

S2-RHT20BD-RS485 Temperature and Humidity Combined Transducer

◆ General

Temperature and Humidity Combined Transducer adopts SHT20, It combines with stable and dependable signal processing circuit to transform the environmental temperature and the humidity to a digital signal for remote measurement and control.

◆ Capability indexes

- ✧ Input: Temperature measuring range: -20℃~80℃; Humidity: 0%RH~100%RH
- ✧ Accuracy: Temperature: $\pm 0.5^{\circ}\text{C}$ (25℃), Humidity: $\pm 4.5\%$ RH (20%RH~80%RH, 25℃)
- ✧ Power supply: Standard power supply DC12V, The range of power supply DC10V~28V
- ✧ Power supply consumption: $\leq 0.5\text{VA}$
- ✧ Sensitive element: SHT20 Digital integrated measurement probe SHT20.
- ✧ Communication protocol: MODBUS-RTU
- ✧ Data frame format: "N,8,1" 1 Startup bit, no parity bit, 8 data bits, 1 stop bit, No check bit, Baud rate 9600
- ✧ Working condition: Temperature: -20℃~80℃, Humidity: 5%~95% (No condensation)
- ✧ Storage temperature: Temperature: -20℃~80℃, Humidity: 5%~95% (No condensation)
- ✧ External dimensions: $71\pm 0.5\text{mm} \times 60\pm 0.5\text{mm} \times 30\pm 0.5\text{mm}$
- ✧ Weight: about 0.029kg

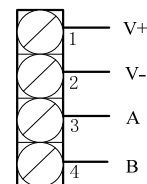
◆ Applications

Used in indoors environment monitoring, such as telecom engine room, warehouse as well as the building automatic control in which temperature and humidity need to be measured and controlled.

◆ Features

- ✧ High measuring precision, quick response speed, good long-term stability.
- ✧ Compactness, light weight, good looking, compact conformation and convenient installation.
- ✧ Adopts digital integrated measurement probe.
- ✧ Digital interface isolated output, easy for reading data.

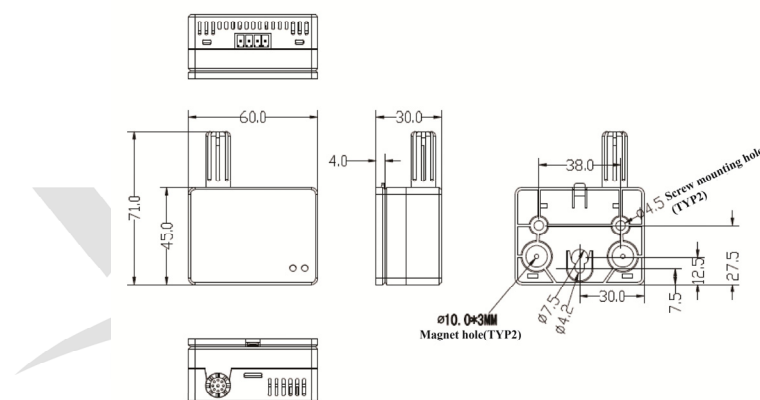
◆ Wiring diagram



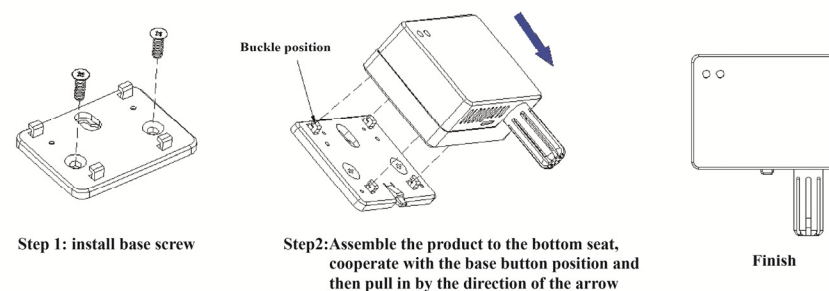
Terminal definition:

- (1): Power (+)
- (2): Power (-)
- (3): RS485_A
- (4): RS485_B

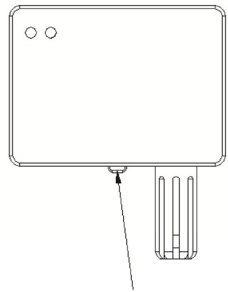
◆ External and installation dimensions (Units:mm, Tolerance: ± 0.5)



◆ Installation mode



◆ Opening mode



Opening mode: press the button down, and then press (figure 1 on the right) Push the arrow upward to remove the product

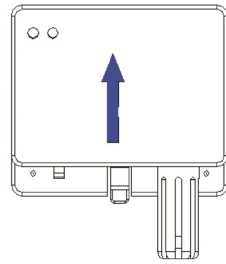
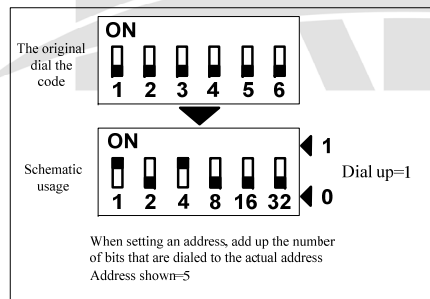


Figure 1 on the right

◆ Data transmission

Communication parameter setting

The frame format of the communication data of this meter adopts the fixed "N, 8, 1" format. When using, please set the serial port to 1 bit starting bit, 8 bit data bit, 1 bit stop bit, with no parity bit, baud rate of 9,600.



Submachine address dial setting method

Host read operation

Function	Address	Order	Address height 8 bits	Address lower 8 bits	Operation number is 8 digits higher	Operation number is 8 digits higher	CRC16L	CRC16H
Read the address	00	03	00	00	00	01	85	DB
Read the temperature and humidity	ADD	03	00	02	00	02		

Sub-machine response

Function	Address	Order	Byte length	Content	CRC16L	CRC16H
Read the address	00	03	2	00 ADD		
Read the temperature and humidity	ADD	03	4	Temperature(D0D1), Humidity(D2D3), Signed fixed point integer data, 10 times the actual value		

◆ Note

- ✧ Please do not install against the draught of air conditioning, away from the places where there is water or fog.
- ✧ Avoiding the sunlight perpendicular incidence, avoiding product damage.
- ✧ Do not install at the places where there is much dust, avoiding influence of the measuring accuracy.
- ✧ Operating environment should be electric dust free and corrosive metal free. The altitude should be less than 2,500 meters.

Note: The above pictures are for reference only, the products are subject to the actual product,

Copyright, all rights reserved. Specification subject to change without prior notice.