

High Precision Measurement can be easily realized in your palm

ACO's Simple Vibration Meter

Lv (Vibration level)

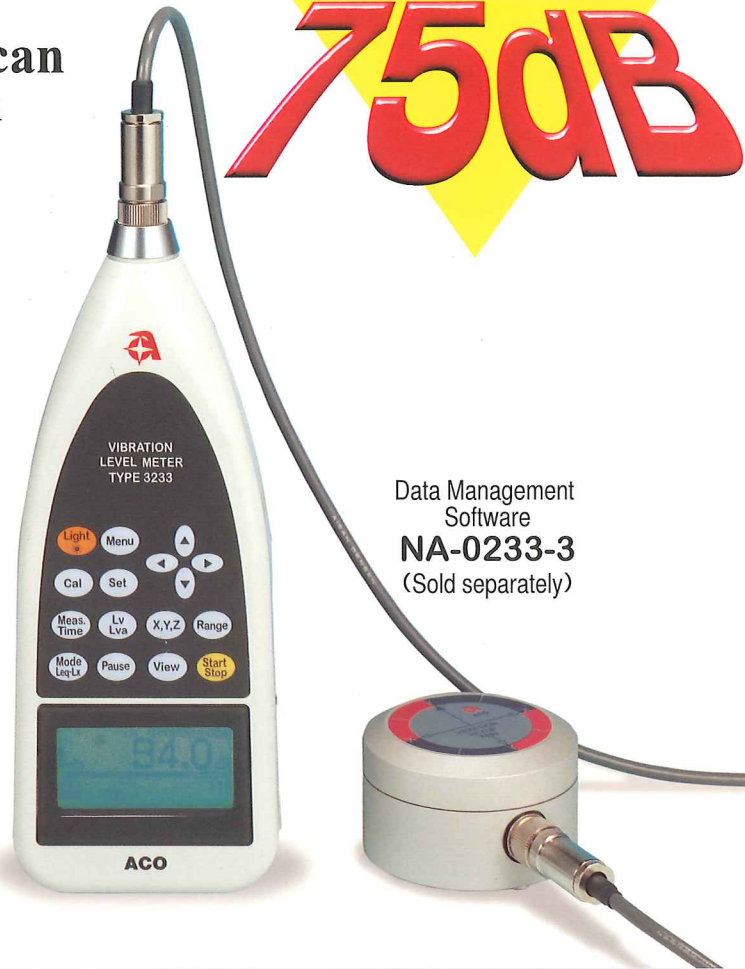
Lva (Vibration acceleration level)

Leq (Power average)

Lmax (Maximum value)

Lx (Percentile level)

Dynamic Range
75dB



Data Management Software
NA-0233-3
(Sold separately)

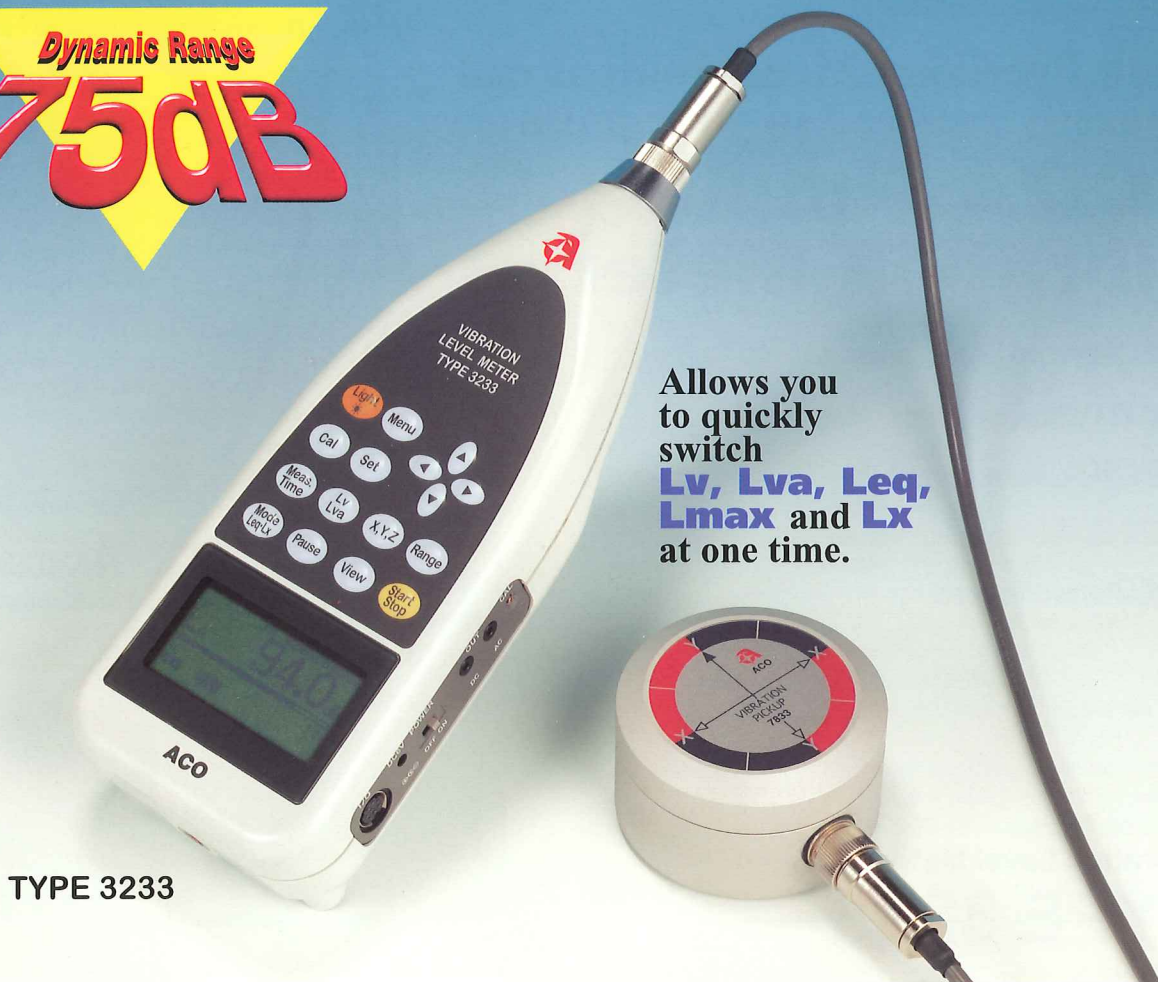
Vibration Level Meter
TYPE 3233



Challenger for your future needs

ACO

Dynamic Range
75dB



Allows you to quickly switch
Lv, Lva, Leq, Lmax and Lx
at one time.

TYPE 3233

ACO's state-of-the-art Vibration Meter

The TYPE 3233 conforms to measurement law JIS C 1510-1995, and exerts 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, TYPES 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 75 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.

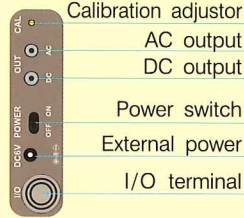
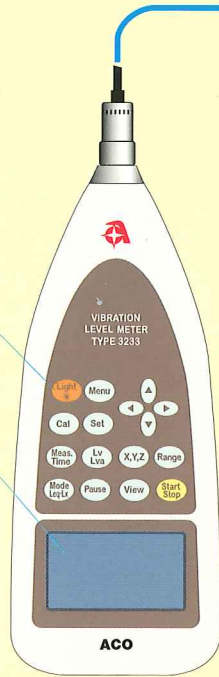
Operating button easy to handle

Large-scale screen easy to read

Dimensions of main body
85(W) × 220(H) × 48(D)
Weight: Approximately 350g

Option

- AC adaptor AC-1026
- Extension cable(5~10m) BC-0233
- Output cable BC-0073
- Interface cable BC-0026
- Data management software ... NA-0233-3
- Transformation connector A12-25F-9F



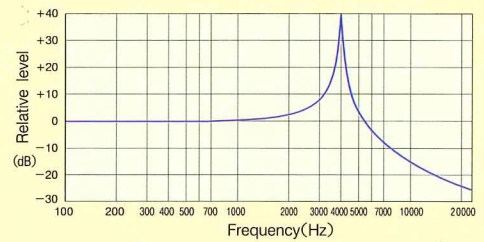
Specifications of sensor

Main body	Three directional acceleration pickup for public nuisance
Structure	Pickup with built-in pre-amplifier
Waterproof	Protective Class 2 Drip-proof II Type(JIS C 0920)
Model	7833
Sensitivity	100 mV/(m/s ²)
Transverse sensitivity	5 % or less
Frequency characteristic	1~200 Hz
Temperature range	-10~50 °C
Dimension, weight	φ70×45 mm, Approximately 300 g

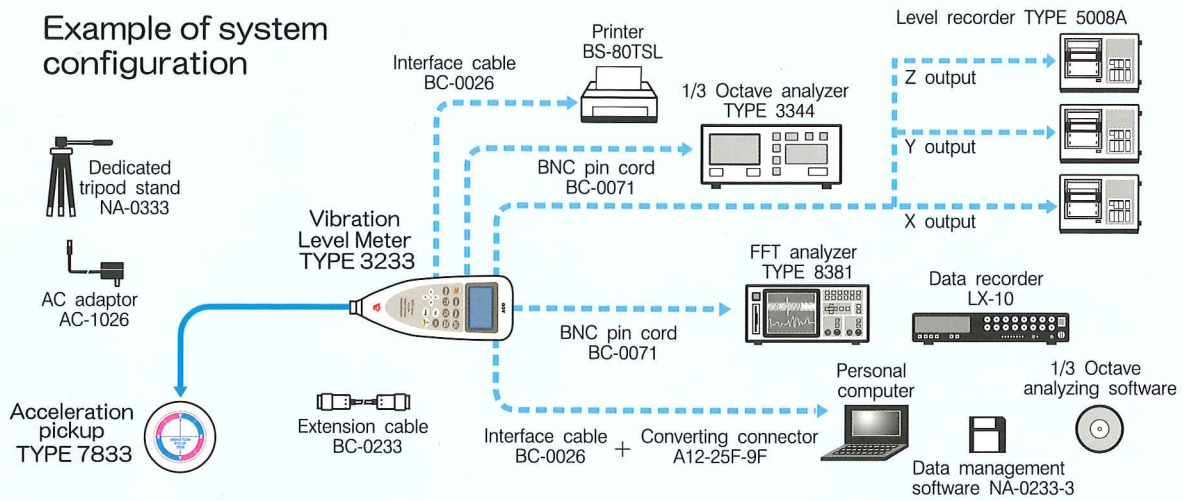


Acceleration pickup (Three directional)

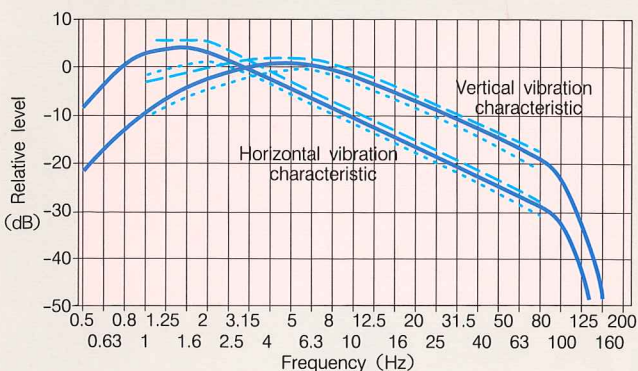
Acceleration pickup frequency characteristic



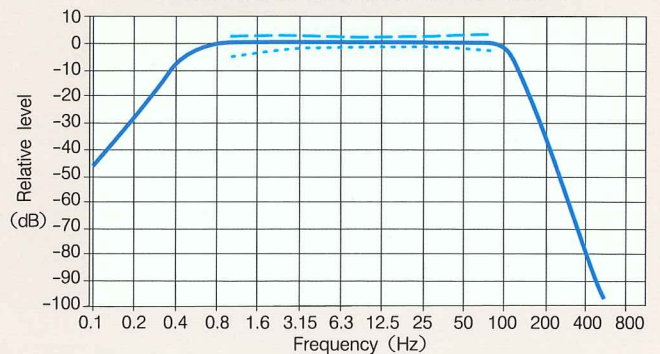
Example of system configuration



Frequency response



Flat characteristic for measuring vibration acceleration level



Vibration Level Meter Specifications

Standard applied	Measuring law JIS C 1510-1995 (Japan)
Measuring functions	
Vibration level	Lv
Vibration acceleration level	Lva
Power average	Leq
Maximum value	Lmax
Minimum value	Lmin
Percentile level	Lx(Five values arbitrarily selected)
Measuring time	10 seconds, 1, 5, 10, 15, 30 minutes, 1, 8, 12, 24 hours Manual Longest measuring time: 199 hours 59 minutes 59 seconds
Measuring level	30~120 dB
Self-noise	Not larger than 30 dB
Linearity range	75 dB
Level range switching	2 stage switching by 20 dB step 30~90 dB 50~110 dB
Frequency range	1~80 Hz
Frequency correcting circuit	Vertical characteristic, horizontal characteristic, and flat characteristic
Effective value detecting circuit	Real effective value detecting circuit (digital computing scheme)
Dynamic characteristic	0.63 second
Calibration	Electrical calibration by built-in oscillator (sinusoidal wave of 31.5 Hz)
Sampling period	2 ms (Leq) 64 ms (Lmax, Lmin, Lx)
Computing	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 value (Lmax, Lmin) Computing maximum and minimum values within measuring time in three directions simultaneously
Pause function	General pause function

Displayer	Liquid crystal display (128 X 64 dots) with backlight
Digital display	Displayed in numerals: Displayed in 4 digits Displaying cycle: 1 second
Bar display	Displaying cycle Approximately: 64 ms
Alarm display	Over: Overload, displayed in +10 dB from scale upper limit Under: Excessively faint signal, displayed in -0.6 dB from scale lower limit Remaining battery amount: Displayed in 4 stages Clock: Year, Month, Date, Hour, Minute, Second
Output terminal	Independent output in 3 directions respectively
AC output	Output voltage: 1 Vrms (full scale) Output resistance: 600 Ω Load resistance: Not less than 10 kΩ
DC output	Output voltage: 2.5 V (full scale) 0.25 V/10 dB Output resistance: 50 Ω Load resistance: Not less than 10 kΩ
I/O terminal	Control of vibration meter and data output by computer (direct output to computer) Interface RS-232C (asynchronous)
Battery	AA batteries four or AC adaptor Battery life: Alkali battery, approximately 20 hours (Manganese battery, approximately 11 hours) Battery life is approximately 1/3 the above when the backlight lights
Operating temperature range	-10~50 °C 30%~90 %RH (no condensation)
Weight	Approximately 350 g including batteries
Configuration	Main body TYPE 3233 1 Vibration pickup TYPE 7833 (Three directional) 1 Cable (3m) BC-0233 1 BNC pin cord BC-0071 1 AA batteries 4 Housing case 1



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