



Vibro-Meter

Aerospace products: monitoring the future

MEGGITT
smart engineering for
extreme environments



AAVM

Vibration sensors

The piezo-electric accelerometer is best adapted to aerospace vibration monitoring. There are no moving parts and the case can be hermetically sealed and made of tough materials such as Inconel or titanium for low mass. Vibro-Meter accelerometers are so stable and reliable that no routine calibration is required. We offer a range of standard products and can tailor designs to specific needs.

We work closely with engine manufacturers to ensure our transducers are exactly matched to the requirement.

Typical applications: gas turbine engine monitoring, auxiliary power unit monitoring, bearing analysis, gearbox analysis and airframe structural vibration analysis.



CA 151

Electronic equipment for flight applications

We provide engine vibration monitoring units either as LRUs or as plug-in cards. Additional functions such as data management can be included. The new advanced aircraft vibration monitor (AAVM) is fully software configurable. It is aware of the aircraft and engine combination which it is fitted to and automatically adopts the correct configuration so only one part number applies to a wide range of aircraft and engine types. This allows a significant saving in inventory and training costs. An optional condition monitoring facility is available.

Vibro-Meter is developing a new engine-mounted monitoring system (EMU) for the Trent 900 engines on the A380. This unit will fulfill all the traditional and statutory vibration monitoring tasks, while acquiring additional data to support maintenance management using condition monitoring techniques. Understanding the condition of the engine allows maintenance action to be performed when actually required, increasing availability and reliability while reducing costs.

Vibro-Meter also supplies other aircraft electronic systems and devices including a central maintenance computer, high-security door lock controllers and propeller interface units.



EMU



IEVM

IEVM

Vibro-Meter's new integrated engine vibration monitoring (IEVM) unit, is a plug-in board that is integrated into the Honeywell EPIC modular avionics system. This unit is a fully digital model, implementing narrow band and broadband processing with a powerful balancing algorithm, which provides solutions to balance the engines based on data acquired in-flight. It is specifically designed for regional jets and high-end business jets.

Dassault EVM

This variant of EVM is specifically designed for business jet applications, where the minimum regulatory requirements apply. Multi-channel broadband processing with full engine-to-engine segregation is implemented in an optimised low-cost and light weight solution. The current three-engine variant is easily adaptable to single- and twin-engine configurations.



Dassault EVM



EIPM

EIPM

The engine interface and power management (EIPM) unit used for the A380 is based on the engine interface and vibration monitoring units (EIVMU) of the Airbus A330 and 340. This stand-alone electronics bay mounted unit is providing typical engine and airframe interface functions and the power management for various engine-mounted equipment.

A similar monitoring unit is being developed for the ARJ21, the new Chinese regional jet.

Space applications

Vibro-Meter sensors have long been employed in launch and space applications, thanks to their high reliability in extreme conditions.

Today, we supply accelerometers, dynamic pressure transducers, eddy current displacement probes and rotational speed probes, all flight qualified for Ariane 5 Vulcain and Vulcain 2 engines. The qualification of eddy current sensors for Vinci are in progress.

Vibro-Meter has been selected to develop and produce the high resolution standard proximity sensor (HRSPS), a 1 nm resolution device that will be used for ISS, micro gravity and satellite applications.



HRSPS

Total condition monitoring on land, sea and air

Since its foundation in 1952 in Fribourg, Switzerland, Vibro-Meter remains the leading supplier of reliable, high quality instrumentation systems to aerospace, marine and industrial customers world-wide, providing vibration, speed and dynamic pressure systems for civil and military applications.

The company's most significant asset is its ability to engineer reliable, high-quality, customer-oriented solutions. Vibro-Meter became a member of the Meggitt group of companies in 1998.

With our commitment to engineering expertise, comprehensive manufacturing resources, world-wide technical support, and full service repair capabilities, help is never far away. Our international network of subsidiaries and distributors is always available.

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Vibro-Meter is a Meggitt group company. Headquartered in the UK, Meggitt PLC is an international group of companies operating in North America, Europe and Asia. Known for its specialist extreme environment engineering, Meggitt is a world leader in the aerospace, defence and electronics industries.

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