ALTA® WIRELESS SENSORS
GENERAL INFORMATION GUIDE

ALTA By MONNIT

Remote Monitoring for Business

TABLE OF CONTENTS

CAUTION SYMBOL EXPLANATION

The following caution symbol appears on the product. This symbol indicates caution and a potential risk of danger. Carefully read the warning attached with each symbol.

I. ABOUT ALTA WIRELESS SENSORS

GENERAL DESCRIPTION

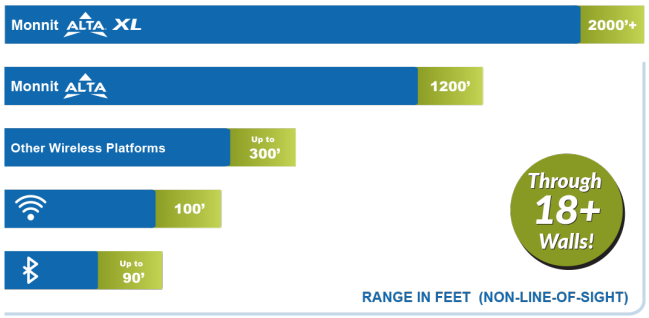
Monnit ALTA® Sensors are global game changers for nearly any industry application like food services, manufacturing, facility management, agriculture, petrochemical, logistics, pharmaceutical, and health care. There are 80+ types of ALTA Wireless Sensors, allowing for remote monitoring of many different conditions.

They have a long wireless range of 1,200+ feet through 12+ walls when connected to an ALTA Gateway. or 2,000+ feet through 18+ walls when connected to an ALTA XL® Gateway. Each sensor uses a novel scheme to encrypt data, so privacy and authenticity are guaranteed without direct provisioning.

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 set alerts to be sent via SMS text and email

Wireless Range Comparison



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.

SENSOR CLASSES

COMMERCIAL

ENTERPRISE

INDUSTRIAL

II. GENERAL SETUP PROCEDURES

It is important to understand the setup procedure for activating your ALTA Sensor. If performed out of sequence, your sensor may have trouble communicating with its gateway. Please perform the steps below in the order indicated to ensure best results.

1. **Set up the Monnit Software of choice. (Create an account if this is the first time.)**
    a. iMonnit Premiere
    b. iMonnit Enterprise
    c. iMonnit Express
    d. Monnit Mine
2. **Add the gateway to iMonnit or other software, then power it up.**
3. **Add and power up each sensor and verify they check into a gateway and software.**
4. **Install each sensor in a final location.**

Note: ALTA Sensors will perform a handshake when the sensor will send 10 transmissions 30 seconds apart before engaging the configured interval or Heartbeat.

Please refer to the gateway's user guide for more information relating to gateway setup procedures.

III. BATTERIES AND INSTALLATION

ALTA Wireless Sensors contain various battery types. The type of battery you use will depend on the class of sensor and can come preinstalled or have a required installation.

- ALTA Commercial Sensors are powered by removable CR2032 coin-cell batteries.
- ALTA Enterprise Sensors are powered by two removable AA (1.5V) batteries.
- ALTA Industrial Sensors are powered by a unique single AA (3.6V) battery.

You can purchase additional sensor batteries from Monnit directly. We encourage customers to recycle all old batteries.

Note: ALTA Sensors retain their configurations in non-volatile memory (without power). When batteries are replaced, the sensor will continue to function and provide data as previously configured.

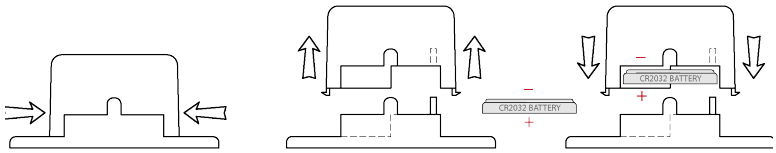
INSTALLING/REPLACING BATTERIES

Commercial Batteries

One replaceable, non-rechargeable, 3.0V button cell battery (included with purchase) powers ALTA Commercial Sensors. The typical battery life is up to two years for most sensor types.

To replace the battery in a commercial sensor, make sure that removing power will not interfere with any upcoming data message. Also, if your sensor is attached to any other systems or voltages, we recommend disconnecting this sensor or powering off the other system.

WARNING: CR2032 batteries must be oriented correctly to avoid irreparable damage to the sensor.



Pinch
(press in on the sides)

Pull
(sensor away from base)

Press
(sensor back into base)

Pinch the enclosure and pull the lid away from the base to install batteries, which power on the sensor. Then, insert the new button cell battery in the carriage with its smooth positive side down toward the sensor base, and the negative (textured) side up toward the sensor label.
Press the lid back into the base to close.

Note: If the battery is inserted upside down, it will likely immediately discharge and need to be replaced.

Enterprise Batteries

Two replaceable, non-rechargeable, 1.5V AA-sized batteries (included with purchase) power ALTA Enterprise Sensors. The typical battery life is up to 10 years for most sensor types.

Some enterprise sensors are also available with a line-power option. The line-powered version has a barrel power connector, allowing it to be powered by a standard 4.5–12.0V power supply. The line-powered version also uses two standard 1.5V AA batteries as backup for uninterrupted operation during a line-power outage. Power options must be selected at the time of purchase, as the internal hardware of the sensor must be changed to support the selected power requirements.

To install batteries, open the sensor lid by removing the four screws on the enclosure. Then insert the new AA batteries in the carriage and close the lid by reinserting the four lid screws.

WARNING: ONLY install new batteries from the same manufacturer when replacing batteries in enterprise sensors.

To replace the batteries in an enterprise sensor, make sure that removing power will not interfere with any upcoming data message. Also, if your sensor is attached to any other systems or voltages, we recommend disconnecting this sensor or powering off the other system.

Industrial Batteries

The ALTA Industrial Sensor comes with a unique, non-rechargeable, single AA (3.6V) battery preinstalled (Do not disassemble sensor power on the device). The typical battery life is up to 10 years for most sensor types.

This sensor has an On / Off / Status button with red and green LED indicators. To activate the sensor or to confirm the sensor is on, simply press and release the button. The indicator will turn green as long as the button is pressed. When the button is released, the indicator will turn off for two seconds and report the following status:

Power On — If the sensor was off, the indicator turns green for two seconds.

Talk Now — If the sensor is on, the indicator flashes green twice in one second after the gateway acknowledges the latest data from the sensor. No additional flashing will occur if the sensor isn't connected to a gateway.

Power Off—To deactivate the sensor, press and hold the button for more than three seconds before releasing it. The indicator is green when pressed, then turns red to indicate the sensor is off.

For more about how to use this sensor's power button, see this article in the Monnit Knowledgebase.

WARNING: The new replacement battery MUST be a single ER14505M, 3.6 Volt, $LiSO_2$ AA battery.

This ER14505M can only be manufactured by RAMWAY, TITUS, or GMB POWER.

Note: Holding the button for a long time will result in the sensor turning off.

Special Note: tighten the screws to 1 Newton-meter (8 pound-inch) in a criss-cross or X pattern. Do not over tighten.

Monnit recommends purchasing replacement batteries from Monnit directly. To replace the batteries in an industrial sensor, make sure that removing power will not interfere with any upcoming data message. Also, if your sensor is attached to any other systems or voltages, we recommend disconnecting this sensor or powering off the other system. Then open the lid and disconnect the old battery. Connect the new industrial battery and close the lid.

SENSOR PLACEMENT

Place each ALTA Sensor or Meter within 1,200+ feet of an ALTA Gateway and 2,000+ feet of an ALTA XL Gateway. Sensors should be installed to avoid transmissions through a lot of metal or concrete and repositioned to avoid such obstacles if radio communication is spotty. A sensor should also be placed at least one foot from the gateway and other sensors.

Except for ALTA-ISX® Sensors under the specific conditions they are approved, ALTA Sensors should NOT be placed where they can be exposed to volatile or flammable gas. An ALTA Sensor should be deployed where it will be protected from operating temperatures outside those disclosed in the data sheet. ALTA Commercial and Enterprise Sensors aren't recommended for use in fridges and freezers. Although a leaded sensor is preferred, an ALTA Industrial Sensor may be deployed in a refrigerator or freezer. However, the wireless range of the sensor will be significantly reduced.

Since the electronics of an Industrial Sensor are sealed within the sensor housing, the On/Off/Status button is there for your convenience. If you aren't using the sensor, leave the button in the Off position to preserve battery life. If the sensor needs to be reset, you can cycle the power by turning it off and waiting 30 seconds before powering it back on.

ALTA Commercial and Enterprise Sensors are not designed for wet environments, environments with fluctuating or excessive humidity, or where they will be exposed to corrosive or deoxidizing gas or vapor (e.g., chlorine gas, hydrogen sulfide gas, ammonia gas, sulfuric acid gas, nitric oxide gas, etc.). Commercial sensors also should not be placed in: excessively dusty locations; places with salt water, oils, chemical liquids, or organic solvents; low- or high-pressure environments; areas with powerful vibrations; or in other places where similar hazardous locations exist.

Industrial sensors, which are weather-tight, may be deployed both outdoors and indoors. The enclosure of the industrial sensor protects against falling dirt, wind-blown dust, rain, sleet, snow, splashing water, and hose-directed water. The industrial sensor also provides increased corrosion resistance and remains undamaged by ice formation.

WARNING: In placing the sensor, be aware that it has a mechanical impact rating of IK06, meaning that the housing protects the sensor from a mechanical impact of one Joule. This is roughly equivalent to dropping a solid metal sphere weighing 500 grams from 20 centimeters onto the respective housing.

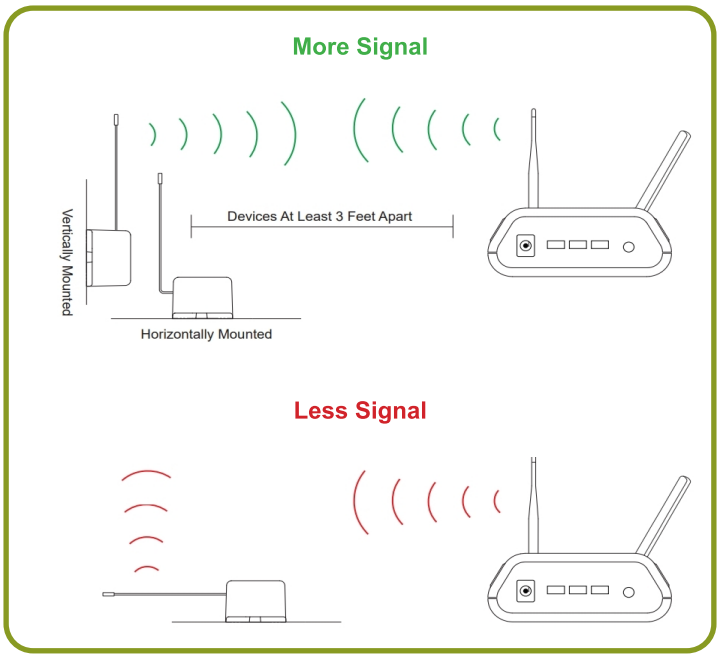
ALTA Sensors aren't rated for greater mechanical impact based on a documented Risk Analysis performed by Monnit. Therefore, the IK06 rating is justified because the sensors should be:

- **Installed in locations that unauthorized persons or the general public cannot easily access**
- **Accessed during normal use for occasional operations such as adjustment, programming, or maintenance**

We recommend adhering to these stipulations because using the sensors in a manner inconsistent with the above may impair their IK06 protection.

ANTENNA ORIENTATION

Get the best performance out of ALTA Wireless Sensors by properly positioning antennas—point sensor and gateway antennas in the same direction, pointing vertically from the device. If the sensor is mounted flat on a horizontal surface, bend the antenna as close to the sensor housing as possible, with most of the antenna pointing vertically. If the sensor has a permanent antenna, make the antenna wire as straight as possible, avoiding any kinks and curving of the wire. Sensors must be at least three feet away from other sensors and the wireless gateway to function.



If your sensor doesn't have a permanent antenna, for the sensor to function properly, attach the included antenna. Simply screw the antenna onto the barrel connector on the top side of the device. Ensure the antenna connection is snug, but do not over tighten. When placing the sensor, mount the sensor with the antenna straight up (vertical) to ensure the best signal.

MOUNTING A SENSOR

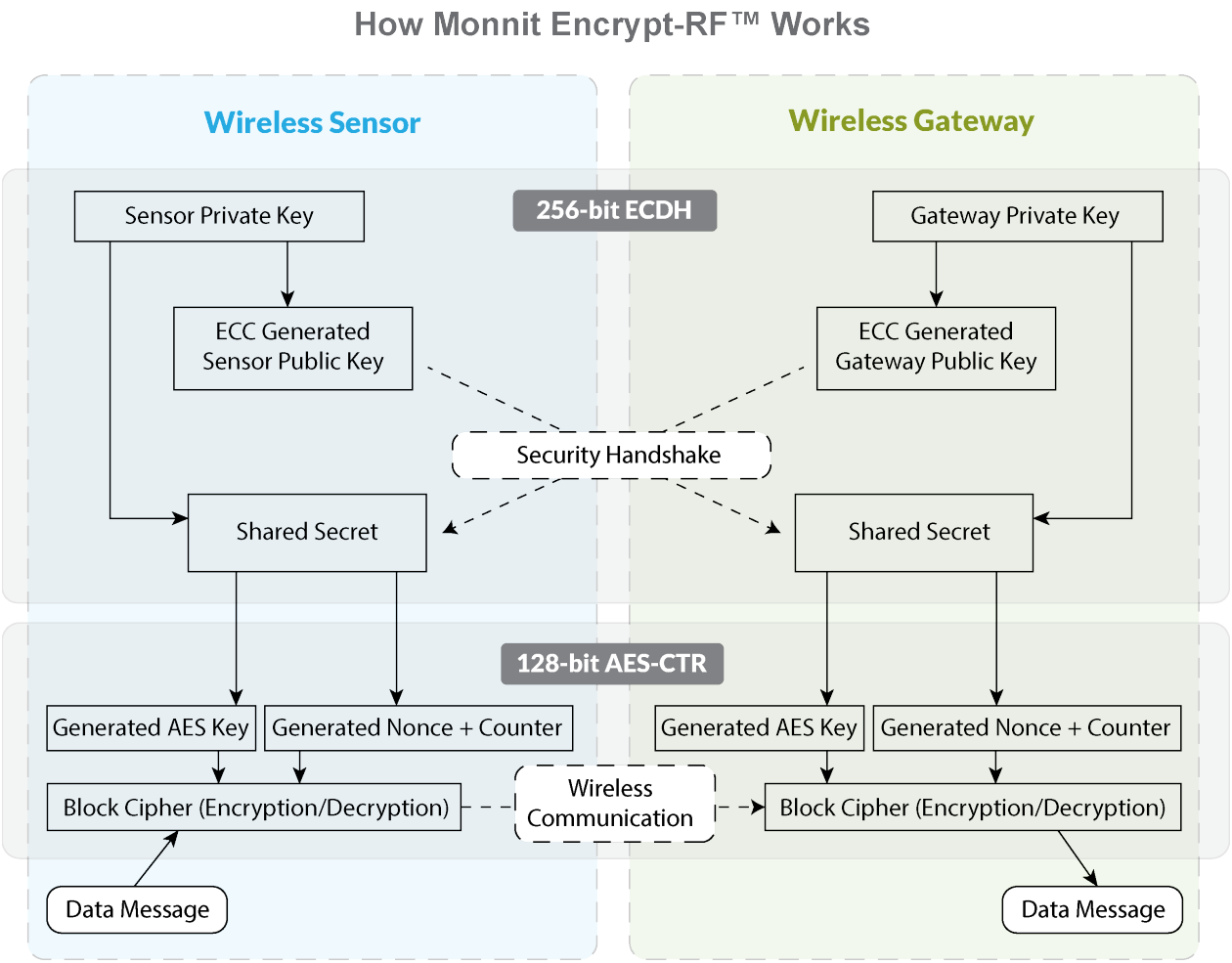
ALTA Sensors feature mounting flanges that can be attached to most surfaces, including a wooden or metallic surface, or drywall, using the included screws or double-sided tape (use two pieces).

For masonry, use the double-sided tape. If the screws aren't available, use two #7, 7/16” (0.4375”) screws. If the included double-sided tape is not available, use one or more pre-cut, double-sided foam squares of dimensions 1/32” x 3/4" x 3/4", available from ULINE as model number S-11695, or the like.

CLEANING

When needed, clean the sensor with a damp, but not dripping-wet, cloth where it's installed. Do not use cleaners or chemicals.

IV. MONNIT DATA SECURITY



Your data security is a top priority at Monnit. We use the same data transmission methods in our security infrastructure that financial institutions do. Security features from sensors to gateways include tamper-proof network interfaces, data encryption, and bank-grade security.

Monnit's proprietary sensor protocol uses low-power and specialized radio equipment to transmit application data. Wireless devices listening on open communication protocols can't eavesdrop on sensors. Packet-level encryption and verification ensure data traffic isn't altered between sensors and gateways. We pair data with a best-in-class wireless range and power consumption protocol so it is transmitted securely from your devices, ensuring a smooth, worry-free experience.

SENSOR COMMUNICATION SECURITY

Monnit's sensor-to-gateway, secure wireless tunnel, **Encrypt-RF**™, is generated using ECDH-256 (Elliptic Curve Diffie-Hellman) public key exchange to generate a unique symmetric key between each pair of devices. Sensors and gateways use this link-specific key to process packet-level data with hardware-accelerated 128-bit AES encryption, minimizing power consumption to provide better battery life. Monnit proudly offers robust bank-grade security at every level, thanks to this combination.

iMONNIT SECURITY

The iMonnit system is the cloud software and central hub for configuring device settings. All data is secured on dedicated servers operating Microsoft SQL Server. Access is granted through the iMonnit user interface that requires Two-Factor Authentication (2FA) or an Application Programming Interface (API) safeguarded by 256-bit Transport Layer Security (TLS 1.2) encryption. TLS is a blanket of protection to encrypt all data exchanged between iMonnit and you. The same encryption is available to you whether you are an iMonnit Basic or Premiere user. You can rest assured that your data is safe in iMonnit.

DATA SECURITY ON THE GATEWAY

ALTA Gateways are designed to prevent prying eyes from accessing the data stored on the sensors. Gateways don't run on an off-the-shelf, multi-function operating system. Instead, they run on a purpose-specific, real-time, and embedded state machine that can't be hacked to run malicious processes. There are also no active interface listeners that can be used to gain access to the device over the network. The fortified gateway secures your data from attackers and can't become a relay for malicious programs.

For more information on Ethernet Gateway Security, visit
https://monnit.blob.core.windows.net/site/documents/other/ethernet-gateway-security-brief.pdf

OPTIONAL DATA AUTHENTICATION

SensorPrints™ is the industry's only end-to-end Internet of Things (IoT) data authentication platform for low-power wireless sensors. SensorPrints authenticates data by issuing a unique fingerprint for each device within the IoT. Data is secured from the point of generation to the point of consumption. Easy to install and use, SensorPrints is the definitive IoT security solution for any enterprise.

SensorPrints authenticates data at both the point of generation and consumption, creating trust between the sensor and server levels. Implementing 256-bit SHA 3 authentication, SensorPrints creates a fingerprint for a Monnit Wireless Sensor that contains an authenticated sensor message. When data is transmitted from the sensor, it is accompanied by a generated authentication token. Upon receipt by the application, the token is evaluated via a cryptographic hash function against a unique per-sensor secret key. This step provides unprecedented full-coverage security for any Monnit user wishing to secure their IoT devices and data.

Click here for more information on SensorPrints.

V. TROUBLESHOOTING

Symptoms	Detailed Problem Description	Solution
Not Checking into iMonnit	The sensor lost the radio link to the gateway or never connected to the gateway.	Power cycle the sensor by turning the switch off for 60 seconds then toggling it on. 1. Ensure the network is set up correctly in iMonnit (the sensor and gateway are on the same network). Press the utility button on the gateway. 2. If the network is set up correctly, reform the gateway. 3. Move the sensor ~10 feet from the gateway. 4. Move the sensor progressively further from the gateway ensuring at least two signal bars are showing. Keep in mind the signal bars represent the signal from the previous message, not the current message. We recommend taking two readings to verify signal strength. 5. Check the antenna position on the gateway.
Low Signal	The radio signal strength in iMonnit is lower than expected.	1. Ensure the gateway antenna is properly connected. 2. Ensure the gateway antenna is optimally oriented with respect to the position of the sensor. (See Antenna Orientation section of this guide).

VI. SUPPORT

For technical support and troubleshooting tips, please visit our support library at monnit.com/support/. If you are unable to solve your issue using our online support, email Monnit Support at support@monnit.com with your contact information and a description of the problem. A support representative will call you within one business day.

For error reporting, please email a full description of the error to support@monnit.com.

VII. WARRANTY

(a) Monnit warrants that Monnit-branded products (Products) will be free from defects in materials and workmanship for a period of one (1) year from the date the Products arrive at the Customer's shipping address with respect to hardware and will materially conform to their published specifications for a period of one (1) year with respect to software. Monnit may resell sensors manufactured by other entities and are subject to their individual Warranties; Monnit will not enhance or extend those Warranties. Monnit does not warrant that the software or any portion thereof is error-free. Monnit will have no Warranty obligation with respect to Products subjected to abuse, misuse, negligence, or accident. If any software or firmware incorporated in any Product fails to conform to the Warranty set forth in this Section, Monnit shall provide a bug fix or software patch correcting such non-conformance within a reasonable period. Monnit shall provide the fix or patch after Monnit receives from the Customer (i) notice of such non-conformance, and (ii) sufficient information regarding such non-conformance so as to permit Monnit to create such bug fix or software patch. If any hardware component of any Product fails to conform to the Warranty in this Section, Monnit shall, at its option, refund the purchase price less any discounts, or repair or replace nonconforming Products with conforming Products or Products having substantially identical form, fit, and function. Monnit will then deliver the repaired or replacement Product to a carrier for land shipment to the Customer within a reasonable period after Monnit receives from the Customer (i) notice of such non-conformance, and (ii) the non-conforming Product provided; however, if, in its opinion, Monnit cannot repair or replace on commercially reasonable terms, it may choose to refund the purchase price. Repair parts and replacement Products may be reconditioned or new. All replacement Products and parts become the property of Monnit. Repaired or replacement Products shall be subject to the Warranty, if any remains, originally applicable to the Product repaired or replaced. The Customer must obtain from Monnit a Return Material Authorization (RMA) number prior to returning any Products to Monnit. Products returned under this Warranty must be unmodified.

The Customer may return all Products for repair or replacement due to defects in original materials and workmanship, if Monnit is notified within one year of the Customer’s receipt of the Product. Monnit reserves the right to repair or replace Products at its own and complete discretion. Products returned under this Warranty must be unmodified and in original packaging. Monnit reserves the right to refuse Warranty repairs or replacements for any Products that are damaged or not in original form. For Products outside the one-year Warranty period, repair services are available at Monnit at standard labor rates for a period of one year from the Customer’s original date of receipt.

(b) As a condition to Monnit’s obligations under the immediately preceding paragraphs, Customer shall return Products to be examined and replaced to Monnit’s facilities, in shipping cartons which clearly display a valid RMA number provided by Monnit. The Customer acknowledges that replacement Products may be repaired, refurbished or tested, and found to be complying. The Customer shall bear the risk of loss for such return shipment and shall bear all shipping costs. Monnit shall deliver replacements for Products determined by Monnit to be properly returned, shall bear the risk of loss and such costs of shipment of repaired Products or replacements, and shall credit a Customer’s reasonable costs of shipping such returned Products against future purchases.

(c) Monnit’s sole obligation under the Warranty described or set forth here shall be to repair or replace non-conforming products as set forth in the immediately preceding paragraph, or to refund the documented purchase price for non-conforming Products to the Customer. Monnit’s Warranty obligations shall run solely to a Customer, and Monnit shall have no obligation to the customers of a Customer or other users of the Products.

Limitation of Warranty and Remedies

THE WARRANTY SET FORTH HEREIN IS THE ONLY WARRANTY APPLICABLE TO PRODUCTS PURCHASED BY THE CUSTOMER. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. MONNIT'S LIABILITY WHETHER IN CONTRACT, IN TORT, UNDER ANY WARRANTY, IN NEGLIGENCE, OR OTHERWISE SHALL NOT EXCEED THE PURCHASE PRICE PAID BY A CUSTOMER FOR THE PRODUCT. UNDER NO CIRCUMSTANCES SHALL MONNIT BE LIABLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES. THE PRICE STATED FOR THE PRODUCTS IS A CONSIDERATION IN LIMITING MONNIT'S LIABILITY. NO ACTION, REGARDLESS OF FORM, ARISING OUT OF THIS AGREEMENT MAY BE BROUGHT BY A CUSTOMER MORE THAN ONE YEAR AFTER THE CAUSE OF ACTION HAS ACCRUED.

IN ADDITION TO THE WARRANTIES DISCLAIMED ABOVE, MONNIT SPECIFICALLY DISCLAIMS ANY AND ALL LIABILITY AND WARRANTIES, IMPLIED OR EXPRESSED, FOR USES REQUIRING FAIL-SAFE PERFORMANCE IN WHICH FAILURE OF A PRODUCT COULD LEAD TO DEATH, SERIOUS PERSONAL INJURY, OR SEVERE PHYSICAL OR ENVIRONMENTAL DAMAGE SUCH AS, BUT NOT LIMITED TO, LIFE SUPPORT OR MEDICAL DEVICES, OR NUCLEAR APPLICATIONS. PRODUCTS ARE NOT DESIGNED FOR AND SHOULD NOT BE USED IN ANY OF THESE APPLICATIONS.

VIII. CERTIFICATIONS

United States FCC

This equipment has been tested and found to comply with the limits for a Class B digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures:

- *Reorient or relocate the receiving antenna.*
- *Increase the separation between the equipment and receiver.*
- *Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- *Consult the dealer or an experienced radio/TV technician for help.*

WARNING: Changes or modifications not expressly approved by Monnit could void the user's authority to operate the equipment.

RF Exposure

WARNING: To satisfy FCC RF exposure requirements for mobile transmitting devices, the antenna used for this transmitter must not be co-located in conjunction with any antenna or transmitter.

Monnit and ALTA Wireless Sensors

This equipment complies with the radiation exposure limits prescribed for an uncontrolled environment for fixed and mobile use conditions. This equipment should be installed and operated with a minimum distance of 23 cm between the radiator and the body of the user or nearby persons.

All ALTA Wireless Sensors Contain FCC ID: ZTL-G2SC1. Approved Antennas

ALTA devices have been designed to operate with an approved antenna listed below, and having a maximum gain of 14 dBi. Antennas having a gain greater than 14 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

- *Xianzi XQZ-900E (5 dBi Dipole Omnidirectional)*
- *HyperLink HG908U-PRO (8 dBi Fiberglass Omnidirectional)*
- *HyperLink HG8909P (9 dBd Flat Panel Antenna)*
- *HyperLink HG914YE-NF (14 dBd Yagi)*
- *Specialized Manufacturing MC-ANT-20/4.0C (1 dBi 4" whip)*

Canada (IC)

English

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the Equivalent Isotropically Radiated Power (E.I.R.P.) is not more than that necessary for successful communication.

The radio transmitters (IC: 9794A-RFSC1, IC: 9794A-G2SC1, IC: 4160a-CNN0301, IC: 5131A-CE910DUAL, IC: 5131A-HE910NA, IC: 5131A-GE910 and IC: 8595A2AGQN4NNN) have been approved by Industry Canada to operate with the antenna types listed on previous page with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

French

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la Puissance Isotrope Rayonnée Èquivalente (P.I.R.È) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Le présent émetteurs radio (IC: 9794A-RFSC1, IC: 9794A-G2SC1, IC: 4160a-CNN0301, IC: 5131A-CE910DUAL, IC: 5131A-HE910NA, IC: 5131A-GE910 et IC: 8595A2AGQN4NNN) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne figurant sur la page précédente et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, méme si le brouillage est susceptible d'en compromettre le fonctionnement.

UK / CE

There is no restriction for the commercialization of Monnit ALTA 868MHz and 433MHz wireless products in all the countries of the European Union. The European Community provides specific directives for the electronic equipment introduced on the market. All the relevant information is available on the European Community websites.

ALTA wireless products comply with the specific harmonized standards, regulations, instruments, and directives listed in the table below. For more information on product compliance, please contact Monnit Sales or Support and request a copy of the manufacturer's Declaration of Confirmatory (DoC) for the relevant product(s).

Directive / Instrument / Regulation	Part	Harmonized Standard(s) / Standard(s)
Low Voltage Directive (LVD) (2014/35/EC) **Electrical Equipment (Safety) Regulations 2016** (S.I. 2016/1101)	All parts	**EN 61010-1**:2010 IEC 61010-1:2010/ AMD1:2016
ElectroMagnetic Compatibility Directive (EMCD) (2014/30/EU) **Electromagnetic Compatibility Regulations 2016** (S.I. 2016/1091)	Emissions Requirement	**EN 55032**:2015/ A11:2020
	Immunity Requirement	**EN 55035**:2017/ A11:2020
Radio Equipment Directive (RED) (2014/53/EU **Radio Equipment Regulations 2017** (S.I. 2017/1206)	Electrical Safety Article 3.1(a)	**EN 61010-1**:2010 IEC 61010-1:2010/ AMD1:2016
	EMC Article 3.1(b)	**ETSI EN 301 489-3** V2.2.0 (2021-11)
	RF Spectrum Efficiency Article	**ETSI EN 300 220** V3.2.1 (2018-06)
	Internet of Things Cybersecurity Article 3.3(d)-(f)	EU 2022/30 **ETSI EN 303 645** V2.1.1 (2020-06)
Restriction of Hazardous Substances (2011/65/EU) **Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012** (S.I. 2012/3032)	RoHS II and RoHS III	**IEC 63000**:2016/ AMD1:2022
Registration, Evaluation, and Authorization of CHemicals (REACH) Regulation 1907/2006	Article 33	**SVHC 224** (June 10, 2022)

IX. USER SAFETY REQUIREMENTS

READ CAREFULLY

WARNING: It is the responsibility of the user to enforce the country regulation and the specific environment regulation.

WARNING: This product is not certified for use in hazardous locations (HAZLOC) where there is a risk of explosions.

WARNING: IF THE SENSOR IS USED IN A MANNER NOT SPECIFIED BY THE MANUFACTURER, THE PROTECTION PROVIDED BY THE EQUIPMENT MAY BE IMPAIRED. *Do not disassemble the product; any mark of tampering will compromise the warranty validity. We recommend following the instructions of this user guide for correct setup and use of the product. Please handle the product with care, avoiding any dropping and contact with the internal circuit board as electrostatic discharges may damage the product.*

WARNING: The device has a mechanical stress rating of **IK06**, meaning its housing and/or its readings could be compromised by an impact with greater energy than one Joule.

Justification of a mechanical impact rating less than five Joules exists by: (1) a documented Risk Analysis performed and maintained by Monnit; (2) installation of the sensor in locations that cannot easily be touched by unauthorized persons or the general public; (3) the equipment being only accessible in normal use for occasional operations such as adjustment, programming, or maintenance.

WARNING: **DO NOT** rely solely on the sensor system to prevent: (1) one or more fatalities; (2) disabling injury or illness; (3) chemical release with acute or public health impact; (4) chemical release with temporary environmental or public health impact; (5) system or facility loss; and/or, (6) major subsystem loss.

Note: Every device has to be equipped with a proper antenna with specific characteristics. The antenna must be installed with care to avoid any interference with other electronic devices and has to guarantee a minimum distance from the body (23 cm). In case this requirement cannot be satisfied, the system integrator has to assess the final product against the SAR regulation.

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

Industrial products are enclosed in reliable, weatherproof NEMA-rated enclosures. Our NEMA-rated enclosures are constructed for both indoor or outdoor use and protect the 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
- Remains undamaged by ice formation on the enclosure

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