

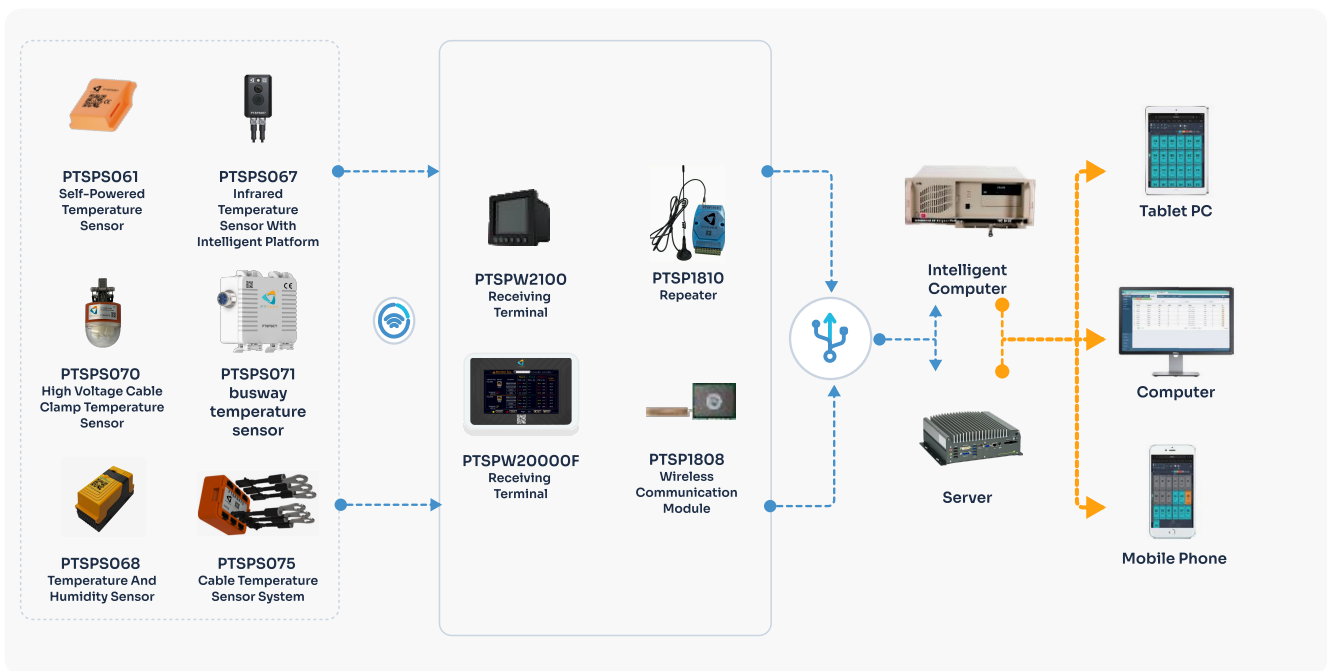
# PTSPS061 World's Smallest Self-Powered Wireless Temperature Sensor

## Product Overview

The PTSenR™ PTSPS061 Self Powered Wireless Temperature Sensor is mainly applied in temperature measurement of electrical junction which inside high and low voltage Switchgear. With 20 years of practical application and seven times technical upgrading, the sensor has been in the leading level in comprehensive aspects like product stability, anti-interference ability, practicability, lifetime, volume and so on, successfully applied in thousands of Industrial scenes globally.

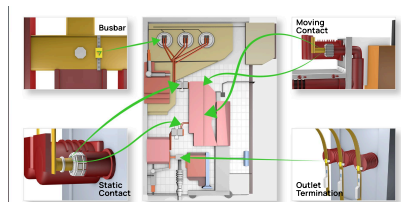
The product adopts ultra-low power Zigbee Green Protocol design, micro electromagnetic energy harvesting technology, no battery, radio frequency communication, CRC check and other technologies. It has the characteristics of green environmental protection, no maintenance, no calibration, complete electrical isolation, convenient installation, strong anti-interference ability, reliable work, small volume and so on, which can solve the problem of temperature measurement in high voltage state.

## System Architecture



## Applications

HT Switchgear



Transformer Incoming and Outgoing Line



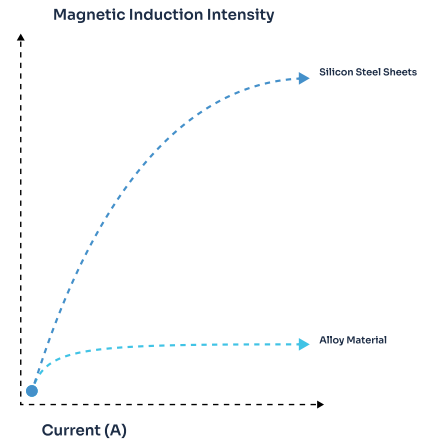
Single-Core Cable



## Characteristics

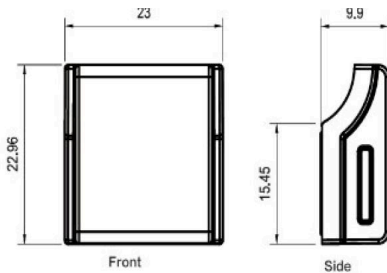
The PTSenR™ PTSPS061 Wireless Temperature Sensor is an advanced monitoring solution designed to protect electrical equipment by proactively identifying and preventing overheating. It utilizes precise sensing technology to deliver real-time temperature data across a range of electrical components, including switchgear contacts, cables, transformers, and distribution cabinets.

The sensor's unique design adapts to the specific thermal properties of materials commonly found in electrical systems. This allows it to effectively monitor components made from both silicon steel, which tends to generate excess heat, and alloy materials, known for rapid magnetic saturation. By tailoring its monitoring approach to the distinct characteristics of each material, the sensor ensures accurate temperature readings and minimizes the risk of false alarms or overlooked critical temperature elevations..



## Dimensions

(Unit: mm)



## Specifications

Power Supply Input Voltage	Voltage Free & Battery Free
Energy Harvesting	≤5A ~ 10,000A
Operational Voltage	110Vac - 1,000KV
Wireless Operating Bandwidth	433.92MHz (Zigbee)
Transmission Power	10dBm
Wireless Transmission Distance	0.4 ~ 40 meter (enclosed) / 500 meter to 1KM (open space - Line of Sight)
Communication rate	10 kbps
Temperature measurement type	Direct Contact-type
Relative Humidity (RH)	≤95%RH (non-condensing)
Storage Temperature	-40°C ~ 85°C
Operating Temperature	-40°C ~ 85°C
Temperature measuring range	-40°C ~ 125°C
Measurement accuracy	±1.0°C
Measurement interval	5 -10 Sec

Transmission interval	5 to 100 sec, the higher the temperature of the sudden change, the shorter the transmission interval
Protection level (IP)	IP68
Flame retardant grade	V0 (700°C 30 Sec)
Service life	≥20 years
Certification	EN 61000-6-2:2005+AC; EN 61000-6-4:2007+A1:2011; EN 62366-1:2014+A11:2017; EN 220, 301, 489, 62479 EN 62271-1:2021;EN 61326-1: 2021; EN 300 220 301 489-1-3 EN/IEC 61284; UL508
Communication Rate	2400 ~ 115200 bps (Default 9600bps)
Communication Protocol	Standard Modbus-RTU protocol
<b>Ordering Information</b>	
Part Number	Product Description
PTSPS061	PTSenR™ Temperature Wireless Sensor