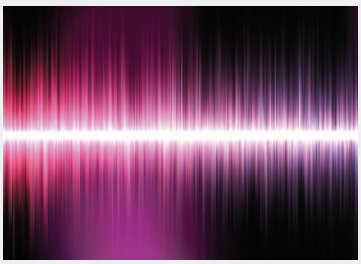
TE TOOLBOX FOR 89X1N VIBRATION SENSORS

TE 89x1N Series of Piezo-Electric vibration sensors use configurable edge processing to provide access to detailed spectral analysis over LoRaWAN networks with minimum power consumption.



Vibration data is rich in detail, containing valuable insights about machine performance, health, and potential issues. However, traditional solutions make tapping into this power difficult, especially when communications networks limit the amount of data that can be transmitted. The TE Toolbox solves these problems by providing powerful, customizable on-board data analysis tools.

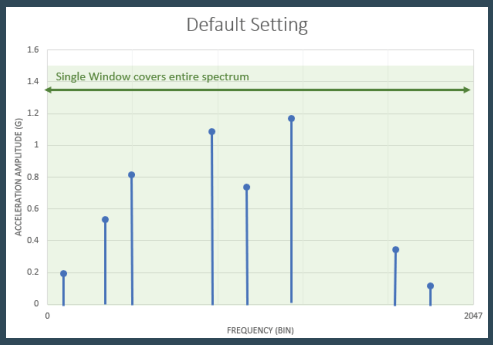
Solutions Benefits	TE Connectivity		Competitors	
FFT Data Processing	✓	Pre-processed spectral data that simplifies vibration analysis	✗	Single RMS value only, or large data download requiring offline analysis
Data Transmission Efficiency	✓	Optimized for long range low data rate wireless transmission	✗	Large and inefficient data transmission
Focus zones	✓	User can select frequency bands of interest	✗	Not Supported
Multiple peak detection	✓	Define the number of peaks returned from each window	✗	Single peak support
Flexible configurations	✓	15 preset and 16 user defined configurations	✗	Limited adjustments
Rotating Mode	✓	Allows for wide and narrow band analysis	✗	Only single frequency band sweep analysis

The TE data analysis toolbox provides highly configurable analytical tools including FFT, enabling users to efficiently access the information they need.

TE TOOLBOX SETUP

Default Settings

The device delivers the most significant 8 peaks across the full spectrum. The frequency and magnitude of each peak is provided



Powerful Configuration Tools

Collection Interval

User can configure the device to collect and transmit data from every 15 minutes to every 24 hours.

FFT Resolution

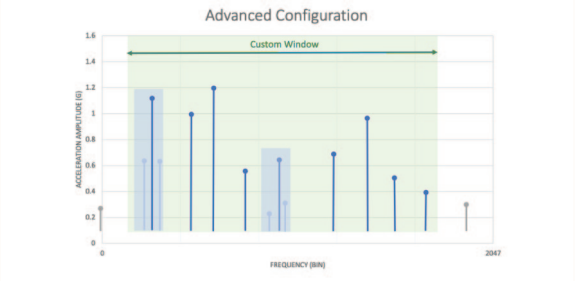
Customize the effective bandwidth between 200 Hz to 20.8 kHz to best suit your application. Resolution and acquisition time will be adjusted accordingly.

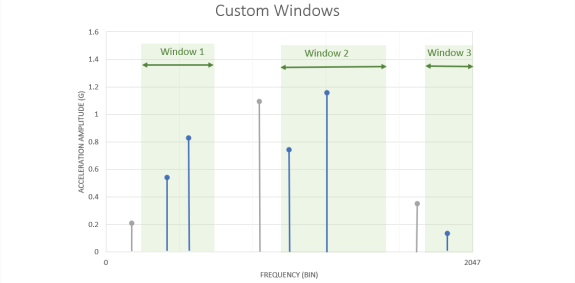
Advanced Configuration

Modify the number of peaks detected in each window. User can also adjust the width of peak detection so that several nearby peaks are handled as one.

Window Definition

User can define up to 8 custom windows to focus on the regions of interest and ignore other frequencies.





Rotation Mode

With rotation mode enabled the device will automatically cycle between two configurations, giving you the ability to take different snapshots of your system's performance

15 factory and 16 user defined configurations

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