

# VIBRATION METER



## Features:

- Pocket-sized, full-function vibration meter
- True RMS vibration velocity measurements
- Data hold
- Auto shut-off
- Supplied with leather sheath, batteries and manual

## Specifications:

Velocity Range:	0.1 to 199.9 mm/sec
Accuracy:	±5% ±2
Frequency Range:	10Hz to 1kHz
Display:	3-1/2 digit LCD
Power Supply:	Two button batteries (LR44 or SR44)
Battery Life:	10 hours of continuous use or 400 tests
Dimensions:	150 x 22 x 18mm
Weight:	55g

Model	Description	Price
TV200	Pocket Vibration Meter	\$695.00

# VIBRATION METER



## Features:

- Ideal for measuring acceleration, velocity, rotational speed, and frequency
- Three display modes:
  - Special show acceleration in peak, velocity in RMS and display in peak-peak simultaneously
  - Common show one of the above, three at one time
  - Spectrum show charts
- Status bar compares current data with previous data
- Warnings of alarm limits
- 320 x 200 pixels LCD with LED backlight
- Adjustable LCD contrast
- Auto function finds climaxes of spectrum
- Manual function views spectrum by moving cursor
- Zoom function spreads the spectrum
- Point index can be set to increase automatically
- Real time clock
- Adjustable shut down time
- 25-point memory capacity
- RS-232 serial interface
- Powered by rechargeable lithium battery that provides 20 hours of continuous operation

## Specifications:

Ranges:	Acceleration: 0.1 to 392 m/s <sup>2</sup> ; Velocity: 0.01 cm/s to 80 cm/s; Displacement: 0.001 to 10 mm
Frequency Ranges:	Acceleration: 10 to 200Hz, 10 to 500Hz, 10Hz to 1kHz, 10Hz to 10kHz; Velocity: 10Hz to 1kHz; Displacement: 10 to 500Hz
Frequency Resolution:	0.25Hz
Accuracy:	±5%
Dimensions:	171 x 78.5 x 28mm
Weight:	230g

Model	Description	Price
TV300	Vibration Meter	\$1995.00

# VIBRATION METER



## Features:

- Includes remote vibration sensor
- Two velocity ranges: 20 and 200 mm/s
- Two acceleration ranges: 200 and 2000 m/s<sup>2</sup>
- RMS; Peak Hold; Min/Max
- RS-232 output
- Dimensions: 180 x 72 x 32 mm

Model	Description	Price
VB-8200	Vibration Meter	\$933.00

# VIBRATION METER

## Features:

- Provides direct readings of acceleration, velocity and displacement
- Slide switch operation
- Easy-to-read four-digit LCD readout
- Durable metal casing
- Overload indicator
- Complete with cable to accelerometer, hand probe and carrying case

Providing measurements in displacement, velocity, or acceleration, the **VI-100** Vibration Meter is an easy-to-use wide band meter. It is designed to be used in industrial or environmental applications for general purpose investigations such as shock or pulsation checks, basic machinery condition monitoring and comparative studies, quality specification checks, or general engineering work.

The simple four-button control provides for easy operation and the large LCD readout makes for easy viewing of data. The hand-held meter, housed in a rugged metal case, is extremely lightweight, weighing 14.6 oz.

Application areas include power power generation, utilities, manufacturing, transportation systems, government and military agencies, laboratories, universities, and any other are where an accurate, affordable, portable vibration instrument is needed.



## Specifications:

Operating Ranges: (all values in RMS units)

- Low:** Acceleration: 0.01 to 19.99 g's;  
Velocity: 0.01 to 19.99 cm/sec  
Displacement: 0.01 to 19.99 m x 10<sup>-5</sup>
- High:** Acceleration: 0.01 to 199.9 g's;  
Velocity: 0.01 to 199.9 cm/sec  
Displacement: 0.01 to 199.9 m x 10<sup>-5</sup>

Frequency Range: 5 to 10,000 Hz  
Calibrated: 159 Hz, 10 m/sec<sup>2</sup> ±5%

Accelerometer: Internally amplified and case grounded  
Sensitivity: 10 mV/g (8-14 mV calibration range) Mounting threads: 10-32 tapped hole, 0.12" deep

AC Output: Signal maximum of ±5.0 volts relative to ground signal. Accepts 1/8" phone jack. 1 kΩ output impedance.

DC Output: Signal maximum of ±2.0 volts relative to ground signal. 10 mV of rms signal/count of 1.0 on the display on high range. 100 mV of rms signal/count of 1.0 in the display on low range. Accepts 1/8" phone jack. 1kΩ input impedance.

Operating Temp.: Unit: 0 to 60°C  
Accelerometer: -50 to 120°C

Relative Humidity: 0 to 95%, non-condensing

Power Supply: Two alkaline 9-volt batteries

Battery Life: 40 hours of continuous operation

Dimensions: 2.75" x 8.5" x 1.0" (70 x 216 x 25mm)  
Accelerometer: 0.87" x 0.6" dia. (22 x 15mm)  
Cable: 16" (410mm) coiled; 6' (1.83m) stretched

Weight: Unit: 14.6 oz. (415 g)  
Accelerometer: 0.42 oz. (12 g)  
Cable: 1.2 oz. (34 g)

Model	Description	Price
VI-100	Vibration Meter	\$2271.00
831	Magnet	\$40.00

# VIBRATION METER



All industrial machinery vibrates. The level of vibration is a useful guide to machine condition. Poor balance, misalignment and looseness of the structure will cause the vibration level to go up - a sure sign that maintenance is needed.

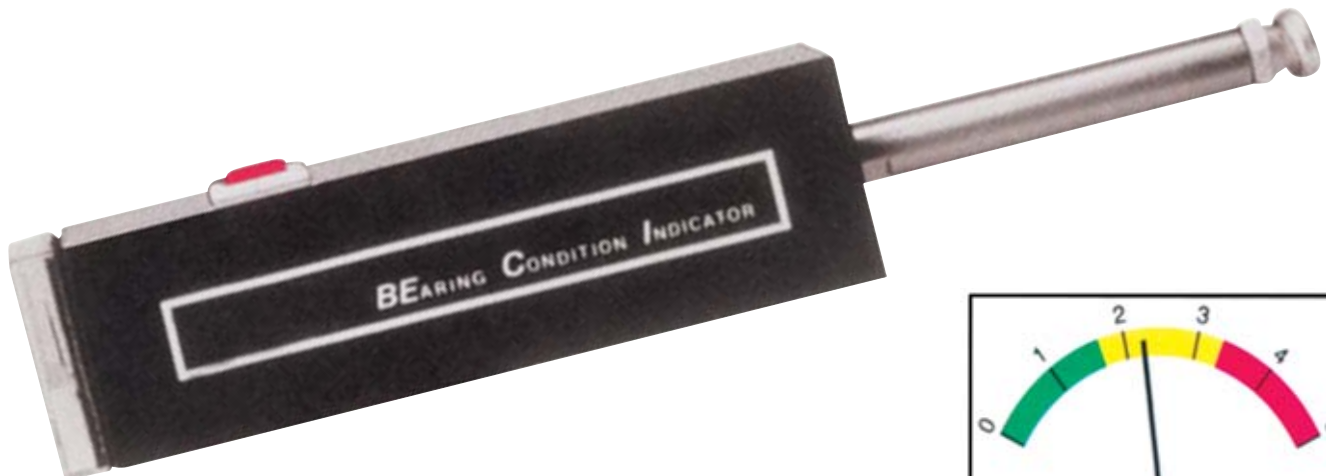
ISO Standard 2372 recommends measurement of vibration severity as most suitable for general industrial purposes. They also define limit values for common types of machinery. By comparing measured vibration severity with the norm of the machine class, it is possible to judge the condition in terms of good, acceptable or bad. Regular readings will show the development trend of the vibration level and thus the urgency of the maintenance problem: stable condition, slow or fast deterioration. **VIB-10** is a sturdy, battery-powered instrument, based on ISO standards, for use by personnel without special training in vibration monitoring. It is very easy to use: attach the transducer to the machine, press the button. The RMS value of vibration velocity is displayed directly in large, red LED digits. Features include automatic switch-off and a shock absorbing protection sleeve of oil resistant rubber.

## Specifications:

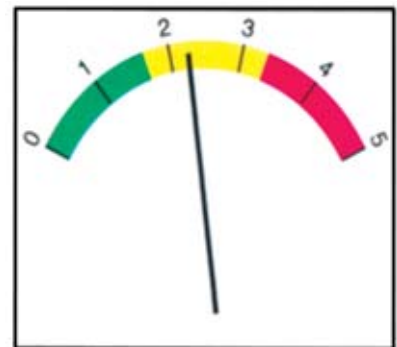
Range:	0.5 to 99.9 mm/sec., 10 to 1000 Hz
Resolution:	0.1 mm/sec.
Accuracy:	2% $\pm$ 0.2 mm/sec.
Display:	3 digits, red LED
Power Supply:	4 x 1.5V alkaline cells
Dimensions:	210 x 75 x 30 mm
Weight:	400g

Model	Description	Price
VIB-10	Vibration Meter	\$2140.00

# BEARING CONDITION INDICATOR



The **BECI** colour-coded meter tests bearings and gears and machinery by providing a reading from the specially designed probe tip when it is placed on the bearing cap of the machine being measured and the bright orange "Test" button is pressed. Relative bearing condition is indicated by a red, yellow, green scale and a "0-5" reading. A 9 volt battery will give approximately 120,000 bearing test readings. For use with equipment running from 1,800 to 3,600 RPM.



Model	Description	Price
VT40101	Bearing Condition Indicator	\$1347.00

# VIBRATION TRANSMITTER



## Specifications:

### DYNAMIC PERFORMANCE

Range: **VT100:** 0.00 - 1.00 in/sec. peak (0 - 25mm/sec peak)  
**VT200:** 0.00 - 2.00 in/sec. peak (0 - 50mm/sec peak)  
**VT500:** 0.00 - 5.00 in/sec. peak (0 - 125mm/sec peak)

Accuracy: < 5%  
 Frequency Range: 5 to 1500 Hz  
 Transverse Sensitivity: < 2%  
 Sensitive Axis: Lengthwise

### ELECTRICAL

Supply Voltage: 12 to 40 VDC  
 Output Range: 4 to 20 mA  
 Case Isolation: > 800 VAC  
 Connection: Black (+), White (-) polarity protected

### MECHANICAL

Housing Material: 316 Stainless Steel  
 Dimensions: 1.85" L x 1.25" dia. (46 x 32 mm)  
 Weight: 4 oz. (116g)  
 Electrical Connection: 2 conductor SOW cable  
 Cable Length: 10 ft. (3.04m)  
 Mounting Wrench: 1-1/8"

### ENVIRONMENTAL

Shock Limit: ±500g  
 Operating Temp. : 14 to 212°F (-10 to 100°C)  
 Housing: NEMA 4X

## Features:

- Very economical for continuous vibration monitoring of all machinery
- Outputs 4-20 mA proportional to peak vibration velocity levels (0 to 1 in/sec)
- Extremely rugged, NEMA 4 stainless steel housing
- Operates off loop power

All industrial equipment vibrates. Poor balance, misalignment, looseness will all cause the vibration levels to increase, a sure indication that maintenance is required. Vibration transmitters are an inexpensive way to continuously monitor machine vibration levels and locate problems before catastrophic machine failures occur.

**VT100** Vibration Transmitters provide a 4 to 20mA signal that is proportional to the peak velocity of the vibration in inches per second. The **VT100** Vibration Transmitter's 4-20mA output can easily be interfaced with panel meters, PLCs, data loggers, digital control systems, etc.

## Vibration Warning Levels:

Vibration Velocity	Class of Machinery			
	Class 1	Class 2	Class 3	Class 4
<b>0.01 ips</b>	Good	Good	Good	Good
<b>0.02 ips</b>	Good	Good	Good	Good
<b>0.04 ips</b>	Fair	Good	Good	Good
<b>0.06 ips</b>	Fair	Fair	Good	Good
<b>0.08 ips</b>	Rough	Fair	Fair	Good
<b>0.1 ips</b>	Rough	Rough	Fair	Fair
<b>0.2 ips</b>	N/A	Rough	Rough	Fair
<b>0.4 ips</b>	N/A	N/A	Rough	Rough
<b>0.6 ips</b>	N/A	N/A	N/A	Rough
<b>0.8 ips</b>	N/A	N/A	N/A	Rough
<b>1.0 ips</b>	N/A	N/A	N/A	N/A
<b>Class 1</b>	Individual components, integrally connected with the complete machine in its normal operating condition. Small electric motors, precision machines, turbines.			
<b>Class 2</b>	Medium sized machinery without special foundations, rigidly mounted engines, or machines on special foundation. Gear boxes, pumps, M-G sets, fans.			
<b>Class 3</b>	Large prime movers mounted on heavy, rigid foundations. Compressors, blowers, hammer mills, engines.			
<b>Class 4</b>	Large prime movers mounted on relatively soft, light weight, structures. Crushers, reciprocating machinery.			

Model	Description	Price
<b>VT100</b>	Vibration Transmitter, 1.00 in/sec peak	<b>\$577.00</b>
<b>VT200</b>	Vibration Transmitter, 2.00 in/sec peak	<b>\$577.00</b>
<b>VT500</b>	Vibration Transmitter, 5.00 in/sec peak	<b>\$633.00</b>