


# Continuous Wireless Thermal Monitoring Micro Thermal Tag, PST0010

## Product Overview

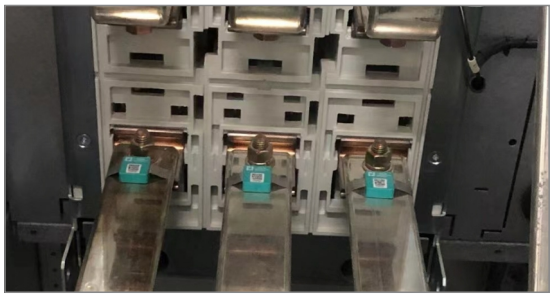
PST0010 is a battery-free wireless sensor for continuous temperature monitoring of conductors in switchgear, transformers, and other power equipment. It harvests energy from the conductor' s electromagnetic field and transmits data via 2.4 GHz LoRa, ensuring reliable, maintenance-free operation. Compact, IP68-rated, and easy to install, it provides a robust solution for critical asset protection.



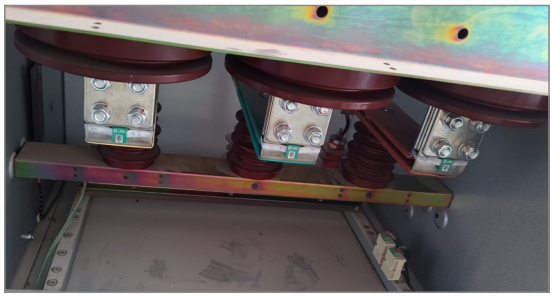
MV Cable Termination



MV Breaker Contact



LV Feeder Busbar



Busbar Joints

## Scope of Application

| | |
|---|---|
| **Applicable Current** | 3.5A~10000A |
| **Rated Supply** | Self-powered via current induction |
| **Minimum Current of measured target for sensor operation** | 3.5A (on 35 mm diameter conductor) |
| **Dimensions range of measured target** | 20 - 300mm |

## Temperature Measurement

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|---|---|
| **Measurement Principle** | Semiconductor-based surface contact sensing |
| **Measurement Range** | –40°C to +150°C |
| **Measurement Accuracy** | ±1°C (–25°C to +80°C); ±2°C (other range) |
| **Measurement Interval** | Every 5 sec |
| **Sensor Operating Temperature (Ambient)** | –40°C to +125°C |

## Wireless Transmission

| | |
|---|---|
| **RF Band** | 2.4 GHz |
| **Max Transmission Power** | ≯10 dBm (EIRP) |
| **Wireless Protocol** | 2.4GHz LoRa Q/GDW12020-2019 |
| **Transmission Interval** | 20–300 s (default 300 s, shorter with temp rise) |
| **Typical Wireless Range** | 150 m (LoS), 30 m (1 layer of metal enclosure) |

## Mechanical and Environmental

| | |
|---|---|
| **Sensor Dimensions (L×W×H)** | 24.3 × 21.3 × 8.6 mm |
| **Sensor Weight** | 9 g |
| **Ingress Protection** | IP68 (IEC 60529) |
| **Impact Resistance** | IK07 (IEC 62262) |
| **Glow-wire flammability withstand** | 960°C |
| **Installation Method** | Strap-on mounting with metal tie |
| **Design Life Expectancy** | ≥20 years |
| **Storage Temperature** | –40°C to 70°C |
| **Storage Humidity** | 0-100% RH |
| **Altitude** | 0-4000m |

## Compliance and Certification

| | |
|---|---|
| **Main Standard** | EN / IEC 61010-1, IEC/EN 62311, ETSI EN 300 328, IEC 62271 |
| **EMC Compliance** | IEC 61000-4-2/3/4/5/6/8/9 |
| **Wireless Certification** | CE / FCC |
| **Environmental Compliance** | RoHS/REACH |

# IEC 62271 Type Test with Sensor Installaed

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|---|---|
| **Power-frequency withstand voltage test** | 42 kV, 1 min |
| **Lightning impulse withstand voltage test** | 75 kV |
| **Partial discharge test** | 13.2 kV, ⩽ 50 pC |
| **Short-time withstand current test & Peak withstand current test** | 31.5 kA / 4 s, Peak 80 kA |