ETN-24-SUPER-SH Series

Owner's Manual – Installation and Operating Instructions

⚠ **Please read this manual carefully before installation and use.**
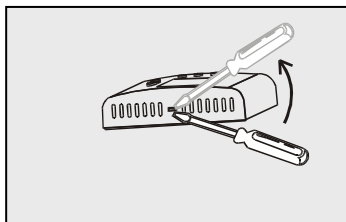
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1. Options & Accessories

- External sensor option: RS01 for remote temperature sensing (1 required) RS01 for averaging temperature with thermostat (4 required) RS02 for averaging temperature with thermostat (2 required RS02 has two thermistors in one enclosure).
- Hand held remote control.
- Door switch or window contact connection.

2. Installation Instructions

Separate the front panel from the back panel by depressing the tongue located in the top of the unit.
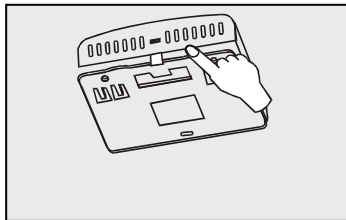
Pull the back panel out.
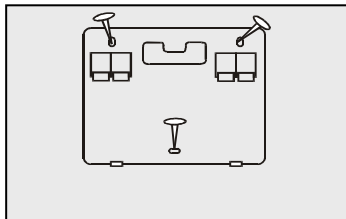
Line the back panel up against the wall or flat surface. Install three screws as required.
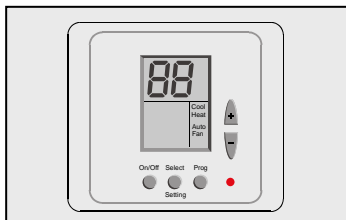
Make electrical connections as shown on enclosed electrical wiring connections. (Next page)

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

3. Wiring Connections

Choose the right configuration for your model.

C1-1S

Pin	Connection
R	24VAC
C	
S1	
S2	
0	Window Contact
T	
S3	
S4	External Sensor
S5	
S6	
S7	Fan
S8	Compressor 1

C1-3S

Pin	Connection
R	24VAC
C	
S1	
S2	Fan Medium
0	Window Contact
T	
S3	
S4	External Sensor
S5	
S6	Fan High
S7	Fan Low
S8	Compressor 1

C2-1S

Pin	Connection
R	24VAC
C	
S1	
S2	
0	Window Contact
T	
S3	
S4	External Sensor
S5	
S6	Compressor 2
S7	Fan
S8	Compressor 1

C2-3S

Pin	Connection
R	24VAC
C	
S1	
S2	Fan Medium
0	Window Contact
T	
S3	Compressor 2
S4	External Sensor
S5	
S6	Fan High
S7	Fan Low
S8	Compressor 1

C3-1S

Pin	Connection
R	24VAC
C	
S1	
S2	
0	Window Contact
T	
S3	Compressor 3
S4	External Sensor
S5	
S6	Compressor 2
S7	Fan
S8	Compressor 1

HC11-1S

Pin	Connection
R	24VAC
C	
S1	Heater 1
S2	
0	Window Contact
T	
S3	
S4	External Sensor
S5	
S6	
S7	Fan
S8	Compressor 1

HC11-3S

Pin	Connection
R	24VAC
C	
S1	Heater 1
S2	Fan Medium
0	Window Contact
IN	
S3	
S4	External Sensor
S5	
S6	Fan High
S7	Fan Low
S8	Compressor 1

HC12-1S

Pin	Connection
R	24VAC
C	
S1	Heater 1
S2	
0	Window Contact
T	
S3	
S4	External Sensor
S5	
S6	Compressor 2
S7	Fan
S8	Compressor 1

HC12-3S

Pin	Connection
R	24VAC
C	
S1	Heater 1
S2	Fan Medium
0	Window Contact
T	
S3	Compressor 2
S4	External Sensor
S5	
S6	Fan High
S7	Fan Low
S8	Compressor 1

HC22-1S

Pin	Connection
R	24VAC
C	
S1	Heater 1
S2	Heater 2
0	Window Contact
T	
S3	
S4	External Sensor
S5	
S6	Compressor 2
S7	Fan
S8	Compressor 1

HC23-1S

Pin	Connection
R	24VAC
C	
S1	Heater 1
S2	Heater 2
0	Window Contact
T	
S3	Compressor 3
S4	External Sensor
S5	
S6	Compressor 2
S7	Fan
S8	Compressor 1

⚡ **IMPORTANT! Before making any changes in the Dip Switch, disconnect the electricity in the main board.**

4. DIP switch Explanations (different configurations)
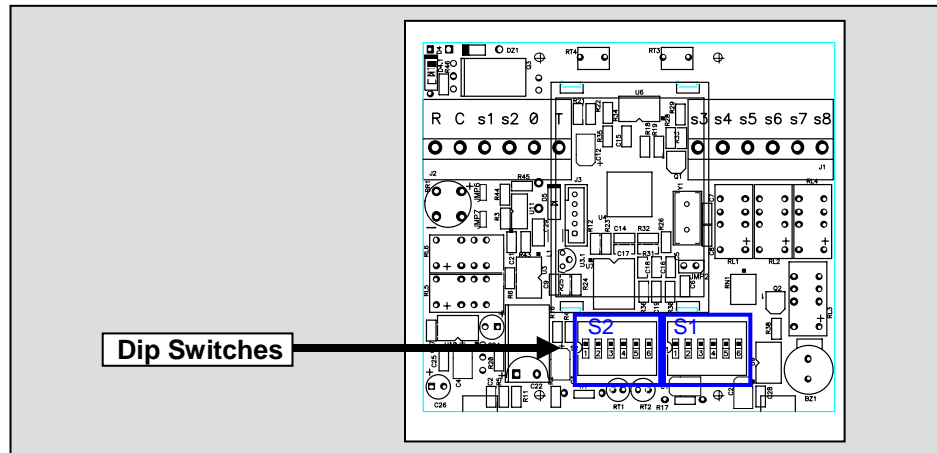
Location of Dip Switches:

Table 4.1 – Dip Switch selection

Dip Switch S1:

Func.	Fan Speed		Time Delay*		Fan Mode in Econ.	
No.	1 Speed	3 Speeds	3 Minutes	No Delay	Auto Fan	Continuous
1	X	X	X	X	OFF	ON
2	OFF	ON	X	X	X	X
3	X	X	OFF	ON	X	X
4	OFF	OFF	OFF	OFF	X	X
5	X	X	X	X	X	X
6	X	X	X	X	X	X

X = Not important   * = No delay for compressor – for test only.

Dip Switch S2:

Func	Internal/External Sensor		Cool Only (C##)	COOL & HEAT (HC##)	Display of T. Ambient		Window Contact	
No.	Internal	External			With display	No display	Stop Completely	Go to Econom.
1	ON	OFF	X	X	X	X	X	X
2	OFF	ON	X	X	X	X	X	X
3	ON	OFF	X	X	X	X	X	X
4	X	X	OFF	ON	X	X	X	X
5	X	X	X	X	OFF	ON	X	X
6	X	X	X	X	X	X	OFF	ON

4.2 DIP Switch Operation

The Dip Switch has 6 pins.

Each pin can be set ON or OFF.

In this example, pins 1,6 are ON and pins 2,3,4,5 are OFF.
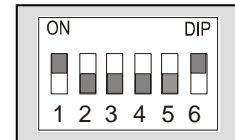
Example

4.3 External sensor connection - option

⚠ **Important! The external sensor must be of Meitav-tec type.**

Table 4.3 - N.TC. Sensor: Temperature ~ Resistance Characteristics

Temp °C	7.2	10.0	12.8	15.6	18.3	21.1	23.9	26.7	29.4	32.2
Temp °F	45	50	55	60	65	70	75	80	85	90
Res. k	115.8	100.9	88.1	77.1	67.7	59.6	52.5	46.4	41.2	36.6

📌 **The factory default is INTERNAL SENSOR.**

- Disconnect the power to the thermostat (24vac).
- Move the DIP Switch S2 as described in the 'Dip Switch S2' table above.
- Connect the temperature sensor to S4, S5 terminals.
- Reconnect the power (24vac).
- Make sure the display reading is that of the external sensor.

The length of the cable needed for the external sensor is 100 feet (30 meters).

Standard cable may be used.

If a longer distance is needed, then the cable MUST be shielded.

There is a wide range of sensors available for different applications,

ex: ducts, rooms, etc.

There also exists an option for averaging the temperature.

For details please contact our technical support line or visit our web site.

Internal Sensor Configuration

External Sensor Configuration
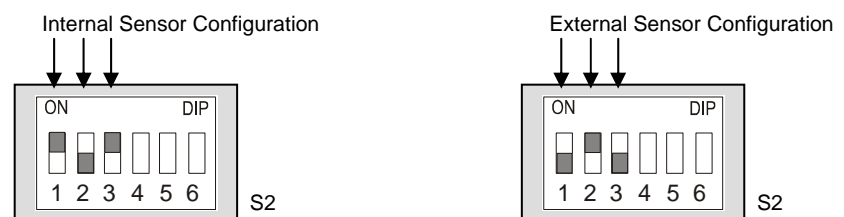
5. Operating Manual

5.1 On/Off

Press the ON/OFF button to activate or deactivate the thermostat.

The word "ON" or "OFF" will appear in the display.

5.2 Set temperature

Press the SET buttons (+) or (-); the temperature will flash, change with the set buttons (+) or (-).

5.3 Selecting modes

Press the MODE button to switch between the four modes:

- Cool
- Heat
- Cool/heat (auto-change over),
- Fan only.

5.4 Selecting fan speeds

Press the FAN button to switch between speeds:

- Low
- Medium
- High
- Auto speed

5.5 Fan/Auto Fan function

Press the FAN button to select AUTO FAN, press again to cancel. In AUTO FAN the fan will only run when calling for heat or cool.

6. Technician Settings

6.1 Set temperature limits and offset

First, set the temperature to 10°C.

Set limit for cool

- Press and hold the MODE button (5 seconds).
- "COOL" will appear on display.
- Adjust set limit for "Cool" using the "+" and "-" buttons.

Set limit for heat

- Press the MODE button again.
- "HEAT" will appear on display.
- Adjust set limit for "Heat" using the "+" and "-" buttons.

Set the offset (the offset is used for calibration of the measured temperature).

- Press the MODE button again.
- Adjust set offset using the "+" and "-" buttons (range -6°C/+6°C – default 0°C).

Set limit for cool in economy mode

- Press the MODE button again.
- "AUX" and "COOL" will appear on display.
- Adjust set limit for "Cool" in economy mode using the "+" and "-" buttons.

Set limit for heat in economy mode

- Press the MODE button again.
- "AUX" and "HEAT" will appear on display.
- Adjust set limit for "Heat" in economy mode using the "+" and "-" buttons.

Set time delay between compressor stages

- Press the MODE button again.
- "AUX" and number will appear on display.
- Adjust set time delay between compressor stages using the "+" and "-" buttons (Range 1-10 minutes).

Set Dead Band in Auto change over mode

- Press the MODE button again.
- "ºC" and number will appear on display.
- Adjust differential for Auto-change over mode using the "+" and "-" buttons (Range 2ºC - 5ºC).

6.2 Lock/Unlock the thermostat's buttons

First, make sure the set temperature is NOT 10°C.

Lock the thermostat's buttons

- Press and hold 'MODE' button (5 second).

Unlock the thermostat's buttons

- Press and hold 'ON' button (5 second).

6.3 Window contact input

The input to connect a door switch, window contact, etc. is normally open (active when closed) and Voltage Free (2 terminals).

If window contact closes, the thermostat has two options:

- Option A: The thermostat will turn OFF.
- Option B: The thermostat will change the set point (switch to Economy Mode)

To change these options in the thermostat please refer to the Dip Switch explanations.

Rev. 4