

TE154 LCD Electronic Thermostat 20VDC

Mounting Location:

The thermostat is to be used indoors only. It should be mounted on an inner wall about 1.5m above the floor at a position where it is readily affected by changes of the general room temperature/humidity with freely circulating air. Avoid mounting near heat generating equipment (e.g. TV, baseboard heaters, refrigerator), do not expose unit to direct sunlight, draft or in enclosed spaces. Do not expose this unit to moisture.

Mounting Instruction:

1/.To remove cover:

- Loosen screws at the bottom of the cover (@ '1') & (@ '2')
- Remove the top cover carefully, forward (@ '3') and then upward (@ '4 ') to loosen the top locks

2/.Mounting directly on the wall without a back 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 directly on the wall with back plate (Diagram 2):

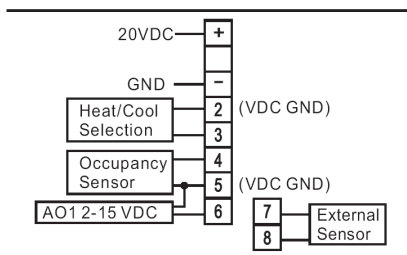
- Adjust the back plate on the wall or junction box and ensure the plate is at surface level and cover the junction box completely
- If necessary, pull the cables out of the middle hole of the back plate
- Use wall anchors provided if necessary
- Fasten the plate with 2 long screws
- Pull the cables through the hole near the terminal block
- Fasten the thermostat with 2 screws through the 2 mounting holes

4/.Electrical connection:

- Connect according to the circuit diagram attached inside the top cover
- Do not use metal conduit or shielded wire
- Recommended to add fuse or protective device in the line circuit

5/.Install the cover:

- Ensure the rubber key is firmly attached on the PCB (@ '6a')
- Ensure rubber key fitting location on the cover is right towards the rubber key (@ '6b')
- 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 slide keys and the rubber keys can be moved smoothly, otherwise reinstall the cover and realign



Dip Switch Selections:

Internal DIP switches selects the following features

Pole	ON	OFF
1	°F Scale	°C Scale
2	DA Direct Acting	RA Reverse Acting
3	External sensor	Internal sensor
4	Fast response	Normal response
5	Normal temperature range	Limited temperature range
6	Proportional band selection 1	
7	Proportional band selection 2	

Fast response: update output every 10secs. Normal response: update output every 30secs.

Proportional band selection:

Pole 6	Pole 7	Proportional band
OFF	OFF	2°F
OFF	ON	3°F
ON	OFF	6°F
ON	ON	20°F

To Set Up D.A. /R.A. Action:

1st Step Set up Heating Mode (no jumper) or Cooling Mode (with jumper) on terminal 2-3

2nd Step When set in Heating Mode, switch #2 is in the ON Position, if the set point is higher than the room temperature (call for heat), the output is 2Vdc. When set in Cooling Mode (jumper on 2-3) switch #2 is in the ON Position, if the set point is higher than room temperature (cooling not required), the output is 15Vdc.

Changing the Set Point:

To change set point use the increase or decrease keys. LCD display will illuminate after pressing the hand key. When the thermostat is in heating mode a thermometer will appear in the display. It will flash when there is a demand for heat. When the thermostat is in cooling mode a snow flake will appear in the display. It will flash when there is a demand for cooling. Selectable by jumper on terminal 2 and 3

On Power Failure:

The set-point will remain in the memory.

Maintenance:

Caution: Switch off the electrical source before maintaining the thermostat. We recommend that all maintenance be performed by a trained professional.

Troubleshooting Tips:

If no heating/cooling control:

- Check the relays on/off performance by applying DC voltage at the coil, if it works then trace the control circuit if it does not work replace it
- Check the thermistor sensor performance by measuring the corresponding variable resistance under different temperatures, if it is in good condition the LCD value will change accordingly. If the LCD value does not change then trace the control circuit or the LCD connection.
- If the control circuit has a problem, replace the PCB.

Technical Data:

Temperature Range:	5-35 °C/ 40-95 °F
Power Supply:	20Vdc ±10%
Analogue output:	2-15VDC
Sensing Element:	NTC thermistor
Terminals:	2mm ² Cable
Operating Temperature:	0-50 °C/ 32-122 °F
Storage Temperature:	-10-60 °C/ 14-140 °F

