

Product Data

Hand-Arm Vibration Meter — Type 2537

USES:

- Control workers' exposure to hand-arm vibration in the workplace
- Find calculated half- and full-day exposure levels (A_{eq4} and A_{eq8}) based on short measurements
- Demonstrate a tool's compliance with vibration exposure safety standards
- Simultaneous RMS and Peak measurements
- Hand-arm vibration and linear frequency weightings
- Measures A_{eq} , A_{eq4} , A_{eq8} , A_{max} , A_{min} , A_{mp} , Peak, and Inst
- 40 records of stored results
- Two measurement ranges
- Included mounting bracket attaches the accelerometer firmly to a tool handle

FEATURES:

- Conforms with ISO 8041 Type 2 and ISO 5349
- Back-lit display
- Five built-in languages: English, German, French, Spanish, Italian

Description

Hand-Arm Vibration Meter Type 2537 is designed to be quick and easy to use when taking occupational health related measurements.

Measurements are displayed on a large LCD screen, which includes a quasi-analogue bar that shows the current acceleration level.

The instrument features two parallel independently frequency weighted detectors. This enables it to display both RMS and Peak readings simultaneously.

Intuitive User-interface

The clearly marked arrows and symbols on the front panel, combined with the large LCD screen (with back light), make the hand-arm vibration meter very easy to learn and use. The display is clear and concise. Clear instructions and warnings guide you through your measurement.

Real-time Clock

The Type 2537 has a real-time clock and calendar, which marks each measurement with the date and time.

Data Storage & Processing

The instrument is capable of storing up to 40 records of measurement results. Each record stores the date, measurement time, A_{eq} , A_{eq4} , A_{eq8} , A_{max} , A_{min} , A_{mp} , and overload status. These results can be transferred in a spreadsheet-compatible format via the built-in serial interface to a PC. Measurement results can also be output to a portable printer as you take them.

Convenient Downloading

The instrument comes with communication software that runs on a PC under Windows. The software's graphical interface makes it simple to download measurement records and display them in a spreadsheet program.

AC Output

The linearly weighted AC output enables you to make a direct calibrated recording (on Digital Audio Tape, for example), which can be used later for complete vibration analysis.



Specifications 2537

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| <p>STANDARDS: Conforms with ISO 8041 Type 2 and ISO 5349</p> <p>INPUT: 0.35 pC/ms⁻² for accelerometer Type 4505</p> <p>FREQUENCY WEIGHTINGS:</p> <ul style="list-style-type: none"> • Linear (Unweighted) • Hand-Arm Vibration Weighting <p>MEASURING RANGES: Hand-Arm: 5 – 1500 Hz Linear: 6.3 – 5000 Hz (-3 dB) Inst, Low Range Setting: 0.1 – 316 m/s² Inst, High Range Setting: 1 – 3160 m/s² Peak, Low Range Setting: 0.14 – 447.2 m/s² Peak, High Range Setting: 1.4 – 4472 m/s²</p> <p>DETECTORS: RMS Averaging Time: 1 s Peak Rise Time: <100 µs Automatic reset at 1 s intervals</p> <p>PARAMETERS: A_{min}, A_{max}, A_{eq1}, A_{eq4}, and A_{eq8} are calculated based on 1 s exponential averaging of the instantaneous RMS readings (Inst). A_{mp} is the highest peak reading (Peak)</p> <p>OVERLOAD INDICATION: Instantaneous indication of overload and latched overload. Stored records also include a latched overload indicator</p> <p>DISPLAY: 4 line LCD showing: <ul style="list-style-type: none"> • Input signal level – indicated with a quasi-analogue bar (updated 15 times per second) • Selected parameters with level • Warnings for: battery low and overload • Measuring range • Elapsed measurement time • Menus for displaying and editing settings • Recalled records Features a back-light for easy viewing, which can be turned on and off and includes an auto time-out to save batteries. Displayed parameters updated once per second</p> <p>MEMORY: 40 Records of Overall Results</p> | <table border="1"> <tr> <td style="text-align: center; vertical-align: middle;">CE</td> <td>CE-mark indicates compliance with EMC Directive</td> </tr> <tr> <td>Safety</td> <td>EN 61010-1 and IEC 1010-1: Safety requirements for electrical equipment for measurement, control and laboratory use</td> </tr> <tr> <td>EMC Emission</td> <td>EN 50081-1: Generic emission standard. Part 1: Residential, commercial and light industry EN 50081-2: Generic emission standard. Part 2: Industrial environment CISPR 22 (1993): Radio disturbance characteristics of information technology equipment. Class B Limits FCC Rules, Part 15: Complies with the limits for a Class B digital device</td> </tr> <tr> <td>EMC Immunity</td> <td>EN 50082-1: Generic immunity standard. Part 1: Residential, commercial and light industry EN 50082-2: Generic immunity standard. Part 2: Industrial environment When measuring vibration with the Lin frequency weighting in an industrial environment, levels below 0.3 m/s² may be affected (extreme worst case)</td> </tr> </table> <p>TRANSDUCER: Type 4505 accelerometer</p> <p>SERIAL INTERFACE: Compatible with: <ul style="list-style-type: none"> • EIA-574 • EIA-232-E with 25-pole adaptor Baud Rate: 9600 Data Bits: 8 Stop Bit: 1 Parity: None Handshake: XON/XOFF Result Output Formats: Buffer (printer format) or all records (spread-sheet format)</p> <p>AC OUTPUT: Short-circuit protected coaxial LEMO socket (series 00) Minimum Load Impedance: 5 kΩ in parallel with 1 nF Output: Output signal from input amplifier (no frequency weighting); approximately 0.5 V RMS at full scale deflection</p> <p>CLOCK: Real-time (calendar) and measurement duration Factory set to CET</p> | CE | CE-mark indicates compliance with EMC Directive | Safety | EN 61010-1 and IEC 1010-1: Safety requirements for electrical equipment for measurement, control and laboratory use | EMC Emission | EN 50081-1: Generic emission standard. Part 1: Residential, commercial and light industry EN 50081-2: Generic emission standard. Part 2: Industrial environment CISPR 22 (1993): Radio disturbance characteristics of information technology equipment. Class B Limits FCC Rules, Part 15: Complies with the limits for a Class B digital device | EMC Immunity | EN 50082-1: Generic immunity standard. Part 1: Residential, commercial and light industry EN 50082-2: Generic immunity standard. Part 2: Industrial environment When measuring vibration with the Lin frequency weighting in an industrial environment, levels below 0.3 m/s ² may be affected (extreme worst case) | <p>WARM-UP TIME: <15 s</p> <p>REFERENCE CALIBRATION: Frequency: 159.15 Hz Acceleration: 10 m/s² (gives an indication of 1 m/s² when HA weighted)</p> <p>ENVIRONMENTAL EFFECTS: Storage Temperature without Batteries: -20 to +70°C (-13 to +158°F) Operating Temperature: -10 to +50°C (14 to 122°F) Maximum Humidity for Operation: 90% RH at 40°C for 96 h</p> <p>BATTERIES: Four 1.5 V LR6/AA size alkaline cells Lifetime (at room temperature): Approximately 14 h Internal back-up battery: Charging time: ~10 hours (1st time) Keeps clock and memories operating for 6 months (typically) if fully charged</p> <p>PHYSICAL CHARACTERISTICS: Size: 257×97×41 mm Weight: 460g (incl. batteries)</p> |
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Ordering Information

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| <p>Type 2537 Hand-Arm Vibration Meter</p> <p>Includes the following accessories: Type 4505 Accelerometer ZE 0777 Charge Amplifier DB 3585 Mounting Stud 4×QB0013 Four 1.5 V LR6/AA size alkaline cells AO0038: Low-Noise Cable</p> | <p>Optional Accessories</p> <p>Type 4294 Calibration Exciter Type 2322 Portable Printer Type 4500: Cubic Accelerometer Type 4501: Cubic Accelerometer AO 0283: Super-Low-Noise Teflon Cable (for Types 4500 and 4501)</p> | <p>AO 0339: Low-Noise Cable (for Types 4500 and 4501) AO 0403: LEMO to BNC Cable AO 1386 9-pole Cable with 25-pole Adaptor (for computer and serial printer)</p> |
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Brüel&Kjær reserves the right to change specifications and accessories without notice



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