

Characteristics

The PTSPD4000W sensor operates using several advanced principles. The UHF method detects electromagnetic waves radiated by steep current pulses during partial discharge events, providing precise monitoring within the frequency range of 300MHz to 1500MHz. The ultrasonic method captures the broad spectrum of sound waves generated by local discharges, ranging from 20 KHz to 60 KHz. Additionally, the TEV method senses the excitation frequencies in the ground housing and ground wire caused by local discharge, with a frequency range between 3MHz and 100MHz. These combined monitoring techniques ensure high-dimensional sensitivity and accuracy.

This sensor is fast and easy to deploy, requiring no wiring, and boasts high anti-jamming capabilities. Its three-in-one functionality includes monitoring ultra-high frequency signals, transient ground waves, ultrasonic emissions, ambient temperature, and humidity.



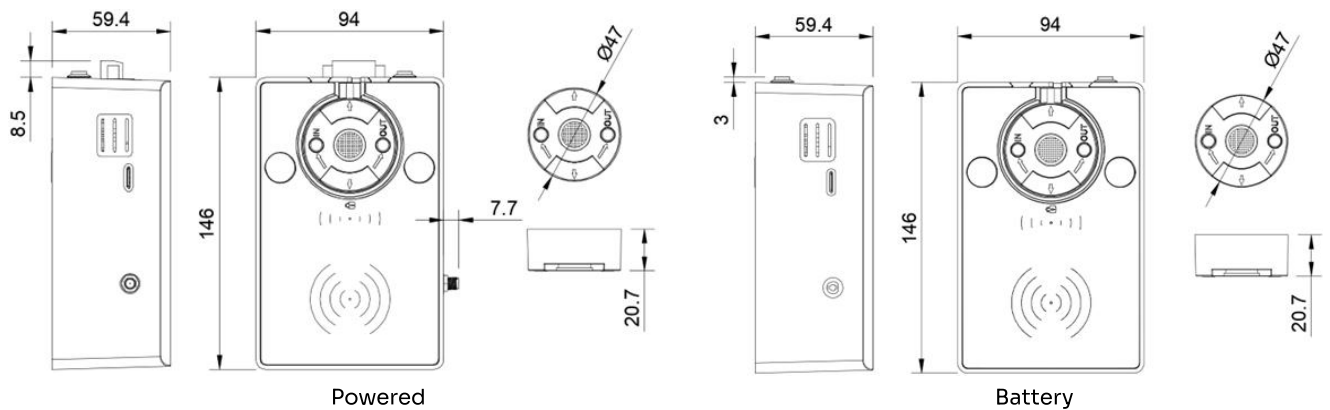
PTSPD4000W - Front



PTSPD4000W - Back

Dimensions

(Unit: mm)



Specifications

Operational Supply	3.7 V Lithium Battery / 24 VDC / CT	Relative Humidity	10% RH~95% RH (non-condensing)
Power Consumption	120 mW	Protection Level	IP 30
Type of Monitoring	Ultra-High Frequency (UHF) 300 MHz to 1500 MHz, Transient Ground Waves (TEV) 3 MHz to 100 MHz, Ultrasonic (AE) 20 kHz to 60 kHz	Installation Mode	Magnetic Suction
Application for Switchgear	3.3 kV ~ 40.5 kV	Compliance	EN 62479; EN 61326; EN 220, 300, 301, 400, 489
Wireless Operating Bandwidth	433.92 MHz	Ordering Information	
Transmission Power	≤10 dBm		
Sampling Cycles	Battery Powered: 60 mins External Powered: 20 mins	Part Number	Product Description
Wireless Transmission Distance	≤300 meters (open space)	PTSPD4000W	PTSenR™ 3 in 1 Continuous Online Partial Discharge Monitoring
Reception Sensitivity	5 dBm		
Installation	Cable room or viewing window location		
Operating Temperature	-40°C ~ 85°C		

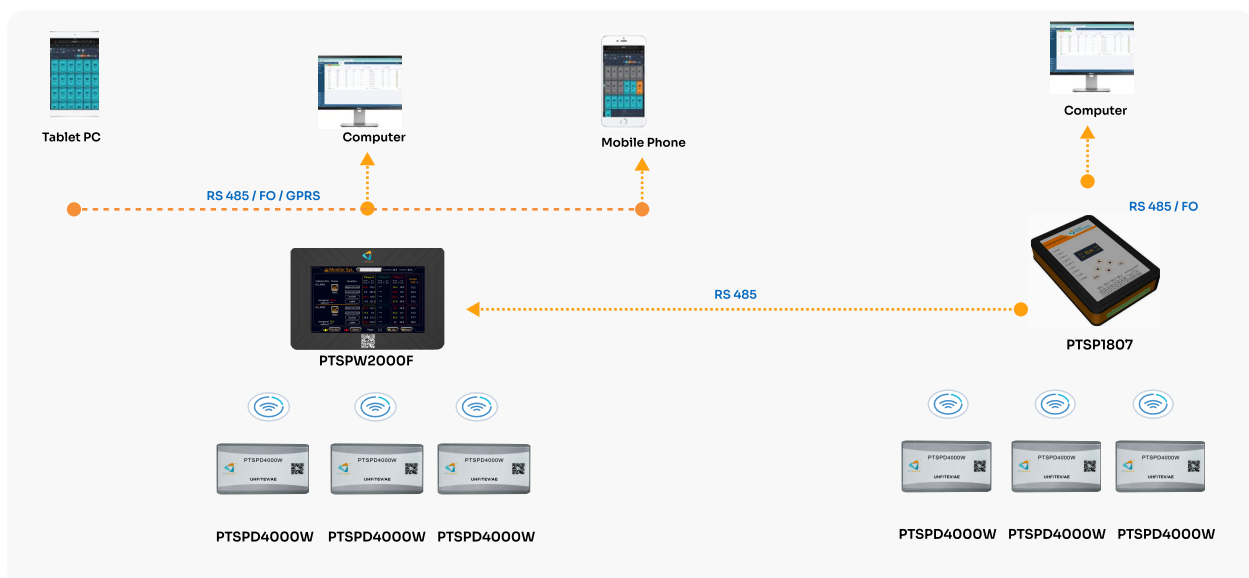
PTSPD4000W Continuous Online Partial Discharge Monitoring

Product Overview

The PTSenR™ PTSPD4000W Continuous Online Partial Discharge (PD) Monitoring Sensor is a wireless, three-in-one device designed to provide comprehensive monitoring of partial discharge. This sensor is particularly effective in identifying partial discharge phenomena caused by material aging, poor contact, current overload, and other factors that pose hidden failure risks. It is designed to operate reliably in both high and low-temperature environments, offering small size, light weight, and wide application adaptability.

The sensor employs advanced monitoring technologies including ultra-high frequency (UHF), ultrasonic (AE), and transient ground wave (TEV) for accurate and sensitive detection. It is compatible with both external power supply and battery power, addressing long-term power supply issues with its low-power microelectronics technology. The sensor boasts a lifespan greater than 10 years, with safety, reliability, and maintenance-free operation, powered by industrial batteries.

System Architecture



Applications

Air/Gas Insulated Switchgear



Ring Main Unit



Dry Type Transformer

