



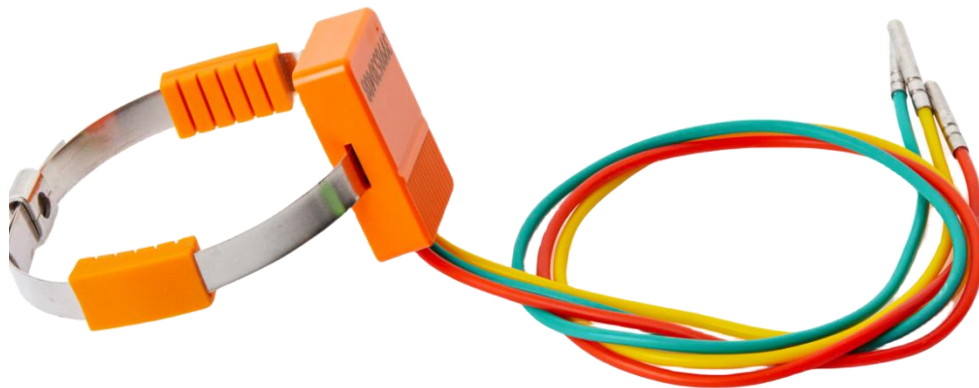
ASY Electronics (Jiaxing) Co., Ltd

Business inquiries: +86 181 5734 3325

E-mail: sales@king-sen.com Website: www.asyjx.com

Address: Room 302, Building 11, No. 79 Jinsui Road, Economic and Technological Development Zone, Jiaxing , Zhejiang P.R. China

Passive three-channel wireless temperature sensor KL-DS33WB Manual





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I、 Product Overview

The KL-DS33WB passive three-channel wireless temperature sensor is a high-precision three-channel temperature sensor featuring wireless transmission, ultra-low power consumption, and inductive power generation. It consists of three temperature sensors, a signal modulation and amplification device, a logic control circuit, a wireless communication circuit, and an antenna. This temperature sensor utilizes CT inductive power generation technology, making it universally applicable in temperature measurement scenarios with suitable electrical nodes. It requires no external power supply or battery power, offering significant advantages in product stability and ease of installation compared to externally powered temperature sensors which are difficult to deploy, and battery-powered temperature sensors which are susceptible to the impact of ambient temperature on their lifespan.

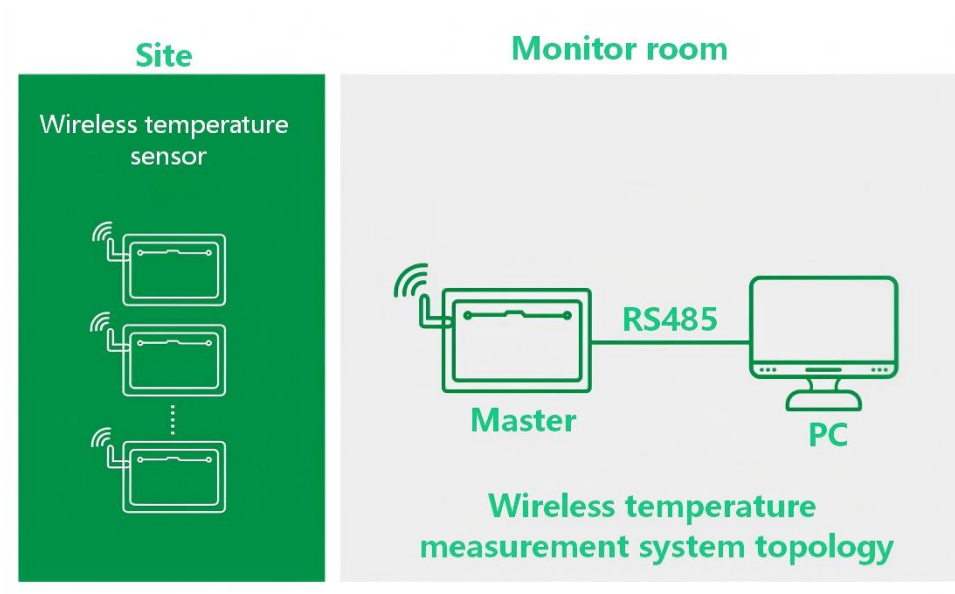
This temperature sensor is an upgraded version of the single-channel passive wireless temperature sensor product, expanding from the ability to collect temperature data from only a single node to the ability for a single sensor to simultaneously collect temperature data from three nodes. While maintaining the same performance, it saves customers costs, and market feedback has been positive. Its cost advantage is particularly significant in scenarios involving large-scale deployment of electrical node temperature monitoring.

This temperature sensor employs ultra-low power wireless communication to transmit the collected three temperature data points to a wireless temperature measurement host via a wireless network. The product is primarily used in low-voltage switchgear and similar applications.



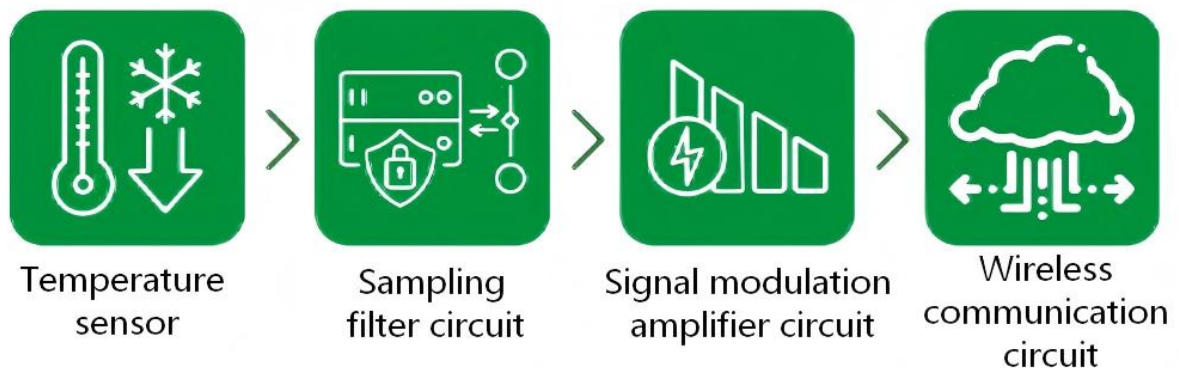
II、Wireless temperature measurement system structure

2.1 Wireless temperature measurement system structure diagram



2.2 Schematic diagram of wireless temperature sensor

Principle and structure of wireless temperature measurement sensor

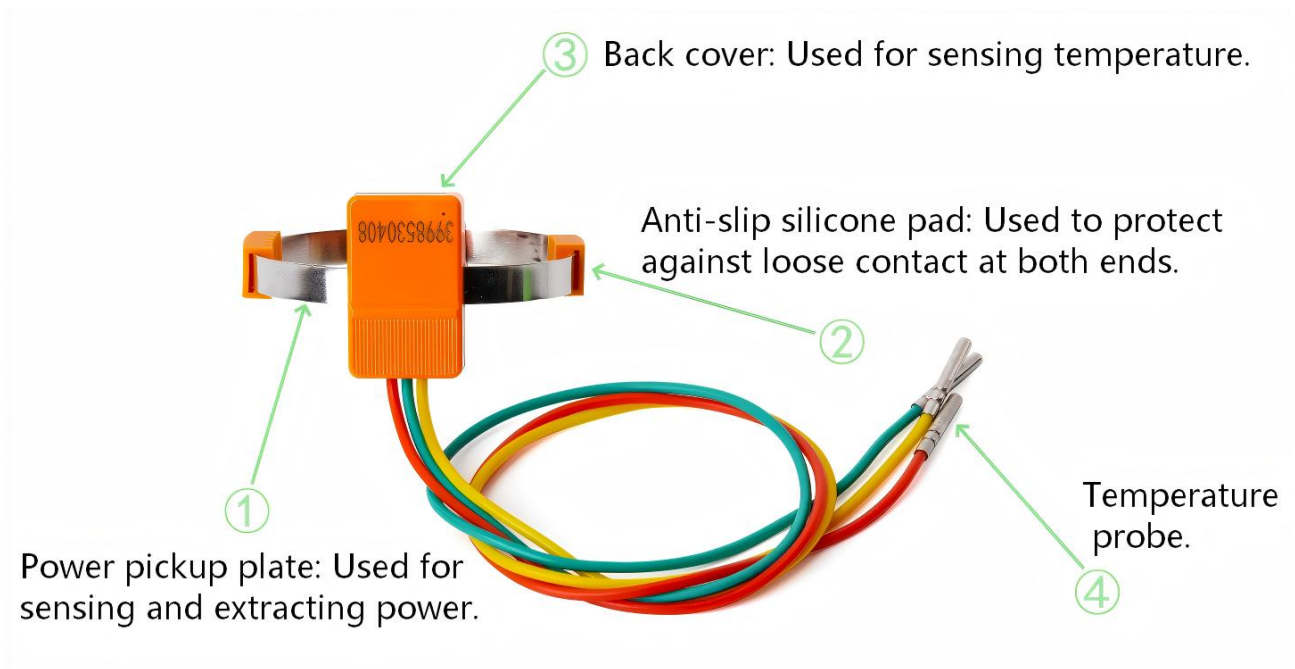




2.3 Function Introduction

Main functions	Function Introduction
Temperature	Real-time detection of the current temperature of the
Power supply	Real-time detection of the sensor's own power supply
Power is drawn from	The sensor is powered by electromagnetic induction of
Note: All data detected by the sensors are uploaded to the wireless temperature	

2.4 Sensor Structure





III、 Main technical parameters

parameter	Specification
Measurement range	-40 ~ +200°C
Measurement accuracy	±0.5°C (0~65°C), ±1°C (-40~125°C)
Number of temperature acquisition channels	3
Sampling transmission frequency	Default 10s
RF modulation mode	GFSK/LORA
Carrier frequency	433MHz/470MHz
Wireless transmission distance	≤300 meters (visible distance in open areas)
Working power supply	Inductive power supply
Starting current	>5A
Installation method	Bundled
size	31mm*22mm*11mm (Module body)



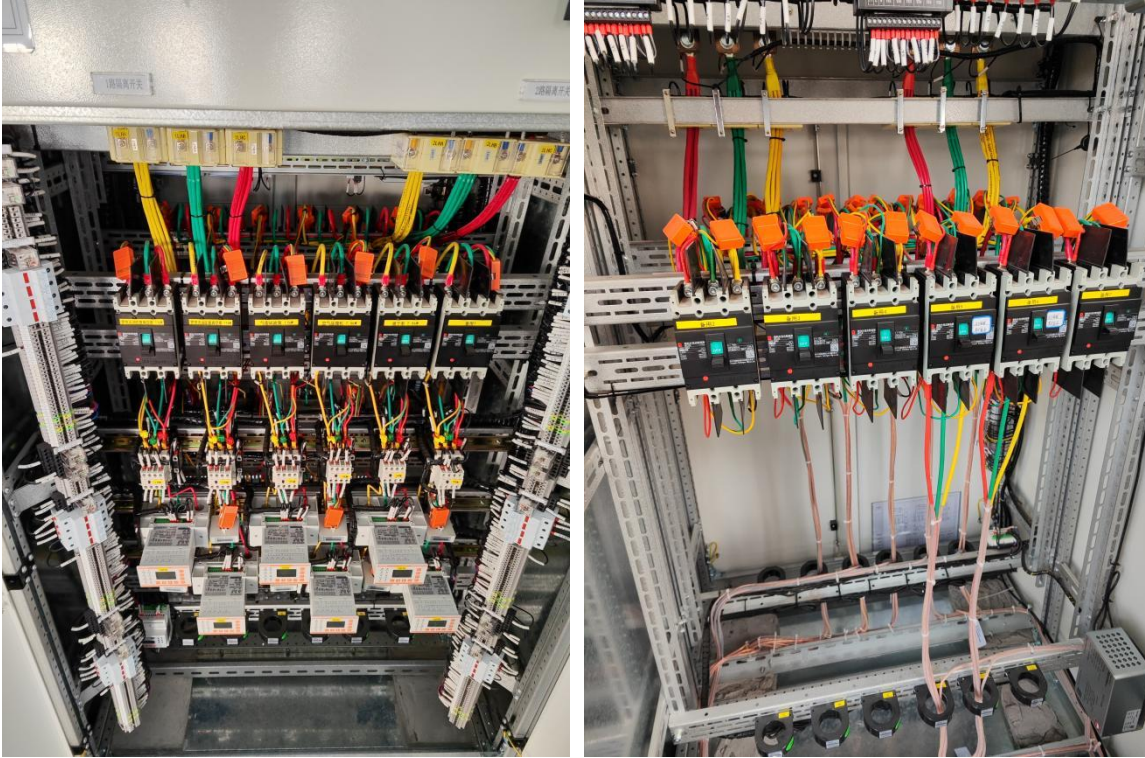
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IV、 On-site case studies



V、 Contact Us



Business Phone: 18157343325 Lila Xu

Technical Phone: 18057302496 Wailly Yang

E-mail: sales@king-sen.com

Office website: www.asyjx.com

Address: Room 302, Building 11, No. 79 Jinsui Road,
Economic and Technological Development Zone,
Jiaxing , Zhejiang P.R. China

*This information product images and technical data is for reference only, if subject to update without prior notice, the specific content of the right to interpret ASY Electronics (Jiaxing) Co., Ltd.