![Spartan Peripheral Devices logo]

## TE112H Room and Duct Type 2 stage High Temperature Range 2 position ON/OFF LCD Electronic Thermostat 24V

### Mounting Location:
For room applications:
The thermostat is restricted to be used indoors only. It should be mounted where it is readily affected by changes of the general room temperature/humidity with freely circulating air.

For duct applications:
Use external sensor and install the thermostat in any location for your application.
**Do not expose this unit to condensation.**

### Mounting Instruction:
1/.Remove Cover:
- Place the screwdriver at the bottom of the locks and loosen the screws (@ '1') & (@ '2')
- Remove the top cover carefully forward(@ '3') and then upward(@ '4 ')to loosen the top locks

2/.Mounting without bottom plate (Diagram 1):
- Ensure the surface is level
- Pull the cables through the hole near the terminal block
- Use wall anchors provided if necessary.
- Fasten the thermostat with 2 long screws through the 2 mounting holes

3/.Mounting with bottom plate (Diagram 2):
- Adjust the bottom plate on the wall or junction box and ensure the plate is at surface level and covers the junction box completely
- If necessary, pull the cables out of the middle hole of the bottom plate
- Use wall anchors provided if necessary
- Fasten the plate with 2 long screws
- Pull the cables through the hole near the terminal block
- Fasten the thermostat with 2 screws provided to the mounting plate

4/.Electrical Connection:
- Connect the cable to the terminal block according to the circuit diagram attached inside the top cover
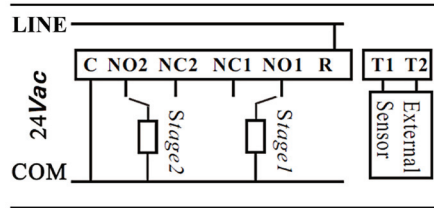  It is recommended to use a fuse or circuit protective device

5/.Install the Cover:
- Ensure the rubber key is firmly attached on the PCB (@ '5')
- Ensure rubber key fits through the opening of the cover (@ '6')
- Replace the cover in direction (@ '7') and ensure the top locks are fastened

- Press the cover in direction (@ '8') and fasten the cover with 2 screws (@ '9') &(@ '10')
- Check that the rubber keys can be moved smoothly, otherwise reinstall the cover and realign properly
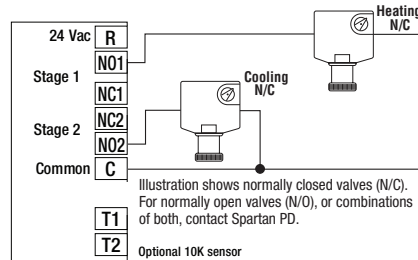
### 6/. Temperature setting:
- Select the comfortable temperature by pressing ▲ or ▼ to the desirable temperature set point. The set point will flash after releasing the keys.
- The display of the room or duct temperature will return after 10 seconds
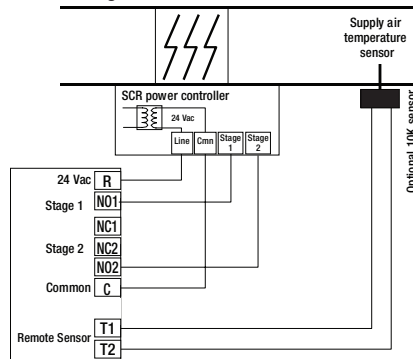- Backlight will illuminate by pressing ▲or ▼ or ☁ it will return after 10 seconds once the keys are released



**Discharge Air or Room Control for Control Valves**

24Vac power is on terminal NO1 when there is a demand for heating and on terminal NO2 when there is a demand for cooling



Illustration shows normally closed valves (N/C). For normally open valves (N/O), or combinations of both, contact Spartan PD.

**Optional 10K sensor**

**Discharge Air or Room Control of Electric Heating**



### 7/.Dip switch Selections:

| Pole | OFF | ON |
|------|-----|-----|
| 1 | ºC | ºF |
| 2 | Internal sensor | External Sensor |
| 3 | Limited set point range | Normal set point range |
| 4 | Span selection | |
| 5 | | |
| 6 | Switch Differential selection | |
| 7 | | |

Re-power the thermostat after changing the dipswitch settings

#### Span selection
| Span | Pole 4 | Pole 5 |
|------|--------|--------|
| 1°C | OFF | OFF |
| 2°C | ON | OFF |
| 4°C | OFF | ON |
| 6°C | ON | ON |

#### Switch Differential selection
| Differential | Pole 6 | Pole 7 |
|------|--------|--------|
| 1°C | OFF | OFF |
| 2°C | ON | OFF |
| 4°C | OFF | ON |
| 6°C | ON | ON |

### 8/. Adjusting the Set point (Dip switch 3)
With dipswitch # 3 we can select a normal or limited temperature range. See tables below.
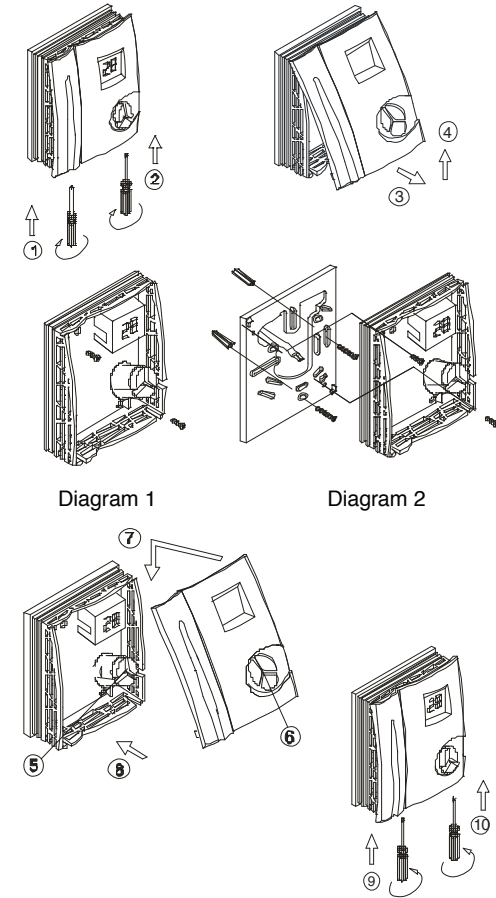
Normal set point range:
- 5.0 - 55.0ºC (0.5ºC resolution)
- 40 - 130ºF (1º F resolution)

Limited set point range:
- 18.0 - 24.0ºC (0.5ºC resolution)
- 64 - 76ºF (1ºF resolution)

### Technical Data:
Temperature Control Range: 5- 55°C /40 - 130°F
Temperature measurement: 0- 60°C /32 - 140°F
Accuracy: ± 1°F, ±0.5°C
Resolution: 1°F, 0.5°C
Operating Voltage: 24Vac
Frequency: 50/60Hz
Relay Rating: 24Vac 2A
Sensing Element: NTC thermistor
Terminals: 2mm² Cable
Time Element: Approx. 2 min.
Operating Temperature: 0 - 40°C / 32 - 104°F
Storage Temperature: -10 - 50°C / 0 - 122°F



Diagram 1          Diagram 2



### 9/. Backlight:
- Press ☁ the backlight will light up the LCD display for 10 seconds.

### 10/. Output icon
- Stage 1 heating is turned on, LCD displays ☼ icon
- Stage 2 heating is turned on, ☼ icon will be flashing
- All output is off, no icon will be shown

**Factory default Dip Switch Selection**
#1 OFF
#2 OFF
#3 ON
#4 ON
#5 OFF
#6 OFF
#7 OFF

Caution: Switch off the electrric source before maintence the thermostat. We recommend that the maintenance should be performed by trained personnel.