

*Acc., Vel., Displacement, data logger*

# VIBRATION METER

Model : VB-8213

ISO-9001, CE, IEC1010



**Lutron**

**LUTRON ELECTRONIC**

*The Art of Measurement*

# VIBRATION METER

Model : VB-8213

## 1. FEATURES

* Applications for industrial vibration monitoring : All industrial machinery vibrates. The level of vibration is a useful guide to machine condition. Poor balance, misalignment & looseness of the structure will cause the vibration level increase, it is a sure sign that the maintenance is needed.
* Frequency range 10 Hz - 1 kHz, sensitivity relative meet ISO 2954.
* Professional vibration meter supply with vibration sensor & magnetic base, full set.
* Metric & Imperial display unit
* Acceleration, Velocity, Displacement measurement.
* RMS, Peak value, Max. hold measurement.
* Wide frequency range.
* Data hold button to freeze the desired reading.
* Memory function to record maximum and minimum reading with recall.
* Separate vibration probe with magnetic base, easy operation.
* RS 232 computer interface.
* Data Logger.
* Optional data acquisition software.
* Optional data logger ( data collection ) software.
* Super large LCD display with bar graph indicator.
* Microcomputer circuit, high performance.
* Auto shut off saves battery life.
* Built-in low battery indicator.
* Heavy duty & compact housing case.
* Complete set with the hard carrying case.

### 2-1 General Specifications

Display	52 mm x 38 mm, LCD display. 16 mm ( 0.63" ) digit size. With bar graph indicator.
Measurement	Velocity, Acceleration, Displacement
Function	<i>Main</i> RMS, Peak, Max. Hold. <i>Others</i> Data hold, Max. & Min. value, Data logger.
Frequency range	10 Hz to 1 KHz * Sensitivity relative during the the frequency range meet ISO 2954 Refer to table 1, page 19.
Circuit	Exclusive microcomputer circuit.
Data hold	Freeze the desired reading.
Peak measurement	To measure the peak value.
Max. hold measurement	To measure and update the max. peak value.
Memory	Maximum & Minimum value.
Power off	Auto shut off, saves battery life, or manual off by push button.
Sampling time	Approx. 1 second.
Sampling Time of Data Logger	0, 1, 2, 10, 30, 60, 600, 1800, 3600 sec. * 0 second : Manual data logger. * Other sampling time beyond 0 second : Auto data logger.
Data Logger No.	500 no. max.
Data output	RS 232 serial output, isolate.
Operating temperature	0 to 50 °C ( 32 to 122 °F ).
Operating humidity	Less than 80% RH.
Power supply	Alkaline or heavy duty type, DC 9V battery, 006P, MN1604 (PP3) or equivalent.
Power consumption	Approx. DC 13 mA.
Weight	Meter 230 g/0.50 LB Vibration sensor 38 g/0.09 LB
Dimension	Meter : 180 x 72 x 32 mm ( 7.1 x 2.8 x 1.3 inch ). Vibration sensor probe: Round 19 mm Dia. x 21 mm.

Accessories included	Instruction manual..... 1 PC. Vibration sensor with cable..... 1 PC. Magnetic base..... 1 PC. Carrying Case..... 1 PC.
Optional accessories	* RS232 cable, UPCB-02 * USB cable, USB-01 * Data Acquisition software, SW-U801-WIN * Data Logger software, SW-DL2005.

### 2-2 Electrical Specifications

#### Acceleration ( RMS, Peak, Max Hold )

Unit	m/s <sup>2</sup>
Range	0.5 to 199.9 m/s <sup>2</sup>
Resolution	0.1 m/s <sup>2</sup>
Accuracy	± ( 5 % + 2 d ) reading @ 160 Hz, 80 Hz, 23 ± 5 °C
Calibration Point	50 m/s <sup>2</sup> ( 160 Hz )
Remark	Acceleration peak range : 1.0 to 199.9 m/s <sup>2</sup>

Unit	G @ 1 G = 9.8 m/s <sup>2</sup>
Range	0.05 to 20.39 G
Resolution	0.01 G
Accuracy	± ( 5 % + 2 d ) reading @ 160 Hz, 80 Hz, 23 ± 5 °C
Calibration Point	50 m/s <sup>2</sup> ( 160 Hz )
Remark	Acceleration peak range : 1.0 to 199.9 m/s <sup>2</sup>

Unit	ft/s <sup>2</sup>
Range	2 to 656
Resolution	1 ft/s <sup>2</sup>
Accuracy	± ( 5 % + 2 d ) reading @ 160 Hz, 80 Hz, 23 ± 5 °C
Calibration Point	50 m/s <sup>2</sup> ( 160 Hz )
Remark	Acceleration peak range : 1.0 to 199.9 m/s <sup>2</sup>

#### Velocity ( RMS, Peak, Max Hold )

Unit	mm/s
Range	0.5 to 199.9 mm/s
Resolution	0.1 mm/s
Accuracy	± ( 5 % + 2 d ) reading @ 160 Hz, 80 Hz, 23 ± 5 °C
Calibration Point	50 mm/s ( 160 Hz )
Remark	Velocity peak range : 1.0 to 199.9 mm/s

Unit	cm/s
Range	0.05 to 19.99 cm/s
Resolution	0.01 cm/s
Accuracy	± ( 5 % + 2 d ) reading @ 160 Hz, 80 Hz, 23 ± 5 °C
Calibration Point	50 mm/s ( 160 Hz )
Remark	Velocity peak range : 1.0 to 199.9 mm/s

Unit	inch/s
Range	0.02 to 7.87 inch/s
Resolution	0.01 inch/s
Accuracy	± ( 5 % + 2 d ) reading @ 160 Hz, 80 Hz, 23 ± 5 °C
Calibration Point	50 mm/s ( 160 Hz )
Remark	Velocity peak range : 1.0 to 199.9 mm/s

#### Displacement p-p ( RMS, Max Hold )

Unit	mm
Range	1.999 mm
Resolution	0.001 mm
Accuracy	± ( 5 % + 2 d ) reading @ 160 Hz, 80 Hz, 23 ± 5 °C
Calibration Point	0.141 mm ( 160 Hz )

Unit	inch
Range	0.078 inch
Resolution	0.001 inch
Accuracy	± ( 5 % + 2 d ) reading @ 160 Hz, 80 Hz, 23 ± 5 °C
Calibration Point	0.141 mm ( 160 Hz )
* Remark :	p-p = Peak to Peak