

# Temperature and humidity module

## Model RHT-2 A/V

**Strong protection Casing**

**High-precision**

**Small size**



### □Model list

>Humidity precision  $\pm 3\%$

Output signal

Current output (4 mA to 20 mA)	RHT-20A
Voltage output (1 V to 5 V)	RHT-20V

>Humidity precision  $\pm 2\%$

Output signal

Current output (4 mA to 20 mA)	RHT-21A
Voltage output (1 V to 5 V)	RHT-21V

### Application

- Temperature and humidity control of food factory
- Temperature and humidity control of the greenhouse and fermentation room
- Temperature and humidity control of air conditioning equipment
- Temperature and humidity control of chemical factory
- Temperature and humidity control of the clean room
- Temperature and humidity control of museum, sample chamber, and warehouse
- Temperature and humidity control instruments
- Temperature and humidity control of plant factory

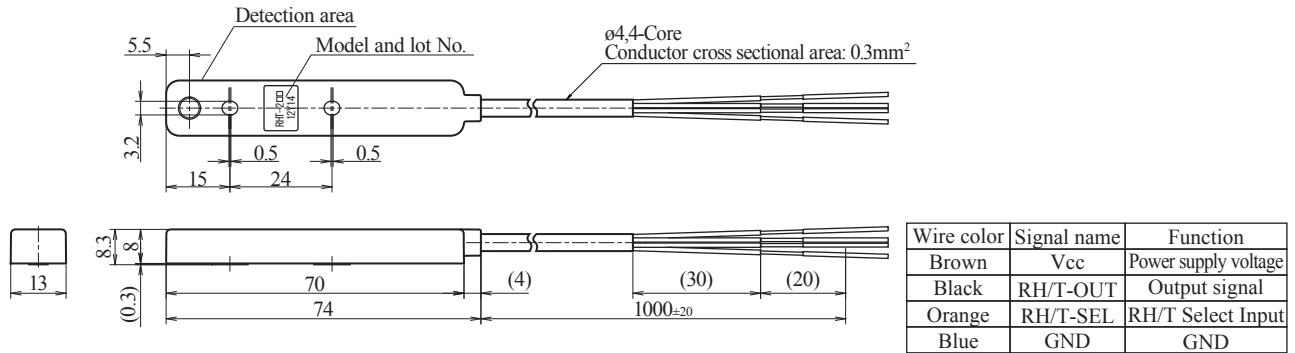
### Characteristics

- Small size but high precision temperature and humidity sensing.
- Two versions with DC 4 to 20 mA output or DC 1 to 5 V output are available.
- Even in an environment with water droplets or dust you can use with confidence by strong protective structure.
- Simple installation with M3 screw.

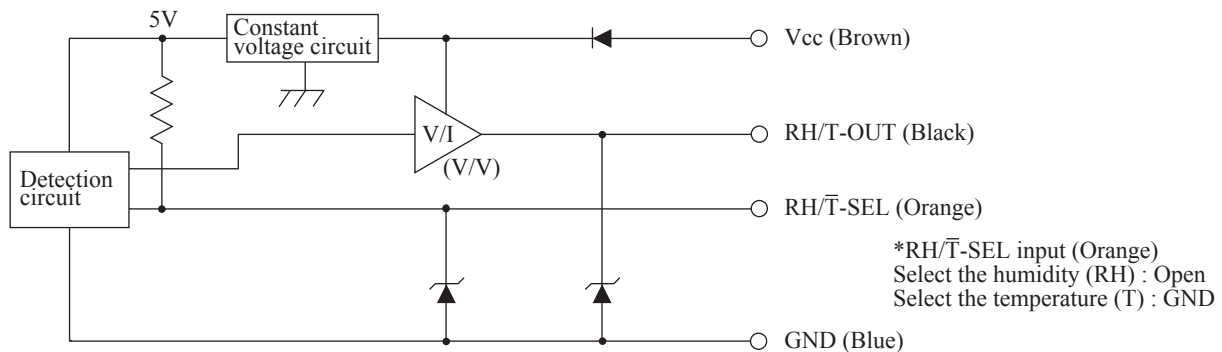
### Rating and performance

Model name	RHT-20A	RHT-20V	RHT-21A	RHT-21V
Detection module	Humidity / Temperature			
Measurement humidity range	0 to 100% RH			
Standard humidity precision	In $\pm 3\%$ RH 25 °C (RH 20 to 80%)		In $\pm 2\%$ RH 25 °C (RH 20 to 80%)	
Humidity response speed	30 sec			
Measurement temperature range	-30 °C to 80 °C			
Standard temperature precision	$\pm 0.5$ °C (at 25 °C)			
Power supply voltage	12 V to 24 V DC (Operating voltage range: 10 V to 30 V DC)			
Electricity consumption	400 mW or less	-	400 mW or less	-
Power consumption	-	DC 5 mA or less	-	DC 5 mA or less
Output signal	DC 4 mA to 20 mA	DC 1 V to 5 V	DC 4 mA to 20 mA	DC 1 V to 5 V
Load resistance	300 $\Omega$ or less	100 k $\Omega$ or more	300 $\Omega$ or less	100 k $\Omega$ or more
Storage temperature	-30 °C to 80 °C			
Storage humidity	95% RH or less			
Withstand voltage	1 min at AC 500 V 50/60 Hz (between the live part and case)			
Insulation resistance	50 M $\Omega$ or more measured with an ohmmeter at DC 500 V (between the live part and case)			
Vibration resistance	Durability: 2 hours in each X, Y, Z direction at 10 to 55 Hz and with peak-to-peak amplitude of 1.5 mm (at power off)			
Shock resistance	Durability: 3 times at 500 m/s <sup>2</sup> (approx. 50 G) in each X, Y, Z direction (at power off)			
Protection rating	IP64			
Case material	PC			
Cable	$\phi 4$ , 4-core round cord of 0.3 mm <sup>2</sup> and 1 m in length (oil and heat resistant)			
Weight	Approx. 33 g			

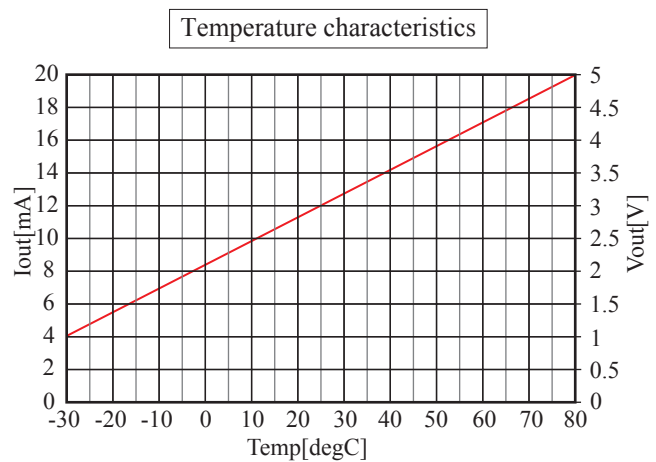
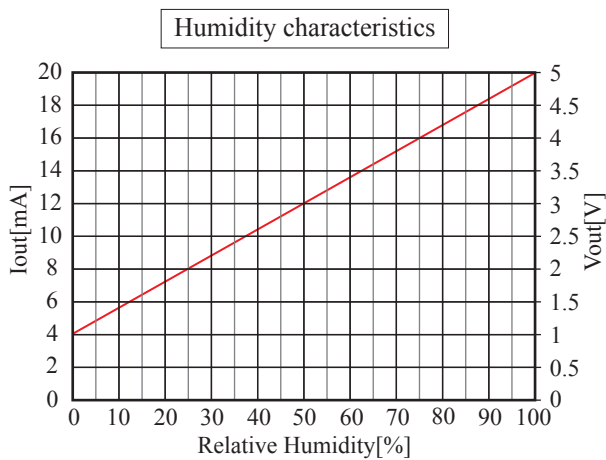
## External dimensions diagram



## Output circuit



## Characteristics graph (typical example)



## Usage precautions

- In order to maintain the accuracy of the module also, it is recommended that it is stored in the following conditions when not using it.

Temperature range : 10 to 50 °C

Humidity range : 20 to 60% RH

Do not use antistatic polyethylene bag (light blue, pink or rose color).

- The value of the relative humidity depends strongly on temperature. If you want to measure the temperature and humidity of the ambient, please ensure that there is no heat-generating components to the mounting surface. Please

- use the M3 Nabebisu the mounting.

Tightening torque of the case should be with 0.32 Nm or less.

- Please use the module cable without bending in the vicinity of the module body.

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