

# Wireless Vibration Sensor

WVS-100

Code: 600-10088

## Key features

- Built-in sensing elements
  - Piezoelectric accelerometer
  - Triaxial MEMS accelerometer
- Battery operated
- Protection class IP66
- WLAN communication
- No cables – increased safety



WVS-100 is an industrial wireless vibration sensor for mechanical condition monitoring. The sensor has two internal vibration sensor elements: a piezo accelerometer for high frequency measurements and a triaxial MEMS acceleration sensor that can be used in lower frequency range measurements. The unit is operated with a rechargeable battery.

WVS-100 carries out A/D conversion and transfers digitized vibration signals to host system via standard WLAN. Several units can be synchronized via wireless network for simultaneous measurements.

The unit has 512 MB internal memory for data buffering. This enables data logging functionality: WVS-100 can measure vibration signals periodically based on configurable time interval or vibration level and store measured signals to buffer memory.

WVS-100 is suitable for the monitoring of most machinery in different speed ranges in e.g. the following industries:

- Pulp and Paper
- Mining and mineral industry
- Power generation
- Steel industry



## WVS-100 sensor specifications

<b>Dynamic, piezoelectric sensing element</b>	Sensing element design	Piezo-Ceramic
	Acceleration range	±20 g peak
	Amplitude nonlinearity	≤1 %
	Frequency range (±3 dB)	0.5 ... 10 000 Hz
	Overload limit (shock)	5000 g
<b>Dynamic, triaxial sensing element</b>	Sensing element design	MEMS
	Acceleration range	±16 g peak
	Frequency response	DC...-3 dB at sampling rate / 2
	Cross axis sensitivity, max.	±1 %
	Sensitivity change due to temperature	± 0.01 %/ °C
	Shock limit	10 000 g
<b>Signal sampling</b>	Sampling rate, piezosensor	max. 80 000 Hz
	Sampling rate, triaxial MEMS	max. 3200 Hz for each axis
	Signal length	max. 1 000 000 samples
	AD conversion accuracy, piezosensor	24 bits
	AD conversion accuracy, MEMS sensor	12 bits, 4 mg/LSB
	Internal buffer memory	512 MB
<b>Radio communication</b>	Communication protocol	IEEE 802.11 b/g/n
	Communication rate	max. 72.2 Mbps
	Security	WiFi security (802.11i) WEP, WPA/WPA2 (AES-CCMP and TKIP)
<b>Electrical</b>	Internal battery	rechargeable 3.6 VDC, 3100 mAh (Lithium-ion)
	Power consumption at continuous use	1 W
	Grounding	mounting base grounded
<b>Environmental</b>	Temperature range	-20...+60 °C
	Protection class	IP66
<b>Physical</b>	Weight	350 g (including battery)
	Case material	AISI 316 and PET-C
	Mounting	¼-28 UNF mounting thread

## WVS-100 sensor dimensions



## Accessories (optional)

Mounting tool for WVS-100 sensor

Code: 600-10087

Mounting stud

- 10-32 UNF / M8x1,25
- 1/4"-28 UNF / M8x1,25
- 1/4" UNF - 1/4" UNF



Code: 600-10154

Code: 600-10147

Code: 600-10148

Flat magnet

- Ø 24 mm
- 1/4-28 stud



Code: 600-10142

Two pole magnet

- Ø 38 mm
- 1/4-28 stud



Code: 600-10141

## Spare parts

Rechargeable battery

Code: 600-10071

Battery charger

Code: 600-10072

Antenna

Code: D202364

Seals for battery pack, 5 pcs

Code: 600-10157

2 mm Allen tool for battery mounting

Code: 600-10143