



Management No. KRH2512076

## Product Specification

Article Name : Humidity Sensor

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Model Name : HIS-06K-N

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Date : December 22, 2025

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**Hokuriku Electric Industry Co., Ltd.**

**Sensor & Piezo Division**

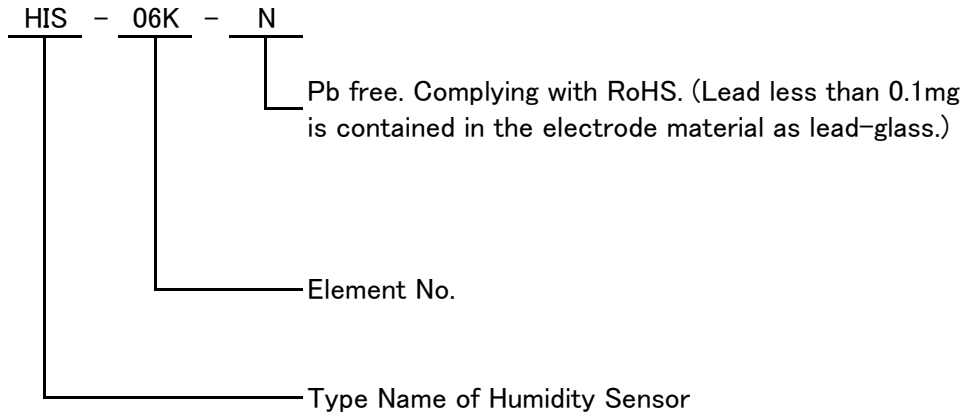
Model Name	Management No.	Page
HIS-06K-N	KRH2512076	2
<p>01.Application</p> <p>02.Type Designation</p> <p>03.Outline and Dimensions</p> <p>04.Absolute Maximum Ratings</p> <p>05.Electrical Characteristic</p> <p>06.Standard Reliability Test</p> <p>07.Notes for Use</p> <p>08.Others</p> <p>09.Impedance Measuring Circuit and Conversion Expression</p> <p>10.Humidity Characteristics of each Temperture (Standard characteristic)</p>		
HOKURIKU ELECTRIC INDUSTRY CO., LTD.		

Model Name	Management No.	Page
HIS-06K-N	KRH2512076	3

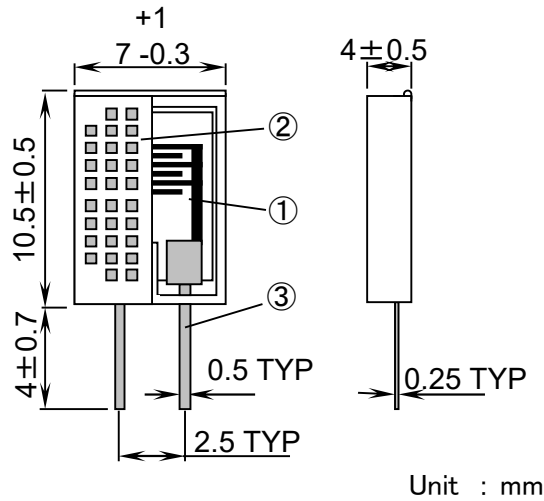
### 01. Application

This specifications shall be applied to the relative humidity sensor 「HIS-06K-N」.

### 02. Type Designation



### 03. Outline and Dimensions

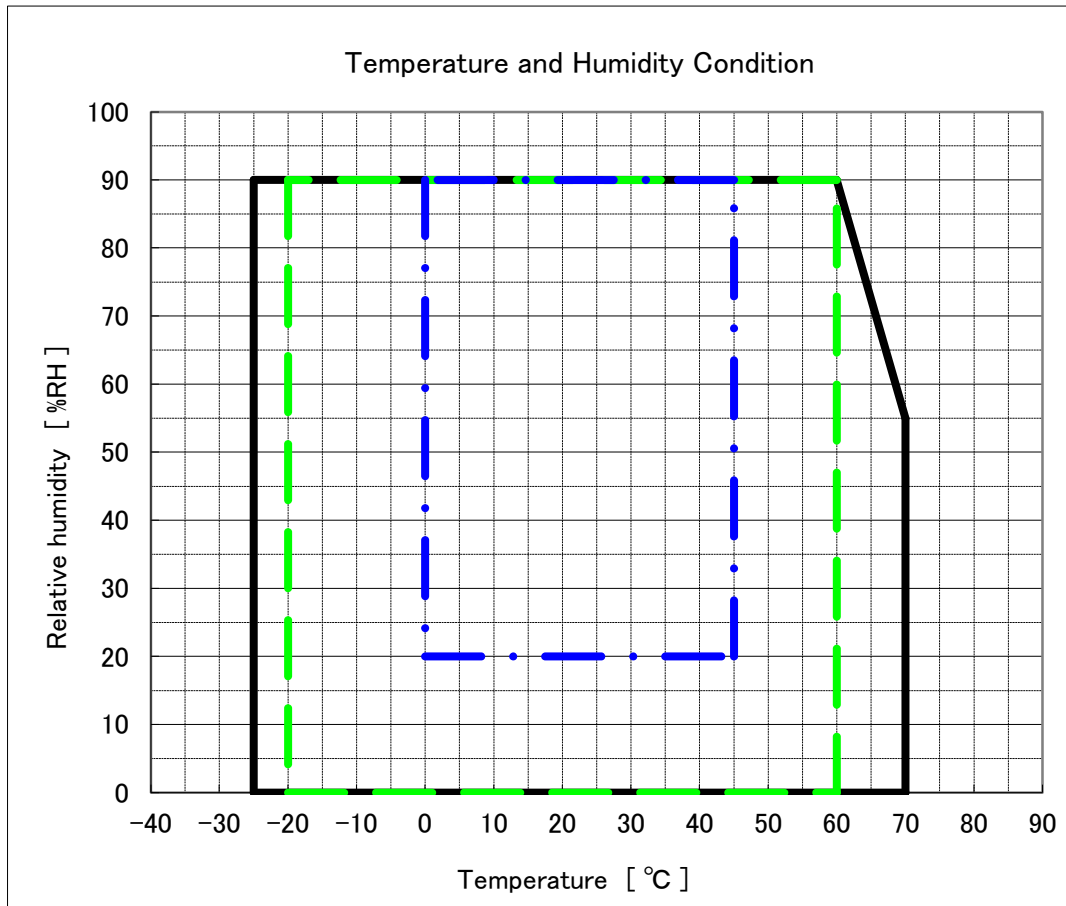


#### Parts Component

Parts No	Name	Material and Specification
①	Humidity Sensor	Element Manufactured by Hokuriku Electric Industry Co., Ltd.
②	Case	Polypropylene (Translucence)
③	Lead Terminal	PBR(The surface has Sn-Ag-Cu solder treatment on the Sn plating.)

**O4. Absolute Maximum Ratings**

- (1) Rated Voltage : Sine wave or square wave of AC. 0 to 5.5V.
- (2) Rated Power : 1.0mW (max)
- (3) Temperature and Humidity Condition



—	①	Storage range
- - -	②	Operating range
- · - ·	③	Humidity detection range

Model Name	Management No.	Page
HIS-06K-N	KRH2512076	5

## 05. Electrical Characteristic

Unless otherwise specified the conditions are Ta=25 degree C and f=1kHz for the table below.  
The measurement method to be adopted is indicated in item 09.

Item	Condition	Min	Typ	Max	Unit
①Humidity Detection Output (Accuracy)	50%RH	26.6 (+5%RH)	45.8	80.0 (-5%RH)	kΩ
②Hysteresis Characteristics	30~90%RH	—	±1	—	%RH
③Humidity Response Characteristics	(90% response) Wind velocity 1.2cm/s	—	3.5	—	min

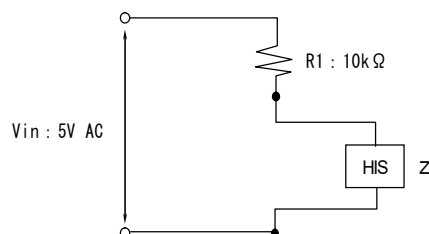
Model Name	Management No.	Page
HIS-06K-N	KRH2512076	6

## 06. Standard Reliability Test

Test item	Test Condition	Criteria
1 Drop Test	Drop the test piece naturally 3 times from the height of 1m onto the lauan material of 30mm thickness.	The sample shall not have any abnormality in the appearance and meet the humidity detection output of item 05.
2 Lead Tensile Strength	The weight of 1kg is applied to the lead wire in the direction parallel to the sensor for 10 seconds.	
3 Lead Bending Strength	The sensor is held vertically, and the weight of 250g is hung from the lead wire end. The sensor is bent in right angle and returned to the original shape, and next bent in the same way to the reverse direction, and returned to the original shape. (One cycle.)	
4 Solder Heat Resistance	Do soldering of 5 +/-1 seconds long on the lead terminal 1.6 to 3.6mm away from the case side with soldering iron tip temperature 350+/-10deg C.	There shall be no coming-off of the terminal and meet the humidity detection output of item 05.
5 Heat Cycle	100 times of heat cycles -25 degree C (1h) ↔ +70 degree C (1h). (Do not let it have dewdrops.)	The amount of change in the humidity detection output in item 05 must be within ± 5% RH.
6 Exposure to High Temperature	The samples are exposed to a temperature of +70±1 degree C for 1000 h.	
7 Exposure to Low Temperature	The samples are exposed to a temperature of -25±1 degree C for 1000 h.	
8 Exposure to High Humidity	The samples are exposed to a temperature of 60+/-5 degree C with 90%RH +/-5%RH for 1000 h.	
9 High Humidity Load	The samples are subjected to consecutive electric load of AC 5V(1kHz) at temperature of 60+/-5 degree C with 90%RH +/-5%RH for 1000 h. AC application condition: Item-7 Impedance measurement circuit R1=10kohm	

### Caution

- 1) Consecutive electric load is done in the circuit of the following figure.
- 2) The measurement of the humidity detection output is done after 15 minutes has passed with the advantage way-type precision humidity producing device after the temperature humidity setting.
- 3) The measurement of the reliability test parts is done after they are left for more than two hours in the normal temperature and the normal humidity.



Model Name	Management No.	Page
HIS-06K-N	KRH2512076	7

## 07. Notes for Use

- (1) This product has been processed to have water-resistant coating and even if a small amount of water sticks to the part, the humidity sensing membrane will not melt away. However please do not use this part under an environment where water adhesion or dewing occurs for a long period of time or frequently.
- (2) Do not make foreign materials such as a solvent, oil and fat stick to the humidity sensor. It may stop fulfilling normal features.
- (3) Please do not bend and extend the lead terminal more than 2 times.
- (4) Attachment by flow soldering or re-flow soldering is not possible.
- (5) Please solder the terminal 1.6 mm or over away from the case side with the iron tip temperature 350 +/-10 deg. C within 5 seconds.
- (6) If a DC voltage is applied, the sensor characteristics will be affected and a failure will occur. DC voltage application is strictly prohibited.
- (7) This product is intended to be used for general electrical equipment.  
Please contact us in advance in case of the following application to be used;  
Extremely-high reliability demanding applications, such as medical equipment, safety device, aerospace instrument, nuclear energy control equipment, combustion control apparatus and so on, which failure and/or malfunction could do serious damage to human life, body, property and so on, directly or indirectly.

Model Name	Management No.	Page
HIS-06K-N	KRH2512076	8

## 08. Others

(1) The doubt of specification

In case of any doubt in this specification, it should be resolved on mutual discussion between both parties.

(2) When performing the specification and material of this specification and making a change in connection with quality in addition to this specification, it shall offer in written form to your company after showing quality check data in advance.

(3) In case that industrial property's dispute happens about our produced PCB and component, we have delivered between you and a third party ,we try to solve on our own responsibility.

(4) Regulation of Ozone-depleting substances and Specific bromine system flame-retardant material  
We never use the following materials in process of manufacturing this PCB and components.  
CFCs, CCl4, 1-1-1trichloroethane, PBBOs, PBBs

(5) Existence of regulation by Export Trade Control Order

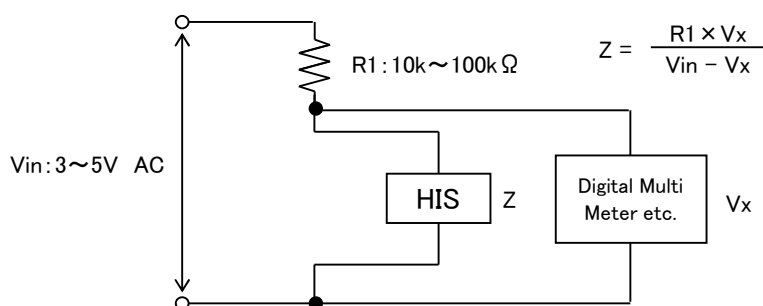
This product is "non-application" in the applicable thing regulated by Export Trade Control Order.

(6) Environment

This product is complying with the European RoHS.

In addition, it is based on "Hokuriku Electric Industry Co., Ltd. Green Procurement Guideline.

## 09. Impedance Measuring Circuit and Conversion Expression



### 10. Humidity Characteristics of each Temperature (Standard characteristic)

By the measuring circuit of item 09. Frequency : 1kHz

Unit : kΩ

Temp.	Relative Humidity [ %RH ]							
	20	30	40	50	60	70	80	90
5°C	68,057	4,915	824.0	218.5	72.27	28.15	12.09	5.35
10°C	35,993	3,076	566.4	151.4	49.94	19.30	8.21	3.70
15°C	19,368	1,906	375.3	99.1	33.47	13.36	5.70	2.70
20°C	10,780	1,130	240.0	68.0	22.70	9.60	4.33	2.08
25°C	5,916	694	149.9	45.8	16.00	7.00	3.28	1.68
30°C	3,450	420	94.6	31.0	11.30	5.20	2.60	1.42
35°C	2,053	268	60.6	21.2	8.05	3.83	2.08	1.20
40°C	1,235	172	41.8	15.0	6.11	3.00	1.71	1.05
45°C	740	115	30.2	11.0	4.76	2.43	1.46	0.93

