



## Humidity sensor --Voltage output, Model: AM1001/AMT1001

### 1. Feature & Application:

- Temperature compensated!
- Good price, Fast delivery!
- 0.6-2.7V DC output for humidity!
- Humidity Accuracy  $\pm 5.0\%RH$ !
- Range 20 to 90% RH !
- Light weight, easy installation!

The outstanding accuracy of AM1001/AMT1001 over the entire range is based on very precise calibration methods and the latest microprocessor technology. Well-proven Aosong humidity sensor ensure excellent long-term stability.

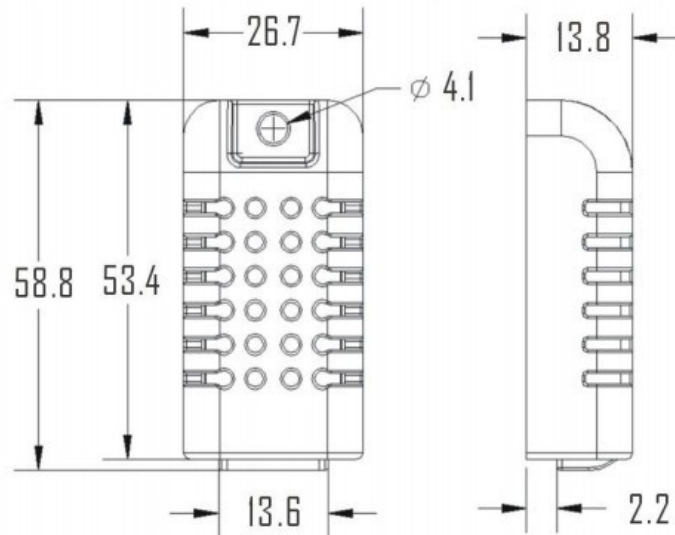
### 2. Technical Specification:

Model AM1001 only detect relative humidity, AMT1001 detect relative humidity and temperature both.

Model	AM1001	
Power supply	4-5.5V DC	
Output signal	0.6- 2.7V DC	
Sensing element	Polymer resistor	
Operating range	humidity 20-90%RH;	temperature 0~50Celsius
<b>Accuracy</b>	<b>humidity <math>\pm 5\%RH</math></b>	
Resolution or sensitivity	humidity 1%RH;	temperature 1Celsius
Repeatability	humidity $\pm 1\%RH$ ;	temperature $\pm 1$ Celsius
Humidity hysteresis	$\pm 1\%RH$	
Long-term Stability	$\pm 1\%RH/year$	
Response time	10s(average)	
Interchangeability	fully interchangeable	

Model	AMT1001	
Power supply	4-5.5V DC	
Output signal	0.6- 2.7V DC	
Sensing element	Polymer resistor	
Operating range	humidity 20-90%RH;	temperature 0~50Celsius
<b>Accuracy</b>	<b>humidity +5%RH</b>	<b>temperature +1Celsius</b>
Resolution or sensitivity	humidity 1%RH;	temperature 1Celsius
Repeatability	humidity +-1%RH;	temperature +-1Celsius
Humidity hysteresis	+-1%RH	
Long-term Stability	+-1%RH/year	
Response time	10s(average)	
Interchangeability	fully interchangeable	

### 3. Dimensions: (unit----mm)



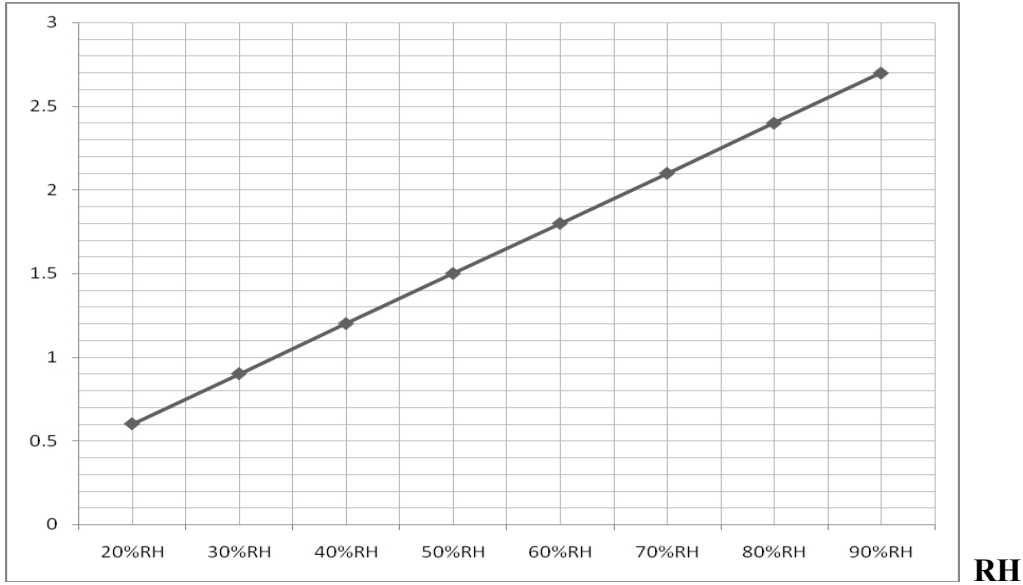
### 4. Electrical connection diagram:

AM001	
Red wire	Power supply
Yellow wire	Humidity output
Black wire	GND

AMT1001	
Red wire	Power supply
Yellow wire	Humidity output
White wire	Temperature output
Black wire	GND

**5. Typical performance diagram:**

**Voltage( Diagram of output for humidity).**



**NTC(25°C, 10KΩ, B:3435) on AMT1001's PCB board for detecting temperature.**

T(°C)	R(KΩ)	T(°C)	R(KΩ)	T(°C)	R(KΩ)
0	28.267	18	13.190	36	6.621
1	27.026	19	12.670	37	6.385
2	25.847	20	12.172	38	6.160
3	24.726	21	11.697	39	5.943
4	23.661	22	11.244	40	5.736
5	22.650	23	10.810	41	5.537
6	21.686	24	10.369	42	5.345
7	20.771	25	10.000	43	5.162
8	19.901	26	9.621	44	4.986
9	19.070	27	9.259	45	4.816
10	18.371	28	8.912	46	4.654
11	17.610	29	8.581	47	4.497
12	16.885	30	8.263	48	4.347
13	16.194	31	7.959	49	4.203
14	15.535	32	7.668	50	4.101
15	14.907	33	7.389		
16	14.308	34	7.122		
17	13.736	35	6.866		

## **6. Error and sources of error:**

Measure values may be influenced by follow factors:

Humidity errors

Equilibration time too short, steam, water sprays, dripping water or condensation at the sensor, etc.

Temperature errors

Equilibration time too short, cold or hot outside wall, sunlights, heating elements, etc.

## **7. Cautions:**

Proper location of the room humidity sensor is important to ensure accurate measurement of representative air samples. Place the sensor in an area of room that has good air circulation. Install the sensor on a flat interior surface, approximately 1.4m from the floor.

Avoid locating the sensor:

- \* Near heat sources, such as radiant heat from the sun, heat from appliances, or from concealed pipe or chimneys
- \* In areas subject to draft
- \* Behind doors, draperies, or in corners
- \* On walls having excessive vibration
- \* In corrosive environments such as swimming pools or hospital rooms

## **8. Warnings:**

Don't use this item on safety or emergency stop devices and any other application which may cause injury due to the failure of this item.

## **9. Quality Warranty:**

Aosong warrants that this product will be free from defects in materials and workmanship for a period of 365 days from the date of shipment. If any such product proves defective during this warranty period, Aosong, at its option, either will repair the defective product without charge for parts and labor, or will provide a replacement for the defective product.

In order to obtain service under this warranty, customer must notify Aosong of the defect before the expiration of the warranty period and make proper prove for the defect. Customer shall be responsible for packaging and shipping the defective product to the service center designated by Aosong, with shipping charges prepaid. Aosong shall pay for the return of the product to customer if the shipment is to a location within the country in which the Aosong service center is located. Customer shall be responsible for paying all shipping charges, duties, taxes, and any other charges for products returned to any other locations.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care. Aosong shall not be obligated to furnish service under this warranty

a) to repair damage resulting from attempts by personnel other than Aosong representatives to repair the product;

b) to repair damage resulting from improper use or connection to incompatible equipment;

c) to service a product that has been modified or integrated with other products when the effect of such modification or integration increases the time or difficulty of servicing the product.

Special notes: quality problem caused by following reasons is not warranted:

(1): Damaged by human factor

(2): Application beyond the using range as stated in product's technical specification

(3): Damaged by corrosive or acid or alkaline air