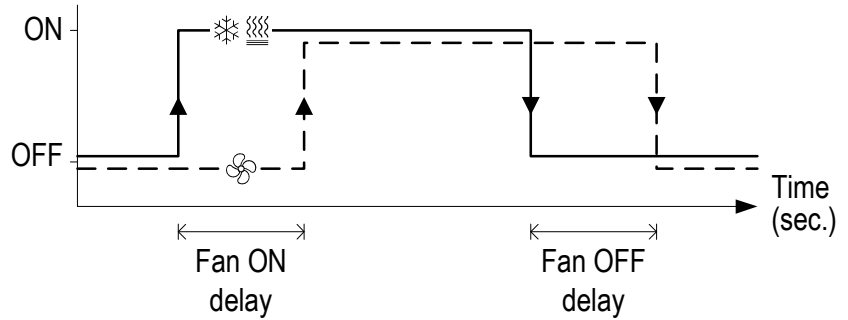
Beeper ON   **Beeper OFF**

P31 – P34

Fan on/off delay

**with fan on demand
(auto fan) active.**

| —— | Valve |
| – – | Fan |

P31 – Fan ON delay in cooling (seconds)

    Range: 0…120 seconds

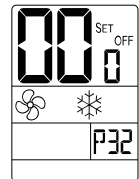   Default: 0 seconds (no delay)

**Fan ON delay
in cooling (seconds)**

P32 – Fan OFF delay in cooling (seconds)

    Range: 0…120 seconds

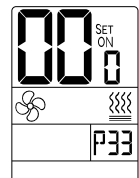   Default: 0 seconds (no delay)

**Fan OFF delay
in cooling (seconds)**

P33 – Fan ON delay in heating (seconds)

    Range: 0…120 seconds

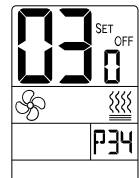   Default: 0 seconds (no delay)

**Fan ON delay
in heating (seconds)**

P34 – Fan OFF delay in heating (seconds)
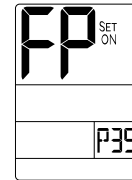
    Range: 0…120 seconds

    Default: 30 seconds

**Fan OFF delay
in heating (seconds)**
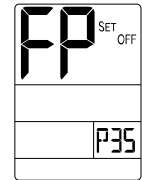
Technician Settings (Cont')

P35 – **Enable/Disable Freeze protection**

"FP" + "ON"   Enable Freeze protection

"FP" + "OFF"   Disable Freeze protection

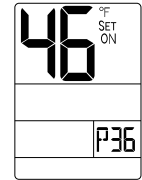**Enable freeze protection**   **Disable freeze protection**

P36 – **Freeze protection cut-in set point**

Range: 8...15°C / 46…59°F

Default: 8°C / 46°F
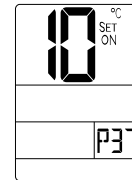
FP cut-in set point (°C)   **FP cut-in set point (°F)**

P37 – **Freeze protection cut-out set point**

Range: 10...17°C / 50…63°F

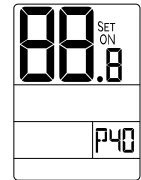Default: 10°C / 50°F

FP cut-out set point (°C)   **FP cut-out set point (°F)**

Technician Settings (Cont')

P40 – View filter counter (hours) – Read only
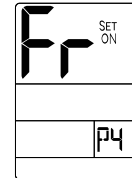Range: 0…999 hours

**View filter
Counter (hours)**

P41 – Reset filter time
"Fr" + "OFF"   No action (keep counting)
"Fr" + "ON"   Reset filter counter
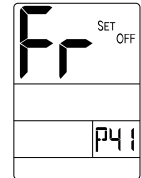
**Reset filter
counter**   **No action
(keep counting)**

P42 – Adjust filter alarm delay time counter (hours)
Range: 0…999 hours
Default: 0 hours (0 = Disable)

**Adjust filter alarm
delay time (hours)**

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P43 – P44

Soft start in heat

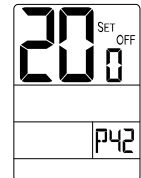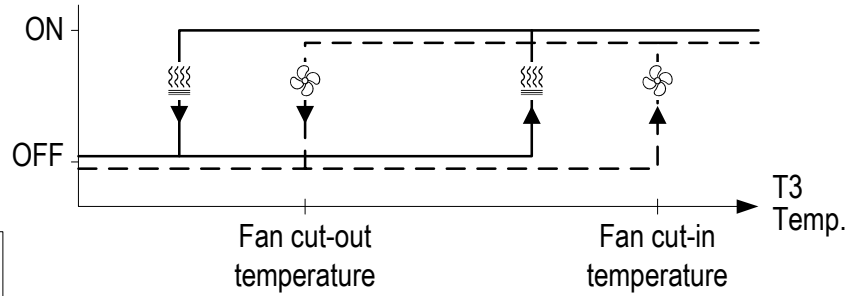**with fan on demand**

(auto fan) active.
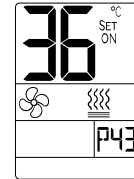

—— Heat valve

– – Fan

P43 – Soft start in heat – cut-in temperature

The fan will not start before the temperature

on T3 sensor reaches the cut-in temperature.

Range: 14...37°C / 57…99°F

Default: 36°C / 97°F

Soft start heat
Cut-in (°C)
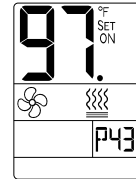
Soft start heat
Cut-in (°F)

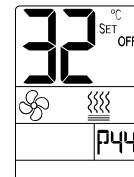**P44 – Soft start in heat – cut-out temperature**

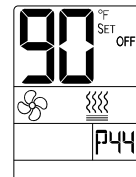The fan will stop if the temperature on T3 sensor

drops below the cut-out temperature.

Range: 14...37°C / 54…95°F

Default: 32°C / 90°F
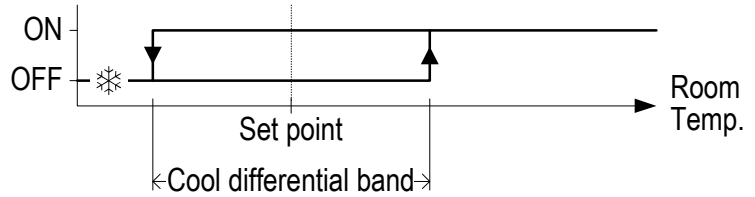

Soft start heat
Cut-out (°C)

Soft start heat
Cut-out (°F)

Technician Settings (Cont')

P45 – P46
Cool differential band / offset
(with cool differential band offset = 0)

——— Compressor / Valve

P45 – P46
Cool differential band / offset
(with cool differential band offset ≠ 0)

——— Compressor / Valve
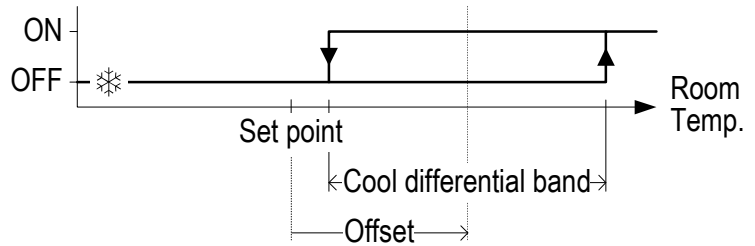
P45 – Cool differential band

Range:	0...5°C / 0...10°F
Default:	1°C / 2°F

Cool diff. band (°C)   **Cool diff. band (°F)**

P46 – Cool differential band offset

Range:	0...5°C / 0...10°F
Default:	0°C / 0°F

Cool diff. band offset (°C)   **Cool diff. band offset (°F)**

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Technician Settings (Cont')

P47-48

Heat differential band / offset

(with heat differential band offset = 0)

—— Compressor / Valve
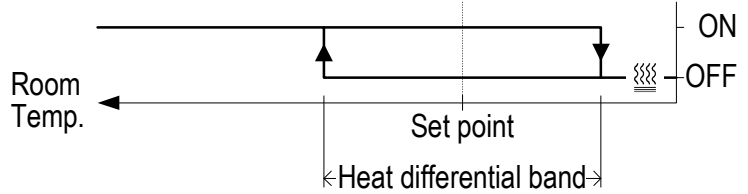
Room Temp.

ON
OFF

Set point

←Heat differential band→

P47-48

Heat differential band / offset

(with heat differential band offset ≠ 0)

—— Compressor / Valve

Room Temp.

ON
OFF

Set point

←Heat differential band→
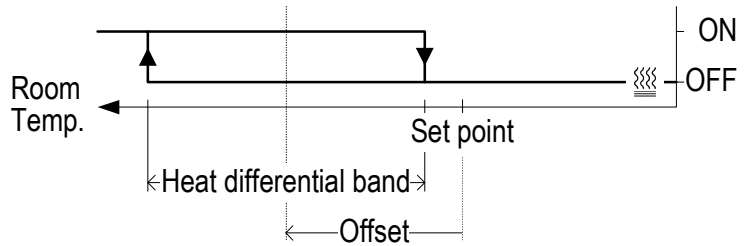
←—Offset—→

P47 –   Heat differential band

   Range: 0...5°C / 0…10°F

   Default: 1°C / 2°F

01.0 °C SET — P47
Heat diff. band (°C)
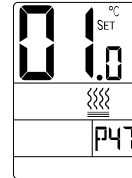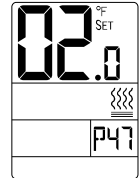
02.0 °F SET — P47
Heat diff. band (°F)

P48 –   Heat differential band offset

   Range: -5...0°C / -10…0°F

   Default: 0°C / 0°F
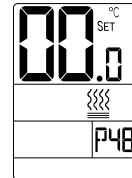
00.0 °C SET — P48
Heat diff. band offset (°C)
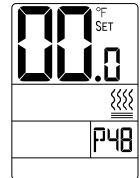
00.0 °F SET — P48
Heat diff. band offset (°F)

P49
Shift between Cool and Heat in Auto change over mode

—— Compressor / Valve

ON
OFF

Heat differential band | Set point | Cool differential band
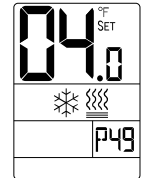
←Shift between Cool and Heat→

Temp.
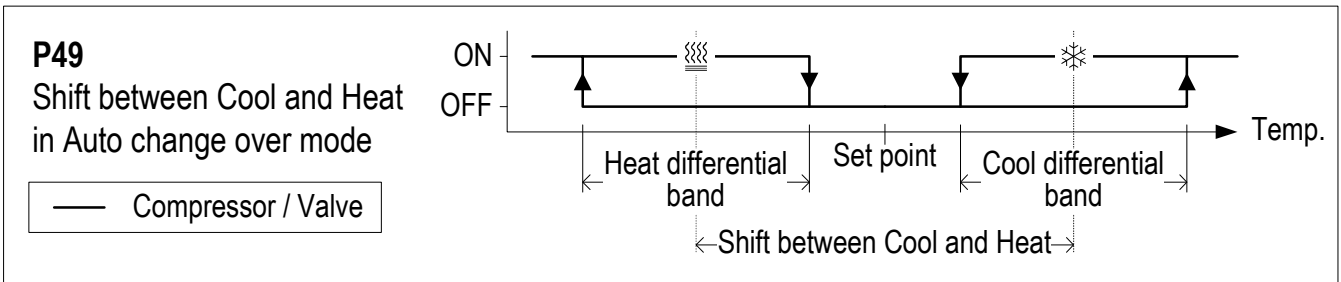
P49 – **Shift between Cool and Heat in Auto change over mode**

Range: 0...10°C / 0…20°F
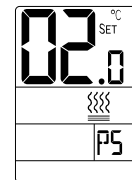
Default: 2°C / 4°F

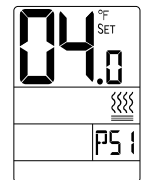**Shift between Cool & Heat (°C)**

Shift between Cool & Heat (°F)

P51 – **Shift between Heating stages**

Range: 0...10°C / 0…20°F

Default: 2°C / 4°F

Shift between Heating stg. (°C)

Shift between Heating stg. (°F)

P83 – **View T2 temperature sensor readings**

Note: If T2 is not connected, -9.8°C / -9.8°F will appear on display
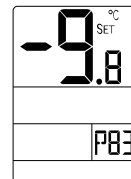
T2 Sensor Not connected
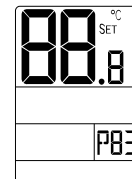
T2 Sensor readings (°C)

T2 Sensor readings (°C)

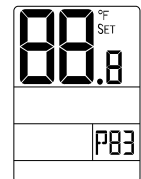**P84 –** **View T3 temperature sensor readings**

Note: If T3 is not connected, -9.8°C / -9.8°F will appear on display
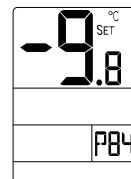
T3 Sensor Not connected
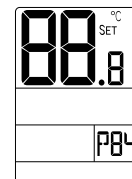
T3 Sensor readings (°C)

T3 Sensor readings (°C)

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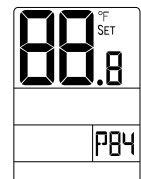
P99 – One or Two set points (for cool and for heat)

"00" - One set point for cooling and heating

"01" - two set points – one for cool and one for heat
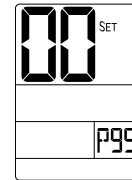
One set point	Two set points
00 SET P99	**01** SET P99
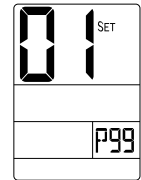
Press the [Mode] button or wait 60 seconds to return to normal display.

Restore defaults

Reset thermostat to factory settings

▪ Press and the [Mode], [Fan] and [On/Off] buttons simultaneously for
  10 seconds to reset the thermostat to factory settings.

Remote control (option)

Clock

Temperature scale

Set-point display

Fan speeds display

Timer

TIMER — Active

TIMER — Not active

Modes display

⊗ —Fan only   ❄ —Cool
≋ —Heat   A —Auto

⊗ — Low   ⊗ — High
⊗ — Medium   A — Auto

Turn system OFF ⋯⋯ Fan speed selection

Clock adjustment ⋯⋯ Mode selection

⋯⋯ Set-point adjustment

Turn system ON / Send changes ⋯⋯

Real Time Clock and Day

- Press the "Select" button – "CLOCK SET" will flash.
- Press the [+] or [-] buttons - the hours will flash.
- Adjust the hours using the [+] or [-] buttons.
- Press the [Select] again - minutes will flash.
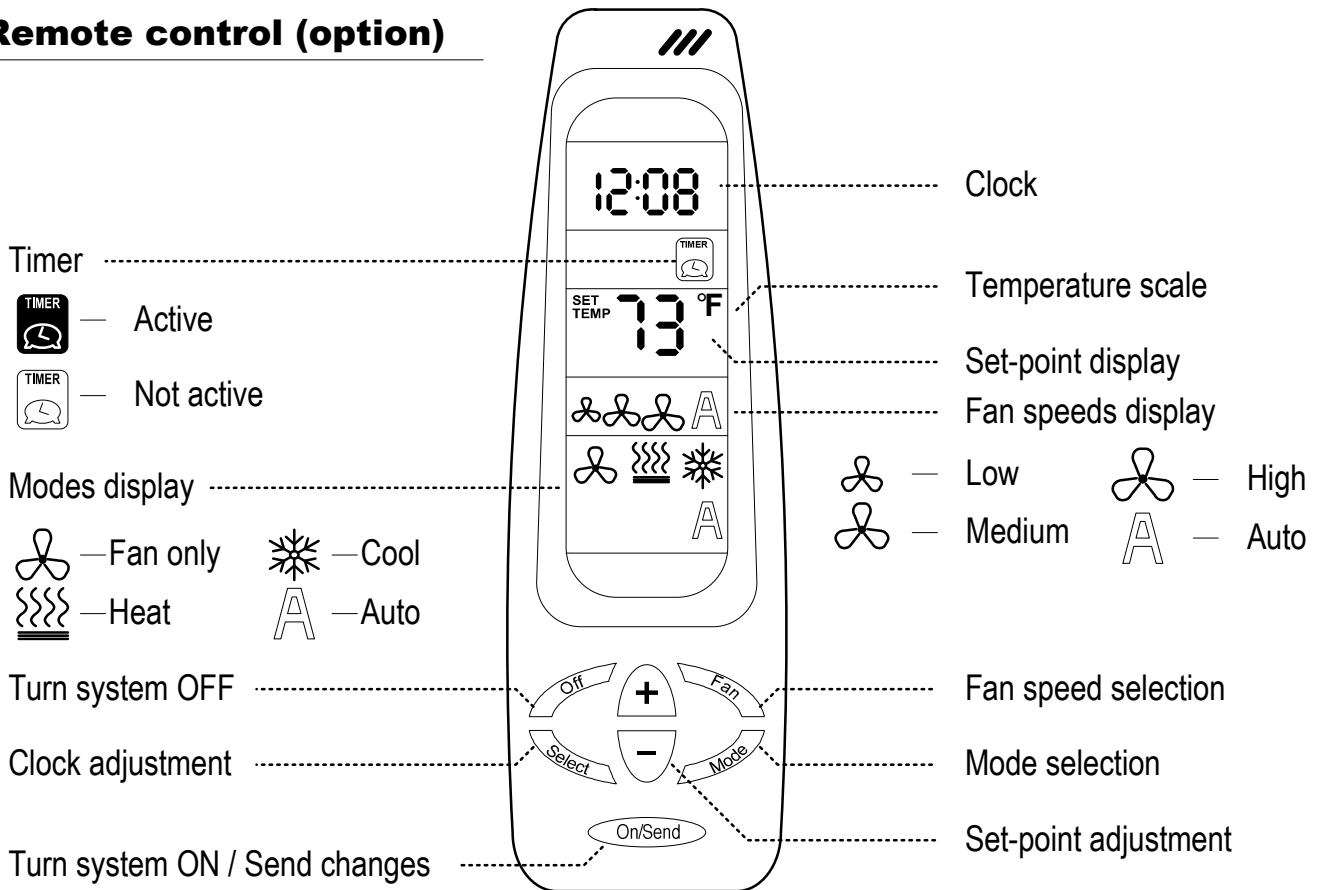- Adjust the minutes using the [+] or [-] buttons.
- Press the [Select] again to return to normal display.
- Press the [On/Send] button to send information to the thermostat.

Batteries Replacement

When the batteries are low, the display of the remote control will dim.
- Pull the batteries cover down to reveal the batteries.
- Remove the old batteries and **wait at least 10 minutes before installing 2 new AAA batteries.**
- Reassemble the batteries cover.

Important: The remote control will not operate unless at least 10 minutes pass between removing the old batteries and installing the new ones.

Timer

Start Time:
- Press the [Select] button twice – "PROGRAM & START" will flash on display.
- Press the [Select] button - the hours will flash.
- Adjust the hours using the [+] or [-] buttons.
- Press the [Select] button - the minutes will flash.
- Adjust the minutes using the [+] or [-] buttons.

Stop Time:
- Press the [Select] button – "PROGRAM & STOP" will flash on display.
- Press the [Select] button - the hours will flash.
- Adjust the hours using the [+] or [-] buttons.
- Press the [Select] button - the minutes will flash.
- Adjust the minutes using the [+] or [-] buttons.
- Press the [Select] button - the TIMER will blink
- Select TIMER ON (black icon) or OFF (white icon) using the [+] or [-] buttons.
- Press the [On/Send] button to send the information to the thermostat.

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