

FEATURES

- **Integrated Micro-Controller**
- **AC or Battery Operation**
- **Low Voltage Lockout**
- **Standard Sensor Probe –or–
Optional Accelerometer w/Cable**
- **Padded Carrying Case**
- **Optional Printer**



The Columbia Model VM-300 Vibration Meter is a general-purpose vibration measuring instrument for periodic routine vibration checks of industrial machinery and general field use where portability and ease of use are required. This hand-held device is the ideal preventive maintenance tool.

Model VM-300 operates from a rugged, precision piezoelectric accelerometer and incorporates a charge amplifier input stage for stability and minimizing errors. Operation is controlled by an internal integrated micro-controller acting under direction of a splash-resistant 7-key membrane keypad.

The sensor probe contains the piezoelectric accelerometer which outputs an electric charge proportional to the instantaneous value of the applied acceleration. This charge signal is communicated to the VM-300 instrument through a low-noise coaxial cable and is processed with a charge amplifier whose output is a voltage signal proportional to instantaneous acceleration. Alternatively, Model VM-300A is supplied with accelerometer and 10' cable assembly in lieu of handheld probe.

Acceleration, Velocity and Displacement Measurement Modes are provided along with a number of value-enhancing features:

- An optional printer can be connected to the VM-300 Meter for making permanent records of readings taken.
- Dual power allows the VM-300 to be powered from its internal battery in the field, or from an external AC adapter to save battery life in bench applications.
- A precision low-voltage lockout circuit prevents the VM-300 Meter from making erroneous readings due to low battery.
- Automatic 10-minute timeout during battery operation prevents the VM-300 from draining its battery while untended.
- The VM-300 is housed in a 7.5" x 4" x 2" plastic case with detachable probe, and is supplied with a padded carrying case, and AC adapter. Model VM-300A option is supplied with accelerometer and LNHT-10' cable assembly in lieu of the handheld probe. An optional printer kit consisting of printer and connecting cable is also available.

Specifications

Size	7.5" x 4" x 2"
Weight	Approx. 1 lb. (w/probe)
Measurement Functions & Ranges	Velocity: 0.1 to 300 in/sec F.S. Displacement: 0.001 to 3 inches F.S. Acceleration: 0.1 to 300 g F.S.
Accuracy	±4% of F.S.
Frequency Response	10 to 1,000 Hz
Low Frequency Rejection	40 dB down (min.) at 1 Hz
Operating Voltage	7 to 12 VDC, Polarity Protected
Operating Current	25 mA Typical
Battery Cutoff	6.5 Volts Typical
Detector Type	Integrated True-RMS Responding Detector
Response Time	2 Seconds for Full Scale Reading 5 Seconds for 10% of Full Scale

Printer Interface	DB9 Male Connector: Pin 2: TxD (to Printer RxD) Pin 3: RxD (not used) Pin 4: DSR (to Printer DTR/Busy) Pin 5: Signal Common Pin 6: DTR (not used)
Data Rate	4800 bits/sec
Format	No Parity, 8 Data Bits, 2 Stop Bits, 1 Start Bit
Output Connector	3/32" Monaural Jack
Signal Output	Approx 200 mV RMS with Meter F.S. 3000 Ohms Output Impedance Signal represents instantaneous acceleration, velocity or displacement per selected function
Sensor Type	Piezoelectric Accelerometer