RION

Efficient Equipment Diagnosis Starts with Vibration Measurement

Vibration Meter

vm-63a

Compact Dimensions, Light Weight, Integrated Accelerometer: Precision Measurement Device That Fits in Your Pocket

Acceleration : 0.1 to 199.9 m/s² peak, 10 to 15000 Hz
Velocity : 0.1 to 199.9 mm/s rms, 10 to 1000 Hz
Displacement : 0.001 to 1.999 mm p-p, 10 to 1000 Hz

The VM-63A is an ultracompact vibration meter with integrated accelerometer. The whole package is small enough to easily fit into a shirt pocket. The unit is designed to be easy to operate and to provide all functions necessary for diagnostic vibration measurements in the field. It is suitable not only for servicing and monitoring machinery installations, but also for use in product development and design, for quality assurance applications and many other tasks.

❶ **Accelerometer attachment**
(shown with attachment S)
Hold this part against the measurement objects .
Vibrations are measured in the direction of the arrow.

❷ **Accelerometer**
Shear-type Piezoelectric Accelerometer

❸ **Vibration frequency range selector and indicator**
(only for acceleration measurements)
LO: 10 to 1000 Hz general measurement
HI : 1000 to 15000 Hz bearing measurement

❹ **Measurement mode selector and indicator**
(acceleration, velocity, displacement)

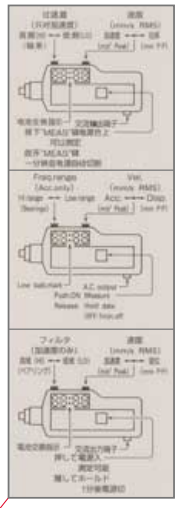
❺ **MEAS (measurement) button**

❻ **Signal output jack**
Full-scale 2 V peak
For connection of level recorder, oscilloscope, earphone, etc.

Simply Hold Against Measurement Object

Functions and Features

- Integrated accelerometer and digital display
- Pocket size dimensions (185 × 68 × 30 mm) and light weight (250 g including battery)
- Wide measurement range, from low frequencies characteristic of unbalanced rotation and misalignment, to high frequencies resulting from bearing vibrations
- Measures acceleration (m/s^2 peak), velocity(mm/s rms), and displacement (mm p-p)
- Newly designed shear type piezoelectric pickup measures a wide vibration range simply by being held against measurement object
- Wide-range desigh eliminates the need for frequent measurement range switching
- Hold function makes measurement results easy to read
- Auto power off design without power switch conserves battery power by shutting the unit off automatically

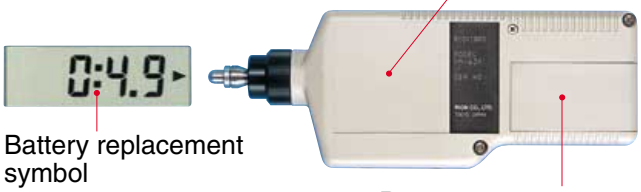


Instruction labels in English, Chinese, and Japanese are available.

Operation

1. Open battery compartment cover and insert battery with correct + – polavity.

Close the battery compartment cover.



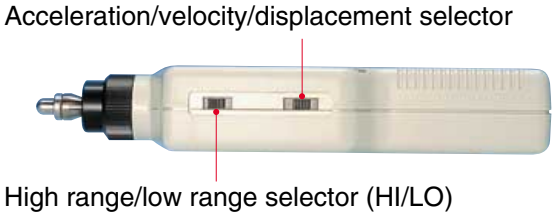
Battery voltage check before measurement

Press MEAS button. If symbol shown below appears on display, replace battery.

2. Select measurement mode

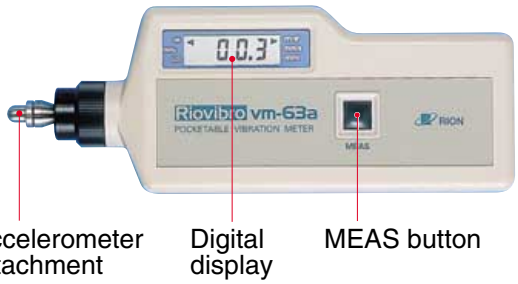
Use selector to select measurement mode. Arrow at right of digital display shows which mode is selected.

For acceleration measurement, the vibration frequency range can be selected. For regular measurements, select LO. For bearing vibration measurements, select HI.



3. Measurement

1) While keeping MEAS button depressed, hold vibration detector against measurement object. Use a pressure of about 500 g to 1 kg.



2) When MEAS button is released, current measurement value is held on display.
3) To cancel hold value, press MEAS button again. Value is canceled and next measurement is performed.
4) Unit turns itself off automatically about 1 minute after MEAS button is released.

Specifications

Accelerometer	Piezoelectric accelerometer (shear-type)
Measurement range	Acceleration: 0.1 to 199.9 m/s² peak (rms × √2) Velocity: 0.1 to 199.9 mm/s rms Displacement: 0.001 to 1.999 mm p-p (rms × 2√2) * Velocity and displacement range is limited by acceleration 199.9 m/s².
Measurement accuracy	±5% ±2 digits
Measurement frequency range	Acceleration: 10 Hz to 1 kHz (LO) 1 kHz to 15 kHz (HI) Velocity: 10 Hz to 1 kHz Displacement: 10 Hz to 1 kHz
Display Display update cycle	3-1/2 digit digital display 1 s * Value updated while MEAS button is pressed and held when button is released.
Signal output	AC output 2 V peak (display full scale) Earphone (VP-37) can be connected Load impedance 10 kΩ or more
Power supply Current consumption Battery life Auto power-off function	6F22 9 V battery × 1 Approx. 7mA at 9 V About 25 h continuous use (at 25℃, with manganese battery) Operates when no control is operated for 1 minute
Ambient conditions	–10 to + 50℃, 30 to 90 % RH (no condensation)
Dimensions	185(H) × 68(W) × 30(D) mm
Weight	Approx. 250 g (including battery)
Supplied accessories	Soft case × 1, Battery 6F22 × 1, Attachment S × 1, Instruction label × 1
Optional accessories	Attachment L (VP-53Y), Earphone (VP-37)

Accelerometer Attachments

A. B. C.

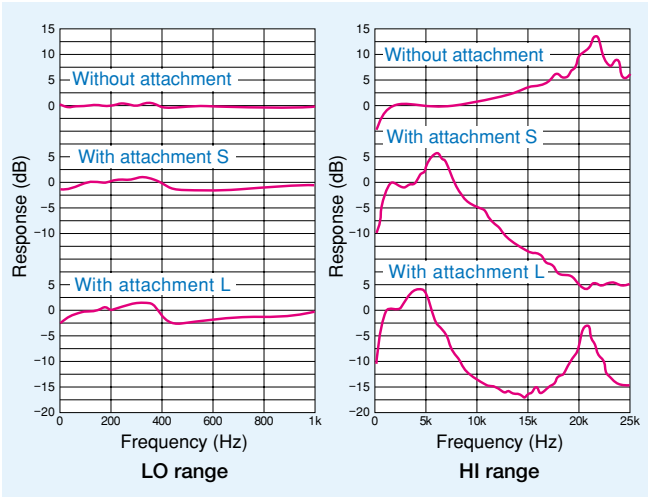
The accelerometer detector of the VM-63A can be used without an attachment or with two kinds attachments (S and L), to fit the respective measurement requirements. (Attachment L is available as an option.)

A. Without attachment
In this condition, best high-range response is achieved (10Hz to 15kHz), but planar contact with the measurement object is required.

B. With attachment S (supplied)
The unit is delivered in this condition. It provides good response and reproducibility over a wide range. Unless there are special requirements, the unit should be used in this condition.

C. With attachment L (option)
Suitable for measurement in cases where access space to the measurement object is limited.

Contact resonance in acceleration measurement (measured with Rion FFT Signal Analyzer)



Specifications subject to change without notice.

RION CO., LTD.
20-41, Higashimotomachi 3-chome, Kokubunji, Tokyo 185-8533, Japan
Telephone: +81-42-359-7888 Fax: +81-42-359-7442
URL：http://www.rion.co.jp/ E-mail：info@rion.co.jp

Distributed by: