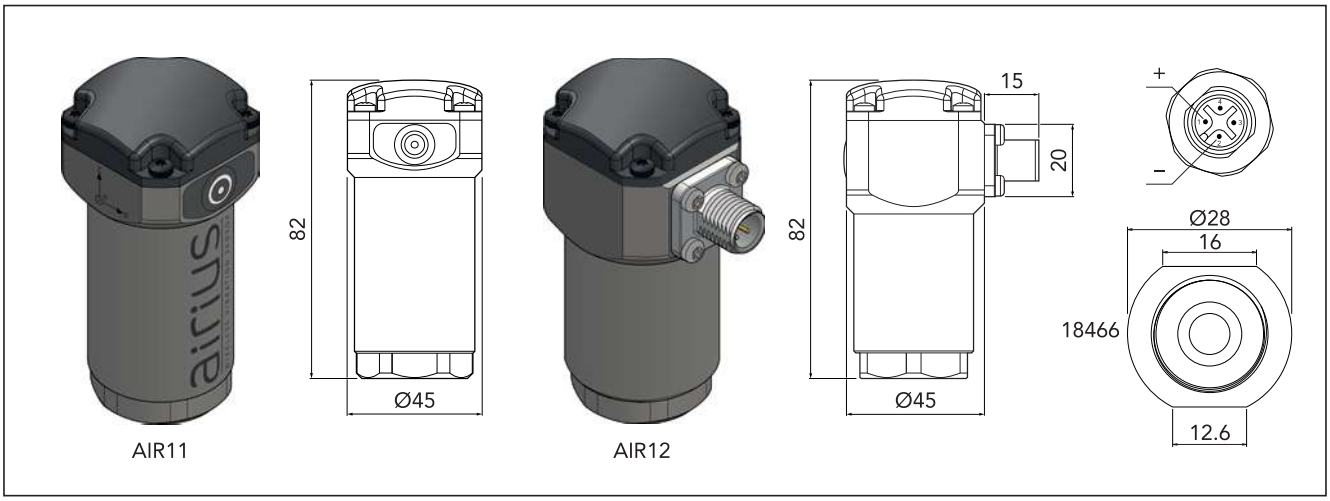
Airius II Wi-Fi – Wireless vibration sensor



Airius is a wireless sensor that performs a user-defined number of vibration measurements per day in the 10-1000 Hz or the 2-5000 Hz frequency range. The MEMS (micro-electro-mechanical-systems) type sensor measures triaxial vibration and temperature.

The vibration sensor is optimal for use on standard production equipment, such as pumps and fans. Airius provides warning of vibration-related problems, such as imbalance, misalignment, impeller and fan blade issues, resonance, and cavitation, as well as gear and bearing faults. The sensor is ideal wherever wireless transmission of vibration data is practical or a matter of safety, as in inaccessible machines or machines placed in hostile or risky environments.

With favorable battery technology and careful design, the battery-powered sensor ensures four-year battery life at four measurements a day under ideal conditions. Aspects that affect battery life are the number of measurements per day, Wi-Fi signal quality, ambient temperature, and time in Bluetooth mode.

The externally powered sensor enables triggered measurements by being connected to one and the same network session instead of several short ones.

Airius is compatible with both Condmaster.NET, the cloud-based application providing easy access to measurement data through a user-friendly interface, and the analysis and diagnostic software Condmaster Ruby. For further information, see TD-583.

The SPM Connect app is used to configure the parameters required to connect to Condmaster Entity Server (CES) or SPM Cloud. The app allows you to search for Airius sensors via Bluetooth, verify server connection, and set up a connection to Wi-Fi and CES or SPM Cloud.

AIR12 has a 4-pin M12 male connector for external power supply. For connectors that fit, see TD-540 and TD-544.

Technical specifications

Material:	housing; stainless steel EN 1.4523, lid; polyamide
Weight:	approx. 300 g
Power supply:	non-rechargeable 3.0 VDC Lithium or 24 VDC ±10 %, 400 mA
Power rating, AIR12:	1.2 W
Readings:	RMS, peak, peak-to-peak, crest, kurt, skew, temperature
Measurement range, temperature:	–20° to +85 °C (–4° to +185 °F) (accuracy +/– 2 °C)
Spectrum lines:	400, 800, 1600, 3200 lines*
Operating temperature:	–20° to +85 °C (–4° to +185 °F)
Storage temperature:	–40° to +85 °C (–40° to +185 °F)
Maximum altitude:	2000 m
Condition evaluation:	ISO10816 Part 2, 3, 4 >600 rpm
Protection class:	IP69
Relative humidity:	0 to 100% (non-condensing)
Wi-Fi:	802.11 b/g/n, 2.4 GHz
Wi-Fi Security:	WPA/WPA2 PSK/WPA2 Enterprise (PEAP-MSCHAPv2 and TTLS-MSCHAPv2 without certificates)
Bluetooth:	v4.2 BLE

Part numbers

AIR11-01	Airius II Wi-Fi, battery-powered sensor 10-1000 Hz, 2/4/8 g
AIR11-10	Airius II Wi-Fi, battery-powered sensor 2-5000 Hz, 2/4/8/16 g
AIR12-01	Airius II Wi-Fi, externally powered sensor 10-1000 Hz, 2/4/8 g
AIR12-10	Airius II Wi-Fi, externally powered sensor 2-5000 Hz, 2/4/8/16 g

Accessories

18466	Installation foot, glue installation
18470	Installation kit (installation foot, M4 screw, M4 washer, M6 screw)
18471	Installation kit (installation foot, M8 screw)
18549	Power supply for testing AIR12 in indoor environment (incl. Europlug, angled 4-pin M12 female connector, and 1.8 m cable)

Spare parts

18716	Lid kit (lid, gasket, 4xM3 screws)
18779	Battery cell, AIR11

* 3200 lines are only available for AIR11-10 and AIR12-10.

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