SAMYOUNG S&C

SYH-1

Resistive Humidity Sensor

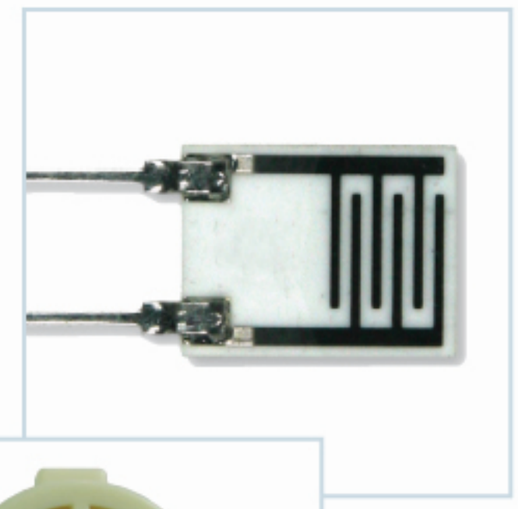
RoHS compliant

DESCRIPTION

Resistive humidity sensor, SYH-1, is consist of metal resistor electrode and humidity sensitive membrane on a durable ceramic substrate. SYH-1 is a cost-effective humidity detecting sensor with excellent characteristics in sensitivity and linearity.

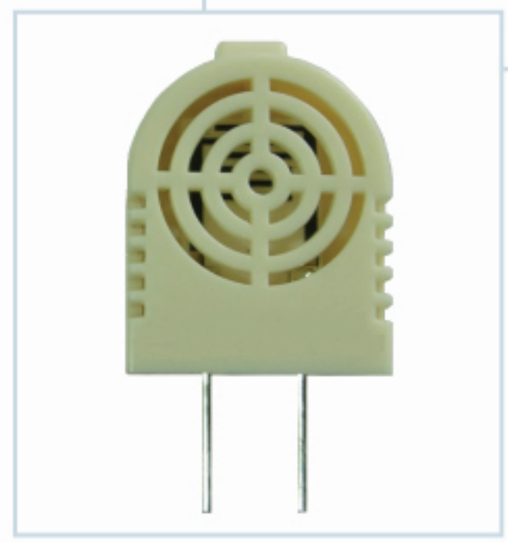
FEATURES

- Wide humidity detection range
- Outstanding for high temperature and humidity
- Long-term stability
- Small and lightweight
- Low hysteresis and fast response time



APPLICATIONS

- Hygrometer
- Humidity controller
- Humidifier and dehumidifier
- Air conditioner
- Humidity transmitter
- Weather forecasting (weather station)



TECHNICAL DATA

	SYH-1C	SYH-1NC
Rate voltage	AC 5V(Max.)	
Rate power	0.26mW	
Working temperature	0~60℃	
Working range	20~95%RH	
Standard characteristics (at 25℃, 60%RH)	23 kΩ	
Accuracy (at 25℃, 60%RH)	±3%RH	
Response time (at 40↔80%RH)	< 60sec.	
Hysteresis (at 40↔80%RH)	2%RH	
Storage humidity	< 95%RH	
Storage temperature	-30~85℃	
Package type	with Case	without Case

BASIC CHARACTERISTICS

at 25℃, $1V_{RMS}$, 1kHz

%RH	20	30	40	50	60	70	80	90	95
Resistance (㏀)	3000	920	220	66	23	9.6	4.2	1.9	1.3

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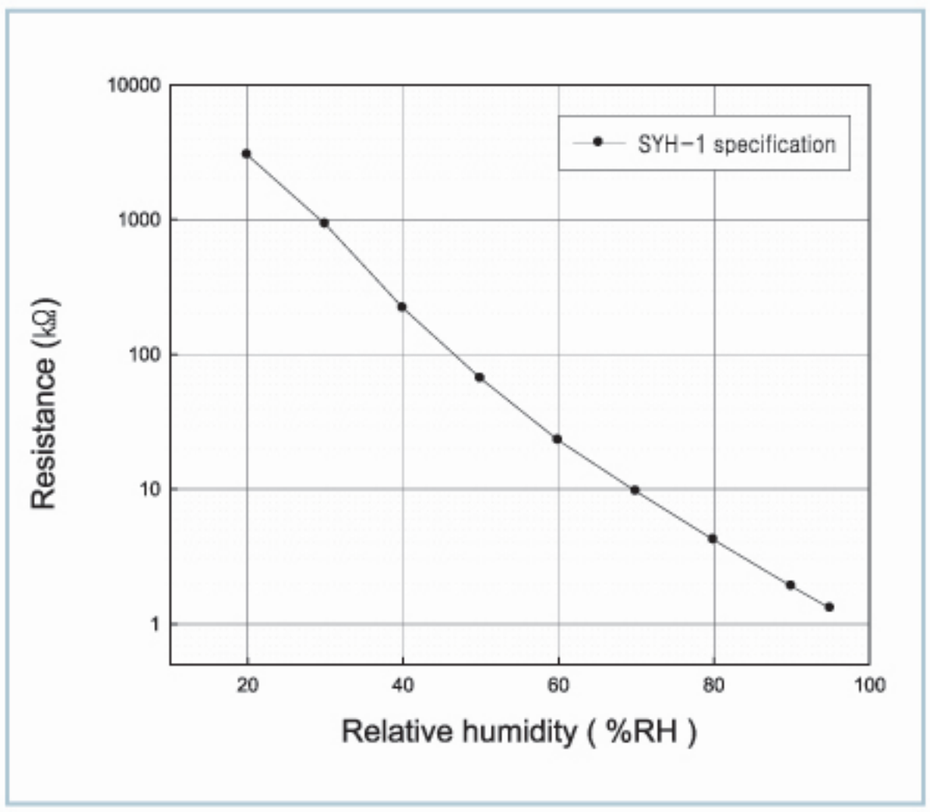
CHARACTERISTICS

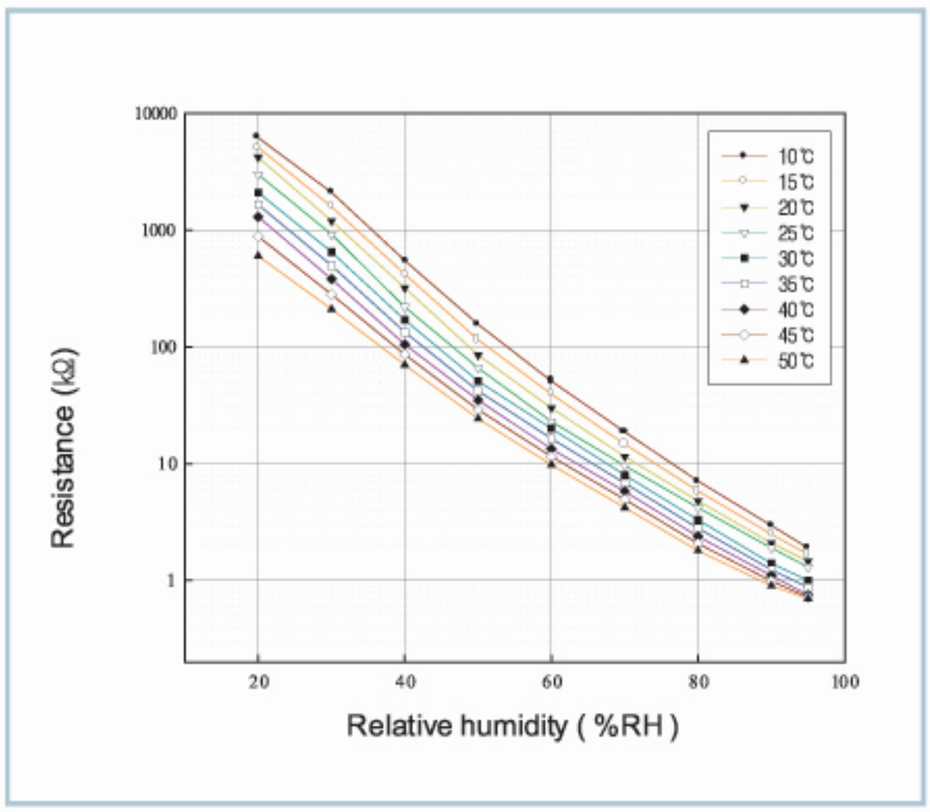
Typical Characteristics

As relative humidity is increasing, the resistance of the sensor is decreasing exponentially.



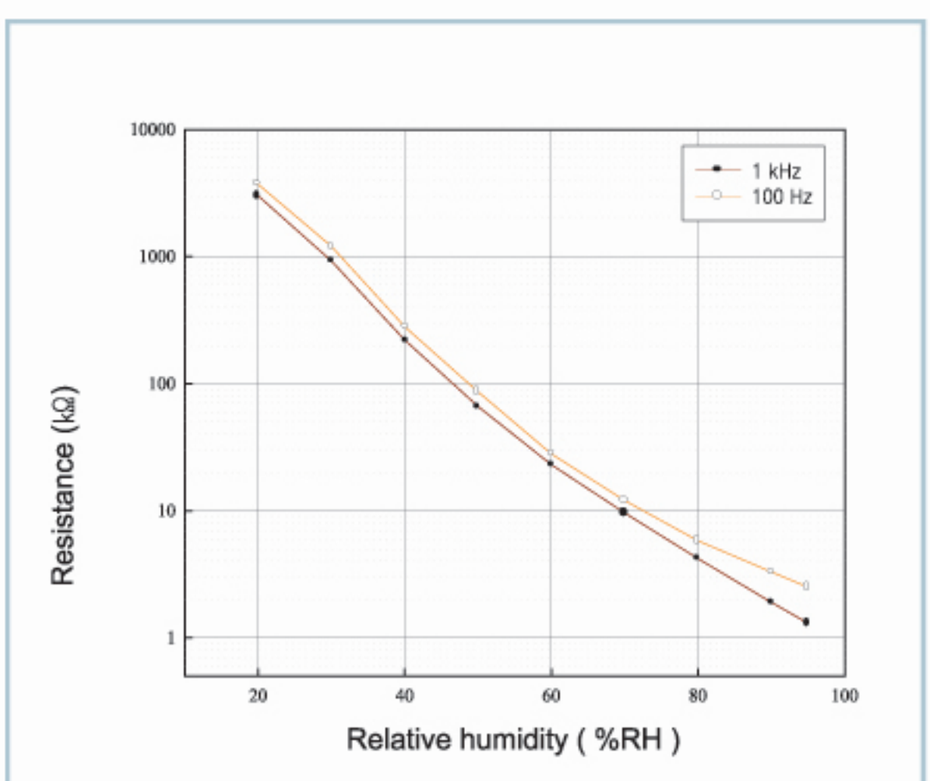
Temperature Characteristics

As temperature increases, the resistance of the sensor is decreasing, due to increased mobility of ionic functional group by electrical conductivity.



Frequency Characteristics

The resistive sensor can be used in a scale from ten hertz (Hz) to kilo-hertz (kHz).



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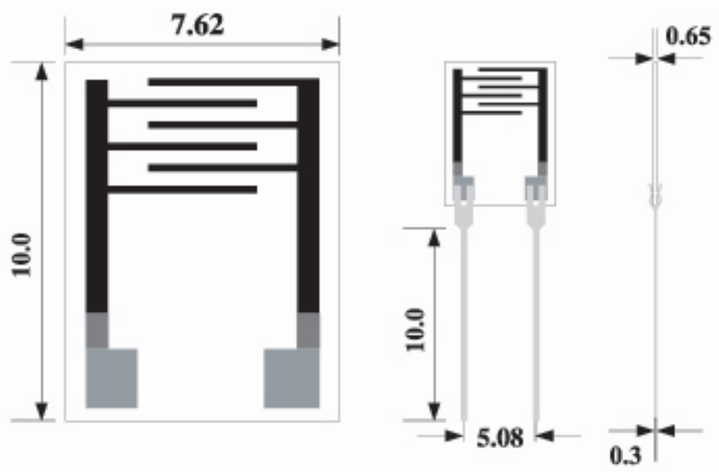
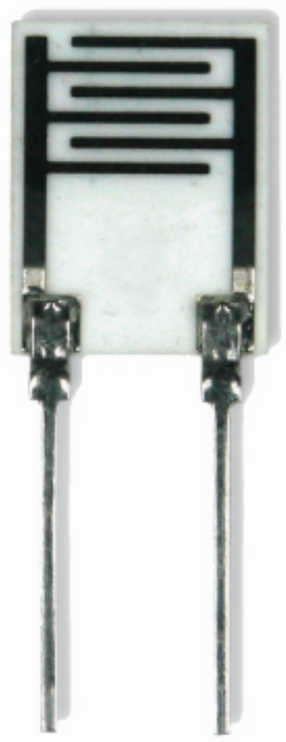
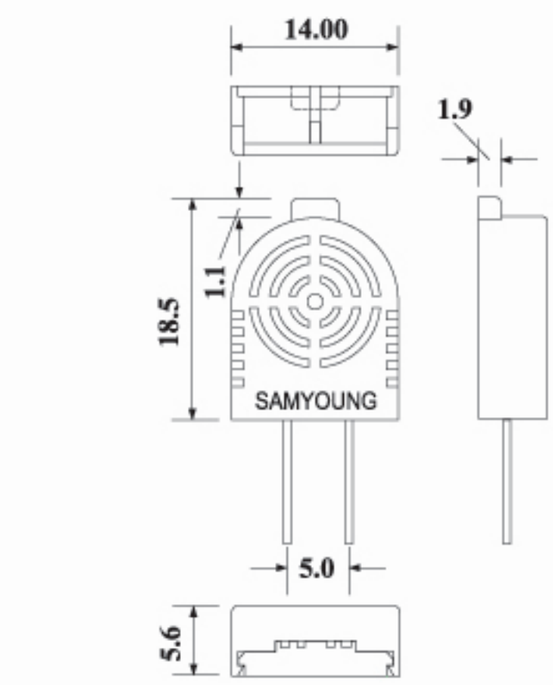
DEMENSIONS (mm)

SYH-1NC





SYH-1C



USAGE PRECAUTIONS

- Do not apply DC voltage to the humidity sensor.
- Avoid condensing and drenching
- Take extra caution using in the atmosphere of the below.

1. Salty air and/or nearby anionic ionizer
2. Inorganic gases (SOx, NOx, ammonia)
3. Organic gases (alcohols, glycols, etc)