

# Monnit MNS2-NXT-DC-CF-L01 Next Wi-Fi Sensors User Guide

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General Inf ormat ion Guide for Next™ W i-Fi Sensors



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#### **ABOUT Next W i-Fi SENSORS**

## **GENERAL DESCRIPTION**

Monnit Next™ W i-Fi Sensors provide remote monit or ing for many use cases and conditions in nearly any industry application, such as food services, manufactur ing, facility management, agriculture, petrochemical, logist ics, pharmaceutical, and health care. They have a wireless range of up to 125 feet through five walls or a 500-ft. line of sight.



#### **Features of Monnit Next Wi-Fi Sensors**

- Wireless Range: 125 ft through five walls or a 500-ft line of sight1
- Power: Two replaceable 1.5 V AA batteries (included)
- Communications: 802.11 b (2.412-2.484 GHz)
- Wi-Fi Security: OPEN, WPA, WPA2, WPA3
- Wi-Fi Setup: Bluetooth® via an app.
- · Typical Battery Life:
  - 10-minute Heartbeats = ~ 2 years2
  - 2-hour Heartbeats = ~ 5 years2
- Data logs up to 4096 readings if the Wi-Fi connection is lost (non-volatile flash, persists through the power cycle):
  - 10-minute Heartbeats = ~ 22 days
  - 2-hour Heartbeats = ~ 266 days
- Over-the-air updates (future-proof)
- Power/Utility Button: Powers device on/off, triggers data transmission, changes operating mode, etc.3
- LED Indicator: Indicates status and activity<sup>3</sup>
- Free iMonnit Basic Online Wireless Sensor Monitoring and Notification System to configure sensors, view data, and set alerts to be sent via text and email
- 1. Actual range may vary depending on the environment.
- 2. Battery life is determined by the sensor reporting frequency and other variables. Other power options are also available.
- 3. For a full description of Button/LED behaviors see the Next Sensor General Information Guide, Section VI.

#### **GENERAL SETUP PROCEDURES**

Here are the steps to activate your Next Sensor. If you perform them out of sequence, your sensor may have trouble communicating with the Wi-Fi access point or Monnit Software. To ensure the best results:

1. Download the iMonnit App. (Create an account if this is the first time.)

Download iMonnit here

**How to Install the iMonnit Mobile App** 

**How to Create an iMonnit Online Account** 

2. Add the Next Sensor(s) to iMonnit.

Go to Sensors in the main menu of iMonnit then select the Add Sensor icon.

From here the instructions in software will closely match/cover steps 3 to 6.

3. Add batteries, wait seven seconds, then power on the Next Sensor by pressing the Power/Utility button.

The LED will turn green for two seconds, indicating that the sensor has just powered on. The LED will double flash red if you haven't configured the Wi-Fi settings. If already configured and able to connect to iMonnit, the LED will double flash green.

4. To configure the Wi-Fi settings for the first time:

Download and install the Monnit Next Setup App on your iOS or Android device. (Note: The information below will also be referenced in iMonnit when adding the sensor to iMonnit)

Download Links:





Open the app and permit access to precise location on Android devices if prompted, and to Bluetooth® on iOS devices.

Follow the on-screen prompts to configure Wi-Fi credentials on your sensor.

5. Once successfully configured and after successfully connecting to the server, the sensor will automatically exit the Bluetooth mode and attempt to send data to iMonnit.

If the data transmission is successful, the LED will double flash green or double flash red for communication failure. If a red double flash occurs, short-press the button to try the communication again. If communication fails again, see the Troubleshooting section.

- 6. Ensure the sensor connects to the configured access point and Monnit Software by checking for new data in the Monnit Software.
- 7. Install sensor(s) in a final location.

Refer to the Batteries and Installation section for general mounting, installation, and placement recommendations.

Note: Next Sensors send 10 transmissions 30 seconds apart when communicating with iMonnit for the first time, after resetting or powering on, and before engaging the configured interval or Heartbeat.

#### **BATTERIES & INSTALLATION**

Next Sensors are powered by two removable AA (1.5 V) batteries (included). You can purchase additional sensor batteries from Monnit directly. We encourage you to recycle all old batteries.

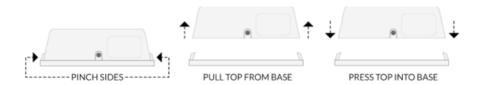
**Note:** Next Sensors retain their configurations in non-volatile memory (without power). When batteries are replaced, the sensors will continue functioning and provide previously configured data.

#### **POWER SENSOR ON/OFF**

ON: Wait up to seven seconds after installing batteries, then press and release the Power / Utility button to power the sensor.

OFF: Hold the button for up to 15 seconds to turn the sensor off. Release the button when the LED goes off.

#### **Next Enclosures**



#### **INSTALLING/REPLACING BATTERIES**

To install batteries, open the sensor lid by pinching the sides of the case and pulling away from the base. Then, insert the new AA batteries in the carriage and close the lid by pushing the lid and the case together until the clips snap.

If your sensor is attached to any other systems or voltages, we recommend powering off the other system and disconnecting this sensor.

### SENSOR PLACEMENT

Place each Next Sensor within 125 feet of its Wi-Fi access point. Sensors should be installed to avoid transmissions through a lot of metal or concrete and repositioned to avoid such obstacles if communication is spotty. A sensor should also be placed at least one foot away from the Wi-Fi access point and other sensors.

Next Sensors should NOT be placed where they can be exposed to volatile or flammable gas. A Next Sensor should be deployed where it will be protected from operating temperatures outside those disclosed in the data sheet. We also recommend that you not place Next Sensors in fridges and freezers. A leaded sensor can monitor temperatures inside fridges and freezers.

A Power/Utility button is included on Next Sensors for your convenience. If you aren't using the sensor, turn the sensor off by holding the button until the LED turns off. If the sensor needs to reset, you can cycle the power by turning it off and waiting 10 seconds before powering it back on.

Next Sensors aren't designed for wet environments, environments with fluctuating or excessive humidity, or where they'll 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.). Next 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.

#### **MOUNTING A SENSOR**

Next Sensors can be mounted to most surfaces using screws or double-sided tape (both included). The Next enclosure features mounting keyhole slots molded into the enclosure backplate and guides for the double-sided tape.

For masonry, use the double-sided tape or use appropriate screw anchors for #7, 7/16" (0.4375") screws. If the screws aren't available, use two #7 size screws of proper length for your application. If the included double-sided tape is unavailable, use one or more pre-cut, double-sided foam squares of dimensions  $1/32" \times 3/4" \times 3/4"$ , 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.

## **GENERAL & Wi-Fi SETTINGS CONFIGURATION (IMONNIT)**

#### **GENERAL SETTINGS CONFIGURATION**

These are configurable settings for almost every Next Sensor.

- 1. Heartbeat: How often the sensor transmits data to the server when not in the Aware State.
- 2. Aware Heartbeat: How often the sensor transmits data to the sever when in the Aware State.
- 3. Server Address: The server the sensor communicates with. If the sensor is unlocked, this setting is editable. If not, this setting isn't visible.
- 4. Server Port: Port used for server communication. If the sensor is unlocked, this is editable. If not, this setting isn't visible.

#### Wi-Fi SETTINGS CONFIGURATION

These setting configurations control what Wi-Fi access points the sensor can communicate with and how the IP address is assigned.

- 1. Sensor IP Address: Determines if the sensor uses DHCP to obtain an IP address.
- 2. IP Address: The IP address the sensor will use on the network it joins.
- 3. Subnet Mask: A 32-bit number that helps routers direct data packets to the correct place on a network.
- 4. Default Gateway: IP address of the devices serving as the gateway to the Internet. Typically, your Wi-Fienabled router.
- 5. DNS Server: IP address of the device that resolves DNS queries for the network. Often, your Wi-Fi-enabled router.
- 6. Primary Wi-Fi Network: The first configurable Wi-Fi network. The sensor will typically try to connect to this network first.
  - a. SSID: The text name of your Wi-Fi access point.
  - b. Security Type: Open, WPA, WPA2 PSK, WPA WPA2 PSK, WPA3 PSK, WPA2 WPA3 PSK
  - c. Security Key: The passkey for the access point can be left blank if set to open security.
- 7. Secondary/Tertiary Wi-Fi Network: The second and third configurable Wi-Fi networks.

For sensor specific setting configurations, refer to the specific sensor's configuration and installation guide.

#### **OPERATING MODES**

#### **STANDARD**

The sensor will communicate data to iMonnit using the configured settings in this mode.

#### **BLUETOOTH®**

In this mode, the sensor is disabled (no sensor data will be generated), and Bluetooth® is activated. Only short button presses reset the Bluetooth auto exit timeout.

PAIRING STATE: The LED flashes blue, and the sensor is discoverable by the setup app.

PAIRED STATE: The sensor is connected to the setup app, and Wi-Fi credentials can be configured.

If the sensor loses connection with Bluetooth on the app's device, it will automatically revert to the pairing state.

The sensor will automatically exit Bluetooth mode after 10 minutes to save power.

## **CRITICALLY LOW BATTERY**

The sensor enters a low-power data logging-only mode when the battery voltage falls below 2.15 volts. Wi-Fi and Bluetooth are fully disabled in this mode to save power so setup and data transmission are not allowed. If the sensor sent data to the server when the battery level dropped, it will continue logging data to flash.

Typical green LED flashes for button and power activity are replaced with red ones. If the sensor is powered on with a critically low battery, it will not log data since it requires time from the server to generate data. The LED will flash solid red for two seconds instead of green upon boot or power cycle. To exit this mode, the average battery voltage must rise above 2.3 volts.

#### **BUTTON & LED BEHAVIORS**

FUNCTION	ACTION	BEHAVIOR	
Power On	Short press the Power/Utility butt on when the sensor is powered of f.	The sensor will power on, and the LED will turn green f or two seconds. The first communication after powerin g on will also produce a double LED flash. Red is for c ommunication failure and green is for communication success. At this point, the sensor will be in its standard operating mode.	
Power Off	With the sensor powered on, hold the Power/Utility button while the LED cycles through various colors until the LED turns off, then release.	The sensor will power off completely.	
Generate Data	Short-press the Power/Utility butt on while sensor is on and in stand ard operating mode. The sensor h as communicated with the server since it was powered on/reset.	The sensor will produce a data point and attempt to tra nsmit the data. The LED will double flash green for suc cessful data communication and red for failure.	
Enter Bluetooth Pairing Mode	Hold the Power/Utility button until the LED turns solid blue, then im mediately release it while the sensor is in standard operating m ode.	The sensor will enter Bluetooth pairing mode. If sensor sends Wi-Fi data when entering this mode, the LED will remain solid blue, and the sensor will finish sending data and then enter Bluetooth pairing mode. The LED will start flashing blue when fully in pairing mode.	
Exit Bluetooth P airing Mode Hold the Power/Utility button until the LED turns magenta, then imm ediately release.		The sensor enters standard operating mode and imme diately tries communicating with the server using the s aved Wi-Fi settings. The LED will double flash green f or successful data communications and red for failure.	
Reset Defaults	Hold the Power/Utility button until the LED turns red, then immediately release it while in sta ndard operating mode.	Points the sensor to the iMonnit server and sets defaul t sensor configurations. Calibration values are guarded if applicable. The LED will flash red five times then the sensor resets and keeps Wi-Fi settings.	

## **LED Status Indicat or (St andard)**

STATUS	LED	
Button Pressed	Solid green	
Bluetooth Pairing Mode	Flashing blue	
Bluetooth Paired	Solid blue	
Communication Success	Double green flash	
Communication Failure	Double red flash	
Firmware Update in Process	Continuous yellow flash	
Powering On	2-second green flash	

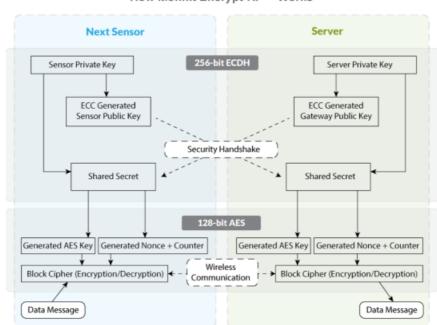
## **LED Status Indicator (Critically Low Battery)**

STATUS	LED
Button Pressed	Solid red
Button Short Press	Double red flash
Powering On	2-second red flash

The Power/Ut ilit y button is disabled during f irmware updates. But is still capable of physically power ing the sensor off.

#### **MONNIT DATA SECURITY**

Your data security is a top priority at Monnit. Next Sensors use a powerful combination of hardware, software, and firmware security to ensure your data is fully secure.



How Monnit Encrypt-RF™ Works

#### HARDWARE/FIRMWARE SECURITY

Next hardware implements read-locked-flash, preventing third parties from downloading any data saved directly on the device. Next Sensors also use secure boot technology, making it impossible for malicious applications to run on the device.

## **SENSOR TO SERVER SECURITY**

Monnit's sensor-to-server, secure communication 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. Thanks to this combination, Monnit proudly offers robust bank-grade security at every level.

#### **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.

#### TROUBLESHOOTING

SYMPTOMS	DETAILED PROBLE M & DESCRIPTION	SOLUTION
Not Checking int o iMonnit	Thesensor lost connection to theWi-Fi accesspoint and/or se rver or never connected.	Here are several options to address this issue:  1. Bring the sensor 10 to 20 feet from the router without any obstruct ions between the sensor and router.  2. Verify the Wi-Fi access point / router is up and connected to the I nternet.  3. Place the sensor in Bluetooth mode and double-check that the Wi -Fi credentials and server address are correct in the setup app. Dou ble-check for spaces at the end of any text values.  4. Power cycle the sensor.  5. Verify that the specific Next Sensor is permitted to connect and c ommunicate with the Internet through your router. You may need to check with your network administrator.  6. If connecting closer to the router, move the sensor progressively f urther from the router, ensuring at least two signal bars are showing. Remember that the signal bars represent the signal from the previous message, not the current one. We recommend taking two r eadings to verify signal strength.  7. If additional action is required to access the Internet through the a ccess point, such as logging in via a webpage, the Next Sensor can not communicate with the server. Next isn't compatible with this type of connection.
Access Point or Router isnot Visible in t he Setup App		Here are some options to address this issue:  1. If the access point, router, or hotspot uses Wi-Fi-6 or higher, it may need to be set to Compatibility mode to ensure it uses 802.11b.  2. The app only displays access points with security compatible with Next products. If the access point uses enterprise-level security that requires one or more additional layers of validation, the app will not display these access points

## **SUPPORT**

For technical support and troubleshooting tips, please visit our support library at <a href="mailto:monnit.com/support/">monnit.com/support/</a>. If you can't solve your issue using our online support, email Monnit Support at <a href="mailto:support@monnit.com">support@monnit.com</a> 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 <a href="mailto:support@monnit.com">support@monnit.com</a>.

#### **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.

## **REGULATORY INFORMATION**

**United States: FCC** 

## Contains Transmitter Module FCC ID: 2AC7Z-ESP32MINI1

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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:

- 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.

Warning: This equipment has been designed to operate with a

Deman TFPD08H10060011-C. antenna having a maximum gain of 2.33 dBi. An other antenna, or an antenna having a gain greater than 2.33 dBi, is strictly prohibited for use with this equipment. The required antenna impedance is 50 ohms.

## **RF Exposure**

**WARNING:** This equipment must be deployed such that at least 20cm is maintained between the antenna and users'body and/or the body.

**WARNING:** This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

#### **United States:**

#### Section 6(h) of the Toxic Control Substances Act (TSCA)

Monnit is currently engaged with its suppliers to perform the due diligence necessary to make a determination as to whether or not Monnit can declare that none of the Environmental Protection Agency's (EPS) prohibitions on any of the five (5) Persistent Bio-accumulative and Toxic (PBT) substances set forth in the five (5) final rules promulgated by the EPA, pursuant to Section 6(h) of the TSCA, are violated by the manufacture and/or distribution of each of the Next Sensors, as those five (5) PBTs and their corresponding prohibitions are listed below:

- 1. Decabromodiphenyl ether (decaBDE) (prohibited: "all manufacture (including import), processing, and distribution in commerce");
- 2. Phenol, isopropylated phosphate (3:1) (PIP (3:1)) (prohibited: "processing and distribution of PIP (3:1) and PIP (3:1)-containing products, with specified exclusions, and... the release of PIP (3:1) to water during manufacturing, processing, and distribution." prohibited);
- 3. 3. 2,4,6-Tris(tert-butyl)phenol (2,4,6-TTBP) (prohibited: "processing and distribution in commerce of 2,4,6-TTBP, and products containing 2,4,6-TTBP at concentrations above 0.3 percent by weight, for use as an oil or lubricant additive, regardless of container size");
- 4. Hexachlorobutadiene (HCBD) (prohibited: all manufacturing (including import), processing, and distribution in commerce of HCBD and HCBD-containing products or articles, recognizing that there is unintentional production of HCBD as a byproduct during the production of chlorinated solvents, and that results in distribution in commerce of a very limited subset of that byproduct for burning as a waste fuel); and,
- 5. Pentachlorothiophenol (PCTP) (prohibited: "manufacturing (including import), processing, and distribution in commerce of PCTP and PCTP-containing products or articles for any use, unless PCTP concentrations are at or below 1% by weight).

For further information, a TCSA Declaration of Conformity is available upon request.

#### Canada (IC)

#### Contains IC: 2AC7Z-ESPC3MINII

This device complies with Industry Canada license-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.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users

The device could automatically discontinue transmission in case of absence of information to transmit, or operational failure. Note that this is not intended to prohibit transmission of control or signaling information or the use of repetitive codes where required by the technology.

The transmitter of this device may not be co-located with any other transmitter or antenna.

Radio transmitter IC: 2AC7Z-ESPC3MINII, as used in this device, has been approved by Innovation, Science and Economic Development Canada to operate with the external antenna type, with the maximum permissible gain of 2.33 dBi and required antenna impedance of 50 Ohms. Antennas of another type having a gain greater than the maximum gain indicated for the type listed, are strictly prohibited for use with this device.

#### Conformité Européenne CE

Monnit's Next™ Wi-Fi Sensors conform to all requirements necessary for CE marking, including, without limitation, the European Union's (EU) Radio Equipment Directive (RED) (2014/53/EU) and the EU's Restriction of Hazardous Substances (RoHS) (2011/65/EU), as amended by Directive (EU) 2017/2102. For further information on RED and RoHS conformity, please see the table of harmonized standards below for the harmonized standards, and versions thereof, used to leverage the presumption of conformity with respect to the essential requirements of the foregoing directives. Additionally, an EU Declaration of Conformity is available upon request.

Monnit is also currently engaged with its suppliers to perform the due diligence necessary to be able to declare the absence, or presence, in the Next™ Wi-Fi Sensors, at the homogeneous material level (as interpreted by EU Court of Justice decision C-106/14 of 10, September 2015) of any of the Substances of Very High Concern (SVHC) under the Registration, Evaluation, and Authorization of Chemicals (REACH) Regulation 1907/2006, in amounts no more than 1,000 ppm. For further information, a REACH SVHC Declaration of Conformity is available upon request.

Additionally, Monnit engages with its suppliers to track and eliminate the prohibited substances and restricted substances listed in Annexes I through IV of the Persistent Organic Pollutants (POPs) Regulation (850/2004/EC). For further information, a POPs Declaration of Conformity is available upon request.

ESSENTIAL DIRECTIVES, INSTRUMEN TS,& REGULATIONS	PART	HARMONIZED STANDARD(S)/ STANDARD(S)
	Electrical Safety Article 3.1(a)	EN 61010:2010 EN 62368-1:2020+A11:2020 EN 50665:2017 EN 62311:2008
Radio Equipment Directive (RED)(2014/5 3/EU)	EMC Article 3.1(b)	ETSI EN 301 489-1 V1.9.2 ETSI EN 301 489-17 V3.2.4 EN 55032:2015 EN 55035:2017/ A11:2020
	RFSpectrum Article 3.2	ETSI EN 300 220 V2.2.2
Low Voltage Directive (LVD)(2014/35/EU)	Article 3; Annex I Elements1(a) -(c), 2(a)-d,3(a)-(c	EN 61010:2010 (end product) EN 623681:2020+A11:2020 (radi o module)
	Article 3; Annex I; Element 2(a)	EN 50665:2017 EN 62311:2008
Electromagnetic Compatibility Directive (EMCD)(2014/30/EU)	Emissions Article 6; Annex I; Element 1(a)	ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4 EN 55032:2015

Electromagnetic Compatibility Directive (EMCD)(2014/30/EU)	mmunity Article 6; Annex I; Element 1(b) a	ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4 EN 55035:2017/ A11:2020
General Product Safety Regulation (GPS R) (2023/988/EU)	Article 5; Article 6.1(a)-(h	EN 61010:2010 EN 62368-1:2020+A11:2020 EN 50665:2017 EN 62311:2008 (Pending additional implementing actsuner Article 7.2)
Restriction of HazardousSubstances (2011/65/EU) and (2017/2102/EU)	Article 7 (RoHS,RoHSII, and RoHSIII)	EN 63000: 2018
Registration, Evaluation, and Authorization of CHemicals (REACH)(1907/2006/EC)	Article 33	EN 63000: 2018
Persistant OrganicPollutants (POPs) (2019/1021/EU)	Article 3.1;Annex I and Article 3.2;Annex II	EN 63000: 2018 Additionally,Mon nit is currently engaged with its suppliers to perform the due dilig ence necessary to be able to decl are that Per- and PolyFluoroAlkyl Substances (PFAS),a group of th ousandsof florocarbon substances, often known as "forever chemicals" are NOT included within,or used in the production of,the Monnit Next Sen sorsand/or their constitutive components. For further information,aPFASDeclaration of Conformity isavailable upon request.

#### **USER SAFETY REQUIREMENTS**

#### **READ CAREFULLY**

⚠ WARNING: It is the responsibility of the user to comply with all regional and national regulations.

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.

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

**WARNING:** DO NOT connect the exposed contact wires or prongs on a dry contact or water detect sensor to an active switch or any other circuitry or circuit elements that would inject voltage, current or power.



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#### **Documents / Resources**



Monnit MNS2-NXT-DC-CF-L01 Next Wi-Fi Sensors [pdf] User Guide MNS2-NXT-DC-CF-L01 Next Wi-Fi Sensors, MNS2-NXT-DC-CF-L01, Next Wi-Fi Sensors, Wi-Fi Sensors, Sensors

#### References

- How to Install the iMonnit Mobile App Monnit Knowledge Base
- B How to Create an iMonnit Online Account Monnit Knowledge Base
- M iMonnit Online Wireless Sensors Portal
- User Manual

#### Manuals+, Privacy Policy

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