



1-117

Portable Vibration Meter



Features

- Direct Indication of Average Velocity and Peak-to-Peak Displacement
- Four Transducer Input Channels
- Accepts Internal or External Filters for Vibration Analysis
- Easily Calibrated Using Closed Case Calibration Procedures

Description

As a valuable tool for vibration analysis, the 1-117 Vibration Meter has won wide acceptance with its demonstrated accuracy, reliability, and flexibility. It has proven itself equally efficient in the field, in the laboratory, and on the production line as a monitor for use in establishing product acceptability. With four input channels, any of which may be selected at will, the 1-117 provides direct indication of average vibratory velocity and peak-to-peak displacement from self-generating velocity transducers.

Optional plug-in high-pass filters or CEC's 1-159 Variable Filter may be used for elimination of unwanted frequencies. This is of particular value for work with gas turbine and jet or turbo-prop

engines, where large-amplitude, low-frequency vibrations are apt to completely mask the low-amplitude, high-frequency vibrations of interest.

An internal calibration circuit provides for accurate amplifier gain adjustments for matching the input from a transducer of known sensitivity, to any one of four individual input channels. Individual channel sensitivity may be adjusted to provide full-scale indications from input signals as low as 27.8 millivolts.

Monitoring Systems



1-117 Portable Vibration Meter

Performance Specifications

Power Requirements:	105-125 VAC, 50/60/400 Hz, 30 Watts
Input Impedance:	10,000 Ohms
Linearity:	±3% of full-scale
Temperature Range:	+14°F to +104°F (-10°C to +40°C)

Meter will not be damaged by any temperature from -40°F to +122°F (-40°C to +50°C)

Temperature Stability:	Meter indication changes less than 0.2% of full scale /°C within operating temperature range
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Noise Level:	Less than 2% of full scale under any operating condition (as read at SCOPE connector)
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Input Devices:	Self-generating transducers
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SENSITIVITY AND FREQUENCY RESPONSE:

Displacement Measurement

A. Normal sensitivity range (D x 1)

1. Frequency response ±4% from 5 to 1000 Hz (without filter input)
2. Sensitivity 0.005 inches peak-to-peak displacement for full-scale indication (unattenuated) 1.5 inches peak-to-peak for full-scale indication (maximum attenuation)

B. High sensitivity range (D x 0.1)

1. Frequency response ±4% from 5 to 1000 Hz (without filter input)
2. Sensitivity 0.0005 inches peak-to-peak displacement for full-scale indication (unattenuated)

Velocity Measurement

A. Normal sensitivity range (V x 1)

1. Frequency response ±3% from 5 to 5000 Hz (without filter input)
2. Sensitivity 5 ips (average) for FS indication (unattenuated) 1500 ips (average) for full-scale indication (maximum attenuation)

B. High sensitivity range (V x 0.1)

1. Frequency response ±3% from 5 to 5000 Hz (without filter input)
2. Sensitivity 0.5 ips (average) for FS indication (unattenuated)

Optional Accessories

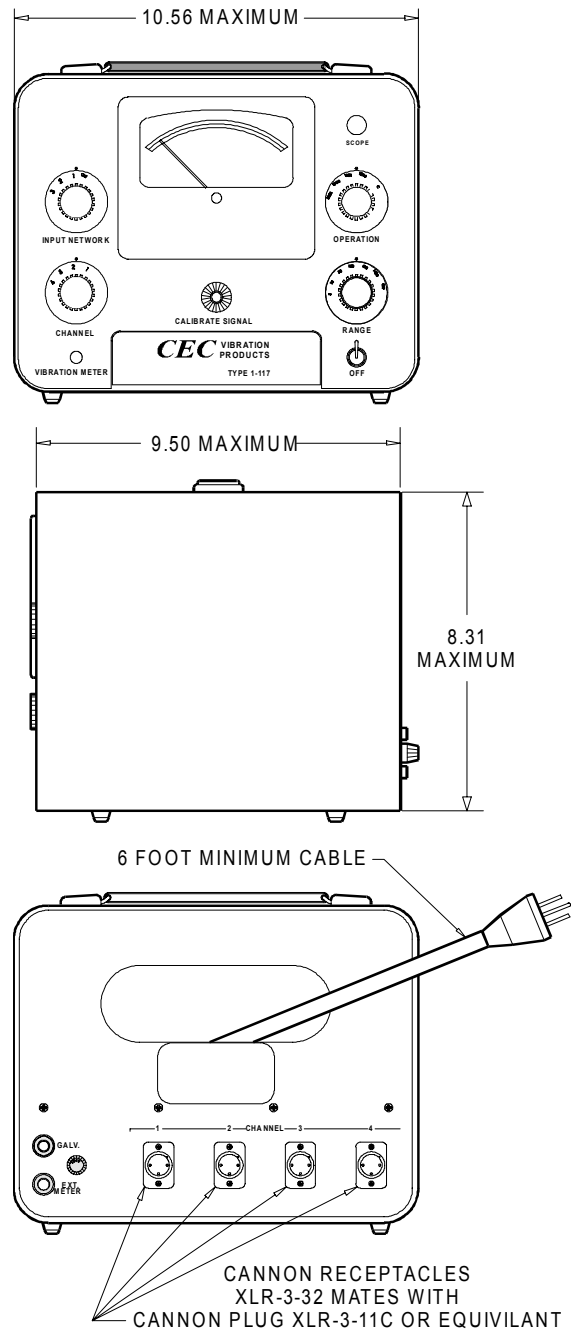
1. 19" Rack mounting kit P/N 37409
2. Transducer input cable P/N 49657-XXXX
3. Cable assembly P/N 170172-XXXX for connecting Type 1-117 to Type 1-159 Variable Filter
4. Filters; High Pass; Low Pass and Bandpass filters available on special request. Specify filter frequency. Four mating input connectors (XLR-3-11C) and an Operation and Maintenance Manual P/N 992064 are included.

Ordering Information

When ordering standard unit, specify 1-117-0001. Other units available are as follows:

- 1-117-0105: Standard unit with two permanently installed highpass filters, 70 Hz and 200 Hz.
- 1-117-0109: Metric scale meter with 230 V single phase operation.
- 1-117-0100: Standard unit with 230 V single phase operation.
- 1-117-0110: Metric scale meter with 115 V single phase operation.

For more information on non-standard units and other accessories, please contact your sales representative. In keeping with CEC's policy of continuing product improvement, specifications may be changed without notice.



Dimensions are in inches.