WS200 Series ConnectSens™ Wireless Single Axis Accelerometer Installation Guide

Table of Contents

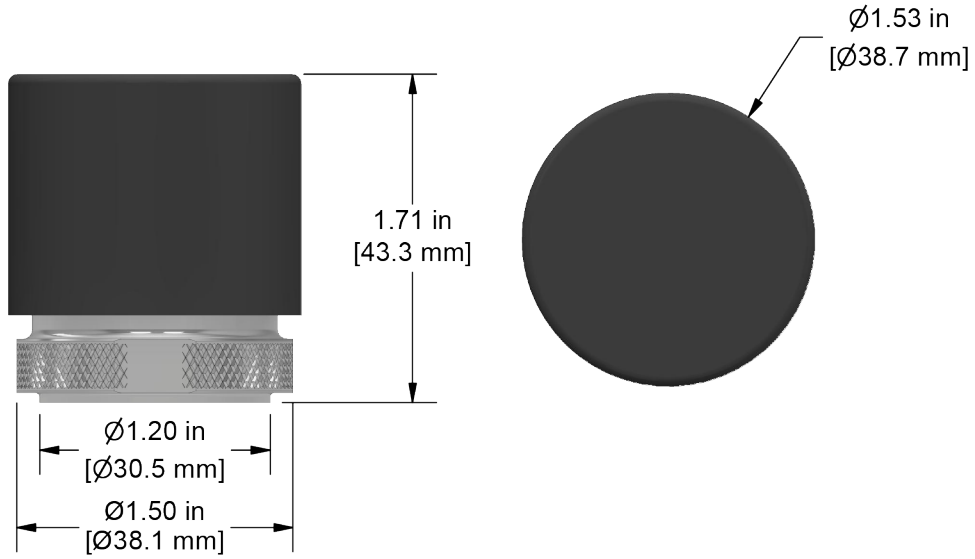
Introduction

This document contains information on the installation of the WS200 Series of wireless sensors.

WS200 Series Product Overview
CTC Connect WS200 Series Wireless Sensors capture and transmit dynamic vibration signals over a **Bluetooth®** Low Energy 5.2 connection, as well as temperature measurements. Within a clear line of sight, they can transmit data as far as 1200 ft/365 m.

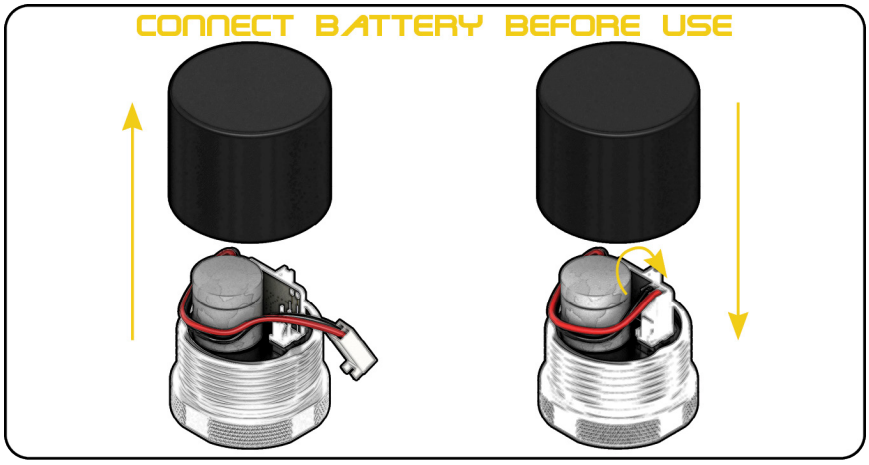
Data can be accessed via CTC ConnectView™ Web App running on a CTC Gateway, or through custom software integration with the CTC Connect API and CTC Gateway.

WS200 Series sensors are designed for permanent mounting on the machine surface. To prepare the machine surface for installation, spot face, drill, and tap the mounting location. CTC suggests using MH117 Series Installation Tool Kits. To view in depth mounting instructions, please view our Mounting Guide.



Battery Installation

To avoid premature battery usage, CTC Wireless sensors ship with the battery disconnected. To install, remove the cap and connect the battery's connector to the receptacle on the back of the exposed circuit board. Tighten down the sensor cap and your sensor will now begin sending out Bluetooth® advertisements for discovery. CTC Gateways and the preloaded Web App will automatically be scanning for these advertisements when running, making all detected sensors visible and autonomously establishing connections to newly discovered sensors.



Mounting Instructions

Prior to any installation, ensure that the sensor's battery is properly connected and functioning.

Note: DO NOT install CTC wireless sensors under metal guards, behind machine safety cages, or in locations shielded by metal structures.

Metal obstructions can significantly attenuate RF signals, leading to reduced range, intermittent communication, or data loss. Wireless sensors should be installed with a clear RF path to the gateway or access point.

Stud Mounting

1. Spot face, drill, and tap the mounting location. CTC recommends MH117 Series Installation Tool Kits inclusive of spot face tools that are 1.25 inches in diameter:

PN	Spot Face Tool Type	Spot Face Diameter	Tap Thread
MH117-1B	High Speed Steel	1.25 in. (31.75 mm)	¼-28
MH117-4B	High Speed Steel	1.25 in. (31.75 mm)	M6x1
MH117-6B	High Speed Steel	1.25 in. (31.75 mm)	M8x1.25
MH117-11B	Carbide Tipped	1.25 in. (31.75 mm)	¼-28

2. Thread the sensor onto the machine using 2 to 5 ft-lbs of mounting force. A coupling agent (such as MH109-2A epoxy) will maximize the high-frequency response of your hardware but is not required. Ensure that once fully threaded, the mounting base of the WS200 is completely flush with the mounting surface.

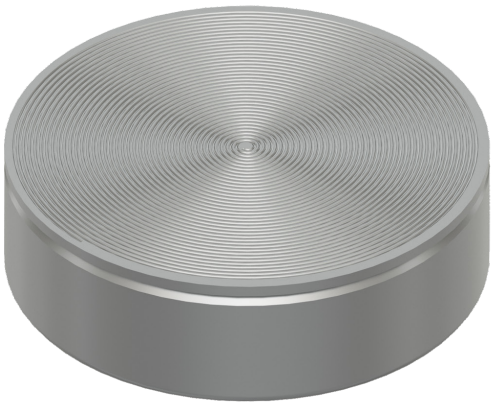
NOTE: If the sensor is not tight enough, proper coupling between the base of the sensor and the mounting disk will not be achieved. If the sensor is over-tightened, stud failure may occur.

Adhesive Mounting Pads
CTC recommends using MH130-3A Adhesive Mounting Disk with ¼-28 blind tapped hole.

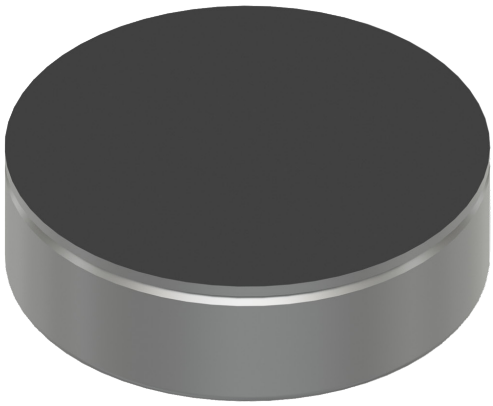
1. Prepare the mounting location by spot facing using MH117 Series Installation Tool Kit spot face drills. For the MH130-3A, it's advisable to use tools with a diameter of 1.25 inches:

PN	Spot Face Tool Type	Spot Face Diameter
MH117-1A	High Speed Steel	1.25 in. (31.75 mm)
MH117-11A	Carbide Tipped	1.25 in. (31.75 mm)

2. Apply epoxy (suggested MH109-2A) to the roughened surface on the bottom of the mounting pad.

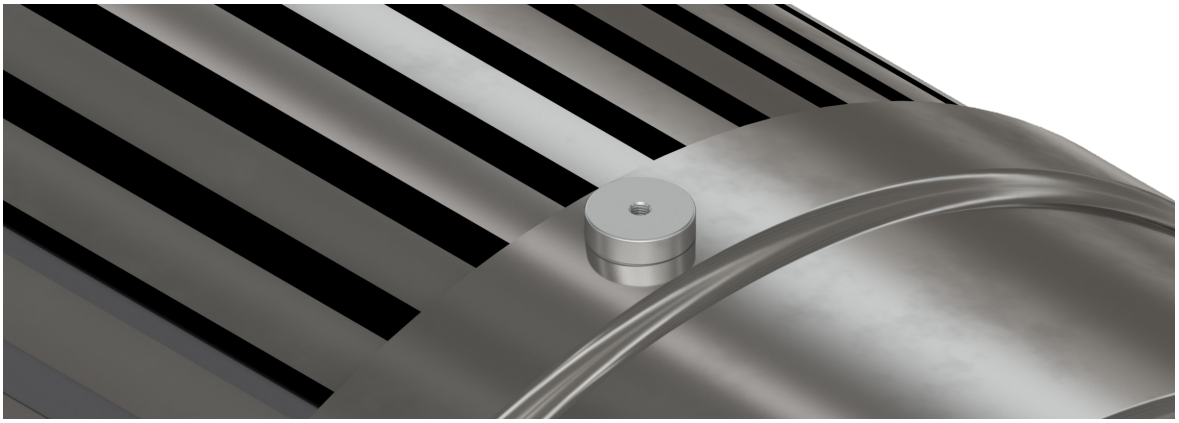


Without Epoxy

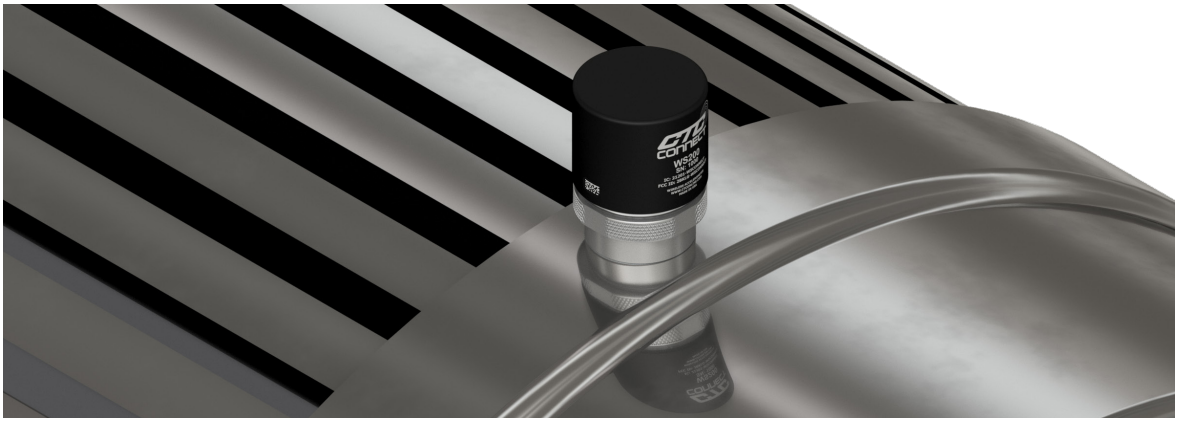


With Epoxy

3. Affix the mounting pad to the mounting location.



4. After the mounting pad has fully adhered to the machine, proceed to attach the sensor and stud to the mounting pad and **tighten securely,** approximately 2 to 5 ft. lbs.



Magnetic Mounting Base

1. Thread the sensor and stud onto the MH114-3A magnet.

2. Gently rock the sensor and magnet assembly onto the machine at the intended location, ensuring that the axes of the sensor are in the intended alignment with the machine.

Warranty and Refund

Please visit www.ctconline.com to view a complete recapitulation of our warranty and refund policies.

Need Additional Technical Support?

Need additional technical support for issues or questions about the Connect Wireless ecosystem?

Scan the QR code or use the hyperlink to access our convenient web form to submit your request online at any time.

CTC's experienced support team will review your inquiry and work quickly to resolve your issues.

scan QR code or

CLICK HERE FOR SUPPORT REQUEST FORM