

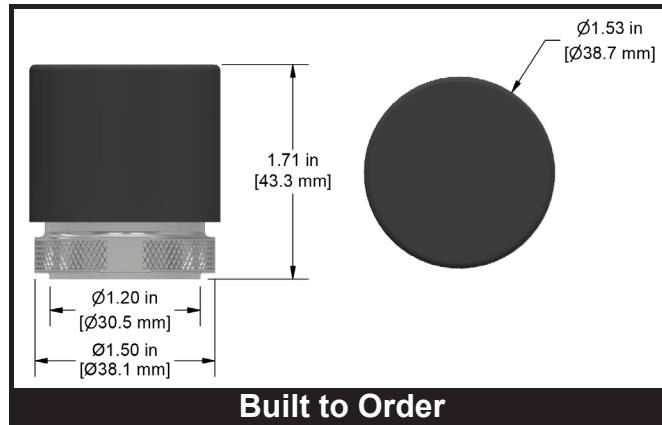
WS100 Series

ConnectSens™ Wireless Overall Triaxial
Vibration Sensor with Temperature Output



Product Features

- 2100 ft (640 m) line of sight range
- Up to four years of autonomous operation
- RMS, Peak, Peak-to-Peak in acceleration or velocity



Component Specifications

Specifications below reflect sensor use in conjunction with a CTC ConnectBridge™ gateway. If a ConnectBridge™ gateway is not used, specifications may vary. CTC does not provide technical support for direct integration of the sensor without a ConnectBridge™ gateway.

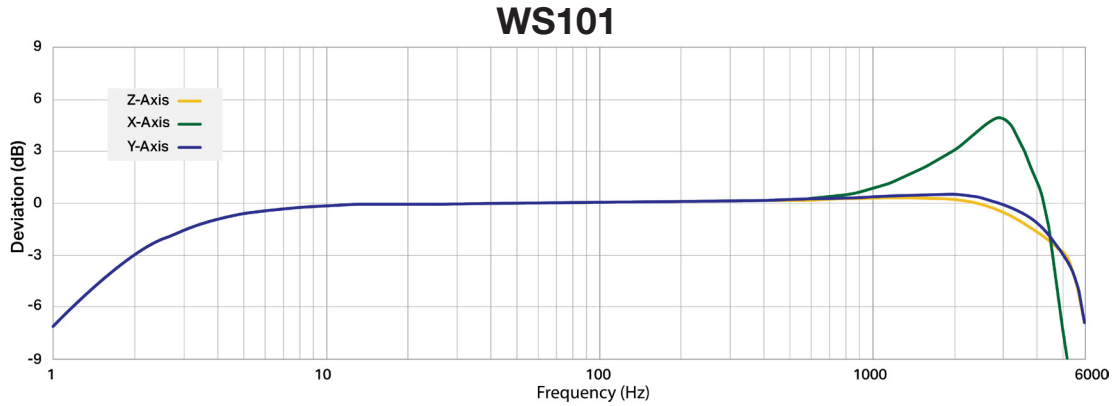
Frequency Range	Factory configurable frequency bands	Operating Temperature Range	-40 °F to 176 °F (-40 °C to 80 °C)
Resonant Frequency	5.5 kHz	Maximum Shock Protection (Powered)	5,000 g, peak for 0.5 ms
Reading Duration (All Axes)	500 ms	Maximum Shock Protection (Unpowered)	10,000 g, peak for 0.2 ms
Automatic Reading Interval	Factory configurable in hours from 1-24	Sealing	Compressed Silicone O-ring
Dynamic Range	Factory configurable: ±8 g, ±16 g, ±32 g, ±64 g	Ingress Protection	IP67
Data Output Format	Overall vibration in Peak, RMS, & Peak-to-Peak	Operating Distance	Line of sight (2100 ft/640 m)
Output Unit	Factory Configurable: acceleration (g's) or velocity (IPS)	Wireless Protocol	Bluetooth® Low Energy 5.2
Sample Resolution	16 bits	Sensing Structure	MEMS - triaxial
Temperature Measurement Range	-40 to 80 °C	Weight	4.6 oz (130 grams)
Temperature Output Measurement Unit	°C	Case Material	316L SS base with nylon cap
Power Source	Field replaceable 3.6V 1 Ah lithium battery pack (.35 gram lithium)	Mounting Thread	1/4-28 blind tapped hole
Battery Life	4 years based on 2 readings taken per day at 20 °C	Mounting Torque	Base: 2 - 5 ft/lbs Cap: 4 - 5 ft/lbs
		Mounting Hardware Supplied	1/4-28, M6x1, or M8x1.25 stud
		EMC Compliance	FCC ID: 2BKLG-WSCONNECT ISED: 21201-WSCONNECT CE
		Calibration Certificate	CW10
		SIL Rating	SIL 2

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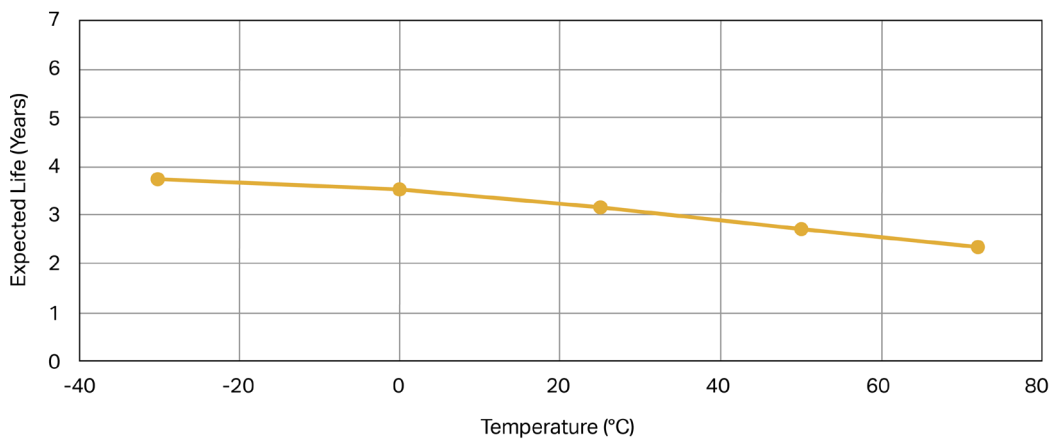


Example Frequency Response at 2 Hz - 5 kHz Frequency Range



Battery Information

WS101 Expected Life, Wireless Process Control Sensor, 10 Hz - 1 kHz, Two Readings Per Day



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Ordering Information



Stud Type	Output Unit	Dynamic Range	Frequency Range	Auto Read Rate [†]																								
Blank = ¼-28 M = M6x1 M8 = M8x1.25	0 = Acceleration 1 = Velocity*	1 = ±8 g 2 = ±16 g 3 = ±32 g 4 = ±64 g	01 = 2 Hz - 1 kHz 02 = 2 Hz - 2.5 kHz 03 = 2 Hz - 5 kHz 04 = 10 Hz - 1 kHz 05 = 1 kHz - 5 kHz	<table border="0"> <tr> <td>01 = 1 Hour</td> <td>13 = 13 Hours</td> </tr> <tr> <td>02 = 2 Hours</td> <td>14 = 14 Hours</td> </tr> <tr> <td>03 = 3 Hours</td> <td>15 = 15 Hours</td> </tr> <tr> <td>04 = 4 Hours</td> <td>16 = 16 Hours</td> </tr> <tr> <td>05 = 5 Hours</td> <td>17 = 17 Hours</td> </tr> <tr> <td>06 = 6 Hours</td> <td>18 = 18 Hours</td> </tr> <tr> <td>07 = 7 Hours</td> <td>19 = 19 Hours</td> </tr> <tr> <td>08 = 8 Hours</td> <td>20 = 20 Hours</td> </tr> <tr> <td>09 = 9 Hours</td> <td>21 = 21 Hours</td> </tr> <tr> <td>10 = 10 Hours</td> <td>22 = 22 Hours</td> </tr> <tr> <td>11 = 11 Hours</td> <td>23 = 23 Hours</td> </tr> <tr> <td>12 = 12 Hours</td> <td>24 = 24 Hours</td> </tr> </table>	01 = 1 Hour	13 = 13 Hours	02 = 2 Hours	14 = 14 Hours	03 = 3 Hours	15 = 15 Hours	04 = 4 Hours	16 = 16 Hours	05 = 5 Hours	17 = 17 Hours	06 = 6 Hours	18 = 18 Hours	07 = 7 Hours	19 = 19 Hours	08 = 8 Hours	20 = 20 Hours	09 = 9 Hours	21 = 21 Hours	10 = 10 Hours	22 = 22 Hours	11 = 11 Hours	23 = 23 Hours	12 = 12 Hours	24 = 24 Hours
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Ordering Number	Frequency Range	Sampling Rate (Hz)	Reading Duration (s)
01	2 Hz - 1 kHz	6400	0.5
02	2 Hz - 2.5 kHz	12800	0.5
03	2 Hz - 5 kHz	25600	0.5
04	10 Hz - 1 kHz	6400	0.5
05	1 kHz - 5 kHz	25600	0.5

* Compatible with 2 Hz - 1 kHz and 10 Hz - 1 kHz frequency ranges only.

† Achievable battery life depends on environmental conditions, configuration options, and sensor use. CTC recommends replacing the battery every 4 years, regardless of remaining battery life reported by software, due to effects of battery degradation over time. If operating above 50 °C, replace the battery in half that time.

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Connectivity

Connectivity

CTC WS100 sensors broadcast readings over **Bluetooth®** Low Energy 5.2, which can be picked up by CTC ACCESS360 wireless gateways. Complete your data collection route from your desk when utilizing a WS100 with a gateway. Each gateway can be used with an unlimited number of CTC wireless sensors within range, and allow for 20 simultaneous connections. ACCESS360 gateways connect to your plant's network via an ethernet connection to request a reading on demand.

ConnectView™ Web App

CTC offers an easy to use web app that is included with the purchase of any ACCESS360 gateway. Key features include:

- Nickname sensors & assign sensors to machine groups
- Easily view and export data:
 - Historical data & overall values for trending over time
- Set early warning and critical alert levels
- View battery life
- Web interface runs off of your local network - you own your data and control your security. This means no recurring data fees when utilizing your local network.

Our API also allows OEM customers to utilize their own software to communicate with CTC ConnectSens™ Wireless Sensors via a CTC ConnectBridge™ gateway.

