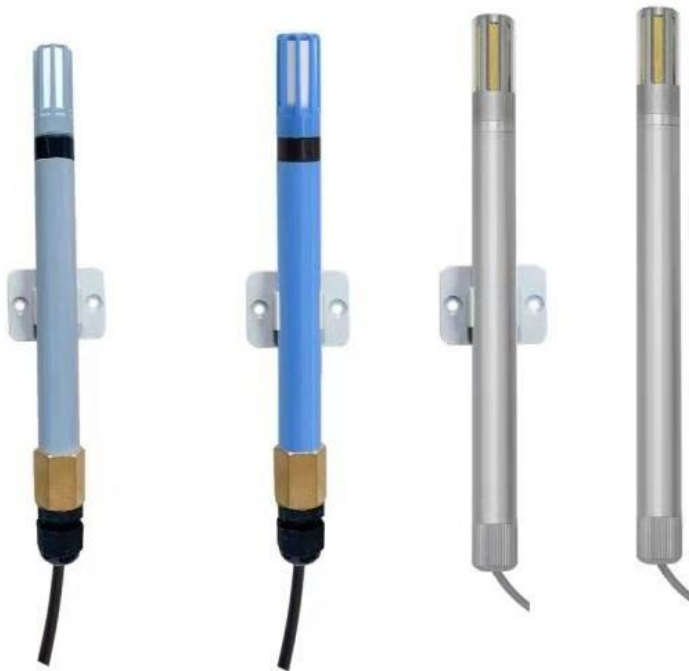
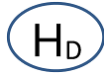


# Air temperature and humidity sensor Introduce



**Type NO.: RD-ATH-4A**

**HONDE TECHNOLOGY CO.,LTD**



## 1. Product Introduce

The temperature and humidity sensor uses a temperature and humidity integrated probe as the temperature measurement element, collects the temperature and humidity signals, and after circuit processing, directly outputs the 4-20mA or RS485 through the main control chip.

The simple series of temperature and humidity sensors use imported digital temperature and humidity data acquisition modules, which have been accurately calibrated when they leave the factory. The relative humidity and temperature sensors have digital outputs and can be fully interchangeable. The measurement accuracy, linearity, repeatability, and mutual is outstanding in terms of conversion and consistency. It is suitable for environmental equipment matching, instrument equipment integration, and other general environmental tests.

## 2. Product Features

1. Wide voltage design, high cost performance.
2. Digital linearization correction, high precision and high stability.
3. Full range temperature and humidity compensation, wide temperature and humidity measurement range, optional measurement range.
4. Flexible installation and convenient use.
5. Small size, light weight and anti-vibration.
6. It can be made into a variety of shapes to meet different needs of customers.

## 3. Product application

It is widely used in building automation, telecommunications room, papermaking and printing, warehousing and logistics, shopping malls, hotel housing, agricultural greenhouses, cinemas, railway stations, museums, theaters, clean workshops and other fields where temperature and humidity need to be measured.

## 4. Product Parameter

- Temperature range: standard -40 ~ 80°C
- Humidity range: 0 ~ 100%RH (non-condensing state)
- Accuracy:  $\pm 0.3^{\circ}\text{C}$  (@25°C);  $\pm 3\% \text{RH}$  (10% ~ 90%);
- Repeatability:  $\pm 0.1^{\circ}\text{C}$ ;  $\pm 0.1\% \text{RH}$ ;
- Resolution: 0.01°C; 0.05%RH;
- Long-term stability: <0.04°C/year; <0.5%RH/year
- Power supply voltage: 9 ~ 24V DC
- Output signal: 4-20mA



- Response time: <1S
- Working environment: temperature: -40°C ~ 60°C; humidity: ≤95%RH
- Working current: DC12V <20ma (485); DC12V <45ma (current)
- Power consumption: DC12V <0.24W (485); DC12V <0.54W (current)
- Cable length: 3 meters (customizable)
- The farthest lead length: current 200 meters, RS485 100 meters, voltage 50 meters
- Shell material: ABS engineering plastic
- Product weight: <100g
- Protect level: IP65

## 5. Line connection diagram

Wire colour	Description
Red	Positive power supply 12-24VDC
Black	Negative power & Negative analog output
Yellow	Temperature positive current output(4-20mA)
Green	Humidity positive current output(4-20mA)

## 6. Data conversion method

### 1. Analog output

T: Temperature , Unit °C

H: Humidity, unit, %RH

A: Current value collected by the collector, unit: mA

Output signal	Temperature conversion method (-40 to 80 ° C)	Humidity conversion method
4 ~ 20mA	$T = 7.5 * A - 70$	$H = 6.25 * A - 25$

## 7. Instructions

1. When receiving the product, please check whether the packaging is intact and check whether the model and specifications of the transmitter are consistent with the product you purchased;
2. The installation place should be away from the chemical corrosion environment;
3. Transmitters and wires should be kept away from high voltage electricity and heat sources;
4. The transmitter is a precision instrument and should be stored in a dry, ventilated and indoor environment.
5. The sensor is a precision device. Please do not disassemble it by yourself when using it to avoid product damage