

Temperature and humidity measurement

Platinum resistance temperature sensor



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Semiconductor temperature sensor



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Temperature and humidity sensor



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Platinum resistance temperature sensor



The platinum resistance temperature sensor measures temperature by utilizing the characteristic that the resistance of special metal changes with the temperature. The display instrument will indicate the temperature value corresponding to the resistance value of platinum resistance. When there is a temperature gradient in the measured medium, the measured temperature is the average temperature in the medium layer within the range of the temperature sensing element. The platinum resistance temperature sensor is the most precise and stable temperature sensor. Its linearity is better than that of thermocouple and thermistor, and it is suitable for application fields with strict requirements on precision.

Inquiry Soway

86-0755-88367005
soway@sowaysensor.com



Data download

www.sowaysensor.com/product/

- High precision and good linearity
- Good sealing performance and capable of withstanding 150 meters water depth
- Digital bus interface, can be in series with 250 sensors
- Unique interface mode for convenient wiring

Product application example



Ground temperature inspection



Ocean temperature monitoring



Ocean temperature monitoring

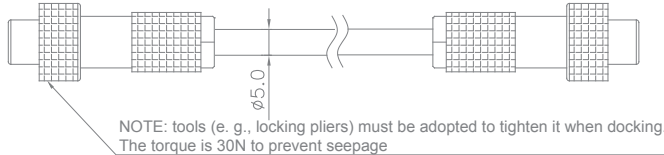
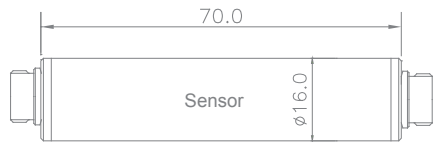


Ocean temperature monitoring

Basic performance parameter

Model	STP100
Supply voltage	DC 7 to 26V
Measuring temperature range	-10 C to +85 C
Measuring element	PT100
Response time	15S
Resolution	0.001 C
Accuracy	±0.1 C
Power consumption	<0.04W
Level of protection	IP68
Output mode	RS485
Protocol	Standard Modbus

Machine dimension



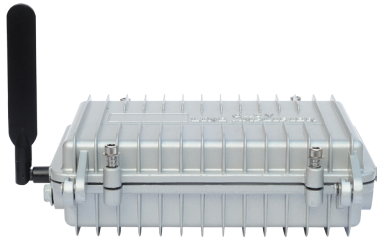
- Position detection
- Angle measurement
- Speed measurement
- Displacement measurement
- Liquid level measurement
- Flow measurement
- Pressure measurement
- Temperature and humidity measurement
- Current measurement
- Special sensor

- Platinum resistance temperature sensor
- Semiconductor temperature sensor
- Temperature and humidity sensor



Shallow geothermal energy geotemperature measurement

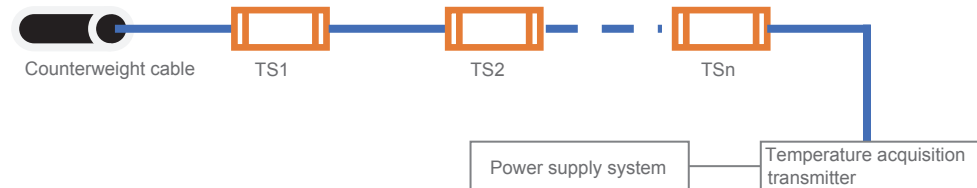
The shallow geothermal energy geotemperature measurement adopts hinge bus technology to form a temperature probe induction chain. Multiple temperature sensors are connected in series by PUR cable and hinge structure, which can be widely applied in measuring the change of water temperature profile in lake, coastal and other environment, as well as in the measurement of soil temperature profile in geological departments and other application fields.



Platinum resistance temperature sensor
Semiconductor temperature sensor
Temperature and humidity sensor

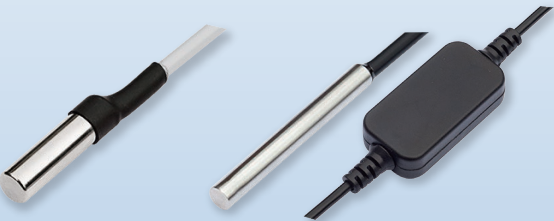


Temperature acquisition transmitter



- With the warning function for low voltage.

Semiconductor temperature sensor



The temperature sensor is a device that converts the temperature information of physical characteristic that represents the degree of cold and heat of an object or space into electrical signal, which is adopted to inspect and control the relevant temperature characteristics. As there are various use requirements, the temperature sensors have many types.

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High sensitivity, low temperature delay

High measurement accuracy and good stability

Compact size, easy to install

High quality stainless steel pipe encapsulation, with internal sealing glue, waterproof, moisture-proof and rust-proof

Product application example



Machine room temperature detection



Temperature detection of machinery and equipment



Cold chain logistics vehicle

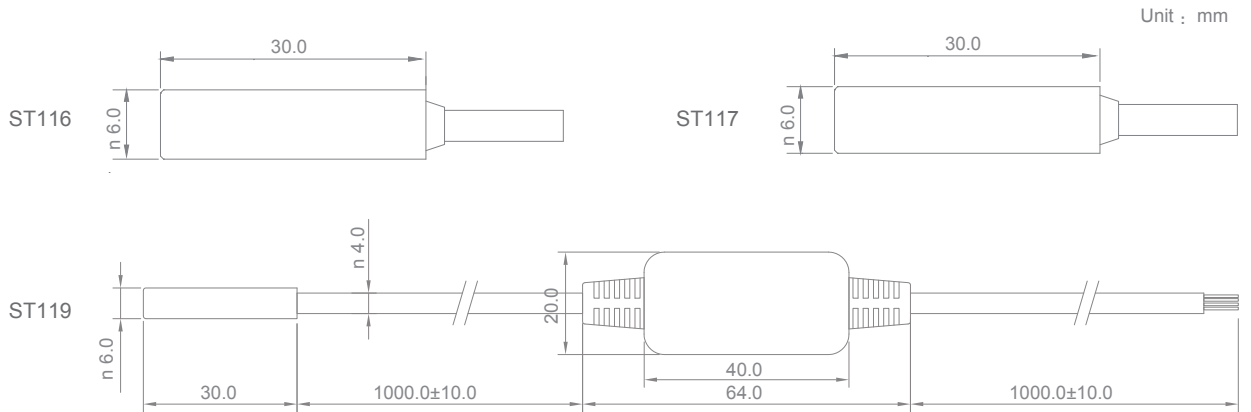


Greenhouse temperature detection

Basic performance parameter

Model	ST116	ST117	ST119
Supply voltage	3~5.5VDC	3.0~5.5VDC	5 VDC
Measuring range	-40~+85 ℃	-40~+85 ℃	-40~+80 ℃
Accuracy of detection	±1 ℃ (0~+70℃)	±0.5 ℃ (-10~+85℃)	±0.5℃ (0~+70℃)
Resolution	/	9 to 12 bits, the maximum working cycle of 12 bits is 750 milliseconds	
Output signal	Linear voltage: 0℃-500mV, 10mV/℃	Single bus data communication	Modbus、Baud rate9600bps
Leve of protection	IP67	IP67	IP65
Housing	Stainless steel 316	Stainless steel 316	Flame retardant engineering plastics UL94-V0
Cable	Shielded cable 1 m	Shielded cable 1 m	4x0.12mm shielded cable 2 m

Machine dimension



Wiring method

ST116		ST117		ST119	
Lead description	Cable wire color definition	Lead description	Cable wire color definition	Lead description	Cable wire color definition
VCC power supply	Red	VCC power supply	Red	VCC power supply	Red
GND ground line	Grey	GND ground line	Grey	GND ground line	Black
Temperature signal	Yellow	DATA Signal	Yellow	485A	Green
				485B	White

Position detection
Angle measurement
Speed measurement
Displacement measurement
Liquid level measurement
Flow measurement
Pressure measurement
Temperature and humidity measurement
Current measurement
Special sensor

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Temperature and humidity sensor



T118 humidity sensitive capacitance digital temperature and humidity module is a temperature and humidity composite sensor with calibrated digital signal output. It adopts special digital module acquisition technology and temperature-humidity sensing technology to ensure the product has high reliability and excellent long-term stability. The sensor comprises a capacitive humidity sensing element and a high precision temperature sensing element, and is connected with a high performance ARM single chip computer. Therefore, this product has the advantages of excellent quality, super fast response, strong anti-interference capability and high cost performance, etc.

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Product application example



Machine room temperature detection



Temperature detection of machinery and equipment



Cold chain logistics vehicle

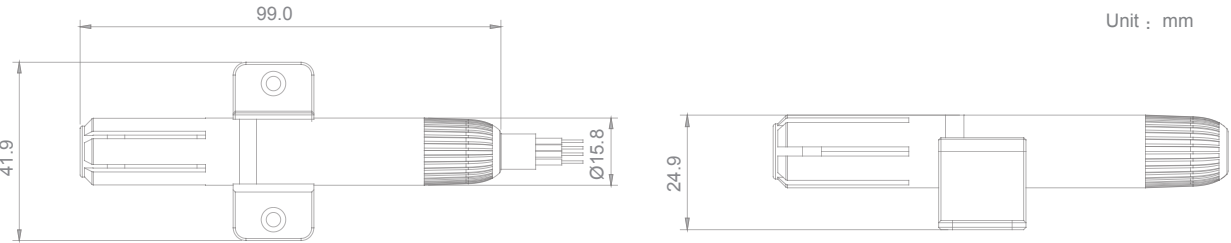


Greenhouse temperature detection

Basic performance parameter

Model	ST118
Supply voltage	5VDC(Current ≤15Ma)
Measuring range	Temperature: -20~+70 ℃ 、 Humidity: 0-100%RH
Accuracy of detection	Temperature: ±0.2℃ (0~+60℃) 、 Humidity:2% (25℃)
Resolution	9 to 12 bits, the maximum working cycle of 12 bits is 750 milliseconds
Output signal	RS485(Modbus)
Housing	Flame retardant engineering plastics UL94-V0
Cable	4x0.12mm shielded cable 1 m

Machine dimension



Wiring method

Cable color	Item	Definition
Red	Vin	Power supply positive
Black	GND	Power supply negative
Blue	A	RS485 interface
White	B	

Precautions

Air relative humidity is the function of temperature. Air temperature has great influence on relative humidity, and many compounds have great influence on the physical, such as acid, alkali and salt, properties of water vapor. The following matters should be noted when using:

- 1、The temperature and humidity sensor shall be installed in a place where the temperature is relatively stable and can best represents the temperature and humidity of measured ambient.
- 2、Avoid mounting in places where the temperature changes dramatically.
- 3、Avoid installing in places where the air is flows violently.
- 4、Avoid installing in dead angle where air does not flow.
- 5、Avoid being used in salt fog environment6、Avoid being used in corrosive gas environments.

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