



SensGuard PT100 Standard Accuracy

Wireless Temperature Sensor
with External Probe

Description

The **SensGuard PT100 Standard Accuracy** is an industrial-grade wireless temperature sensor designed for precise remote temperature monitoring across a wide range of **–50°C to +200°C**.

Featuring a high-performance external RTD probe, this sensor is ideal for measuring temperatures inside liquids, industrial machinery, cold storage units, or other hard-to-reach environments. The device operates autonomously, powered by two standard AAA batteries with an exceptional lifetime of up to **5 years**. Once the batteries are depleted, they can be easily replaced by the user.

Data collected by the sensor is securely transmitted over a wireless radio link to a compatible SensGuard gateway for real-time tracking and cloud integration.

Key Features

- **Extended Measurement Range:** High-accuracy monitoring from –50°C to +200°C.
- **Long Battery Life:** Up to 5 years of operation using two standard AAA batteries.
- **User-Replaceable Power:** Simplifies long-term maintenance without requiring factory servicing.
- **Secure Transmission:** Fully encrypted radio link using AES-128 standard.
- **On-Board Diagnostics:** Built-in connection test button and multi-state LED indicator.

Typical Applications



Commercial Refrigeration:
Temperature logging in super-markets, grocery stores, and food retail display cases.



Industrial Monitoring:
Temperature tracking in process pipelines, machinery, and manufacturing setups.



HVAC & Ventilation:
Real-time air duct and environmental temperature monitoring.



Server Rooms & Data Centers:
Localized thermal monitoring of equipment racks.



Cold Chain & Logistics:
Temperature monitoring in cold storage facilities, warehouses, and walk-in freezers.



Museums & Archives:
Preserving climate-sensitive artifacts and exhibition spaces.

Operating Instructions

Powering the Sensor On/Off

To prevent battery drain during transit and storage, the sensor is shipped in a powered-off state.

- **Power On:** Press and release the **JOIN** button.
- **Power Off:** Press and hold the **JOIN** button for 10 seconds.

Device Registration & Configuration

Measurement collection requires a compatible SensGuard gateway (e.g., SensGuard TCP LR X2).

Follow these steps to register the sensor:

1. Power on the sensor by pressing and releasing the **JOIN** button.
2. Log into the SensGuard cloud portal at my.sensguard.lv and navigate to the **Connection** section.
3. Launch the **Connection Wizard** and follow the step-by-step setup instructions.
4. Once registered, the sensor becomes fully operational within five minutes (the sync time required for the gateway to apply the new hardware configuration).

Network Connection Diagnostics

You can verify the connection status at any time by pressing and releasing the **JOIN** button on the sensor body. The onboard **STATUS** LED indicator will display the current network state:

LED Pattern	Network Status
Two short flashes	No connection to the gateway, or the sensor has not been registered in the system.
One long flash	Successful connection to the gateway and the SensGuard cloud system.

Mounting Options

The sensor is designed for quick, non-destructive installation:

- **Double-Sided Adhesive Tape:** The sensor is mounted exclusively using high-bond industrial double-sided tape. This allows for rapid and secure placement on smooth surfaces (such as plastic, metal, glass, or painted walls) without the need for drilling or additional hardware.

Technical Specifications

Parameter	Specification
Sensor Element	PT100 RTD
Measurement Range (Probe)	−50°C to +200°C
Operating Temperature (Sensor Body)	−20°C to +55°C
Measurement Resolution / Step	0.1°C
Measurement Accuracy	±0.2°C
Probe Material	Stainless Steel (SUS304)
Probe Cable Length	1.0 m <i>(longer options available upon request)</i>
Measurement Interval	5 minutes
Wireless Frequency	868 MHz (ISM Band)
Transmission Power (TX Power)	+14 dBm (25 mW)
Communication Range	Up to 150 m (clear line-of-sight)
Data Encryption	AES-128
Battery Type	2 × AAA (1.5V, Lithium recommended for sub-zero temperatures)
Battery Life	Up to 5 years (at default measurement interval)
Enclosure Protection Rating	IP54
Dimensions (Sensor Body)	67 × 67 × 25 mm

Compliance & Certifications

The SensGuard PT100 is designed and manufactured in accordance with major regulatory standards:

- **CE Mark:** Fully compliant with relevant European Union directives.
- **RoHS:** Built with environmentally friendly, lead-free components.

Ordering Information

Model / Part Number	Description
SensGuard PT100	Wireless Temperature Sensor (Standard Accuracy, 1 m probe)
SensGuard TCP LR X2	Wireless Gateway / Data Collector (LAN)



SensGuard

SENSE OF SECURITY



[+371 67553110](tel:+37167553110)



office@sensmax.lv



www.sensmax.eu



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