Sensor DHT22

Humidity sensor and temperature DHT22 is sensor very popular today as cheaply and very easy to get the data via one interface wire (interface digital 1 get the data via), than DHT11 cheaper version DHT22 higher precision.

Technical Specification:

Power supply: 3.3 ­> 6v DC.

Field: 2.5mA max (when transmitting data).

Measuring range: Humidity 0-100%RH; temperature -40~125 Celsius

Accuracy: Humidity +-2%RH (Max +-5%RH); temperature +-0.2Celsius

Resolution or sensitivity: Humidity 0.1%RH; temperature 0.1

Celsius Repeatability: Humidity +-1%RH; temperature +-0.2Celsius

Humidity hysteresis: +-0.3%RH

Long-term Stability: +-0.5%RH/year

Sensing period: Average: 2s

Interchangeability: Fully interchangeable

Pin Function:

1 VDD----power

2 DATA--signal DATA

3 NULL

4 GND

* Sensing period Average: 2s
* If time is less than 2 seconds to read will return the old results.
* 1 reads will return 5 bytes ⬄ 40 bit Inside:
  + - First Byte is humidity values integer
    - Second byte is humidity values decimal
    - Third byte is temperature values integer
    - Fourth byte is temperature values decimal
    - Five byte is byte check sum check measurement results
* The first DHT22 enable low voltage (minimum of 500 nanoseconds)
* Switch reading mode, enable high voltage
* Output Low data rate within 80 nanoseconds. **Remember the value of X**
* Output high data rate within 80 nanoseconds. **Remember the value of X**

The formula for calculating the moisture is: (**X\*256/10) + byte 2 (**decimal**) => poison**

The formula for calculating the temperature of: (**X\*256/10) + byte 4 (**decimal**) => % humidity**

Byte 5 (byte check sum) is “humidity values” ADD “Temperature values” => check the right and wrong of measurements.

Selling links: <http://hshop.vn/products/cam-bien-do-am-nhiet-do-dht22>

DATASHEET: <http://www.electroschematics.com/wp-content/uploads/2015/02/DHT22-datasheet.pdf>