

Acc., Vel., Displacement, data logger

VIBRATION METER

Model : VB-8213

ISO-9001, CE, IEC1010



LUTRON ELECTRONIC



The Art of Measurement

VIBRATION METER

Model : VB-8213

1. FEATURES

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| * 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

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|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 * <i>Sensitivity relative during the the frequency range meet ISO 2954 Refer to table 1, page 19.</i> |
| 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. * <i>0 second : Manual data logger.</i> * <i>Other sampling time beyond 0 second : Auto data logger.</i> |
| 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 sensore 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. |

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|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 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-801-WIN * Data Logger (data collection) software, DL-2005. |

2-2 Electrical Specifications

Acceleration (RMS, Peak, Max Hold)

| | |
|-------------------|-------------------------------------------------------|
| Unit | m/s ² |
| Range | 0.5 to 199.9 m/s ² |
| Resolution | 0.1 m/s ² |
| Accuracy | ± (5 % + 2 d) reading @ 160 Hz, 80 Hz, 23 ± 5 °C |
| Calibration Point | 50 m/s ² (160 Hz) |

| | |
|-------------------|-------------------------------------------------------|
| Unit | G @ 1 G = 9.8 m/s ² |
| 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 ² (160 Hz) |

| | |
|-------------------|-------------------------------------------------------|
| Unit | ft/s ² |
| Range | 2 to 656 |
| Resolution | 1 ft/s ² |
| Accuracy | ± (5 % + 2 d) reading @ 160 Hz, 80 Hz, 23 ± 5 °C |
| Calibration Point | 50 m/s ² (160 Hz) |

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) |

| | |
|-------------------|-------------------------------------------------------|
| 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) |

| | |
|-------------------|-------------------------------------------------------|
| 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) |

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