### Vibration Level Meter Specifications

<table>
<thead>
<tr>
<th>Standard applied</th>
<th>Measuring law JIS C 1510-1995 (Japan)</th>
</tr>
</thead>
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<tr>
<td>Measuring functions</td>
<td></td>
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<tr>
<td>Vibration level</td>
<td>Lv</td>
</tr>
<tr>
<td>Vibration acceleration</td>
<td>Lva</td>
</tr>
<tr>
<td>Power average</td>
<td>Leq</td>
</tr>
<tr>
<td>Maximum value</td>
<td>Lmax</td>
</tr>
<tr>
<td>Minimum value</td>
<td>Lmin</td>
</tr>
<tr>
<td>Percentile level</td>
<td>Lx (Five values arbitrarily selected)</td>
</tr>
<tr>
<td>Measuring time</td>
<td>10 seconds, 1.5, 10, 15, 30 minutes, 1.8, 12, 24 hours</td>
</tr>
<tr>
<td>Measuring level</td>
<td>30~120 dB</td>
</tr>
<tr>
<td>Self-noise</td>
<td>Not larger than 30 dB</td>
</tr>
<tr>
<td>Linearity range</td>
<td>80 dB</td>
</tr>
<tr>
<td>Level range switching</td>
<td>2 stage switching by 20 dB step 20~90 dB</td>
</tr>
<tr>
<td>Frequency range</td>
<td>1~80 Hz</td>
</tr>
<tr>
<td>Frequency correcting</td>
<td>Vertical characteristic, horizontal characteristic, and flat characteristic</td>
</tr>
<tr>
<td>Effective value</td>
<td>Real effective value detecting circuit (digital computing scheme)</td>
</tr>
<tr>
<td>Dynamic characteristic</td>
<td>0.63 second</td>
</tr>
<tr>
<td>Calibration</td>
<td>Electrical calibration by built-in oscillator (sinusoidal wave of 31.5 Hz)</td>
</tr>
<tr>
<td>Sampling period</td>
<td>2 ms, 64 ms (Leq)</td>
</tr>
<tr>
<td>Computing</td>
<td>Power average (Leq) Computing mean square within measuring time in three directions simultaneously. Percentile level (Lx) Computing L5, L10, L50, L90 and L95 in three directions simultaneously based on cumulative frequency distribution Maximum, minimum values (Lmax, Lmin) Computing maximum and minimum values within measuring time in three directions simultaneously</td>
</tr>
</tbody>
</table>

### Paused Function
- General pause function

### Display
- Liquid crystal display (128 X 64 dots) with backlight

### Digital display
- Displayed in numerals
- Displayed in digits
- Displaying cycle 1 second

### Bar display
- Displaying cycle Approximately: 9.4 ms
- Over/Ovload, displayed in 10 dB from scale upper limit
- Underr: Excessively low signal, displayed in -50 dB from scale lower limit
- Remaining battery amount: Displayed in 4 stages

### Alarm display
- Clock: Year, Month, Date, Hour, Minute, Second

### Output terminal
- Independent output in 3 directions respectively
- AC output: Output voltage: 1 Vrms (full scale)
- DC output: Output voltage: 2.5 V (full scale)
- Load resistance: 10 kΩ

### Battery
- AA batteries four or AC adaptor
- Battery life: Alkaline battery approximately 20 hours, Manganese battery, approximately 11 hours, Battery life is approximately 1/3 the above when the backlight lights

### Operating temperature range
- -10~55°C 30%~90%RH (no condensation)

### Weight
- Approximately 350 g including batteries

### Configuration
- Main body TYPE 3233 1
- Vibration pickup TYPE 7833 (Three directions) 1
- Case (3m): BC-0233 1
- BNC pin cord BC-0071 1
- AA batteries 4

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High Precision Measurement can be easily realized in your palm

**ACO’s Simple Vibration Meter**

- **Lv** (Vibration level)
- **Lva** (Vibration acceleration level)
- **Leq** (Power average)
- **Lmax** (Maximum value)
- **Lx** (Percentile level)

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Vibration Level Meter

**TYPE 3233**

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[Image of vibration meter]
ACO's state-of-the-art Vibration Meter

The TYPE 3233 conforms to measurement law JIS C 1510.1999 and excels mobility at every measuring site because of its smallness and light weight. Combination/Integration with Vibration Pickup TYPE 7833 allows you to measure vibration levels and vibration acceleration levels on the ground, floor, foundation and seat etc., simultaneously in three directions of X, Y and Z. The measuring and computing items are vibration level Lv for which sensory characteristics are taken into account, vibration acceleration level Lva of physical quantity, power average Leq, maximum value Lmax, minimum value Lmin and Percentile level Lx, of which instantaneous values are digitally displayed on the liquid crystal screen. These can be simultaneously recorded on an external level recorder with output terminals independent in three directions. In addition, data processing has been simplified by integrating with peripherals using I/O terminal (RS-232C interface). ACO's Sound Meters, TYPE53 6224/6226, having the equivalent specifications, are also on sale as popular comparison meters. Please make use of these in combination with the measuring instruments for environment control.

**Features**

- **Easy to handle as a result of its smallness and light weight, high mobility and easy operation.** Measurer does not require any special skill. The pickup for measurement offers compatibility.
- **Digital values and bar graphs are displayed on a large-scale liquid crystal screen equipped with backlight.** Anyone can take a measurement without a reading error, and easily grasp vibration amounts with the bar graph.
- **Wide range of linearity 80 dB eliminates switching.**
- **Maximum and minimum values (Lmax, Lmin), Percentile vibration level (Lx; five values) and power average are computed simultaneously in three directions, and selectively displayed.**
- **RS-232C interface built-in, data management and processing can be easily carried out by data management software (separately sold).**
- **A wide range of vibration levels can be easily measured and operability is enhanced by using the tripod stand.**

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**Specifications of sensor**

- **Main body** Three directional acceleration pickup for public instance
- **Structure** Pickup with built-in pre-amplifier
- **Waterproof** Protective Class 2, Dip-proof II Type (IS C 0907)
- **Model** 7833
- **Sensitivity** 100 mV/(m/s²)
- **Long-term sensitivity** ±5% or less
- **Frequency characteristic** 1~200 Hz
- **Temperature range** -10~50°C
- **Dimension, weight** ø70×45 mm, Approximately 300 g

**Option**

- **AC adaptor** AC-1026
- **Extension cable** BC-0003
- **Interface cable** BC-0005
- **Data management software** NA-0033-3
- **Transformation connector** A12-25F-9F

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**Example of system configuration**

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**Frequency response**

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**Flat characteristic for measuring vibration acceleration level**