

RK330-04 HVAC Temperature & Humidity Sensor

Hunan Rika Electronic Tech Co.,Ltd

Add: Building B5, Taskin, Yuhua District, Changsha City, Hunan Province, China

T:+86-731-85132979

E:info@rikasensor.com

W:www.rikasensor.com

RK330-04 HVAC Temperature & Humidity Sensor is a professional measurement of air temperature & relative humidity. Sensors are built-in the water-proof and dust-proof shelter. It is widely used in HVAC, storage and environment monitoring field.

FEATURES

- High Sensitivity
- Fast response time
- Wide working temperature range
- Strong anti-interference ability
- Easy installation

SPECIFICATIONS

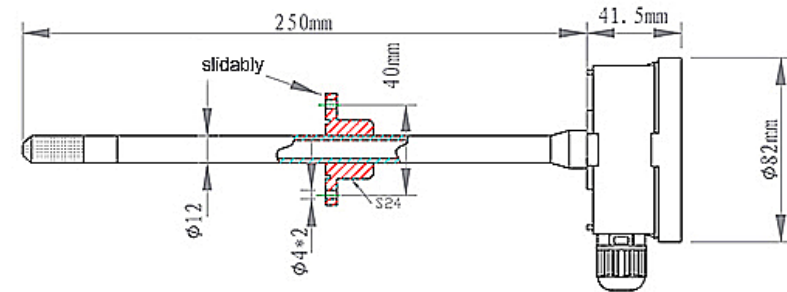
Item	Technical Specification	
	Temperature	Humidity
Range	-40-125°C(intermediate range is optional)①	0-100%RH
Accuracy	±0.2°C	±2%RH,±3%RH,±5%RH
Supply	12-24VDC	
Output Signal	4-20mA,0-5V,0-10V,RS485 MODBUS(RTU)	
Power Consumption	Current output:≤0.48W, Voltage output:≤0.2W, Digital output:≤0.36W	
Load Characteristic	Current output:RL≤(US-7)/0.02Ω, Voltage output:RL≥100kΩ	
Operating Temperature	-40°C+80°C	
Ingress Protection	IP65	
Storage	10-60°C@20%-90%RH	

①Such as 0-50°C,0-100°C,-20-60°C,-20-80°C,-40-125°C...

1

3

DIMENSION



MOUNTING

- Using 2 hole flange(Ø4) installation;
- Installed in the region of the stable environment, avoid direct sunlight, away from the window and air conditioning, heating and other equipment;
- As far as possible away from high-power jamming devices (e.g., frequency converter, motor, etc.), so as not to cause no measurement.

2

ELECTRICAL CONNECTIONS

Cable	Voltage/Current	RS485
Red	V+	V+
Yellow	H-Signal	RS485A
Blue	V-	V-
White	T-Signal	RS485B

Note: This product has been tested and complies with European CE requirements for EMC directive.

WARRANTY

This product is warranted to be free of defects in materials and construction for a period of 12 months from date of lead time.

Liability is limited to repair or replacement of defective item.

5

OUTPUT CHARACTERISTICS

- **Current**

$T=(I-4)/16*100-40$, (where T = temperature(°C), I = output current(mA))

$H=(I-4)/16*100\%$, ((where H = humidity(RH), I = output current(mA)))

- **Voltage**

$T=V/V_full\ scale*100-40$, (where T = temperature(°C), V= output voltage(V), V_full scale= 5V or 10V)

$H=V/V_full\ scale*100\%$, (where H = humidity(RH), V= output voltage(V), V_full scale= 5V or 10V)

- **RS485**

If the transmission distance is over 100m, please add a 120Ω terminal matching resistances on the front end and back end of bus interface respectively. Attach communication protocol.

Communication Protocol (MODBUS)

Transmission mode: MODBUS-RTU, **Baud rate:** 9600bps, **Data bits:** 8, **Stop bit:** 1, **Check bit:** no

Slave address: the factory default is 01H (set according to the need, 00H to FFH)

- **The 03H Function Code Example: Read The Temperature & Humidity**

Host Scan Order(Slave addr:0x01):

01 03 00 00 00 02 C40B

Slave Response:

01 03 04 02 57 02 6ECAD7

Temperature:(0257)H=(599)D, 599/10-40=19.9(°C)

Humidity:(026E)H=(622)D, 622/10=62.2%

- **The 06H Function Code Example: Modify the slave address(fixed command, ensure that no other devices on the bus)**

Host Scan Order (Changed 01H to 09H):

01 06 00 0F 00 09 79 CF

Slave Response:

01 06 00 0F 00 09 79 CF

6

 Complies with applicable CE directives.

Manual subject to change without notice. Version 1.0

Copyright © 2015 Hunan Rika Electronic Tech Co., Ltd

8