

## Wireless Food Probe

### General Description

The Wireless Food Probe assesses the temperature of solid or liquid foods to ensure they are safe and ready-to-eat. Equipped with a leaded needle probe, the device measures temperatures up to 260°C (500°F) and accurately reports the internal temperature of cooked or refrigerated food. Temperatures are displayed on the device's screen and recorded in sensor portal software, creating an easy-to-read log of current and past readings.

- 4 digit temperature display
- Water resistant IP67 rated - wipe down ready case.
- Record and display buttons to transmit and view temperature readings.
- Record session capable to actively monitor individual cook cycles.
- Display units: C or F.
- Ships with high temp metal braided lead. T-handle lead optional.

### Principle of Operation

The Food Probe utilizes an RTD temperature probe to provide long-term, highly accurate temperature readings. The sensor features an on-unit display and two buttons. When pressed, the Display button will provide a new temperature reading that will not be reported to the sensor portal. Momentarily pressing the Record button will record and then transmit a single data point. When the Record button is held down, the display will activate, and the sensor will start a continuous data recording session based on configurations in the sensor portal.

### Example Applications

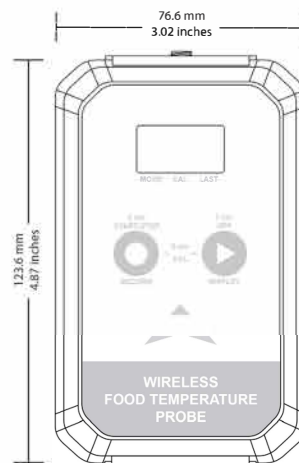
- Ovens and cooking device monitoring
- Food temperature monitoring
- Food Service management
- Many additional applications

### Sensor Features



- Wireless range of 1000+ feet through 12+ walls \*
- Frequency-Hopping Spread Spectrum (FHSS)
- Superior interference immunity
- Superior power management for longer battery life \*\*
- Encrypt-RF® Security
- Datalogs 2000 or more readings if gateway connection is lost (non-volatile flash, persists through a power cycle):
  - 10-minute heartbeats = ~ 22 days
  - 2-hour heartbeats = ~ 266 days
- Over-the-air updates (future proof)

\*Actual range may vary depending on environment and antenna type.

\*\*1+ year typical life on 2 AAA batteries. Battery life is determined by sensor reporting frequency, battery type, and other variables.



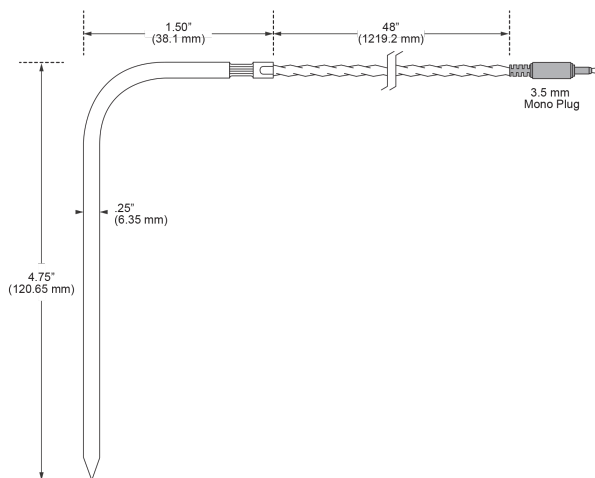
## Food Probe (Device Only) Technical Specifications

Part Numbers	MNS2-9-W2-TS-FP (900 MHz) MNS2-8-W2-TS-FP (868 MHz) MNS2-4-W2-TS-FP (433 MHz) MNS2-94-W2-TS-FP (940 MHz)
Supply voltage	2.0–3.8 VDC
Current consumption	0.2 $\mu$ A (sleep mode), 0.7 $\mu$ A (RTC sleep), 570 $\mu$ A (MCU idle), 2.5 mA (MCU active), 5.5 mA (radio RX mode), 22.6 mA (radio TX mode)
Operating temperature range (board circuitry and batteries)	-18°C to 55°C (0°F to 130°F) using alkaline -40°C to 85°C (-40°F to 185°F) using lithium
Optimal battery temperature range (AAA)	+10°C to +50°C (+50°F to +122°F)
Datalogging	Datalogs 2000 or more readings if gateway connection is lost (non-volatile flash, persists through the power cycle): - 10-minute heartbeats = ~ 22 days - 2-hour heartbeats = ~ 266 days
Wireless range	1,200+ ft non-line-of-sight (365+ m)
Enclosure	IP-67 rated case
Security	Encrypt-RF® (256-bit key exchange and AES-128 CTR)
Weight	4.2 oz (119 g)*
Certifications	<div>   Industry Canada </div> 900 MHz product; FCC ID: ZTL-G2SC1 and IC: 9794A-G2SC1. 868 and 433 MHz product tested and found to comply with: EN 300 220-2 V3.1.1 (2017-02), EN 300 220-2 V3.1.1 (2017-02) and EN 60950

\* With 2x AAA alkaline batteries and without the temperature probe.

## Power Options

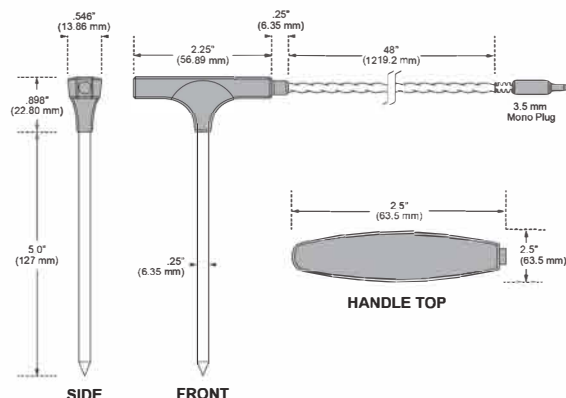
This sensor is powered by two replaceable AAA sized batteries (included with purchase).



Food Probe with Included Probe Technical Specifications	
Part Number	MNA-FP-CP
Temperature Range	-50.0°C to 260.0°C (-58.0°F to 500.0°F)*
Accuracy	± 0.5° C (± 0.90° F)
Calibrated Accuracy	± 0.3° C (± 0.54° F)
Resolution	0.1° C (0.1° F)
Response Time (90% of Actual)	Still Air: 30 Seconds, Water: 2 Seconds**
Temperature Element	RTD PT1000 1 kOhm @ 0° C, Alpha Class 'B'
Probe Tip Material	Stainless Steel (SS316)
Probe Connector	3.5mm Mono Plug
Weight	0.64 oz (18 g)
Length	54.25 inches
Width	0.25 inches
Lead Wire Construction	PTFE plug and collet crimp seals the stainless probe. [2] 26 AWG, Stranded nickel clad copper wires, teflon insulation, type ET style, with protective woven SS overbraid, 90% min. coverage on braiding.

\* Temperature rating for the SS316 tip, handle, and wire. Plug molding maximum temperature rating +107° C (+225° F).

\*\* Response Time depends on how long it takes the medium to bring the probe body up to actual temperature.



## Optional T- Handle Food Probe Technical Specifications

Part Number	MNA-FP-TH
Temperature Range	-40.0°C to 246.0°C (-40°F to 475.0°F)*
Accuracy	± 0.5° C (± 0.90° F)
Calibrated Accuracy	± 0.3° C (± 0.54° F)
Resolution	0.1° C (0.1° F)
Response Time (90% of Actual)	Still Air: 30 Seconds, Water: 2 Seconds**
Temperature Element	RTD PT1000 1 kOhm @ 0° C, Alpha Class 'B'
Probe Tip Material	Stainless Steel (SS316)
Probe Connector	3.5mm Mono Plug
Weight	1.64 oz (46 g)
Length	56.398 inches
Width	0.25 inches
Lead Wire Construction	2C PTFE insulated cable with SS overbraid FEP outer jacket

\* Temperature rating for the SS316 tip, handle, and wire. Plug molding maximum temperature rating +107° C (+225° F).

\*\* Response Time depends on how long it takes the medium to bring the probe body up to actual temperature.

## Commercial Grade Sensors

Commercial grade sensors are designed for applications in ordinary environments (normal room temperature, humidity and atmospheric pressure). Do not use these sensors under the following conditions as these factors can deteriorate the product characteristics and cause failures and burnout.

- Corrosive gas or deoxidizing gas: chlorine gas, hydrogen sulfide gas, ammonia gas, sulfuric acid gas, nitric oxides gas, etc.
- Volatile or flammable gas
- Dusty conditions
- Low-pressure or high-pressure environments
- Wet or excessively humid locations
- Places with salt water, oils chemical liquids or organic solvents
- Where there are excessively strong vibrations
- Other places where similar hazardous conditions exist

Use these products within the specified temperature range. Higher temperature may cause deterioration of the characteristics or the material quality.

For information about our products or to place an order, please contact our sales department at: [sales@iox-connect.com](mailto:sales@iox-connect.com)

Visit us on the web at [www.iox-connect.com](http://www.iox-connect.com)



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