ST Series Wireless Temperature Sensors

The ST series wireless temperature sensors are industrial-grade sensors designed specifically for monitoring the temperature of industrial equipment. The sensors feature high accuracy, ultra-low power consumption, and durability, making them suitable for long-term operation in harsh industrial environments.

ST100P and ST100K are designed with a host and external probe, making them suitable for monitoring the internal temperature of pipes or equipment. These sensors support platinum resistance probe PT100 and various types of thermocouples (K, J, N, T, S, R, or E type), with a temperature monitoring range from -270°C to 1600°C.

On the other hand, ST101 and ST103 are integrated in design, ideal for surface temperature monitoring. These sensors can be easily installed using various fastening methods, such as adhesive, screws, or clamps.

The sensor data is transmitted through a wireless sensor network to a remote monitoring platform. Users can remotely monitor the loosening rotation angle and receive timely alerts in case of bolt loosening, continuously track the entire process of bolt loosening, ensure the safe operation of equipment, prevent unplanned downtime, and reduce maintenance time and costs.

Features and Advantages

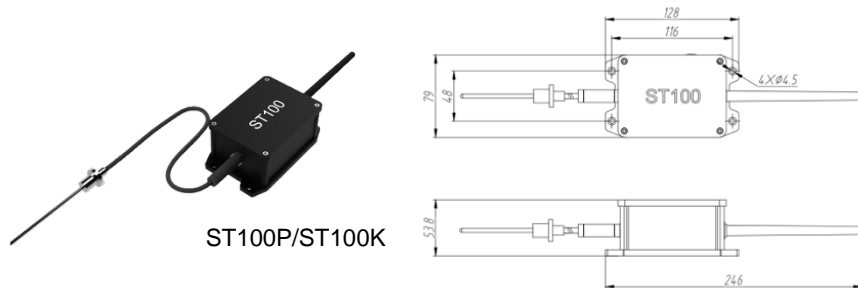|		
Accurate	⇨	Platinum resistance thermometer: 15-Bit ADC, resolution 0.03°C, accuracy ±0.5°C. Type K Thermocouple: 14-Bit ADC, resolution 0.25°C, accuracy ±2°C.
Easy-to-install	⇨	Cable-less, mounted with adhesive, threaded, and clamping methods.
Wireless	⇨	2.4GHz wireless sensor network; capable of transmitting data reliably.
Low-powered	⇨	Built-in battery with 10 years of life for normal usage.
Ruggedized	⇨	Waterproof, dustproof, shockproof, corrosion-resistant, and intrinsically safe; suitable for harsh industrial environment.
Flexible	⇨	The sampling and communication periods can be configured according to specific requirements.
Accessible	⇨	Remotely accessible anytime, anywhere; automatic alarm; maintenance free.
Convenient	⇨	Bluetooth compatible and connected via mobile APP.

APPLICATIONS

- Equipment Monitoring
- Pipeline Monitoring
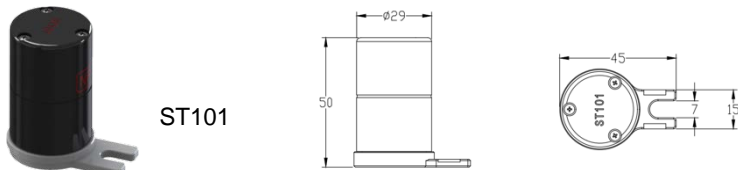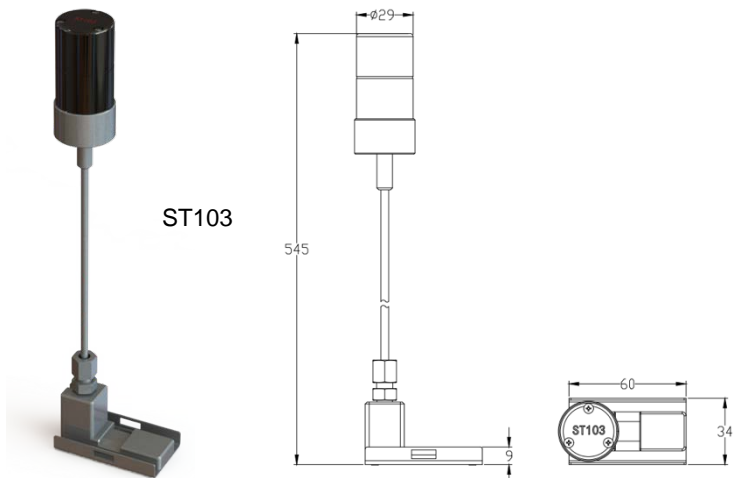- Container Monitoring
- Environment Monitoring

ST Series Wireless Temperature Sensors

Specifications

Product Model	ST100P	ST100K	ST101	ST103
Mechanical Design	External probe		Integrated (normal temperature)	Integrated (high temperature)
Sensor Type	Platinum resistance (RTD)	Type K thermocouple	Platinum resistance (RTD)	Type K thermocouple
Measurement Range	Maximum: -200~450°C	Maximum: -200~1350°C	-200~1350°C (sensing element)	200~1350°C (other ranges customizable)
Measurement Precision	±0.5°C or ±0.5% of full scale	±0.8%	±1°C	±0.8%
Data Acquisition Period	1/2/5/10/15/20/30/60/120/240/360/480/720/1440 minutes			
Communication	2.4GHz Wireless Sensor Network (Bluetooth 5.0), line-of-sight range 300m			
Battery	8500mAh Li/SOCL2; replaceable		1650mAh Li/SOCL2; replaceable	
Dimensions	128mm x 79mm x 54mm (L x W x H)		29mm x 50mm (D x H)	29mm x 545mm (D x H)
Weight	500g		44g	180g
Operating Temperature	-40~85°C			
Operating Humidity	10%~90% RH			
Enclosure	Metal and polycarbonate			
Explosion Protection	EX ia IIC T4 Ga			
Ingress Protection	IP67			
Mounting	Screws		Screws, adhesive mounting or clamping ring mounting	

ST100P/ST100K

ST101

ST103

Clamping Ring Mounting

ST101 Clamping Ring Mounting

ST103 Mounting