



MeshRF Sensor Users and Installation Manual

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LAT-LON, LLC
2300 S. Jason Street
Denver, CO 80223
877-300-6566 Phone 303-531-5754 Fax
www.lat-lon.com

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Part No. X200

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FCC NOTICE

The X200 – RF Mesh Sensor 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.

Changes or modifications not expressly approved by Lat-Lon, LLC could void the user's authority to operate the equipment

WARNING – While the device is in operation, a separation distance of at least 20 centimeters must be maintained between the radiating antenna and the body of all persons exposed to the antenna in order to meet the FCC RF exposure guidelines.

INDUSTRY CANADA (IC) NOTICE

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.

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'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

MeshRF WIRELESS SENSOR BASICS

Sensor capabilities:

1. Tilt detection in two different axes
2. Door/hatch open and close via magnetic reed switch
3. Temperature
4. Its own battery voltage

The RF sender is an event based sensor. It will send data to the network manager upon a triggered event (such as open door/hatch).

Tilt Sensor:

Measures an analog value of the tilt reading and also a digital that the tilt changed by more than X (X is programmed here at Lat-Lon when we make the unit). The tilt also creates a digital value of 1 when it's at the high-end of its range and 0 when it's at the low end of its analog range. This is useful for loaded/empty or hatch open/closed where orientations change from one zone to another.

Digital Reed Switch:

The digital reed switch reports a change of state as well whether the door/hatch was opened or closed since the last timed report.

Temperature Sensor:

The temperature sensor takes readings every 10 minutes. If the sensor is being used for a temperature sensor, the temperature probe is attached to the magnet in the center on the sensor's bottom surface.

Wireless RF Sensor Specifications

Size:	2" x 3.25" x 0.9"
Frequency:	2.4 GHz
Transmission power:	1mW
Range:	100 ft. line of site
Transmission cycle:	Once per minute (default)

Sensor Installation:

1. RF senders have a serial number and are keyed to a specific network manager. Make sure you mount the correct RF sensors with the correct network manager. This “match” can be found on your packing slip or through the Administration/Units/Configuration part of the website.
2. RF sensors can be mounted in several ways. The recommended way is to use A structural adhesive and wire ties.
3. Clean the back of the RF sensor with alcohol to remove grease or oil.
4. Clean the area that the sensor will attach to with scouring pads and alcohol. Make sure area is fully cleaned of grease or oil.
5. Apply Dow Chemical 995 Structural Silicone to back side of the sensor and press on. Press so that the silicone makes contact but not so hard that the silicone squeezes out.
6. Wire tie sensor to keep it in place while silicone dries. Duct tape or a hose clamp can be used in place of wire ties if needed. Restraint should applied for at least 12 hours.

Please see additional manual “RF Sensor Install Manual” for specific installation specs and details. Because there are so many different ways to use an RF Sensor, your specific installation may not be documented.