勝特力科技 886-3-5753170
勝特力電子 86-755-83289224
Http://www.100y.com.tw

TEMPERATURE & HUMIDITY TRANSMITTER MODULE (DC Voltage & Resistance output type) RHU-207

This module has a linear DC voltage output signal of Temperature and Humidity suitable for Home appliances, such as Air Conditioner, Room Humidifier, Room Dehumidifier, Ventilator, etc.

1. COMMODITY : Humidity & Temperature Transmitter Module

2. MODEL NO. : RHU-207-()()()

3. SENSORS :
   - Humidity : " SHINYEI HUMENT HPR-MQ "
   - Temperature : Thermistor(NTC)

4. SPECIFICATIONS :
   - (1) Supply Voltage(Vin) : 5VDC ±5%
   - (2) Consumption : 5mA Less (approx. 2mA)
   - (3) Temperature Output Signal: Resistance output, R(25℃)=50KΩ±3%, B(100/0℃)=3970±2%
   - (4) Humidity Output Signal :
     - ① 0-1VDC (Output impedance : approx. 1.3KΩ)
     - ② 0-3.3VDC (Output impedance : approx. 5KΩ)

     ＊Output signal is linear and 0 to 100%RH Full scale
   - (5) Storage : -20 to +85℃, 95%RH Less
   - (6) Operating range : 0 to 60℃, 90%RH Less
   - (7) Measurement range :
     - Temperature : 0 to +60℃
     - Humidity : 30 to 90%RH
   - (8) Accuracy :
     - Temperature : ±0.7℃ (at 25℃)
     - Humidity : ±5%RH (at 25℃, 60%RH ,Vin=5.00VDC)

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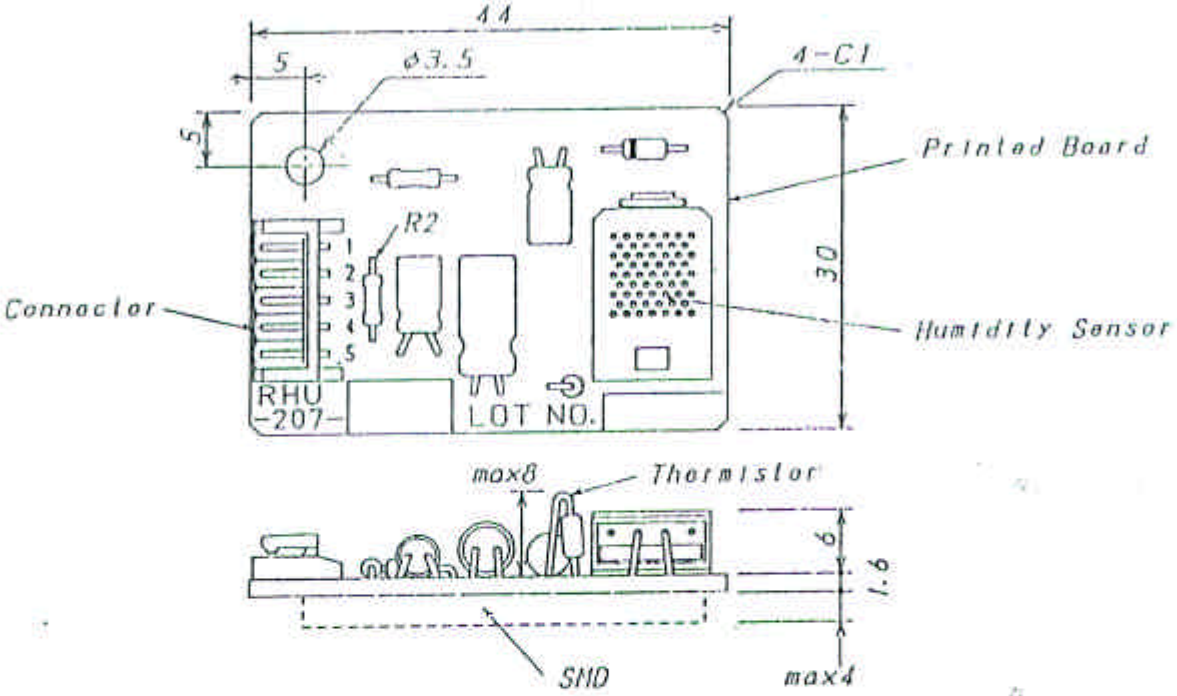
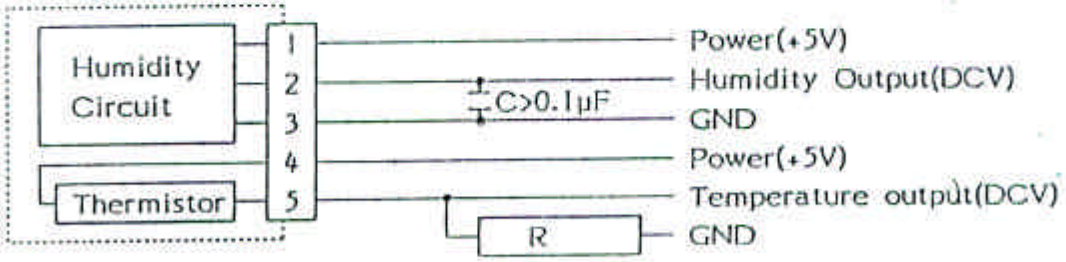
5. DIMENSIONS (Unit:mm)

Note :

* RHU-207-5 : In case of Humidity output only, Thermistor(Temp. sensor) is not mounted and 3 pins instead of 5 pins connector is mounted.
* RHU-207-5A : In case of output "A" (0~3.3V) a Resistor R2 is not mounted.



6. TYPICAL APPLICATIONS



7. ORDER FORM

RHU-207-5 is standard model with 0~1V output only for humidity.
In case that other condition is required, please add the following to the standard RHU-207-5

RHU- 207 - 5 □

- Output
  - Nil : 0~1V w/o Thermistor(Standard)
  - T : 0~1V w/ Thermistor
  - A : 0~3.3V w/o Thermistor
  - AT : 0~3.3V w/ Thermistor
- Accuracy
  - 5 : ± 5%RH

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■MODEL NO

RHU-207-5 :0~1V OUTPUT

RHU-207-5A:0~3.3V OUTPUT

Standard type of RHU-207 has no thermistor sensor as temperature detection, but it is available if neccessary.

■SPECIFICATIONS

(1)Power Source: DC5V±5% MAX

(2)Current Consumption: Approximately 2mA(MAX 5mA)

(3)Operating Temperature Range: 0~60℃

(4)Operating Humidity Range: Less than 90%RH

(5)Humidity Measurement Range: 30~90%RH

(6)Typical Output Characteristics(at25℃,Vin=5.00V)

Humidity/Output Voltage	DC0~1V	DC0~3.3V
30%RH	300mV	0.99V
40%RH	400mV	1.32V
50%RH	500mV	1.65V
60%RH	600mV	1.98V
70%RH	700mV	2.31V
80%RH	800mV	2.64V
90%RH	900mV	2.97V
Output Impedance	Less than 5KΩ	

(7)Accurasy ±5%RH(at25℃,60%RH)

Outout Range: 550~ 650mV(0~1V OUTPUT)

Outout Range:1.815~2.145V(0~3.3V OUTPUT)

■REMARKS ON USING

(1)Avoid demfall and drentching as much as possible.

(2)Use in relatively clean air. Take full care of using in the atmosphere of the below gas.

(a)Salt

(b)Nonorganic gas·····Sulfinde dioxide,Chlorine,Ammonium.

(c)Organic gas ·····Alcohols,Glycols,Aldehydes,etc.

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参考値

RHU－207　標準出力特性

温度	出　力	30%RH	40%RH	50%RH	60%RH	70%RH	80%RH	90%RH
0℃	0-1V	410	440	510	600	700	790	860
	0-3.3V	1.353	1.452	1.683	1.98	2.31	2.607	2.838
5℃	0-1V	390	430	510	600	700	790	870
	0-3.3V	1.287	1.419	1.683	1.98	2.31	2.607	2.871
10℃	0-1 V	370	420	510	600	700	790	880
	0-3.3V	1.221	1.386	1.683	1.98	2.31	2.607	2.904
15℃	0-1 V	350	410	505	600	700	795	890
	0-3.3V	1.155	1.353	1.667	1.98	2.31	2.624	2.937
20℃	0-1 V	330	405	500	600	700	800	900
	0-3.3V	1.089	1.337	1.65	1.98	2.31	2.64	2.97
25℃	0-1 V	310	400	500	600	700	800	910
	0-3.3V	1.023	1.32	1.65	1.98	2.31	2.64	3.003
30℃	0-1 V	290	395	500	600	700	800	915
	0-3.3V	0.957	1.304	1.65	1.98	2.31	2.64	3.020
35℃	0-1 V	270	390	500	600	700	805	920
	0-3.3V	0.891	1.287	1.65	1.98	2.31	2.657	3.036
40℃	0-1 V	250	385	500	600	700	810	925
	0-3.3V	0.825	1.271	1.65	1.98	2.31	2.673	3.053
45℃	0-1 V	230	380	495	600	700	810	930
	0-3.3V	0.759	1.254	1.634	1.98	2.31	2.673	3.069
50℃	0-1 V	210	375	490	600	700	815	935
	0-3.3V	0.693	1.238	1.617	1.98	2.31	2.690	3.086
55℃	0-1 V	190	370	490	600	700	820	940
	0-3.3V	0.627	1.221	1.617	1.98	2.31	2.706	3.102
60℃	0-1 V	170	365	490	600	700	820	945
	0-3.3V	0.561	1.205	1.617	1.98	2.31	2.706	3.119

（単位，0-1V出力：mv，0-3.3V出力：V）

変更▽	・・・	作成		91・1・22	尺度	図番	
変更▽	・・・	検認		・・・	—	図面	
変更▽	・・・	照査		・・・		名称	

Humidity Sensor

Model. C5-M3 & C7-M3

The SHINYEI HUMENT Type HPR-MQ is a humidity device formed by distributing a humidity sensitive macro-molecule onto an electrode substrate. The resistance of the device varies exponentially with variation on Relative Humidity.

Feature	Application
Wide humidity operating range	Air-conditioner, Humidifier, Dehumidifier
Outstanding repeatability	Humidity Controller, Humidity Transmitter
Long-term stability	Hygrometer, Hygro-recorder
Low hysteresis	Copying machine
Small and light-weight	Clock, Weather-forecast barometer

Characteristics

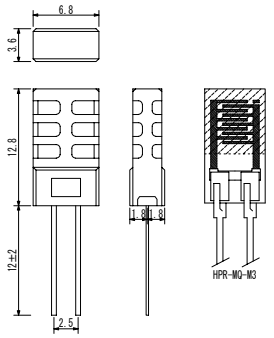
Model	C5-M3	C7-M3
Humidity Sensor element	Shinyei Hument HPR-MQ-M3	
Rated Voltage	5 VAC (Max.)	
Rated Power	5mW. AC (Max.)	
Operating Temperature Range	-20 to 60deg. C	-20 to 70deg. C
Operating Humidity Range	95%rh or less	
Standard Humidity Resistance	31k Ohm (at 25deg. C, 60%rH, 1kHz)	
Humidity Measurement Accuracy	+/-5%rh(at 25deg. C, 60%rh, 1kHz) +/-3.5%rh(at 25deg. C, 60%rh, 1kHz) is available	
Temperature Dependence	0.6%rh/deg. C	
Material of Sensor Housing	ABS	
Color of Sensor Housing	White	Ivory
Dimension	6.8 x 24.8 x 3.6 mm	10 x 27.5 x 5 mm

Specification sheet of C5/C7-M3 June 1, 2004 (Page 2 of 2)

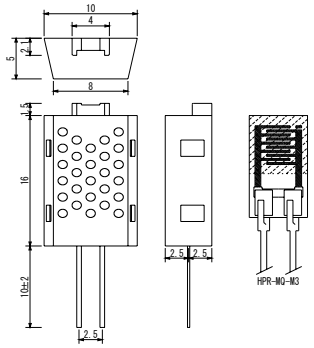
Configuration

(Dimensions in mm)

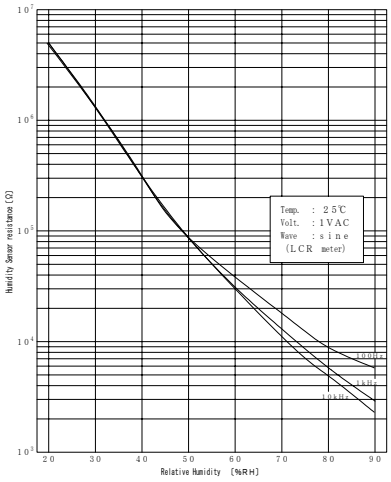
C5-M3



C7-M3



Nominal Characteristics



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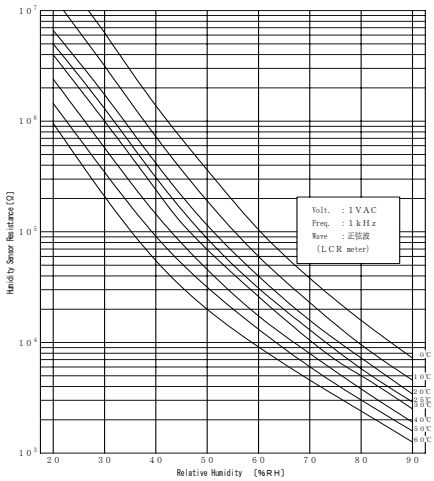


<Temperature Characteristics>

Remark; We have the right to revise specifications and product configurations without notice.

Caution for use

! Avoid inputting DC voltage directly to Humidity Sensor.
! Avoid condensation and drenching.
! Avoid application of the Humidity Sensor in the salt, inorganic gases and organic gases.

Contact : Shinyei Corporation of America
7252 Clairemont Mesa Blvd., San Diego, CA 92111
TEL (858)279-9940 FAX (858)279-9945
E-mail : tony.tokuya@sca-shinyei.com

Humidity Sensor

Model. C7-M62

The SHINYEI HUMENT Type HPR-MQ is a humidity device formed by distributing a humidity sensitive macro-molecule onto an electrode substrate. The resistance of the device varies exponentially with variation on relative humidity.

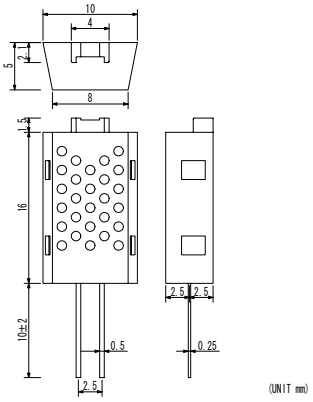
Feature	Application
Wide humidity operating range	Air-conditioner, Humidifier, Dehumidifier
Outstanding repeatability	Humidity Controller, Humidity Transmitter
Long-term stability	Hygrometer, Hygro-recorder
Low hysteresis	Copying machine
Small and light-weight	Clock, Weather-forecast barometer

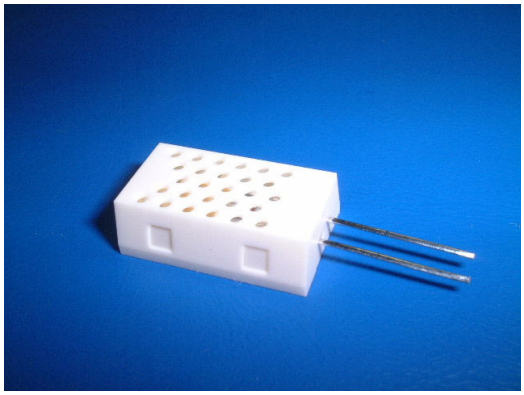
Characteristics

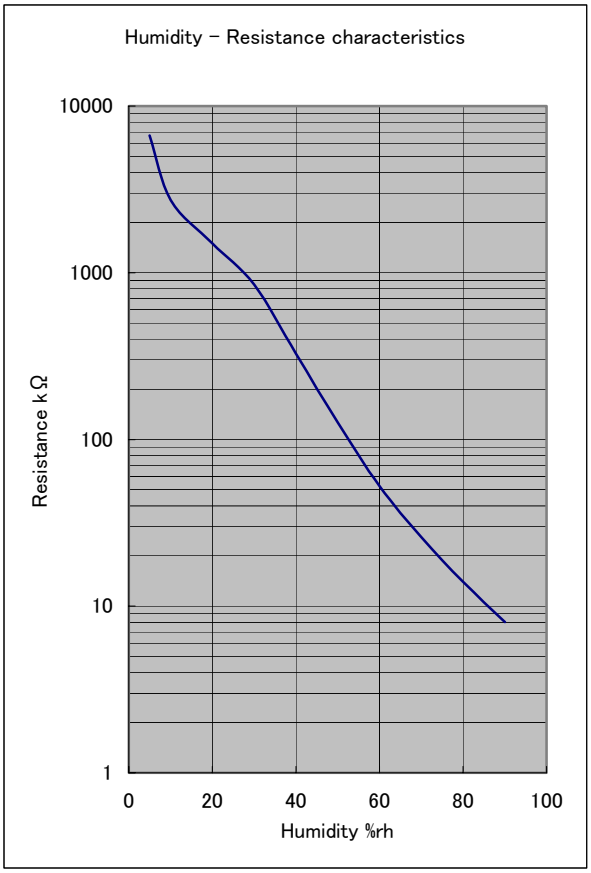
Model	C7-M62
Humidity Sensor element	Shinyei Hument HPR-MQ-M62
Rated Voltage	5 VAC (Max.)
Operating Temperature Range	-20 to 60deg. C
Operating Humidity Range	95%rh or less
Standard Humidity Resistance	50k Ohm (at 25deg. C, 60%rh, 1kHz)
Humidity Measurement Accuracy	+/-5%rh (at 25deg. C, 60%rh, 1kHz)
Material of Sensor Housing	ABS
Color of Sensor Housing	White
Dimension	10 x 27.5 x 5 mm (FC-7)

Configuration

Model :C7-M62







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Caution for use

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