



# **User Manual:**

## **Smart Environment Monitor with Automatic Pump Control**

## 1. Introduction

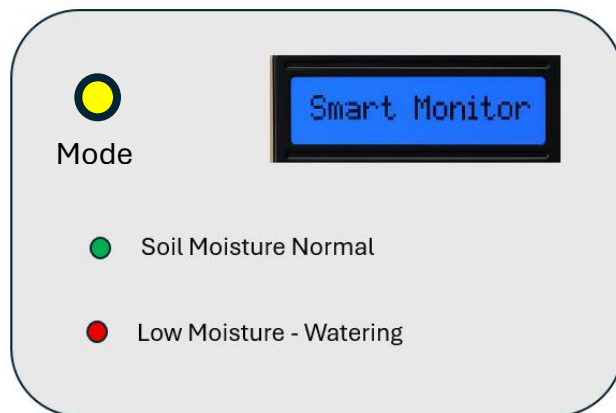
Thank you for choosing the Smart Environment Monitor. This simple device helps you monitor soil moisture, temperature, and humidity, and it automatically turns ON a water pump when the soil becomes too dry.

The device uses a relay to control a 230V water pump, which helps automate watering based on real-time soil conditions. Information is shown on the LCD screen, and you can switch between different sensor readings using a button.

## 2. What's in the Box?

Your kit should include:

- ✓ Smart Environment Monitor device
- ✓ 230V connection cable.



Smart Device



Power cable



Soil Moisture sensor and cable

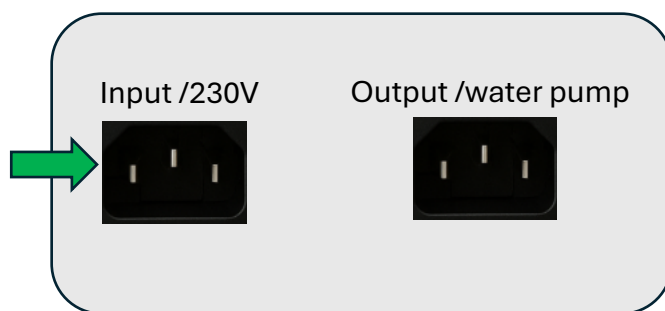
### 3. How to Set It Up

#### ⚠ Safety First!

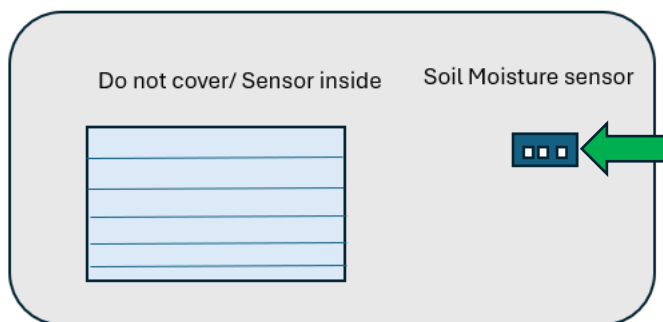
If you're not confident working with 230V, ask an electrician to connect the water pump safely!

#### A. Plug In the Device

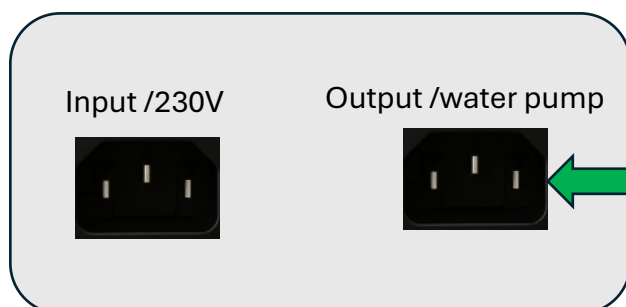
- Connect Power cable to device and plug to 230ACV supply.



- Connect sensor cable to device



#### B. Connect the Water Pump.



#### 4. How to Use

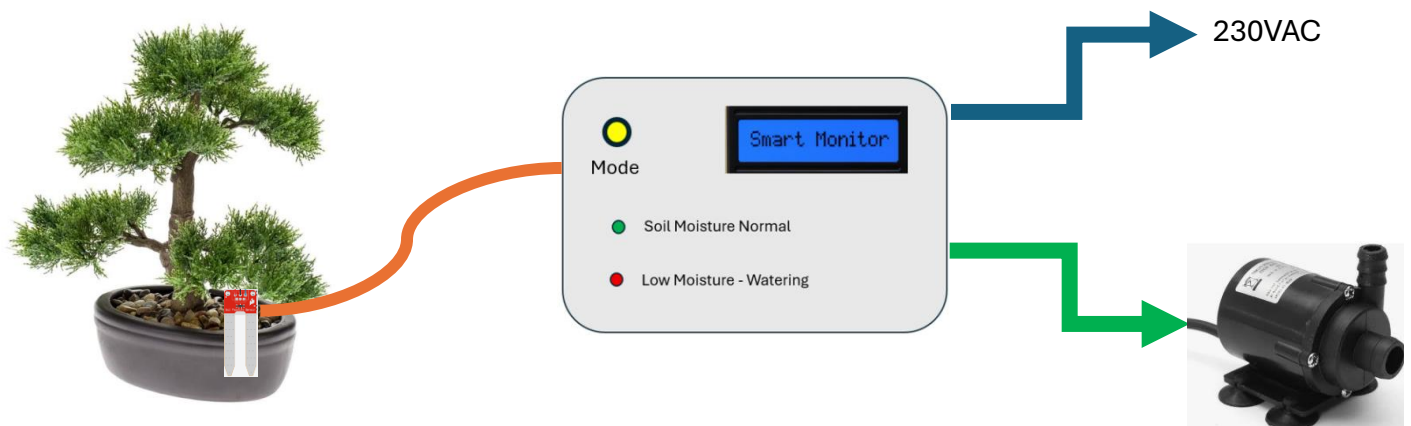
- The device shows **different sensor data** on the LCD screen.
- Press the **button** to switch between:
  - 🌡 **Temperature & Humidity** (from air)
  - 🌱 **Soil Moisture (%)**
  - 🔥 **Room Temperature** (from LM35 sensor)

#### 5. Automatic Watering Function

- If **soil moisture drops below 40%**, the **pump turns ON automatically**.
- When moisture rises above 45%, the **pump turns OFF**.
- This helps **avoid overwatering** and **saves water**.

#### 6. LED Indicators

- 🟢 **Blue LED ON** → Device is working normally./ Pump stopped
- 🔴 **Red LED ON** → Low Moisture level / Pump started



## 7. Troubleshooting

Problem	What to Do
LCD is blank	Adjust small knob on the back (contrast control)
Red LED is ON	Check that all sensors are securely plugged in
Pump not turning on	Make sure moisture is low enough and pump is wired correctly
Button doesn't switch display	Try pressing a bit slower; press and release once to change

## 8. Safety Notes

- ⚠ **Do NOT touch the relay or pump wiring while the device is connected to 230V.**
- ⚠ Ensure all AC wiring is safely insulated and placed away from water or damp areas.
- ⚠ Only use pumps up to 10A at 230V.
- ⚠ Keep the device dry and indoors.
- ⚠ Keep away from the children

## 9. Maintenance

- Keep the soil moisture sensor clean and free of corrosion.
- Ensure all connectors are secure and not exposed to water.
- Check the LCD and buttons occasionally for responsiveness.
- Do not block or cover sensor area in the
- This device has inbuild AC 230v to DC 5v converter.

## 10. Contact

For help or questions, please contact:



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