

Temperature and Humidity Sensor

Built-in high-precision temperature and humidity sensing, 1 RS485 supports Modbus RTU protocol communication. ARM processor, RTOS system operating temperature: -20°C ~ 75°C.



Features and Advantages

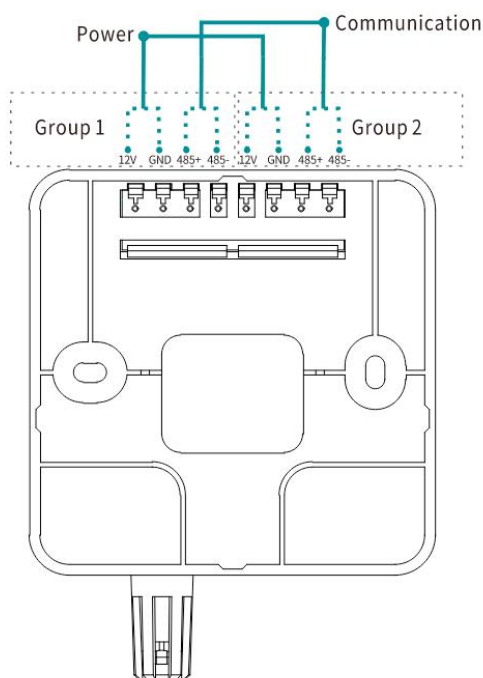
- Supports Modbus RTU protocol
- Supports upgrading via RS485 serial port connection
- Supports 1-channel temperature acquisition, with the screen displaying the result rounded to 1 decimal place in Celsius (°C). Measurement range: -20.0°C ~ 75.0°C, typical accuracy $\pm 0.3^{\circ}\text{C}@25^{\circ}\text{C}$
- Supports 1-channel humidity acquisition, with the screen displaying the result rounded to 1 decimal place in percentage (%). Measurement range: 0%~100% RH, typical accuracy $\pm 3.0\%(20\%\sim 80\%\text{RH}@25^{\circ}\text{C})$
- Supports 1-channel dew point temperature acquisition, with the screen displaying the result rounded to 1 decimal place in Celsius (°C). Measurement range: -40.0°C~75.0°C, typical accuracy $\pm 0.3^{\circ}\text{C}@25^{\circ}\text{C}$
- Supports custom setting of upper and lower limit alarm values for temperature and humidity. When the specified value is exceeded, an alarm point value will be generated
- Supports mechanical button settings for convenient operation
- External probe responds to rapid changes in temperature

Introduction

The temperature and humidity sensor is suitable for monitoring the environment of data centers, including server rooms, micro-modules and corporate server rooms, as well as any other places that require monitoring of environmental temperature and humidity.

Interface Description

Note: The interfaces of ' Power Supply ' / ' Communication ' for the first group and the second group are connected in parallel, which is convenient for hand-in-hand wiring.



Technical Parameters

Basic Information

Processor	ARM
Embedded Operating System	RTOS

Communication Parameters

Communication Port	1 RS485 Interface
Interface Form	Phoenix terminal
Communication Protocol	Modbus RTU
Overvoltage and Overcurrent Protection	5V/200mA
Surge Protection	600W Surge
Protection Form	PPTC+TVS

Collection Parameters

Temperature Range	-20℃~75℃
Temperature Accuracy	±0.3℃@25℃
Number of Channels	1
Humidity Range	0~100% RH
Humidity Accuracy	±3%RH (20%~80%RH@25℃)
Number of Channels	1

Long-term Stability

Temperature	< 0.1℃/y
Humidity	< 1%RH/y

Response Time

Temperature	≤2s (1m/s Wind Speed)
Humidity	≤6s (1m/s Wind Speed)

Power Parameters

Input Power	9~27V DC
Power Consumption	< 10mA@12V DC
Overvoltage and Overcurrent Protection	30V/200mA
Surge Protection	600W Surge
Protection Form	PPTC+TVS

Protection

EMC	Static electricity: GB/T 17626.2-2018, Level 2, Contact 4kV, Air 4kV
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Working Environment

Working temperature	-20℃~75℃
Working humidity	5%~95%RH (no condensation)

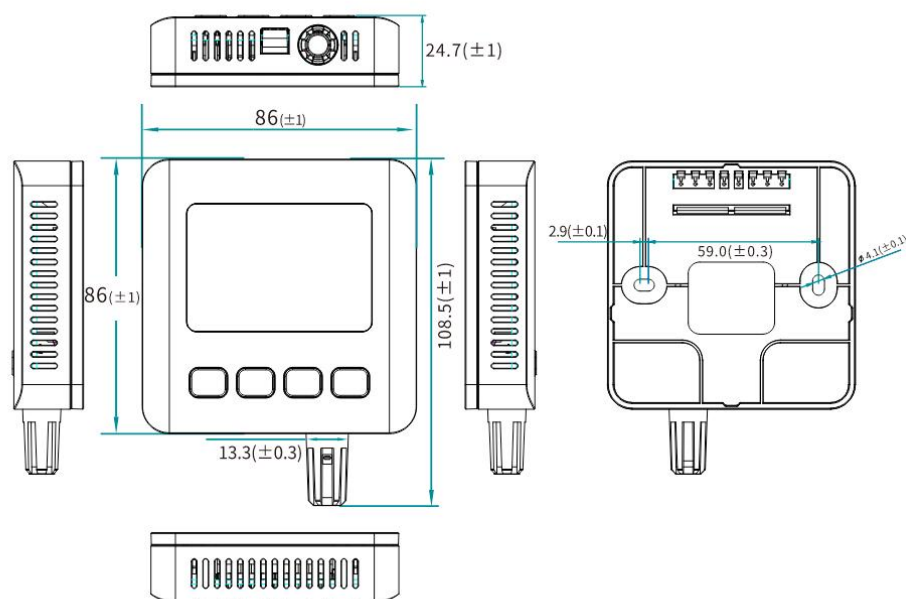
Dimensions and Installation Method

Dimensions(mm)	86*86*24.2mm (excluding probe)
Installation Method	Positioning hole installation

Dimensions

Note: Only used to indicate product dimensions. For details such as port, please refer to the actual product.

Unit (mm, tolerance ± 1 mm)



Mounting method

Positioning hole mounting (only used to indicate the product mounting method, details such as ports are subject to the actual product)

