

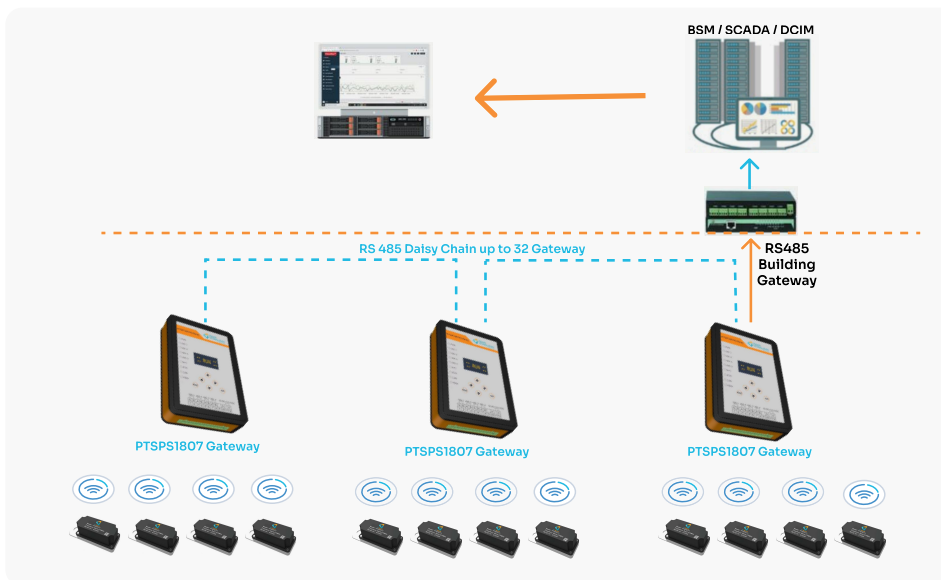
PTSPS111 Wireless Battery Temperature Sensor

Product Overview

The PTSenR™ PTSPS111 Wireless Battery Temperature Sensor is specifically developed for the SMART GRID power system. Monitoring temperature is critical in electrical systems to ensure the primary equipment operates normally. Over time, factors such as equipment manufacturing, environmental pollution, prolonged operation, overloads, contact oxidation, and arc impacts can increase contact resistance, leading to heating issues at cable connections. If uncontrolled, this heating can degrade insulator performance and reduce equipment lifespan.

The PTSPS111 sensor addresses these issues by offering a reliable solution for temperature measurement in power distribution systems, particularly in busway designs with multiple connectors. It is battery-powered, requiring no wiring or modifications to the busway's original structure. The sensor is installed at the busway connector's bolt, transmitting real-time temperature data wirelessly, which allows users to monitor operations remotely, eliminating the need for manual inspections and maintenance.

System Architecture



Applications

Busway Power Distribution Systems



Remote Real-Time Temperature Monitoring



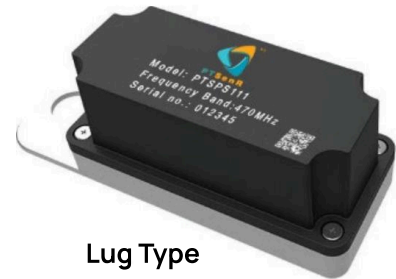
Elimination of Manual Inspections and Maintenance



Characteristics

The PTSPS111 Wireless Battery Temperature Sensor combines efficiency and reliability, powered by a high-capacity lithium battery that ensures extended operational life. It is designed to function across a broad temperature range, ensuring accurate measurements even in extreme conditions. The sensor uses direct contact-type temperature measurement for high precision and consistency, transmitting real-time data wirelessly through the Zigbee Green Protocol. This protocol offers robust performance with strong resistance to interference, ensuring reliable data transmission over long distances.

Engineered for minimal power consumption, the sensor's ultra-low power design extends battery life significantly, reducing the need for frequent replacements. Installation is simple and flexible, with options for nut or magnetic mounting, allowing for easy integration without modifying existing structures.



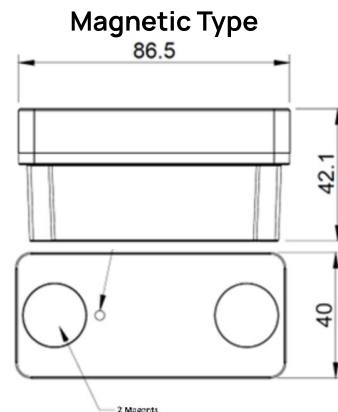
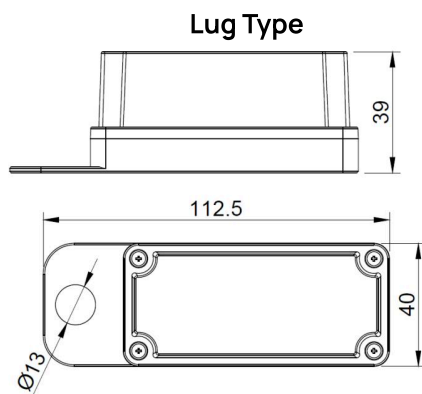
Lug Type



Magnetic Type

Dimensions

(Unit: mm)



Specifications

Power Supply Input	3.6 V (High-capacity Li/SOCI2)	Measurement Accuracy	$\pm 2^{\circ}\text{C}$, $\pm 4\%$ RH ($< 80\%$ RH); $\pm 8\%$ RH ($\geq 80\%$ RH)
Operational Voltage	3.6 V (DC) Lithium Battery C/ER26500	Resolution	0.1 $^{\circ}\text{C}$
Transmitting Current	< 90 mA	Protection Level	IP 67
Standby Current	< 5.0 μA	Flammability Rating	V 0 (700 $^{\circ}\text{C}$ 30 Sec)
Wireless Operating Bandwidth	433.92 MHz or can be customized to 2.4 GHz	Battery Service Life	3~5 years (depend on transmission frequency)
Transmission Power	10 dBm	Installation Mode	Lug or Magnetic
Wireless Transmission Distance	≤ 500 meters (unlock open space)	Lug Specification	M 12
Communication Rate	10 Kbps	Compliance	EN 62479; EN 61326; DNVGL-CG-0339; EN 220, 300, 301, 400, 489
Temperature Measurement Type	Direct Contact-type	Ordering Information	
Relative Humidity	$\leq 95\%$ RH (non-condensing)	Part Number	Product Description
Storage Temperature	-40 $^{\circ}\text{C}$ ~ 85 $^{\circ}\text{C}$	PTSPS111	PTSenR™ Wireless Battery Temperature Sensor
Operating Temperature	-40 $^{\circ}\text{C}$ ~ 85 $^{\circ}\text{C}$		
Temperature measuring Range	-40 $^{\circ}\text{C}$ ~ 125 $^{\circ}\text{C}$ or -55 $^{\circ}\text{C}$ ~ 155 $^{\circ}\text{C}$ up at next row (Optional)		