



Handheld Vibration Meter



KCF Technologies, Inc.

Part Number VM1001

Printed in USA

All rights reserved

For safe operation, please read the manual carefully before using the Handheld Vibration Meter

KCF Technologies, Inc.
119 S. Burrowes St., Suite 605
State College, PA 16801

www.kcftech.com
Email: sales@kcftech.com
TEL: 814-867-4097
FAX: 814-238-1875

1. DESCRIPTION

The VM1001 Handheld Vibration Meter is a stand-alone vibration meter for quick and easy measurements of acceleration, velocity and displacement. The device weighs approximately 300g and is powered with an internal 9V battery. The acceleration, velocity or displacement of the vibrating structure is displayed on an LCD screen. This meter is excellent as a quick diagnostic tool for the vibration engineer, to measure vibration levels and locate areas of high vibration. As optional equipment, the VM1101 Accelerometer Probe can be used with the Handheld Vibration Meter. The Accelerometer Probe can be used like a stethoscope to sweep across a vibrating surface, or can be temporarily mounted to a metallic structure with the built-in magnet.

The Handheld Vibration Meter is manufactured according to International Standard ISO-2954.

2. SPECIFICATIONS

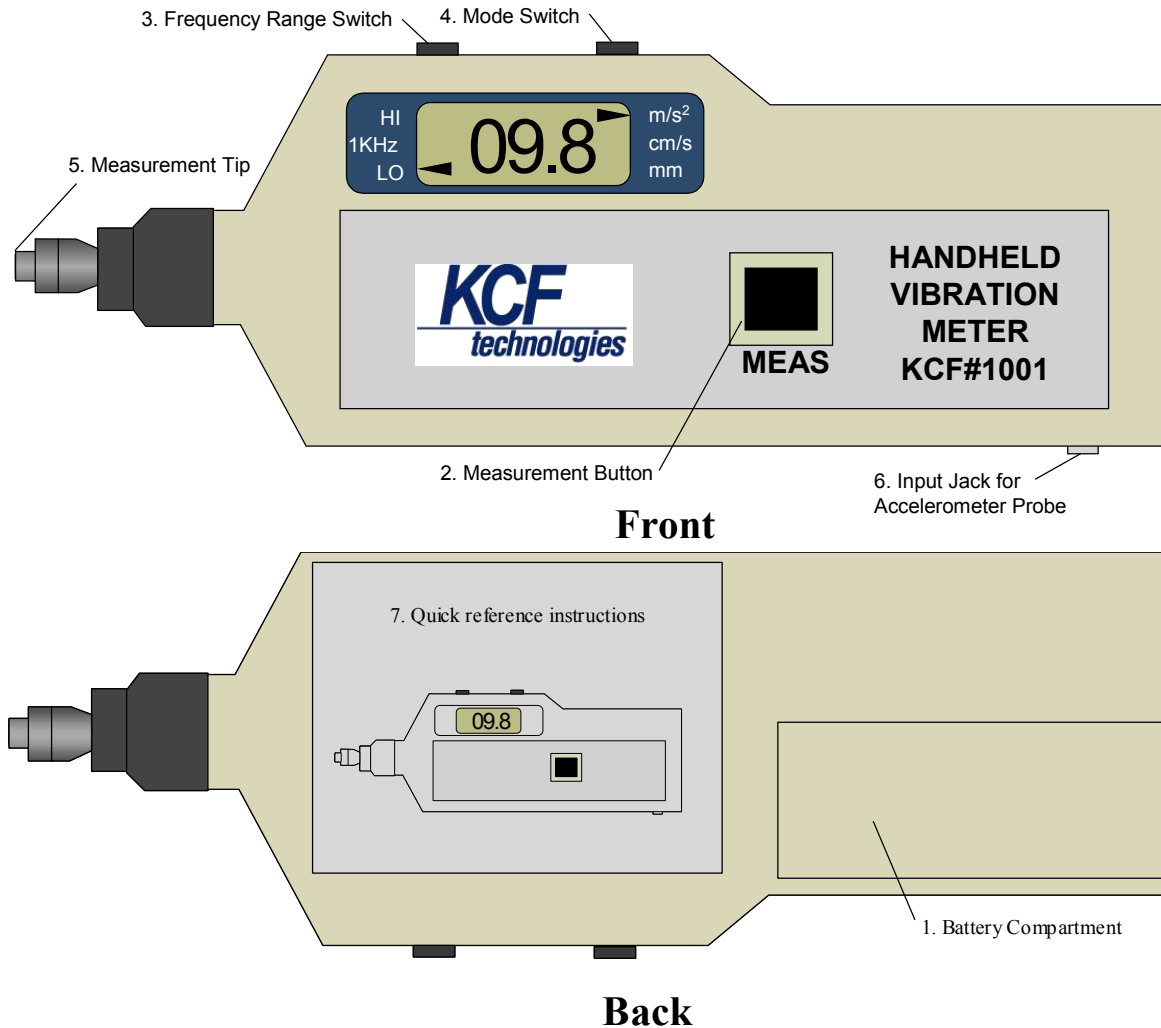
| | |
|--------------------------|---|
| Size | 186 x 70 x 32 mm |
| Weight | 300 g |
| Power | 9V (6F22) Battery |
| Measurement Range | Acceleration: 0.1 – 199.9 m/s ² (peak value) Velocity: 0.01 – 19.99 cm/s Displacement: 0.001 – 1.999 mm (peak to peak value) |
| Frequency Range | Acceleration: 10 Hz – 1 kHz OR 1 kHz – 10 kHz Velocity: 10 Hz – 1 kHz Displacement: 10 Hz – 1 kHz |
| Precision | +/- 2% (Display data +/- 5%) |
| Display | 1.5 inch LED Display |
| Auto Power-off | Power turns off automatically after 60 seconds |

3. OPERATION

The Handheld Vibration Meter is designed as a useful tool for the vibration engineer in the field, or as a fast vibration measurement in the laboratory. It can also be used to perform a rough modal analysis of a structure. The device measures the acceleration, velocity or displacement of a vibrating structure and displays the result. In acceleration mode, the user can switch between low frequency (< 1 kHz) and high frequency (> 1 kHz) range. Refer to the illustration below to follow the operating instructions.

1. Install a 9 Volt (6F22) battery into the battery compartment [1] on the back of the Handheld Vibration Meter.
2. Press the “MEAS” button [2] to turn on the power. Adjust the HI/LO frequency range switch [3] and the Acceleration/Velocity/Displacement mode switch [4] as desired.
3. Hold down the “MEAS” button [2]. The reading should be near zero. If a “ ; ” or “ BAT ” appears on the screen, the battery must be changed.
4. Press the tip of the Handheld Vibration Meter firmly onto a vibrating structure. The meter should be held so that the tip is perpendicular to the measured surface.

5. To acquire a measurement, hold the “MEAS” button while the tip is in contact with the vibrating structure. If the “MEAS” button is released, the reading remains on the screen.
6. After 60 seconds of non-use, the power automatically turns off.
7. Quick-reference instructions can be found on the back of the Handheld Vibration Meter [7].
8. **OPTION** The VM1001 Vibration Meter can be equipped with an external accelerometer probe as optional equipment. When equipped, insert the accelerometer probe plug into the Input Jack [6]. Place the accelerometer probe on the vibrating surface and use as outlined above.



KCF Technologies, Inc.
 119 S. Burrowes St., Suite 605
 State College, PA 16801

www.kcftech.com
 Email: sales@kcftech.com
 TEL: 814-867-4097
 FAX: 814-238-1875

4. MAINTENANCE

The Handheld Vibration Meter is maintenance free. For any maintenance other than a battery change, or in case of malfunction, please contact:

KCF Technologies, Inc.
119 S. Burrowes St., Suite #605
State College, PA 16801
Email: kcftech@kcftech.com
Phone: (814) 867-4097

5. PROPER USE

1. Protect the Handheld Vibration Meter and sensor tip from large bumps or shocks.
2. Use in a temperature range of 0 – 40 °C (32 – 104 °F).
3. Use when the humidity is less than 85 % RH.

6. INCLUDED ACCESSORIES

- | | |
|-----------------------------|---------|
| 1. User's Guide | 1 piece |
| 2. Handheld Vibration Meter | 1 piece |

7. OPTIONAL EQUIPMENT

1. KCF VM1101 Accelerometer Probe