



**Power System  
Services**

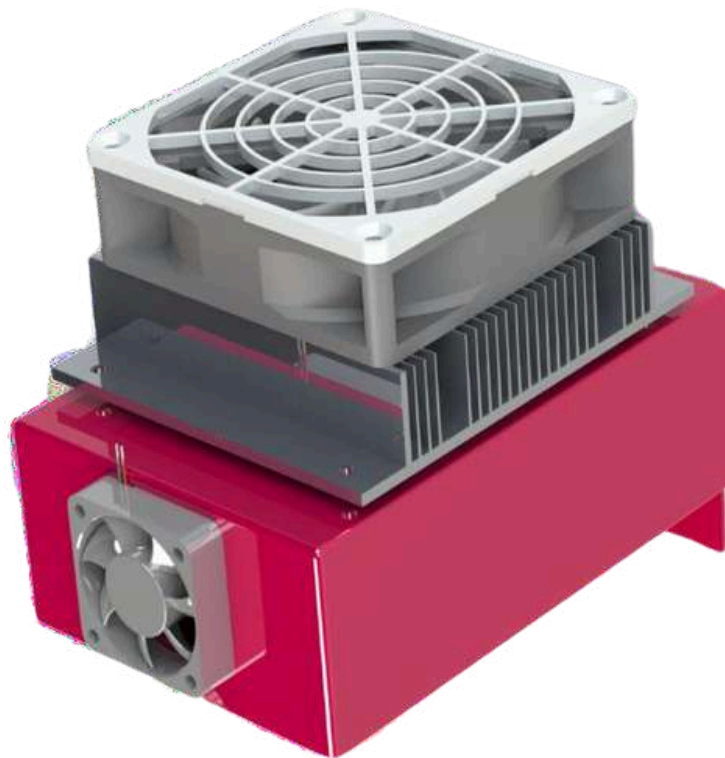
# DEHUMIDIFIER

**Automatic Dehumidifier &  
Temperature Controller**





# Automatic Dehumidifier & Temperature Controller



Humidity level around panel is known to change with the season so usually space heater is used to keep set temperature within the panel. it is observed that the values of temperature and humidity within panel are not visible/known to operator. It is possible that if the temperature and humidity is not maintained to desire value, some problems could occur in the panel as

1. Condensation build-up
2. Corrosion
3. Leakage current

Which leads to flash over and breakdown of panel.

By using ADTC-100 (Automatic Dehumidifier & Temperature Controller) operator can set, control and observe the desire value of humidity and temperature inside the panel.

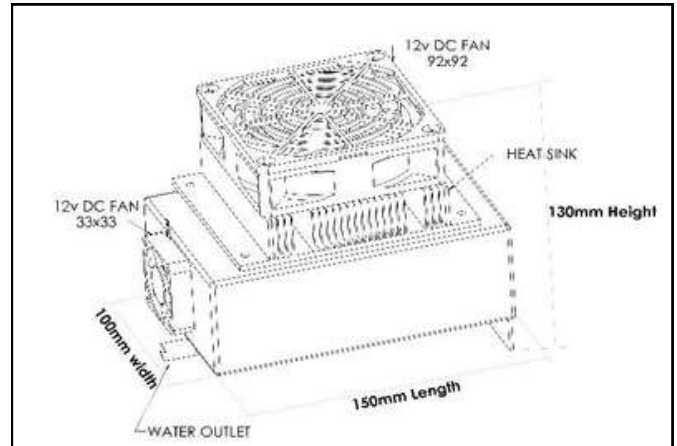


## Electrical Specifications

<b>Input Voltage</b>	<b>230VAC Single</b>
<b>Power</b>	<b>Peltier 60Wattt</b>
<b>Current</b>	<b>5A Max</b>

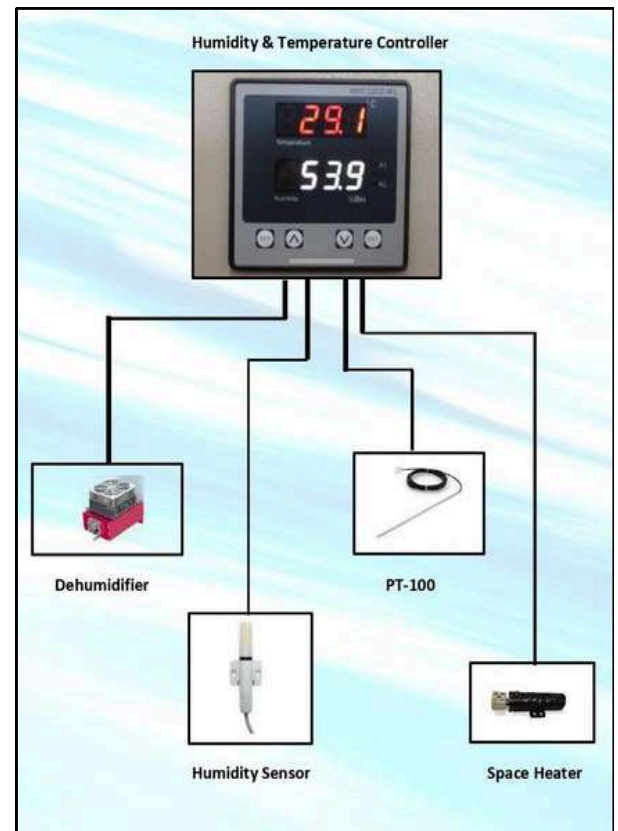
## Mechanical Specifications

<b>Length</b>	<b>150mm</b>
<b>Depth</b>	<b>100mm</b>
<b>Height</b>	<b>130mm</b>



## Features

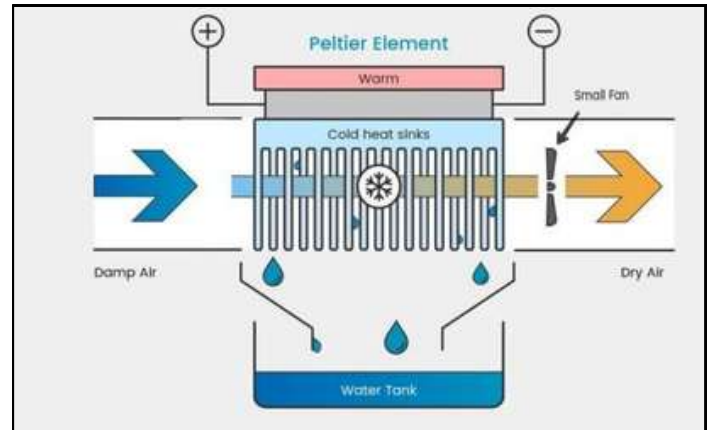
- Maintain the Humidity and temperature of panel to the set point by removing moisture from air within panel.
- Automatic ON/OFF when humidity and temperature reaches pre-set level hence Energy Efficient.
- Portable and lightweight.
- Protection: Output short circuit, over-current, over-voltage, over-temperature protection.
- Display: Set and actual value of humidity and temperature is displayed on controller screen.
- RS 485 communication is provided for remote display at control room through HMI (optional)
- Humidity range: 5 to 95% RH (adjustable)
- Temperature range: 0 to 50 degree (adjustable)
- Water outlet for taking out extracted water outside panel.





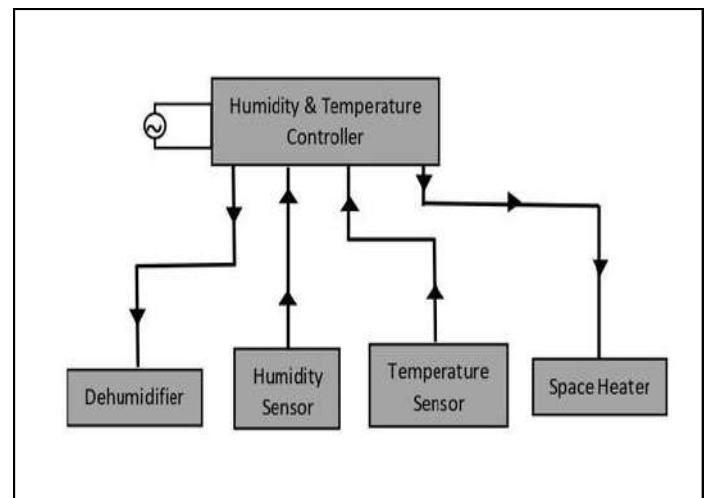
## Working Principle of Dehumidifier

- When device is connected to 230VAC power source, one side of it becomes refrigeration side & the other side becomes Hot. Heat sink with top mounted fan dissipates heat.
- On another side, which is refrigeration side, cold sink is connected for condensation.
- Moisture in the air gets condensate when it comes in contact with the cold sink.
- Side Mounted fan is used for continuous air circulation inside the box. Condensed water collected in the box is taken outside via small pipe arrangement.
- Thus, moisture inside the electrical panel cubicle is removed, and only dry air is circulated within the cubicle.



## Working Principle of Temperature

- Temperature Controller is connected with temperature sensor.
- The desire temperature value set in controller.
- A controller monitors the actual temperature inside of the panel through PT-100.
- If temperature falls below the set value, controller switch ON the space heater power supply to raise the temperature back to the setpoint.
- If temperature goes above the set value, controller switch OFF the space heater power supply to get back the temperature to the setpoint.
- Controller display set temperature value and actual temperature value inside the panel.





## Applications



**MV Panel**



**C&R panel**



**PLCC Panel**



**PLC Panel**



**Transformer LT/HT Cable Box**



**Metering Cubicle**