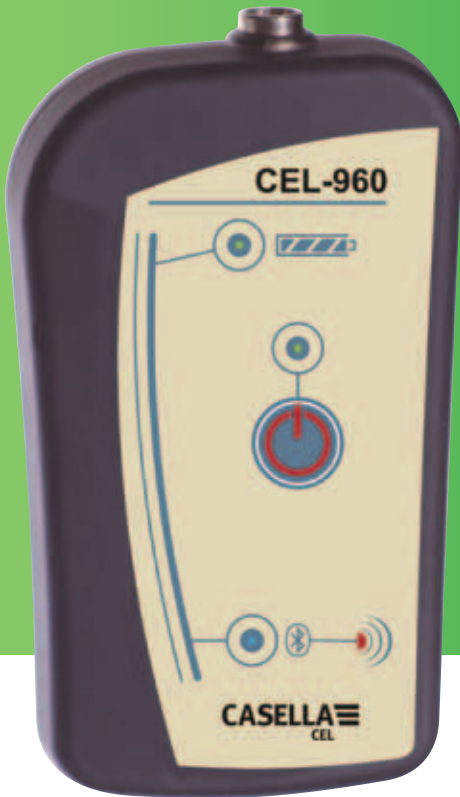


Vibration Meter



Whole-body and hand-arm vibration analyzer: CEL-960

The system hardware consists of an accelerometer (HA and/or WB) with connecting cable plus the analyzer which is housed in a very compact, rugged and lightweight case. A charging base is provided.

- Measures and records X, Y and Z axis vibration levels, RMS and Peak
- Calculates and stores overall and time history data of vector sum, daily exposure A(8) and VDV
- Vibration input signal and 1/3 octave spectrum recording
- Presence detector and warning light (WB)
- Up to 20-hour run time with Lithium-Ion rechargeable battery

Wireless remote control: dB96

A pocket or laptop PC, along with dB96 software is the interface between the operator and the CEL-960.

- Simultaneous control of up to 5 instruments
- Management of instrument setups and measurement configurations
- Download of measurement files
- Real-time display of measured data on a colour screen

Processing software: dB98

dB98 is used to create graphic and numeric reports with text descriptions and search functionality.

- Compliant with standards ISO 5349 and ISO 2631
- Data transfer via USB2.0
- Automatic reports

Applications

Human Vibration Exposure Assessment per ANSI and ISO measurement standards plus ACGIH TLV and EU Directives

- Hand-arm Vibration Exposure Analysis
- per ISO 5349 and ANSI 2.70
- Whole-body Vibration Exposure Analysis
- per ISO 2631 and ANSI 3.44
- 1/3 Octave and Vibration Signal Recording
- General Vibration Measurements

Standards

ISO 8041 (2005), ISO 5349 (2001), ISO 2631 (1997)

Metrology

Channels	From 1 to 4 (depending on configuration and option)
Display resolution	0,01
Conditioning	IEPE : 12V-4mA or 24V-4mA
Voltage (input)	5V AC peak
Filtering	<ul style="list-style-type: none"> • Wd, Wk, Wh (digital, according to ISO 8041) • Programmable filter: 0.4 - 4000 Hz • 1/1 octave: 1Hz - 2kHz / 1/3 octave: 0.8Hz - 2.5kHz (Optional on 1 channel)
Measured magnitudes	<ul style="list-style-type: none"> • General measurement mode: acceleration, peak, peak - peak, crest factor, rms (x, y, z) • Hand-arm: acceleration, peak, peak - peak, RMS (x, y, z), ahv, A(8) • Whole-body: acceleration, peak, peak - peak, peak factor, rms (x, y, z), av, Aeq, A(8), A(8)v, VDV, MTVV, SEAT • Simultaneously stores overall and time history data for all metrics • Signal recording: manual or on trigger ($f_{s_{max}} = 8192\text{Hz}$ (Optional on 1 channel)) • Parallel measurement and time history of all indicators
Calibration	With calibrator / by input of sensitivity (HA, WB) by gravity (WB only)
Temperature	-10°C / +50°C (0-95% HR)
Dimension / Weight	105 x 60 x 25 mm / 135 g

Memory Module	<ul style="list-style-type: none"> • Integrated 1GB flash memory (Micro SD) • Storage of measurement files (minimum rate: 1s) • Signal storage (programmable sampling)
General Performance	<ul style="list-style-type: none"> • Typical battery life: 20 hours (stand-alone mode) / 10 hours (remote controlled mode) • 3.7 V - 2.3 A battery - Charging time: 6h30 (USB or charger)

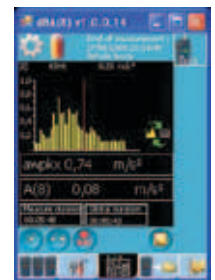
Specification	Triaxial Hand-Arm accelerometer	Triaxial Whole Body seatpad	Monoaxial accelerometer for SEAT (option)
Sensitivity	10 mV/g	10 mV/g	10 mV/g
Dynamic range	500 g	18 g	500 g
Bandwidth	From 1 to 12,000 Hz (± 1 dB)	From 0 to 2,000 Hz (-3 dB)	From 0.1 to 1,000 Hz
Resonance frequency	> 36 kHz	5.5 kHz	> 28 kHz
Weight	13 g	270 g	18 g
Temperature range	-40°C / +125°C (-40°F / +257°F)	-20°C / +70°C (-4°F / +158°F)	-50°C / +125°C (-58°F / +275°F)
Material / Characteristics	Titanium	Seatpad with presence detector	Stainless steel
Accessories	Hand-arm Adapters for direct mount, steering wheel / handlebar, T-bar	Removable retractable reel cable	Floor mounting using an isolated magnetic base

Control software dB96	<ul style="list-style-type: none"> • Control using a Pocket PC/Tablet PC: configuration management / real-time display / data collection • Wireless Bluetooth communication • Programmable start modes: immediate / delayed / by periods / on detection of presence • Visual display and coding of data on colour screen of remote control • Pre-programmed configurations (whole body, hand-arm, general vibration) • Storage of signal: manual or automatic on trigger • Written and oral comments (synchronised with measurement file) • PC-compatible software • Languages: English, French
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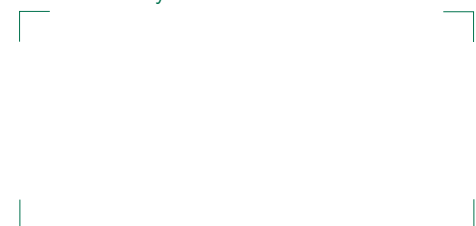
Processing software dB98	<ul style="list-style-type: none"> • Transfer of measurement files generated by CEL-960 through USB2.0 • Calculation of A(8) and peak factor according to Directive 2002/44/EC, calculation of dose on coded events • Whole body (health, comfort or perception, seated, standing, lying), Hand-arm • Time history plots for all indicators • Re-Calculates average values between users' cursors • Automatically formatted reports
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Standard package	<ul style="list-style-type: none"> • CEL-960 - Transducer – Desktop charger – dB96 • Carrying case / CD / Documentation • dB98 Processing Software
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Options	<ul style="list-style-type: none"> • Vibration calibrator / Pocket PC / Tablet PC • Floor mounting system / Shock-proof protecting skin
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Distributed by



Casella CEL

Regent House, Wolseley Road, Kempston, Bedford MK42 7JY, United Kingdom
Tel: +44 (0) 1234 844100 Fax: +44 (0) 1234 841490 Email: info@casellacel.com Web: www.casellameasurement.com

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