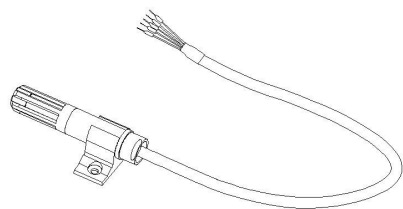


UT-5521P 温湿度传感器说明书

一、概述

- ☆ RS485信号输出
- ☆ 线性响应，温湿度一体
- ☆ 专用的敏感元件，测量范围宽、精度高



二、主要性能指标

	温度	湿度
测量范围	-20~80℃	0%RH~100%RH
测量精度	$\leq \pm 1^{\circ}\text{C}(-20\sim 80^{\circ}\text{C}), \leq \pm 0.5^{\circ}\text{C}(25^{\circ}\text{C})$	$\leq 5\% \text{RH}(25^{\circ}\text{C}, 20\% \text{RH}\sim 80\% \text{RH})$
信号输出	RS485	
通讯协议	MODBUS	
供电电源	5VDC~24VDC	
工作电流	<10mA	
工作温度	-20~80℃	
储存温度	-40~80℃ (非凝结)	
连接方式	冷压端子	
出线长度	3m	
探头长度	67mm	

2.1 外形尺寸及安装图 (mm)

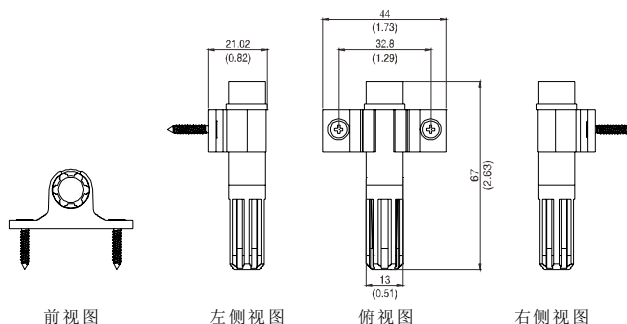


图1

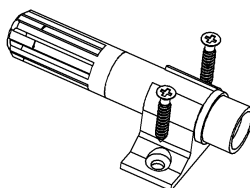


图2

注意事项

安装使用时，注意产品安装方向，同时避免阳光直射或直接接触热源/冷源。避免腐蚀性气体存在。避免在有水、有雾的场所使用。

接线说明

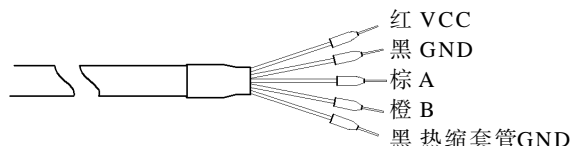


图3

精度与测量范围对应关系

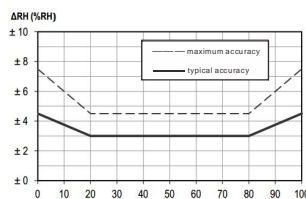


图4

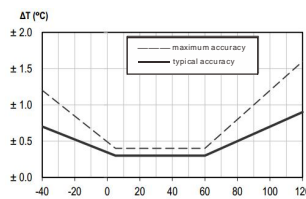


图5

通讯协议Modbus-rtu

波特率：9600 8位数据位，1位停止位，无校验

温湿度寄存器地址表

名称	Modbus寄存器地址	支持功能码	属性	放大倍数	备注
温度1	0000	04	只读	100	实际温度=(寄存器值-4000)/100
湿度1	0001	04	只读	100	实际湿度=寄存器值/100
保留	0002	04	只读	N/A	
温度2	0003	04	只读	100	实际温度=寄存器值/100
湿度2	0004	04	只读	100	实际湿度=寄存器值/100
软件版本号	0005	04	只读	N/A	N/A

参数配置寄存器地址表

名称	Modbus寄存器地址	支持功能码	属性	放大倍数	备注
设备地址	0000	03/06/10	可读/可写	N/A	支持广播修改地址
温度修正值	0002	03/06/10	可读/可写	100	范围限制-5000~5000
湿度修正值	0003	03/06/10	可读/可写	100	范围限制-5000~5000

三、法规要求

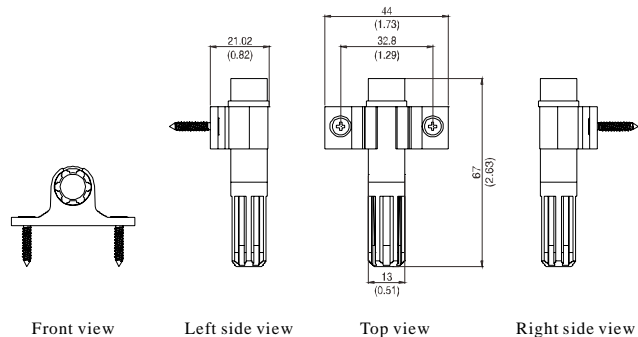
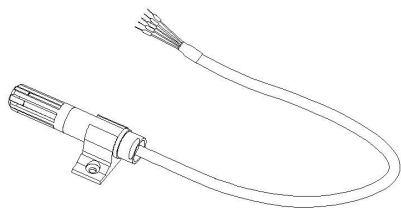
该产品符合ROHS2.0指令（欧盟2011/65/EU）及其修订指令（EU）2015/86



UT-5521P Temperature & Humidity Sensor User Manual

I. Overview

- ☆ RS485 signal output
- ☆ Linear response, temperature and humidity integrated
- ☆ Specialized sensor, wide measurement range, high precision



II. Features

	Temperature	Humidity
Measurement range	-20~80°C	0%RH~100%RH
Measurement precision	≤ ± 1°C(-20~80°C), ≤ ± 0.5°C(25°C)	≤ 5%RH(25°C, 20%RH~80%RH)
Signal output	RS485	
Communication protocol	MODBUS	
Power	5VDC~24VDC	
Operating current	<10mA	
Operating temperature	-20~80°C	
Storage temperature	-40~80°C	
Connection	cold-pressed terminal	
Cable length	3m	
Probe length	67mm	

2.1 Dimension(mm)

Temperature and humidity register address table

Name	Modbus register address	Support code function	Attribute	Magnification	Remarks
Temperature1	0000	04	Read-only	100	Actual temperature = (register value-4000)/100
Humidity 1	0001	04	Read-only	100	Actual humidity = register value /100
Retain	0002	04	Read-only	N/A	
Temperature 2	0003	04	Read-only	100	Actual temperature = register value /100
Humidity 2	0004	04	Read-only	100	Actual humidity = register value /100
Software version number	0005	04	Read-only	N/A	N/A

Parameter configuration register address table

Name	Modbus register address	Support code function	Attribute	Magnification	Remarks
Device address	0000	03/06/10	Readable/Writable	N/A	Support broadcast address modification
Temperature correction value	0002	03/06/10	Readable/Writable	100	Scope limitation-5000~5000
Humidity correction value	0003	03/06/10	Readable/Writable	100	Scope limitation-5000~5000

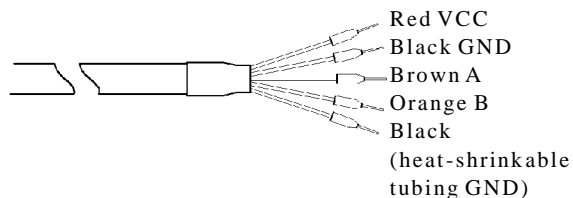
III. Regulatory Requirement

This product complies with the RoHS Directive 2.0 (EU 2011/65/EU) and its revision directive (EU) 2015/86

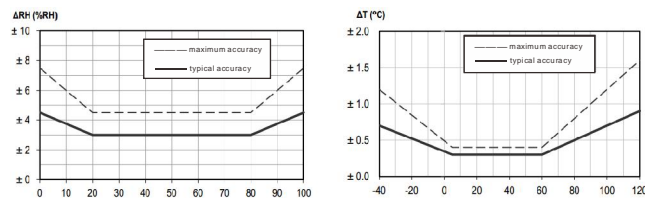
Remarks:

During installation, please ensure the install direction of the product; meanwhile please avoid direct sunlight or direct contact heat/cold source, and avoid the corrosive gas, watery, foggy environment.

Connection description



Precision and measurement range relation



Communication protocol Modbus-rtu

Baudrate: 9600 8-bit digital bit, 1-bit stop bit, without check bit