
PRESS RELEASE

# SPM INSTRUMENT LAUNCHES THE AIRIUS WIRELESS VIBRATION SENSOR FOR LTE-M COMMUNICATION

*The Airius range of wireless vibration sensors, first launched with WiFi capability, is now introduced in a 5G-ready version for data transmission via LTE-M, the cellular connectivity standard developed specifically for IoT. Based on reliable and secure 4G networks, the LTE-M communication technology has extensive network coverage and deep, in-building and underground signal penetration.*

Wireless vibration monitoring with the Airius sensor is an ideal growth platform. The sensor is part of the same ecosystem of high-performance condition monitoring solutions as all other SPM products, making it easy to scale up when the time is right. Regardless of the product used for data acquisition, all measurement data is stored in the same software, making it easy to monitor and stay on top of machine health across plants and locations.

## A reliable, secure, and future-proof IoT solution

Part of the 5G standard and optimized for IoT applications, LTE-M allows energy-efficient data transfer from battery-powered devices via existing cellular networks, thus saving companies the cost of building and maintaining their own WiFi networks.

In addition to superior coverage and penetration, LTE-M networks provide strong, built-in security because they operate within a dedicated, operator-managed licensed spectrum. This minimizes the risk of interference. To further enhance data protection, it is possible to use authentication, credentialing, and encryption tools.

The LTE-M radio technology also offers the benefit of allowing the remote update of connected devices, for instance, to add new capabilities and security features, thus ensuring that they stay secure and productive throughout their lifecycle.

## Industry-leading measurement technology

The Airius vibration sensor measures triaxial vibration, using acceleration enveloping to detect gear and bearing faults. The sensor currently comes in versions for two measuring ranges; 10-1000 Hz and 2-1000 Hz / 10-5000 Hz, both with temperature measurement. It is rated IP69 and can measure in ambient temperatures from −20 to +85 °C.

Airius supports several different vibration measurement assignments per sensor, with a userdefined number of time-based daily measurements. The signal processing algorithms and calculation routines used are the same as in the high-end Intellinova online systems and the sophisticated data collectors Leonova Diamond and Leonova Emerald.

Via REST API, it is possible to integrate measurement data stored in the analysis software Condmaster Ruby into other systems and IoT platforms. Depending on business goals and strategies, local or cloud storage can be used.

Taking into account the total cost of ownership, the Airius wireless vibration sensor is a solid choice. The minimal power consumption and replaceable battery design ensure a long working lifespan and low environmental impact.

## Cooperation with Telia in the Nordics

SPM Instrument has developed a package solution for the Nordic market in cooperation with telecom operator Telia. It includes a three-year connection and sufficient data for four measurements per day with battery power or 24 measurements per day with an external power supply.

If more measurements are required, the connection time and amount of data are extendable (however, this may impact battery life). The monthly cost includes data communication over the cellular network and secure server infrastructure with solutions for transferring data between the sensor and a locally installed Condmaster Ruby database.

The package solution is developed with a high level of security from start to finish. The sensor has a Telia eSIM card on the sensor motherboard, locked to the physical sensor, and a communication protocol that only allows communication initiated from the customer's own network via a secure server. The transfer from the sensor to the user is thus secure against intrusion.

For more information about Airius or solutions for markets outside the Nordics, please contact:

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