

# TH30S-B Temperature & Humidity Probe

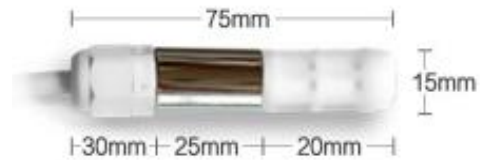
## Product Introduction

The temperature and humidity probe is our self-developed product. It's produced and assembled in our own factory. It has exquisite appearance and high measurement accuracy.



## Product Size

The size of our temperature and humidity probe is as shown below. Length;75mm, diameter:15mm  
The cable is circular, shielded, and durable in extreme high and low conditions.

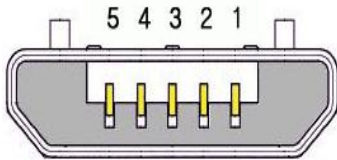


## Product Specification

Product Specifications	
<b>Name</b>	TH30S-B Temperature & Humidity Probe
<b>Model</b>	TH30S-B
<b>Materials</b>	PE+ Stainless steel
<b>Cable length</b>	5m/10m/Custom-made
<b>Power Supply</b>	DC5V~12V
<b>Connector</b>	Micro-USB/Custom-made
<b>Inner Chip</b>	Swiss SENSIRION SHT30
<b>Measurement range</b>	Temperature: -40°C to 80°C Humidity: 0 to 100%RH
<b>Measurement Accuracy</b>	2nd generation : $\pm 0.2^{\circ}\text{C}$ , resolution 0.1°C ; $\pm 2\% \text{RH}$ , resolution 0.1RH (in the condition of 25°C, 60%RH) 1st generation : $\pm 0.3^{\circ}\text{C}$ , resolution 0.1°C ; $\pm 3\% \text{RH}$ , resolution 0.1RH (in the condition of 25°C, 60%RH)
<b>Protocol</b>	RS485 ModBus Protocol
<b>Address</b>	1-247
<b>Baud rate</b>	9600
<b>Communication method</b>	Asynchronous communication
<b>Power Consumption</b>	$\leq 0.1\text{W}$
<b>Ingress Protection</b>	Waterproof and dustproof
<b>Thunder prevention</b>	Level 1
<b>Match with</b>	WS1 Pro and other future UbiBot products

# TH30S-B Temperature&Humidity Probe

## Product Interface definition



Pin Sequence	Pin Definition
Pin 1	GND
Pin 2	RS485B
Pin 3	RS485A
Pin 4	NC
Pin 5	VCC

## Product Application Environment

This product is suitable for indoor and outdoor environments. The recommended environmental conditions are as follows:

Temperature: -40 to 80°C (-40°F to +176°F), Humidity: 0 to 100% RH

Please do not place the product directly on the heat source or cold source; Do not keep it stay in the water curtain and condensation environment for a long time; In the dusty or heavy air polluted environment, please clean up the probe in time.

## Product Customization Instructions

The probe cable can be customized according to the user's requirements. The external connector of the product can be removed or replaced with other types of connectors . Freezer cable can also be supported.

This product is able to match with our UbiBot products, such as WS1Pro (wifi) /WS1Pro (4G ) and the upcoming easy-to-install smart socket.

## Product Application

This product is suitable for a variety of applications, such as warehousing and logistics, greenhouses, fruit and vegetable storage, etc.

e.g.

1.Read T/H Command:

Query Message from Master: (Address=01, Temperature and Humidity)

Address	Function Code (Read)	Starting Address Hi	Starting Address Lo	No.of Registers Hi	No.of Registers Lo	CRC16 LSB	CRC16 MSB
0x01	0x03	0x00	0x00	0x00	0x02	0xC4	0x0B

## TH30S-B Temperature&Humidity Probe

Response Message from Slave (Probe): (e.g. Temperature:18.4°C, Humidity:83.1%)

Address	Function Code (Read)	Starting Address Hi	Starting Address Lo	No.of Registers Hi	No.of Registers Lo	CRC16 LSB	CRC16 MSB	Address
0x01	0x03	0x04	0x00	0xB8	0x03	0x3F	0x3A	0xf6

### 2、 Read Address Command:

Query Message from Master:

Public Address	Function Code	Starting Address Hi	Starting Address Lo	No.of Registers Hi	No.of Registers Lo	CRC16 LSB	CRC16 MSB
0xFF	0x03	0x00	0x64	0x00	0x01	0xD0	0x0B

Response Message from Slave (Probe): (e.g. Address= 01)

Address	Function Code (Read)	Starting Address Hi	Starting Address Lo	No.of Registers Hi	No.of Registers Lo	CRC16 LSB
0xFF	0x03	0x02	0x00	0x01	0x50	0x50

### 3、 Write Address Command: (Change Address= 0x01 to Address = 0x02)

Query Message from Master:

Address	Function Code (Write)	Starting Address Hi	Starting Address Lo	No.of Registers Hi	No.of Registers Lo	CRC16 LSB	CRC16 MSB
0x01	0x06	0x00	0x64	0x00	0x02	0x49	0xd4

Response Message from Slave (Probe):

Address	Function Code (Write)	Starting Address Hi	Starting Address Lo	No.of Registers Hi	No.of Registers Lo	CRC16 LSB	CRC16 MSB
0x01	0x06	0x00	0x64	0x00	0x02	0x49	0xd4

### 4、 Write Address Command: (Change Unknown Address to Address=0x02)

Query Message from Master:

Address	Function Code (Write)	Starting Address Hi	Starting Address Lo	No.of Registers Hi	No.of Registers Lo	CRC16 LSB	CRC16 MSB
0xff	0x06	0x00	0x64	0x00	0x02	0x5c	0x0a

## TH30S-B Temperature&Humidity Probe

Response Message from Slave (Probe):

Address	Function Code (Write)	Starting Address Hi	Starting Address Lo	No.of Registers Hi	No.of Registers Lo	CRC16 LSB	CRC16 MSB
0xff	0x06	0x00	0x64	0x00	0x02	0x5c	0x0a

5、 Read Version No. Command: (Address=1, Read its Version No.)

Query Message from Master:

Address	Function Code (Write)	Starting Address Hi	Starting Address Lo	No.of Registers Hi	No.of Registers Lo	CRC16 LSB	CRC16 MSB
0x01	0x03	0x00	0x88	0x00	0x01	0x04	0x20

Response Message from Slave (Probe): (If the Version No. Is v08)

Address	Function Code (Write)	Starting Address Hi	Starting Address Lo	No.of Registers Hi	No.of Registers Lo	CRC16 LSB	CRC16 MSB
0x01	0x03	0x00	0x88	0x00	0x08	0xc4	0x26