Remote Monitoring for Business

ALTA® Wireless Food Probe

General Description

The ALTA® Wireless Food Probe measures the temperature of solid or liquid foods to ensure they are safe and ready to eat. The probe accurately reports the internal temperature of cooked or refrigerated food.

Key Features

▸ Temperature is displayed on a 4-digit digital screen
▸ Measures up to 260°C (500°F) Display units: C or F.
▸ Resolution: 0.1° C (0.1° F)
▸ Accuracy:
  ▸ Uncalibrated: ± 0.5°C (± 0.90°F)
  ▸ Calibrated: ± 0.3°C (± 0.54°F)
▸ Configurable thresholds for critical condition monitoring

Principles of Operation

The ALTA Wireless Food Probe uses 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 iMonnit.

Momentarily pressing the Record button will record and transmit a single data point to the gateway. When the Record button is held down, the display will activate, and the sensor will start a continuous data recording session based on a user-configurable time interval or Heartbeat.

On every Heartbeat, the current temperature measurement is sent to the gateway, making the data available in iMonnit or another approved data service. The data in iMonnit will enable the direct generation of SMS texts, emails, or voice call notifications or alerts based on your settings.

Example Applications

▸ Ovens and cooking device monitoring
▸ Food temperature monitoring
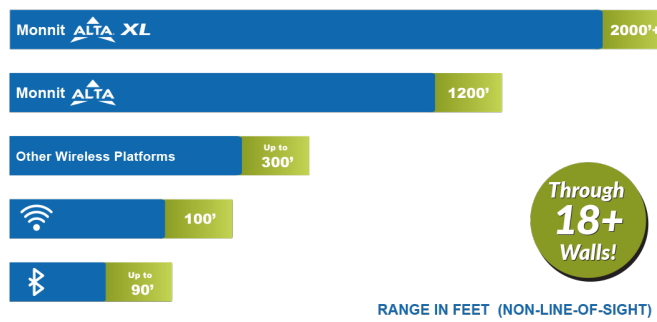▸ Food Services management
▸ Additional applications

Features of Monnit ALTA Sensors

• Wireless range of 2,000+ feet through 18+ walls[1]
• Frequency-Hopping Spread Spectrum (FHSS)
• Best-in-class interference immunity
• Best-in-class power management for longer battery life[2]
• Encrypt-RF® Security (Diffie-Hellman Key Exchange + Advanced Encryption Standard (AES)-128 Cipher Block Chaining (CBC) for sensor data messages)
• Sensor logs 2000 to 4000 readings if the gateway connection is lost (non-volatile flash, persists through power cycling):
    - 10-minute Heartbeats = ~ 22 days
    - 2-hour Heartbeats = ~ 266 days
• Automatic over-the-air updates to sensor firmware (future-proof)
• Free iMonnit Basic Online Wireless Sensor Monitoring and Notification System to configure sensors, view data, and send alerts via SMS text, email, and voice call
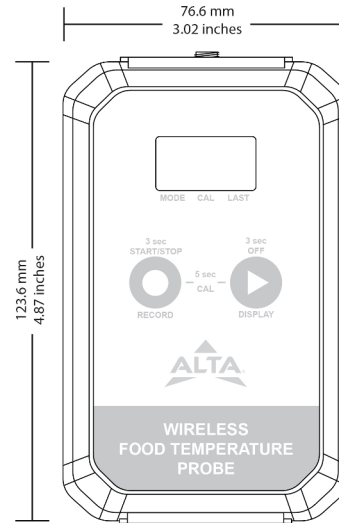
1 Actual range may vary depending on the environment and gateway.

2 Battery life is determined by the sensor reporting frequency and other variables. Other power options are also available.

Wireless Range Comparison

Monnit ALTA XL	2000'+
Monnit ALTA	1200'
Other Wireless Platforms	Up to 300'
(WiFi)	100'
(Bluetooth)	Up to 90'

Through 18+ Walls!

RANGE IN FEET (NON-LINE-OF-SIGHT)

> **The sensor reports the temperature (in °C or °F) of the probe.**

76.6 mm
3.02 inches

123.6 mm
4.87 inches

Technical Specification | ALTA® Wireless Food Probe

Food Probe	Battery	2x 1.5V AAA Alkaline, 1500 mAh, (standard) 2x 1.5V AAA Lithium, 3000 mAh, (optional)
	Battery Life	10+ years expected
	Operating temperature range with given power sources[1]	-18°C to 55°C (0°F to 130°F) - AAA Alkaline Batteries -25°C to 60°C (-13°F to 140°F) - AAA Lithium L91 Batteries
	Wireless antenna type	1/4-wave, 20 gauge wire whip, 3.5" (900/868MHz), 7"
	Weight	4.2 ounces (119 g)[2]
	Enclosure	IP-67 rated case
ALTA Wireless	Data logging	Sensor logs 2000 to 4000 readings if gateway connection is lost (non-volatile flash, persists through power cycling): 10-minute Heartbeats = ~22 days - 2-hour Heartbeats = ~266 days
	Wireless protocol	ALTA Proprietary Frequency-Hopping Spread Spectrum (FHSS)
	Wireless transmission power (EIRP)	50 mW (900MHz), 25 mW (868 MHz), 10 mW (433 MHz)
	Wireless range	2,000+ ft. through 18+ walls with the ALTA XL® Gateway
	Security	Encrypt-RF® (256-bit key exchange and AES-128 CTR)
General	Battery voltage range	2.0 to 3.8 VDC
	Operating altitude (non-pressurized environments)	-15.2 to 1,982 m (-50 to 6,500 ft)[3]
	Storage altitude (non-pressurized environments)	-15.2 to 3,048 m (-50 to 10,000 ft)[3]
	Operating humidity	5 to 85% RH (non-condensing)
	Certifications	900 MHz sensors: **FCC ID: ZTL-G2SC1** and **IC: 9794A-G2SC1**. 868 and 433 MHz sensors tested and comply with: **EN 55032**: 2015/A11:2020; **EN 55035**:2017/A11:2020; **ETSI EN 300 220** V3.2.1 (2018-06); **ETSI EN 301 489-3** V2.2.0. (2021-11); and **ETSI EN 303 645**. All sensors tested and comply with: **EN 61010-1** and **EN 60950** and meet **RoHS 2015/863** and **REACH 224** (June 2022), according to **IEC 63000**:2016/AMD1:2022.

1. Operating below 0°C (32°F) degrees will reduce battery life.
2. With 2x AAA alkaline batteries and without the temperature probe.
3. Operating and storage altitude without DC power supply is -30.48 to 9144 m (-100 to 30000 ft).
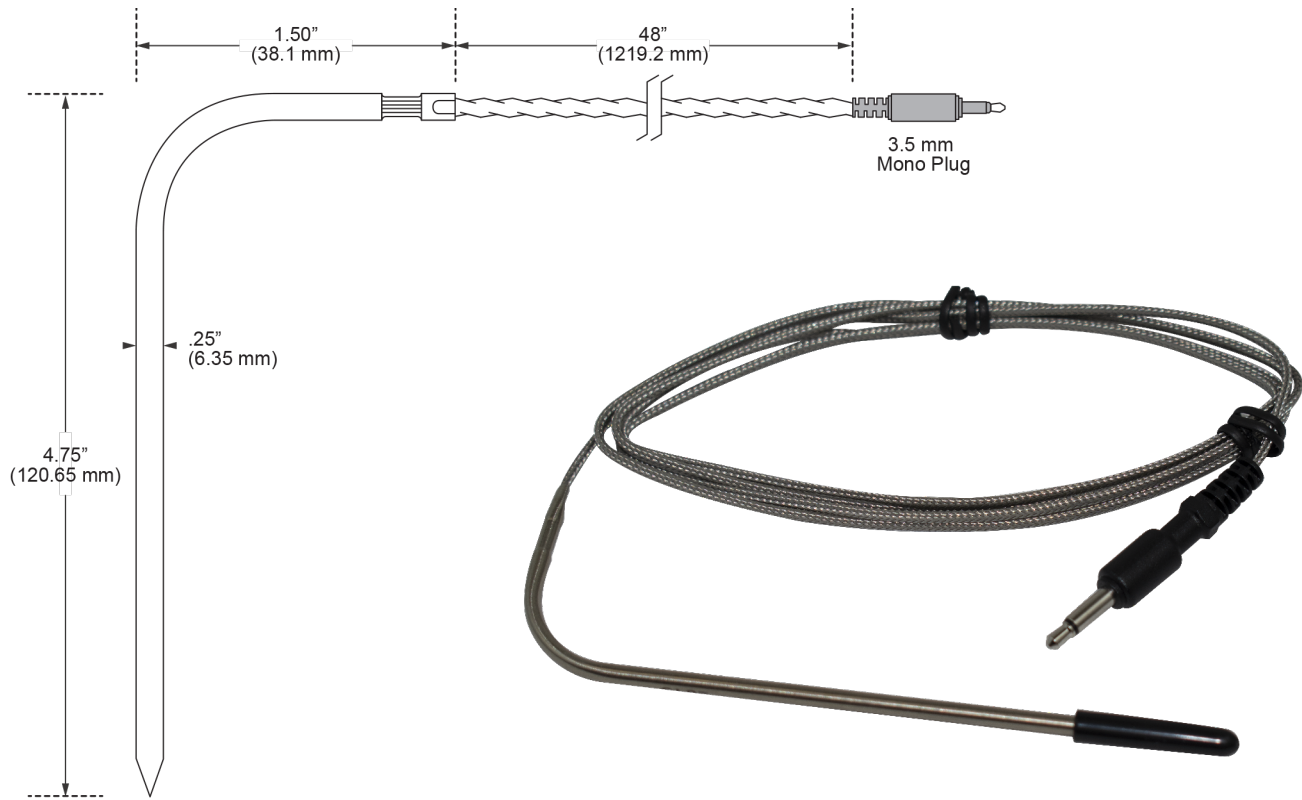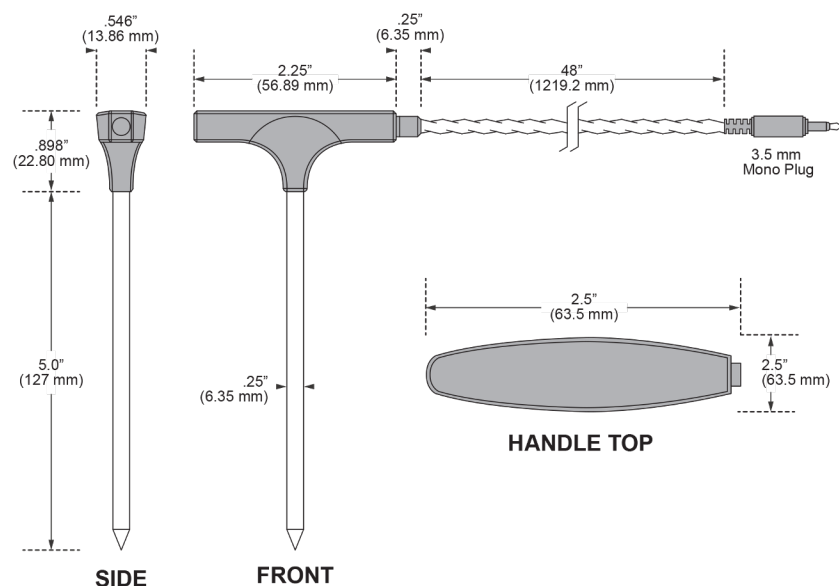
Technical Specifications | Food Probe with Included Probe

Part Number	MNA-FP-CP
Temperature Range	-50.0°C to 260.0°C (-58.0°F to 500.0°F)[1]
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[2]
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 staineless probe. [2] 26 AWG, Stranded nickel clad copper wires, teflon insulation, type ET style, with protective woven SS overbraid, 90% min. coverage on braiding.

1. Temperature rating for the SS316 tip, handle, and wire. Plug molding maximum temperature rating 107°C (225°F).
2. Response Time depends on how long it takes the medium to bring the probe body up to actual temperature.

Note: Only the probe is submersible. The lead wire is not waterproof. DO NOT submerge the the lead wire.

.546"
(13.86 mm)

.25"
(6.35 mm)

2.25"
(56.89 mm)

48"
(1219.2 mm)

.898"
(22.80 mm)

3.5 mm
Mono Plug

5.0"
(127 mm)

.25"
(6.35 mm)

2.5"
(63.5 mm)

2.5"
(63.5 mm)

HANDLE TOP

SIDE

FRONT

Technical Specifications | Optional T- Handle Food Probe	
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

1. Temperature rating for the SS316 tip, handle, and wire. Plug molding maximum temperature rating 107°C (225°F).
2. Response Time depends on how long it takes the medium to bring the probe body up to actual temperature.

Note: Only the probe is submersible. The lead wire is not waterproof. DO NOT submerge the the lead wire.

Commercial-Grade Sensors

Monnit 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 oxide 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 temperatures may cause deterioration of the characteristics or the material quality.

Industrial-Grade Sensors | Type 1, 2, 4, 4X, 12, and 13 NEMA-Rated Enclosure

Monnit's industrial sensors are enclosed in reliable, weatherproof NEMA-rated enclosures. Our NEMA-rated enclosures are constructed for indoor and outdoor use and protect the sensor circuitry against the ingress of solid foreign objects like dust and the damaging effects of water.

- Safe from falling dirt
- Protects against wind-blown dust
- Protects against rain, sleet, snow, splashing water, and hose-directed water
- Increased level of corrosion resistance
- Will remain undamaged by ice formation on the enclosure