

## Wireless Sub-Zero Temperature Sensor - 110

Part Number: **SS3-110**



### Overview

Swift Sensors Wireless Sub-Zero Temperature Sensor includes a 1m sealed temperature probe and can measure temperatures between -100°C to +200°C (-148°F to +392°F). This sensor is ideal for monitoring temperatures in harsh environments, difficult to reach locations, and in liquids. Users can set the inspection rate and thresholds for notifications via SMS text, email and phone call.

### Simple, Plug-and-Play Deployment

Place the small battery-powered sensor in the location or on the equipment you need to monitor. The Swift Sensors Gateway instantly identifies the sensor and establishes secure communication. No wires to connect. No software to install.

Sensors are powered with 2 AAA lithium polymer batteries with an average lifespan of 6 - 8 years. Sensors can be powered on or put into sleep mode by pressing the center of the sensor. A green LED in the sensor blinks when the sensor powers on, turns solid when transitioning to sleep mode, and will blink when the "Find my Sensor" command is sent from the Console. All sensors send encrypted data to the gateway.

### Secure, Scalable, Cloud Architecture

The system is 100% cloud-managed. The gateway securely transmits sensor data to the Swift Sensors Cloud using 256-bit AES encryption. The system is scalable from a single sensor, one site application to multi-site enterprises with thousands of sensors.



### Real-time Monitoring and Analytics with Actionable Data

Swift Sensors Console allows real-time asset monitoring and sophisticated analysis from anywhere – on a computer, tablet, or smartphone. Data analytics provide operational insights and deep visibility. SMS text, email, and phone call notifications can be set based on customizable threshold values and complex rules by individual sensors or sensor groups.

### Applications

- ✓ Manufacturing and Production
- ✓ Facility Monitoring
- ✓ Pharmacies
- ✓ Datacenters
- ✓ Warehouses
- ✓ Greenhouses
- ✓ Restaurants and Food Service
- ✓ Cold Chain Monitoring
- ✓ Transportation
- ✓ Building Management

## Operational Specifications:

<b>Power</b>	1.8 - 3.6VDC, 0.045mW Average
<b>Battery Type</b>	AAA x2 Replaceable "L92" Lithium Polymer
<b>Operating Voltage</b>	1.8VDC - 3.6VDC
<b>Avg. Current Consumption</b>	18uA (Active), 500uA (Command ACK), <5uA(Sleep)
<b>Operating Temperature</b>	-40°C to +60°C (-40°F to +140°F)
<b>Battery Operating Temp.</b>	-40°C to +60°C (-40°F to +140°F)
<b>Battery Life (Average)</b>	6 - 8 Years
<b>Communication Protocol</b>	BLE/BT5 2.4Ghz
<b>BLE Chipset</b>	nRF52840
<b>TX Strength</b>	Default +8dBm
<b>Range</b>	70m - 90m (250ft - 300ft) Line-of-Sight 30m - 45m (100ft - 150ft) Non Line-of-Sight
<b>Encryption</b>	128-Bit AES Encryption
<b>Button Press</b>	Click to turn on. Press and Hold 2 sec to put in sleep mode
<b>LED</b>	Green LED: 2 sec. blinking when turning on Green LED: 2 sec. solid when entering sleep mode
<b>Find My Sensor</b>	Command from Console to blink sensor LED
<b>Weight</b>	224g (8 oz, including probe)
<b>Dimensions</b>	77.5mm x 57.5mm x 44mm (2.26in. x 1.73in. x 0.73in.)
<b>Enclosure Material</b>	ABS PA-765+
<b>IP Rating</b>	IP68 Rating on Cable/Probe Junction
<b>Cable Dimensions</b>	1-Meter with Silver-Plated-Copper FEP, 28-30AWG
<b>Probe Dimensions</b>	5mm x 2mm Diameter Probe Capsule 304.8mm (12") FiberGlass or PTFE Leads Silver-Plated-Copper
<b>Certifications</b>    	FCC ID: X8WBT840F IC ID: 4100A-BT840F CE Compliance: IEC 61010-1



### Operational Specifications Cont.:

<b>EMC Compliance</b>	FCC Part 15 Class B
<b>Flammability Rating</b>	UL94-0V
<b>Warranty</b>	1-year

### Measurements Specs: Temperature (C)

<b>Measurement Range</b>	-100°C to +200°C (-148°F to +392°F)
<b>Accuracy</b>	0.25°C (-75°C to +150°C), 0.5°C Below -75°C and Above 150°C
<b>Precision</b>	0.01°C
<b>Inspection Rate</b>	1 - 30 Minutes, 5-Minute Default

### Swift Sensors Gateway

The Swift Sensors Gateway collects encrypted data from sensors located within the specified communication range (< 90m/300ft) and then transmits the sensor data to the Swift Sensors Cloud through either Ethernet, Wi-Fi, or cellular. The gateway auto-detects all sensors within range and will immediately establish secure communication without any user configuration or setup. Each gateway can support up to 150 Series 3 sensors.

### Swift Sensors Console

All sensor data is logged and stored in the Swift Sensors Cloud. The Swift Sensors Console is configured to monitor and track all sensor data in the cloud. Multiple thresholds and alerts can be set separately for each sensor to supply notification via SMS text, email, or phone call. The console can be viewed in a web browser on a computer, tablet, or smartphone.

No programming is required to configure the console. An API to the Swift Sensors Platform allows integration with other data sources and 3rd-party data analytics tools.