RECOVIB

FEEL

3-AXIS SHOCK & VIBRATION SMART PROBE

PROPERTIES

- 3 axis accelerometer
- DC to 250 Hz useful bandwidth
- Low noise
- Compact and rugged design
- Protection grade IP67

POSSIBLE USE

- “Quick & dirty” vibration monitoring
- Real-time vibration analysis
- Real-time frequency and time analysis
- Vibration diagnosis
- Vibration modal analysis
- Machine tools - Automotive - Aviation
- Structural analysis and Health Monitoring

BENEFITS

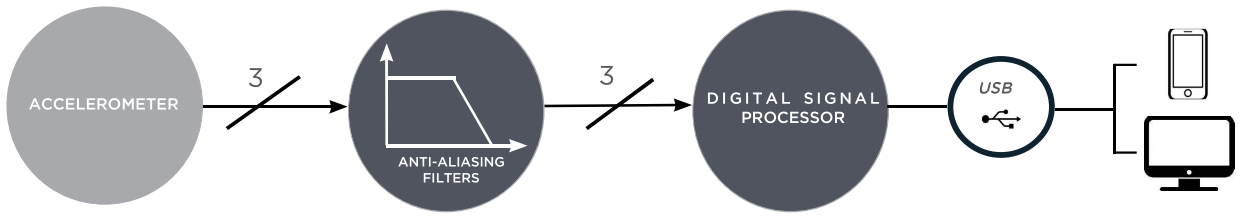
RECOVIB Feel has been designed for performing an immediate vibratory analysis. It is connected to an Android device or tablet PC via a USB connection. The supplied application enables the streaming of real-time vibration data on a chart in the time domain and in the frequency domain.

While streaming, it is possible to record vibration data in order to replay it in a data viewer, on your smartphone or your PC. The viewer allows for a detailed analysis of the vibrations recorded in the time domain and in the frequency domain.

Various signal processing options are available: high-pass, low-pass and band-pass filters, integrator filters (velocity mode) and dual-integrator filters (displacement mode).

In the frequency domain, several FFT-based computations are offered : Amplitude Spectrum Peak and RMS, Power Spectrum, Power Spectral Density and Amplitude Spectral Density.

BLOCK DIAGRAM



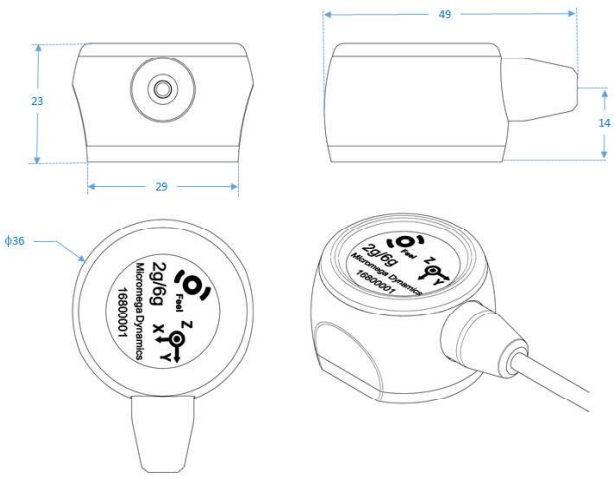
CERTIFICATIONS

	STANDARD	STANDARD REFERENCE	LIMIT LEVEL
EMC COMPLIANCE	Radiated Emission	EN 55016-2-3/CISPR 16-2-3	EN/IEC 61000-6-3 30MHz-1GHz
	Electrostatic discharge immunity	EN/IEC 61000-4-2	4kV by contact 2,4 & 8kV in air Criterion B
	Magnetic Field Immunity	EN/IEC 61000-4-8	30 A/m 50 & 60 Hz Criterion A
	Radiated, radio-frequency, electromagnetic field immunity	EN/IEC 61000-4-3	80 MHz – 1GHz 10V/m 1.4-2.0 GHz 3 V/m 2.0-2,7GHz 1V/m AM 80% 1kHZ Criterion A
DUST & WATER INGRESS PROTECTION LEVEL	Degree of Protection provided by enclosures (IP code)	IEC60529	IP67

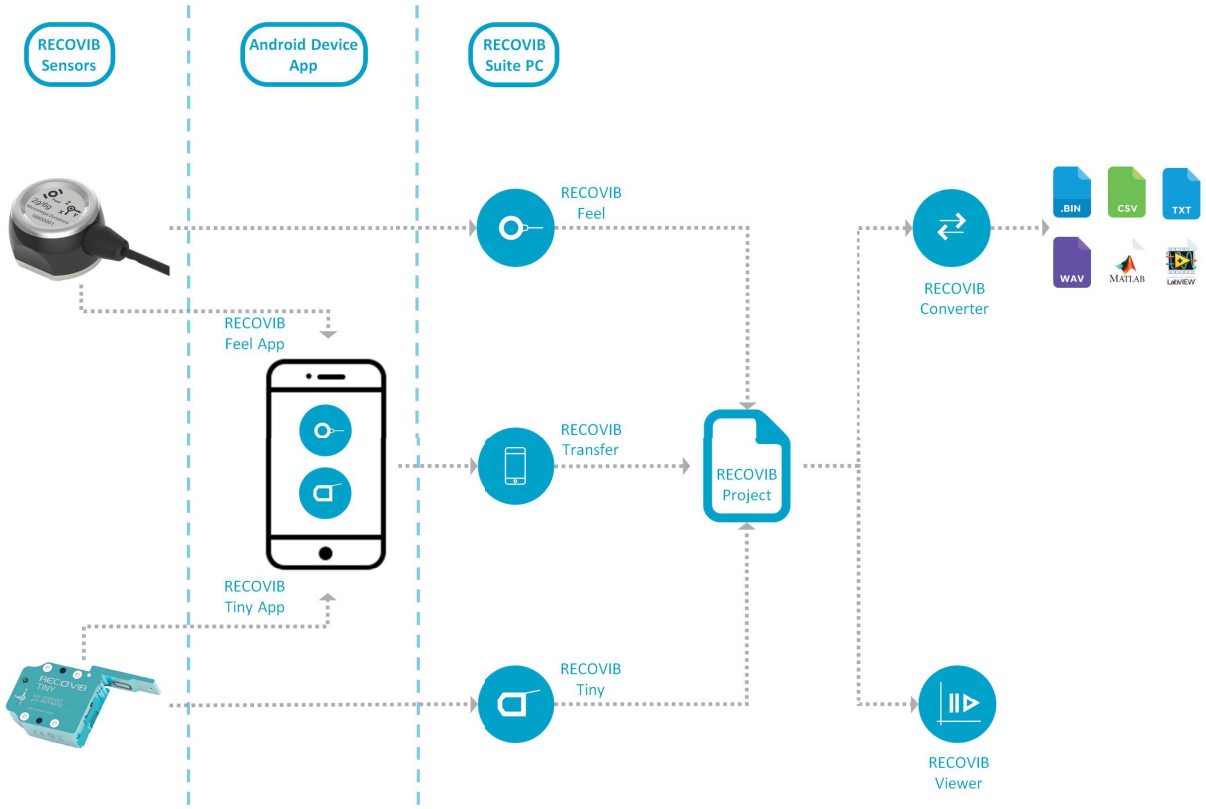
SPECIFICATIONS

MEASUREMENT CHARACTERISTICS	Model	±2g or ±6g	±15g
	Lower frequency limit	0Hz (DC)	
	Passband frequencies (per channel)	250 Hz	
	Output unit	m/s^2 - g	
	Streaming rates (per channel)	1024 samples per second	
	Non-linearity	±0,5 % F.S.	±0,3 % F.S.
	Residual noise density	30µg/√Hz	300µg/√Hz
	Residual noise (250Hz bandwidth)	475 µg	4.75 mg
	Transverse sensitivity	± 2%	
	Sensor technology	MEMS	
ENVIRONMENTAL CHARACTERISTICS	Operating temperature range	-10 .. 50°C	
	Temperature coefficient of sensitivity	±0.01 %/°C	±0.01 %/°C
	Temperature drift of zero point	±0.4 mg/°C	±1 mg/°C
	Protection grade	IP67	
MECHANICAL DATA	Dimension	46.8 x 30 x 23 mm	
	Weight	45.3 g	
	Case Material	Aluminium	
AUTONOMY	Average Power Consumption (idle)	39.15 mW	
	Average Power Consumption (streaming)	57.35 mW	
SOFTWARE	Output format	Binary	

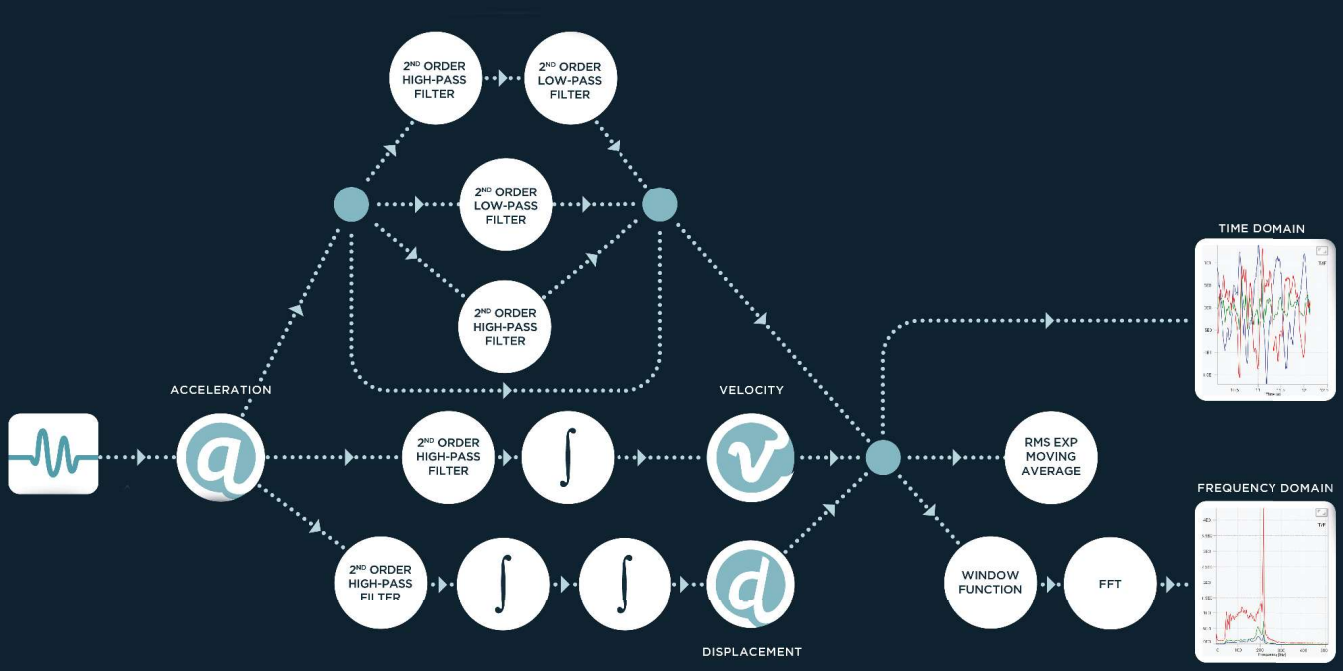
DIMENSIONS



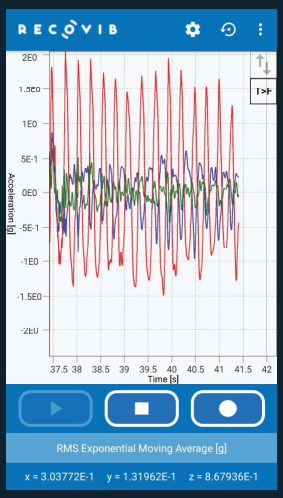
RECOVIB SUITE SOFTWARE

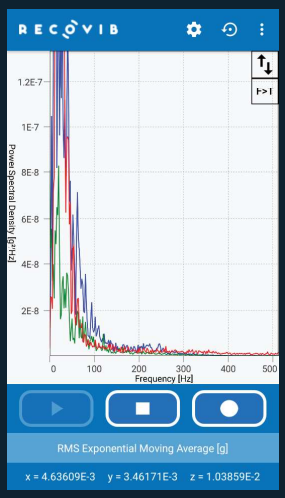


SIGNAL PROCESSING BLOCK DIAGRAM USED IN RECOVIB Feel ANDROID APP. AND RECOVIB VIEWER

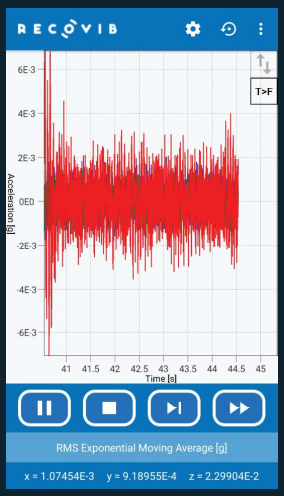


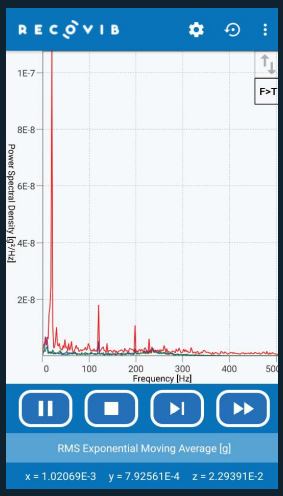
RECOVIB Feel Android App.





Streaming mode





Analysis mode

RECOVIB Suite computer software

Stream, Record and Analyze real-time vibration data thanks to our RECOVIB Suite SOFTWARE which includes 4 tools :

RECOVIB Feel

- Streaming real-time vibration data
- Recording real-time vibration data

RECOVIB Transfer

- Transfer the Android RECOVIB Projects from your Android devices to your computer

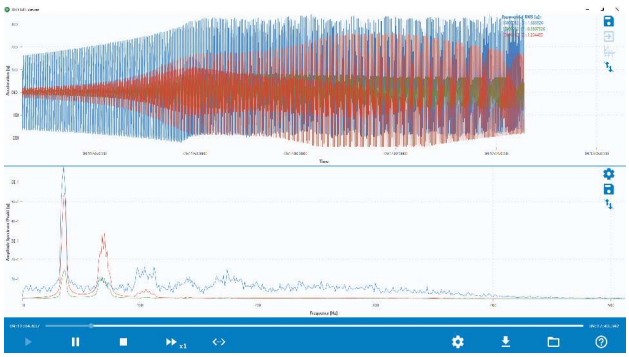
RECOVIB Converter

- Convert RECOVIB measurements into the format of your choice

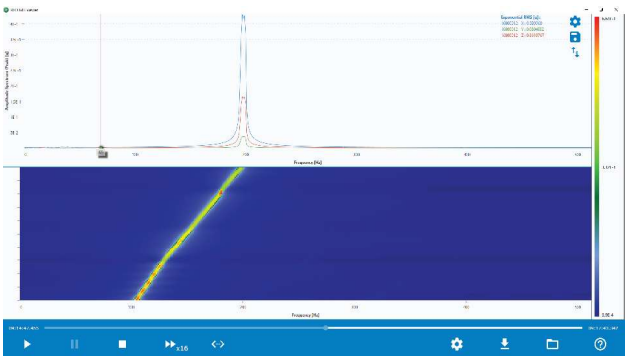
.BIN TXT CSV MATLAB LabVIEW WAV

RECOVIB Viewer

- Analysis PC Software
- Replay and analyze data taken from RECOVIB Projects in the time and the frequency domain



DATA ANALYSIS



SPECTOGRAM FEATURE

REQUIREMENTS

Android

MINIMUM CONFIGURATION	RECOMMENDED CONFIGURATION
Minimum SDK Version : Android 4.4 (Kitkat) – API Level 19	Target SDK Version : Androidi 7.0 (Nougat) – API Level 24
RAM Memory : 2GB	RAM Memory : 4GB or more
USB OTG – USB Host	USB OTG – USB Host

Windows

MINIMUM CONFIGURATION	RECOMMENDED CONFIGURATION
Windows 7	Windows 10
64-bit operating system, x64-based processor	64-bit operating system, x64-based processor
RAM Memory : 2GB	RAM Memory : 4GB (8GB or more for large projects manipulation)
	DirectX10 compatible GPU

ORDER REFERENCE

Sensors

RECOVIB-FEEL 2G/6G	3-axis logger ± 2g or ± 6g range (software selectable)
RECOVIB-FEEL 15G	3-axis logger ± 15g range (fixed)
Each logger comes with one magnet and two USB adapters. It is intended to be stored in a specially designed suitcase.	

Accessories

FEEL-SUITCASE-1	Suitcase for one RECOVIB Feel Sensor
Each suitcase includes a USB key with the software, a screwdriver, and has been designed for storing one sensor (including magnet and the two USB adapters).	

Android App.

RECOVIB Feel
Downloadable on your Android devices via Google Play Store free of charge.

Computer Software

RECOVIB Suite Computer Software
• Available free of charge and delivered inside the suitcase
• Downloadable via our website
• Automatic updates

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