



CV:31A Revo™ Vibration Meter for Hand-Arm, Whole-Body & Machinery



The **CV:31A Revo™ Vibration Meter** provides a simple and convenient way to measure, analyse and assess vibration data in accordance with standards such as ISO 5349 and European Directive 2002/44/EC.

Capable of measuring four channels simultaneously, the **CV:31A** meets the requirements of ISO 8041:2005 and is ideal for assessing hand-arm and whole-body vibration exposure. The instrument can be used to measure whole-body vibration to ISO 2631, as well as vibration on passenger and merchant ships to ISO 6954. In addition to the measurement of vibration for human exposure, the **CV:31A** can also measure three channels of FFT data that can be used to analyse vibration in machinery, vehicles and other vibrating structures.

The **CV:31A** is typically supplied as part of a complete measurement kit, the **CK:31HA**, which includes the accessories required to carry out Hand-Arm vibration measurements, including handle mounts for the Triaxial accelerometer.

A range of accessories is available including the KD:103 Triaxial Whole Body Seat Accelerometer allowing the **CV:31A** to be used in a wide range of additional applications.

Applications

- Hand-Arm Vibration Exposure measurements in accordance with ISO 5349:2001, European Directive 2002/44/EC & the Control of Vibration at Work Regulations 2005
- Whole-body vibration measurements to ISO 2631
- Vibrations on passenger and merchant ships to ISO 6954
- SEAT measurement at driver seats with options KD:103 Triaxial Whole Body Seat Accelerometer
- Condition monitoring of rotating machinery in three axes
- Vibration measurement in vehicles and other vibrating structures
- Display of running and interval RMS, maximum RMS (MTVV), Vibration Dose Value (VDV), Vector Sum, Peak and Maximum Peak value

Key features

- Meets ISO 8041:2005
- Supplied as a complete Hand-Arm vibration kit with Triaxial Accelerometer

- Four independent measuring channels with IEPE inputs & TEDS support
- Fourth channel for SEAT measurements at driver seats
- Measurement of acceleration for Hand-Arm & velocity/displacement for Machine Vibration
- Weighting filters to ISO 8041 Wh for hand-arm vibration and Wb, Wc, Wd, Wj, Wk & Wm for whole-body vibration
- Display of interval and running RMS, maximum RMS (MTVV), interval RMS, estimated Vibration Dose Value (eVDV), Vector Sum, Peak and Maximum Peak values
- 3-channel FFT for the detection of main frequencies
- Stores up to 10,000 measurement and up to 1000 FFT measurements
- Simple software for data transfer and calculation of Daily Exposure A(8)
- Very compact design with colour OLED display
- 10-14 hours operation with 3 x AAA batteries
- USB interface for data transfer to a PC

Preliminary Specifications

Standards	ISO 8041:2005 ISO 5349-1:2001 ISO 5349-2:2001	Channels	4 low-power IEPE inputs TEDS support (IEEE1451.4, Template 25)
Measurements		Measurement Range	Acceleration: 800 m/s ² Velocity: 100 - 10000 mm/s Displacement: 250 - 15000 µm
Human Vibration (Acceleration)	Interval RMS, vector sum, max. running RMS (MTVV), vibration dose value (VDV)	Linearity Range	> 75 dB for ± 6 % error
Acceleration, Velocity & Displacement	Running RMS, maximum RMS, vector sum, peak value, maximum peak value	Noise Floor	< 0,003 m/s ²
Daily exposure A(8)	A(8) calculation for different activities and test persons via software	Sensor Input	Low-power IEPE, sensitivity 0.8 - 120 mV/ms ⁻²
Frequency analysis (FFT)	125 lines for X/Y/Z, peak spectrum of acceleration 3 - 240 / 6 - 480 / 12 - 960 / 24 - 1920 Hz	Memory	Up to 10,000 measurements Up to 1,000 FFTs Each measurement stored with date, time and comments
Weighting Filters	Wb, Wc, Wd, Wh, Wj, Wk, Wm Unweighted: 6.3Hz - 1259 Hz (H/A) / 0.4Hz - 100 Hz (G/K)	Display	Colour OLED
Frequency Range	Acceleration: 0.1 - 2000 Hz / 1 - 1000 Hz	USB Interface	USB 2.0 via ZL:311 cable
	Velocity: 1 - 100 Hz / 2 - 1000 Hz / 10 - 1000 Hz	Power	3 x AAA Alkaline LR03 Typically 10-14 hours operation
	Displacement: 5 - 250 Hz	Environmental	Temperature: -20°C to 60 °C Humidity: Up to 95% RH Non-condensing
		Dimensions (without connectors)	125 mm x 65 mm x 27 mm
		Weight	140gms

Ordering Information

The CV:31A can be ordered as a complete measurement kit with all of the accessories needed to make Hand-Arm vibration measurements.

The CK:31HA kit contains the following items:

CV:31A	Vibration Meter
CK:301	Carrying Case for CV:31A
ZL:311	USB Cable for CV:31A
SP:212	AAA Batteries
UM:31A	User Manual for CV:31A
KD:903	Triaxial Accelerometer for CV:31A
ZL:312	3m Sensor Cable for CV:31A
ML:311 & ML:312	Handle Adaptors

Optional Accessories

KD:103	Triaxial Whole Body Seat Accelerometer
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Please note, details in this datasheet are subject to change

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