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# Humidity Sensor Module

Relative humidity detection via potentiometer adjustment to control the corresponding humidity that pre-mounted with HR202 humidity sensor. It comes with basic components and it can start measuring humidity by just supplying power to it. HR202 humidity sensor is humidity sensitive resistor made from organic macromolecule materials. It can be used in hospitals, storage room, workshop, production floor, toilet, garden, laboratory and more.

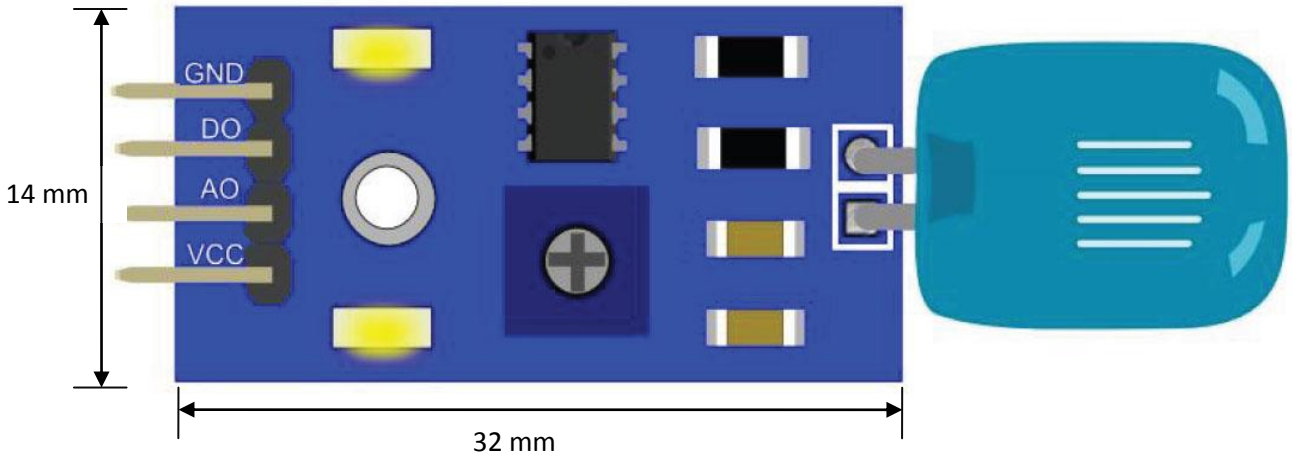
Besides the basic operation, the module also have additional voltage comparator circuit which offer adjustable threshold level for humidity sensor to trigger, it becomes a digital output. It can be interface with any microcontroller with digital or analog input such as PIC, SK40C, SK28A, SKds40A, Arduino series for humidity changes detection.

## Technical Specifications

**Operating Voltage:** 3–5 V
**Operating Humidity Range:** 20-95%RH
**Operating Temperature:** 0–60℃
**Accuracy:** ±5%RH
**Potentiometer Adjustment Direction:** clockwise (humidity level decrease), counterclockwise (humidity level increase)
**Dimensions:** 32mm L×14mm W ×6.5mm H
**Weight:** 0.18 oz (5 g)

## Dimensions and Pin-out

**Product dimensions:**



**Pin definitions and ratings:**

| Pin | Name | Function |
|---|---|---|
| VCC | Supply Voltage | Connects to $V_{CC}$ |
| AO | Analog Output | Connects to analog output interface |
| DO | Digital Output | Connects to digital output interface (0 and 1) |
| GND | Ground | Connects to Ground |

## Mechanism

- Humidity sensor module is very sensitive to the ambient humidity is generally used to detect ambient humidity.
- Through the adjustment of the potentiometer, detecting the humidity threshold can be changed. Clockwise will set the humidity low while counterclockwise will set the humidity low.
- When DO output high level below than the set humidity value, the output goes high. Green LED will remain turn **OFF**.
- When DO output high level higher than the set humidity value, the output goes low. Green LED will turn **ON**.
- DO output of the microcontroller directly connected through the microcontroller to detect high and low, to detect changes in environmental humidity.
- DO output terminal can be directly driven shop relay module, which can form a humidity switch that can control equipment to work in a suitable environment.

## Applications

1) Testing and inspection equipment
2) Weather station
3) Home Appliances
4) Humidity Regulator
5) Medical