

ST Series Wireless Temperature Sensors

The ST series wireless temperature sensors are industrial-grade sensors designed for precise temperature monitoring of industrial equipment. They offer high accuracy, ultra-low power consumption, and exceptional durability, making them ideal for long-term operation in harsh industrial environments.

The ST100P and ST100K models feature a split-type configuration, suitable for monitoring internal temperatures of pipes or equipment. These sensors support platinum resistance probes (PT100) and various thermocouple types (K, J, N, T, S, R, or E), with a temperature range from -270°C to 1600°C.

The ST101, ST103, and ST105 models feature an integrated design, ideal for surface temperature monitoring. These sensors can be easily installed using adhesive, screws, clamps, or magnetic mounts.

The sensor data is transmitted wirelessly to a remote monitoring system, allowing users to monitor the temperature and receive timely alerts, 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-free, mounted with adhesive, threaded, and clamping methods.
- Wireless** ⇒ Reliable data transmission via Bluetooth or LoRa/LoRaWAN.
- Low-powered** ⇒ Built-in battery with 5-10 years of life for normal usage.
- Ruggedized** ⇒ Waterproof, dustproof, shockproof, corrosion-resistant, and intrinsically safe; suitable for harsh industrial environment.
- Flexible** ⇒ Configurable sampling and communication periods to meet specific requirements.
- Accessible** ⇒ Remotely accessible anytime, with automatic alerts and maintenance-free operation.
- Convenient** ⇒ Bluetooth compatible and can be connected via mobile app.



Product Models

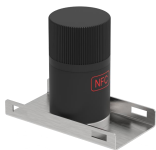
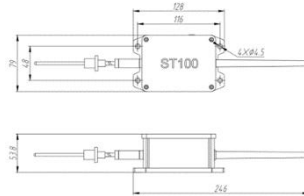
Model	Communication	Measurement Range	Application
ST100-R	Bluetooth 5.0	Maximum: -200~450°C	Internal temperature
ST100-RL	LoRa/LoRaWAN	Maximum: -200~450°C	Internal temperature
ST100-K	Bluetooth 5.0	Maximum: -200~1350°C	Internal temperature
ST100-KL	LoRa/LoRaWAN	Maximum: -200~1350°C	Internal temperature
ST101	Bluetooth 5.0	-45~125°C	Surface temperature
ST101-L	LoRa/LoRaWAN	-45~125°C	Surface temperature
ST103	Bluetooth 5.0	-200~600°C	Surface temperature
ST103-L	LoRa/LoRaWAN	-200~600°C	Surface temperature
ST105	Bluetooth 5.0	-45~125°C	Surface temperature

Specifications

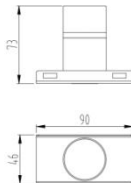
Product Model	ST100-R ST100-RL	ST100-K ST100-KL	ST101 ST101-L	ST103 ST103-L	ST105
Form Factor	Split-type		Integrated (normal temperature)	Integrated (high temperature)	Integrated (normal temperature)
Sensor Type	Platinum resistance (RTD)	Type K thermocouple	Thermal resistance	Type K thermocouple	Thermal resistance
Measurement Range	Maximum: -200~450°C	Maximum: -200~1350°C	-45~125°C (sensing element)	-200~600°C (other ranges customizable)	-45~125°C (sensing element)
Measurement Precision	±0.5°C or ±0.5% of full scale	±0.8%	±1°C	±0.8%	±1°C
Data Acquisition Period	1/2/5/10/15/20/30/60/120/240/360/480/720/1440 minutes				
Communication	ST100-R/ST100-K/ST101/ST103/ST105: Bluetooth 5.0, line-of-sight range 300m ST100-RL/ST100-KL/ST101-L/ST103-L: LoRa/LoRaWAN, line-of-sight range 3000m				
Battery	6500mAh Li/SOCL2; replaceable		ST101/ST103: 4000mAh Li/SOCL2; replaceable ST101-L/ST103-L: 6500mAh Li/SOCL2; replaceable		1200mAh Li/SOCL2; replaceable
Dimensions	128 x 79 x 54mm (L x W x H)		90 x 46 x 73mm 90 x 46 x 81.5mm (L x W x H)	70 x 40 x 565mm 70 x 40 x 573mm (L x W x H)	33 x 28.5mm (D x H)
Weight	500g		140g/150g	300g	38g
Operating Temperature	-40~85°C				
Operating Humidity	10%~90% RH				
Enclosure	Metal and polyamide with fiberglass				
Explosion Protection	EX ia IIC T4 Ga				
Ingress Protection	IP67				
Mounting	Screws		Screws, adhesive, clamping ring or magnetic mounting		



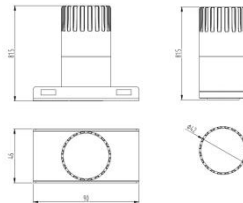
ST100



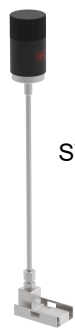
ST101



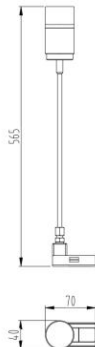
ST101-L



ST101/ST101-L Clamping Ring Mounting



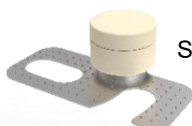
ST103



ST103-L



ST103/ST103-L Mounting



ST105

