

# Model **RHS** Humidity Sensor



Model List	Power Voltage	Detection Humidity
<b>RHS-40</b>	12 V to 24 V DC	40 % RH
<b>RHS-60</b>		60 % RH
<b>RHS-80</b>		80 % RH
<b>RHS-40-5V</b>	5 V DC	40 % RH
<b>RHS-60-5V</b>		60 % RH
<b>RHS-80-5V</b>		80 % RH

## Application

- Humidity control in food processing facilities
- Humidity control in air-conditioning equipment
- Humidity control in pharmaceutical factories
- Humidity control in greenhouses/fermentation chambers
- Humidity control in museums, sample chambers, warehouses
- Humidity control in clean rooms
- Humidity control for musical instruments
- Humidity control in plant factories

## Features

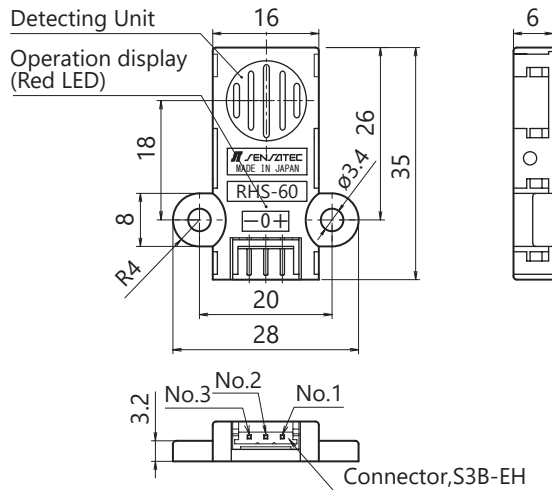
- A small-sized high precision, humidity sensor with switching output.
- Detection humidity of 40 % to 80 % RH are available.
- The unit is equipped with a Red LED display for operation indication.
- Easy to maintain connector type is used.
- M3 screws facilitate easy installation.

## Rating / Performance

Model	RHS-**	RHS-**-5V
Detection Sensor	Humidity	
Humidity Range	0 to 85 % RH (Without dew condensation)	
Standard Humidity Accuracy	±5 % in the RH 25 °C (20 to 80 % RH)	
Hysteresis	±10 % or less of the detection humidity	
Humidity Response Time	60 sec (τ 63 %)	
Power Voltage	12 V to 24 V DC	5 V DC
Operating Voltage Range	10 V to 26.4 V DC	4.5 V to 5.5 V DC
Power Consumption	0.5 mA DC or less	
Output	N-channel MOSFET Open drain 30 V DC, 100 mA DC or less	
Operation Indication	With detection humidity or more , Red LED ON	
Storage Temperature	-10 to 60 °C (Without dew condensation or freezing)	
Storage Humidity	80 % RH or less (Without dew condensation)	
Breakdown Voltage	500 V AC, 50/60 Hz for 1 min (Between live parts and the case)	
Insulation Resistance	50 MΩ or more, at 500 V DC megger (Between live parts and the case)	
Vibration Resistance	Durability : 10 to 55 Hz, Double amplitude : 1.5 mm in X-, Y-, and Z-direction, each 2 hours (Device not powered)	
Shock Resistance	Durability : 200 m/s <sup>2</sup> (Approx. 20 G) in X-, Y-, and Z-direction, each 3 times (Device not powered)	
Ingress Protection	IP50	
Case Material	Polyarylate	
Connector	Connector : S3B-EH (3-pin) (from J.S.T. Mfg. Co., Ltd.) [Connections] Housing : EHR-3, Contact : SEH-001T-P0.6 (from J.S.T. Mfg. Co., Ltd.)	
Weight	Approx. 5 g	
Options (Sold Separately)	Connector harness : CNH-S3B03S26-300	

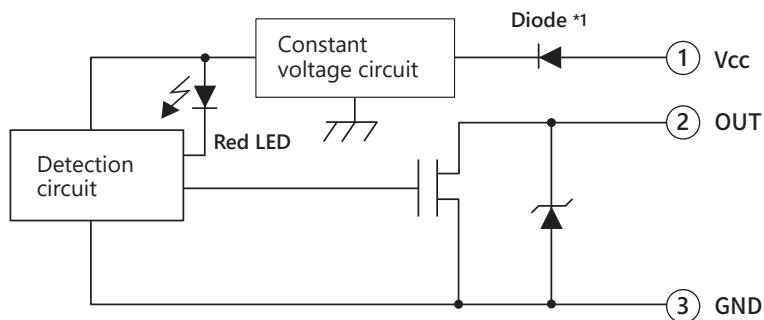
Model Indication	<b>RHS - 60 - 5V</b>	
	<ul style="list-style-type: none"> <li>Power Voltage</li> <li>Detection Humidity</li> </ul>	No indication : 12 V to 24 V DC -5 V : 5 V DC 40 : 40 % RH 60 : 60 % RH 80 : 80 % RH

## Dimensions



Pin No.	Signal Name	Function
1	Vcc	Power Supply Voltage
2	OUT	Output Signal
3	GND	GND

## Output Circuit



\*1 : The 5V DC type does not have a built-in backflow prevention diode.  
Be sure to check the polarity of the power supply and connect it correctly.

## Precautions During Use

- When the sensor is not used, to maintain the precision, it is recommended to store it in the delivered package (in the closed anti-static bag) without opening under the following conditions :  
Temperature range : 10 to 50 °C  
Humidity range : 20 to 60 % RH  
Do not use antistatic polyethylene bags (light blue, pink or rose pink color).
- The relative humidity value greatly depends on the humidity condition.  
When measuring the surrounding temperature/humidity, be sure to confirm there is no heated part on the installation surface.
- Use M3 pan head screws for mounting.  
The tightening torque for the case should be 0.5 N·m or less.
- This sensor cannot be used in dew condensation conditions.  
If this is the case, refer to the RHT series.
- The 5V DC type does not have a built-in backflow prevention diode.  
Be sure to check the polarity of the power supply and connect it correctly.
- Do not use the sensor in the following environmental conditions:
  - Where there is water or moisture
  - Where there are corrosive gases
  - Where there is oil
  - In freezing temperatures or dew condensation
  - Dusty locations
  - A place exposed to direct sunlight or radiated heat
- Vacuum away any serious dust contamination or else a malfunction may result.
- For other precautions, refer to "General Precautions" for infrared temperature sensors.

\*For other detailed specifications, refer to the specification sheet of the corresponding model.