



SensGuard MCP9808

Wireless Temperature Sensor

Description

The **SensGuard MCP9808** is an industrial-grade, ultra-compact wireless temperature sensor designed for remote temperature monitoring in environments from **–30°C to +55°C**.

Featuring a fully integrated high-precision digital temperature sensor element, this model provides excellent measurement accuracy of **±0.5°C** throughout the entire measurement range. The device is powered by an integrated **3.7V lithium battery** that offers up to **5 years** of autonomous operation. The battery is sealed inside the enclosure and is non-replaceable; once the operational lifetime has ended, the entire sensor unit must be replaced and recycled.

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

Key Features

- **Precise Temperature Monitoring:** High-accuracy temperature logging from –30°C to +55°C.
- **Long Battery Life:** Up to 5 years of autonomous operation.
- **Hermetic Design:** Rated IP68 for excellent water and dust resistance.
- **Secure Transmission:** Fully encrypted radio link using AES-128 standard.
- **On-Board Diagnostics:** Dedicated network diagnostic button and status LED.

Typical Applications



Commercial Refrigeration:
Temperature logging in supermarkets, food display cases, and cold storage rooms.



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



Cold Chain & Warehousing:
Temperature verification in pharmaceutical and grocery warehouses.



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



HVAC & Building Automation:
Environmental temperature monitoring in ventilation ducts and living 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	MCP9808 Integrated Digital Sensor
Measurement Range	−30°C to +55°C (0.1°C step)
Measurement Accuracy	±0.5°C (across the entire range)
Operating Temperature (Sensor Body)	−30°C to +55°C
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	Built-in 3.7V lithium battery (non-replaceable)
Battery Life	Up to 5 years (at default measurement interval)
Enclosure Protection Rating	IP68
Dimensions (Sensor Body)	55 × 25 × 12 mm

Compliance & Certifications

The SensGuard MCP9808 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 MCP9808	Wireless Temperature Sensor (Built-in battery)
SensGuard TCP LR X2	Wireless Gateway / Data Collector (LAN)



SensGuard

SENSE OF SECURITY



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