SS-TH110 Temperature and Humidity Probe

Product features

- Miniature temperature and humidity transmitter.
- Low power consumption can be used for battery power.
- Measuring range -40 ... 60℃; 0... 100%RH。
- A sturdy metal case.
- Accuracy ± 1.5% RH.
- Standard M8 pluggable connector.
- Optional dew point calculation output.
- Optional RS485 digital output.
- Suitable for a variety of applications.

Product application

TH110 is an economical temperature and humidity probe with high accuracy and stability, suitable for batch applications or integration into other manufacturers' equipment, such as glove boxes, environmental test chambers, fermentation chambers and environmental test chambers, data loggers, etc.

And that installation is convenient

The probe cable has a standard M8 quick screw connection for easy installation. The customer can choose or provide different lengths of cable.

Multiple output options

Temperature measurement is the standard parameter of the transmitter, and the output of relative humidity or dew point calculation can be selected. Available in 3 voltage output ranges or select RS485 communication output using Modbus RTU protocol.

Low power consumption

The probe may have low power consumption characteristics and may be used in a battery powered manner.

A sturdy shell

The TH110 has a stainless steel housing and the exposed part of the stem has an IP65 waterproof rating for use in some harsh conditions. The TH110's independent capacitive sensor has a high chemical resistance. The sensor is protected by a filter membrane and plastic grille, or optionally by a stainless steel filter.

Technical parameters-performance parameters

Measuring range	
Temperature	-40-60℃
Relative humidity	0-100% RH
Relative humidity accuracy (23 ℃)	
0-90% RH	±1.5 % RH
90-100% RH	±2.5 % RH
Factory calibration uncertainty (23 ° C)	±1.2 % RH
Humidity sensor	Film capacitance
Relative humidity stability (in standard indoor applications)	< 1.5% RH/year

Temperature accuracy (23 ℃)	±0.2℃
Temperature sensor	Pt1000 RTD 1/3 Class B IEC751
Dew point (at 0-40 ℃)	
(Ambient temperature-dew point value) < 15 ℃	±0.5 ℃
(Ambient temperature-dew point value) at 15-25 ℃	±1 ℃
Analog output accuracy	
When the temperature is 20 ℃	± 0.2 % /FS
Temperature coefficient	± 0.01 % /FS/℃

Technical parameters-output

Analog Output (Voltage, Dual)	0-1V/0-5V
Voltage output load 0-1V/0-5V/1-5V	10kΩ min/50kΩ min
Digital output	RS485, two-wire half-working

Technical parameters-input

Supply voltage	**8... 28 VDC** Provide as low voltage as possible to reduce heat generation and avoid affecting accuracy
Supply current	1mA (average), 5mA (instantaneous maximum)
Start time	5S

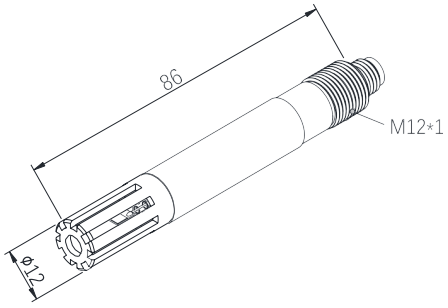
Technical parameters-mechanical structure

Degree of protection	IP65 (excluding filter part)
Shell material	Stainless steel SS 316
Sensor protection	Plastic grille filter, PC/ABS Stainless steel sintered filter optional SS316
Probe diameter	12mm
Cable connection	4 针 M8（ICE 6097-5-2)
Weight (without package)	25g

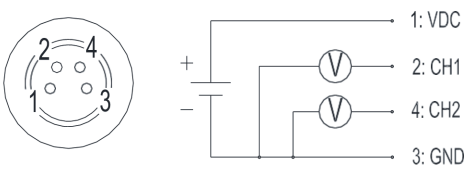
Environmental parameters

Probe operating temperature	-40-80 ℃
Electromagnetic compatibility standard	Complies with EMC standard EN61326-1 for industrial environments

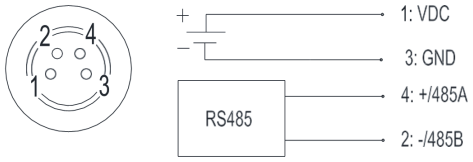
Product size (mm)



Wiring link diagram



Analog Voltage Output Wiring



Digital output connection

Definition of outgoing line of corresponding probe connector:

Pin	Analog output mode	RS485 output mode	Corresponding color of optional cable
1	VDC supply+	VDC supply+	Brown
2	Signal Channel 1	RS485-/B	White
3	GND	GND	Blue
4	Signal Channel 2	RS485+/A	Black

Selection table

温湿度探头		BRSS-TH110-DX				
1.输出信号	0…1V		1			
	0…5V		2			
	1…5V		3			
	其他		X			
	RS485 命令		R			
	Modbus RTU		M			
2.输出参数	RS485 选型			0		
	温度和相对湿度	T: -40…60℃		1		
	其他：温度和露点、湿球温度、绝对湿度、焓值等			X		
3.探头保护	塑料栅格+滤膜				P	
	不锈钢烧结过滤器				S	
4.探头线缆	无线缆					0
	定制线缆长度					X
		选型示范	BRSS-TH110-DX	R	0	P	0