

## INTRODUCTION

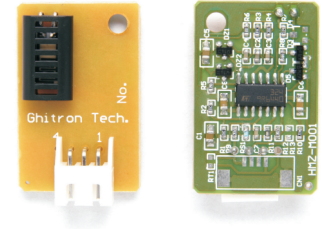
The HMZ-433A is a humidity and temperature sensing module that can be installed in a wide range of applications. This module requires no additional engineering and has specified inputs and outputs.

## FEATURES

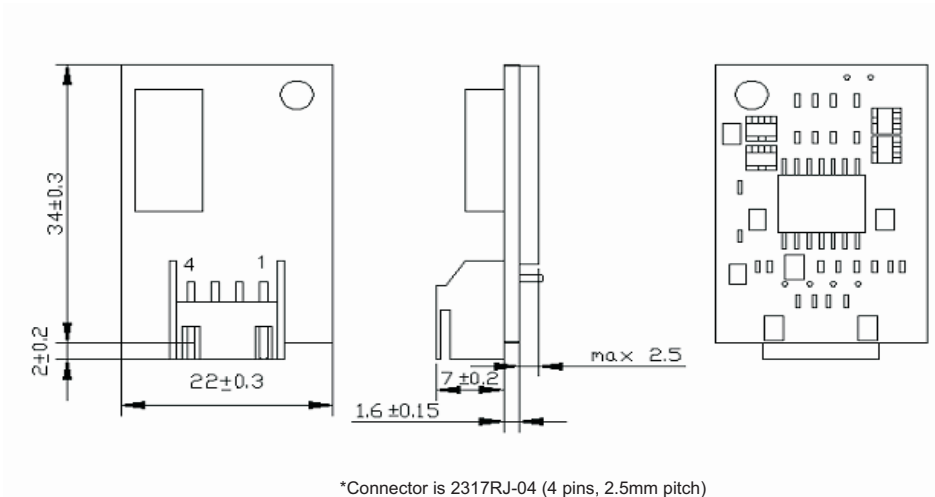
- Wide humidity operation range
- Linear DC output
- Long term stability
- Small and economical
- Temperature sensing included
- RoHS Compliant

## APPLICATIONS

- Airconditioner, Humidifier, Dehumidifier
- Humidity Controller, Humidity transmitter
- Hygrometer, Hygro-recorder
- Copy machines, Data Equipment
- Appliance
- Weather forecast Equipment



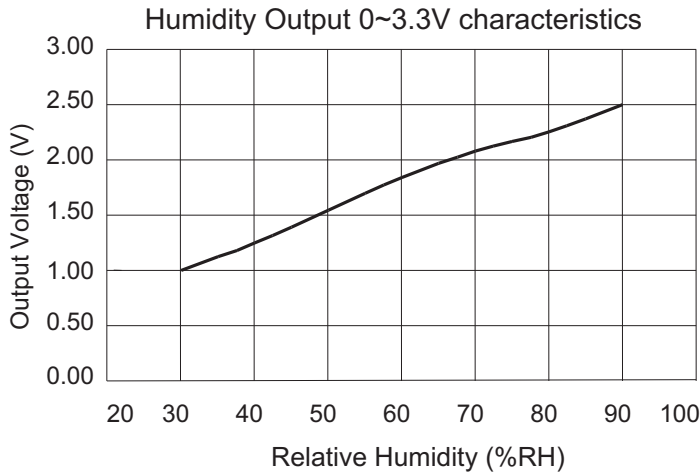
## DIMENSIONS



## ELECTRICAL CHARACTERISTICS

Sensing Element (Humidity)	HMZ-433A, Ghitron HCZ-H6A																			
Supply Voltage (VIN)	5Vdc±5%																			
Current Consumption	5mA max (2mA average.)																			
Operating Range	0 to 60°C	95% RH or Less																		
Storage Range	-20 to 60°C	95% RH or Less																		
Humidity Transmitting Range	30 to 90% RH																			
Accuracy at 25°C(±0.5°C)	±5%RH (at 60%RH, Vin=5Vdc)																			
Humidity Output (At 25°C, Vin=5Vdc) *See Figure A	<table border="1"> <tr> <td>% RH</td> <td>30</td> <td>40</td> <td>50</td> <td>60</td> <td>70</td> <td>80</td> <td>90</td> </tr> <tr> <td>Vo</td> <td>1.00</td> <td>1.32</td> <td>1.65</td> <td>1.98</td> <td>2.31</td> <td>2.64</td> <td>2.97</td> </tr> </table>		% RH	30	40	50	60	70	80	90	Vo	1.00	1.32	1.65	1.98	2.31	2.64	2.97		
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Vo	1.00	1.32	1.65	1.98	2.31	2.64	2.97													
Temperature Response (50kΩ±1% thermistor) *See Figure B	<table border="1"> <tr> <td>Temp (°C)</td> <td>0</td> <td>10</td> <td>20</td> <td>25</td> <td>30</td> <td>40</td> <td>50</td> <td>60</td> </tr> <tr> <td>Resistance (kΩ)</td> <td>160.56</td> <td>98.71</td> <td>62.32</td> <td>50</td> <td>40.3</td> <td>26.75</td> <td>18.8</td> <td>12.5</td> </tr> </table>		Temp (°C)	0	10	20	25	30	40	50	60	Resistance (kΩ)	160.56	98.71	62.32	50	40.3	26.75	18.8	12.5
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■ **FIGURE A**

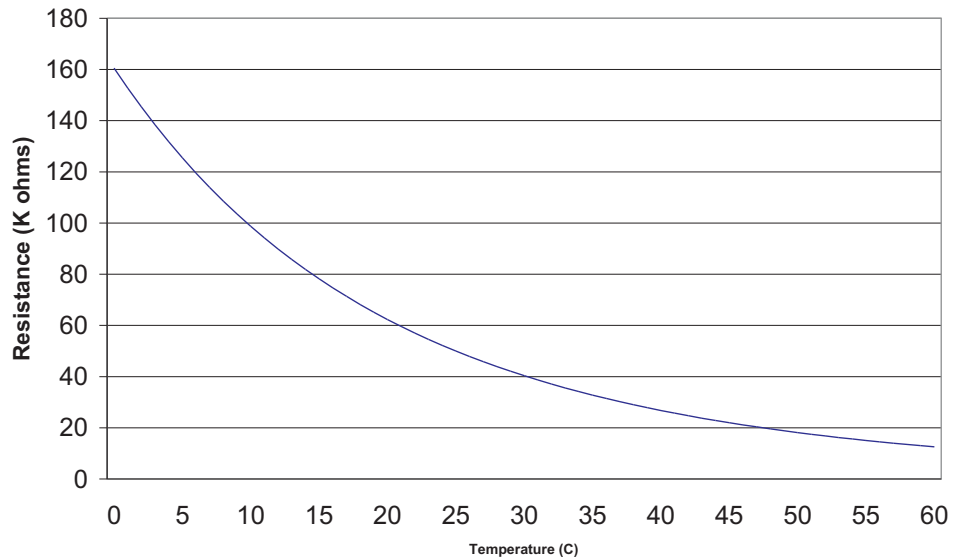


	15°C	20°C	25°C	30°C	35°C	40°C
30% RH	1.23	1.09	1.02	0.94	0.83	0.78
40% RH	1.39	1.32	1.30	1.20	1.14	1.13
50% RH	1.65	1.65	1.64	1.60	1.58	1.62
60% RH	2.01	2.00	1.98	1.97	1.94	1.95
70% RH	2.28	2.21	2.25	2.22	2.15	2.16
80% RH	2.47	2.46	2.45	2.41	2.42	2.42
90% RH	2.82	2.77	2.73	2.71	2.70	2.67

HMZ Module Humidity Output 0~3.3V v.s. Temperature Characteristics

■ **FIGURE B**

Thermistor R-T curve



■ **HOW TO USE IN CIRCUIT**

