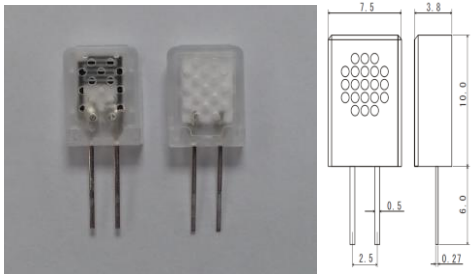
Humidity sensor NHS-13 Product Specifications

1. Product Introduction:

This product is Polymer Resistance Type Humidity Sensor (NHS-13), stable and reliable performance, good consistency, easy for mass production.

2. Dimensions：（See below drawing）Outer casing: optional



Dimension tolerance: ±0.5mm

3. Appliances:

Home appliance control, humidifier, dehumidifier, thermometer and hygrometer, digital calendar (with humidity display), radio controlled clock, digital photo frame, home weather station, etc.

4. Model, type, specifications:

NHS-13，reference impedance 40KΩ, comply with ROHS.

5. Electrical specifications

1. Operating voltage: VPP≤5.5V
2. Operating frequency: 500Hz—2000Hz
3. Operating temperature: 0℃—50℃
4. Operating humidity: 20%—95%RH
5. Stability ≤2%RH/year
6. Temperature stability ≤0.5%RH/℃
7. Humidity test consistency ≤±3%RH
8. Temperature – Relative humidity — Impedance relationship curve (see the graph at Point 8).

6. Standard test condition

1. Temperature 25℃（±1℃）, test frequency 1KHZ，set the voltage to IVAC（sine wave）.
2. Test equipment for AC bridge（LCR）（Note: Use of DC power supply is prohibited）.
3. Use humidity generator: humidity chamber

7. Notes:

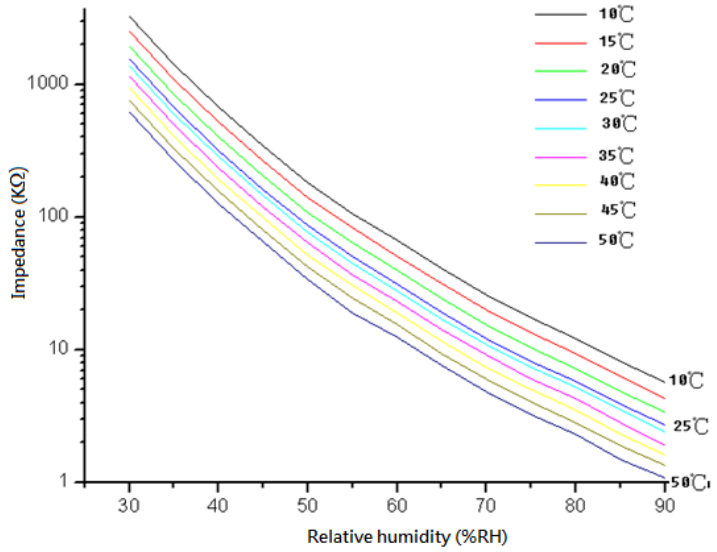
1. Do not touch the surface of the sensing element by bare hand or hard object.
2. Do not use at condensation condition.

8. Typical humidity characteristics

0℃～50℃（40KΩ）Humidity – impedance relationship

	0℃	5℃	10℃	15℃	20℃	25℃	30℃	35℃	40℃	45℃	50℃
20%RH					8300	6070	4500	3400	2580	1880	1590
25%RH			8800	6304	4247	3140	2200	1700	1186	940	770
30%RH	8020	5752	4100	2963	2251	1784	1220	970	700	600	460
35%RH	3560	2623	1804	1384	1065	837	604	492	355	280	207
40%RH	1780	1338	866	655	504	390	311	271	199	140	120
45%RH	850	625	439	332	255	199	157	137	95	75	61
50%RH	457	325	233	176	134	106	84	72	55	44	36
55%RH	232	176	135	103	79	63.5	51.2	41	32.4	26	20.6
60%RH	136	106	84	63	50	40	32	26	20	16.5	13.5
65%RH	78	62	52	39.7	31.3	26	18.6	15.4	12.6	10.3	8.5
70%RH	48	42	33	25.2	19.9	18.4	12.8	10.4	8.0	6.6	5.3
75%RH	29	23	19.6	15.7	13.3	11.0	8.6	6.9	5.6	4.4	3.5
80%RH	20	15.7	12.6	10.3	9.2	7.6	5.9	4.8	3.7	3.0	2.7
85%RH	13.5	10.8	8.8	7.8	6.1	5.0	4.0	3.1	2.4	2.0	1.7
90%RH	9.3	6.6	6.0	5.4	4.3	3.6	2.7	2.1	1.7	1.5	1.3
95%RH	6.4	4.5	4.2	3.7	3.0	2.5	2.1	1.6	1.3	1.1	1.0

9. Humidity – impedance relationship curve



(Updated: April 18th, 2016)