*SD card real time data recorder*

# 4 channels
# VIBRATION RECORDER

**Model : BVB-8207SD** *ISO-9001, CE, IEC1010*




Lutron

**LUTRON ELECTRONIC**

*The Art of Measurement*

# 4 channels VIBRATION METERS

## Model : BVB-8207SD

**FEATURES**

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|---|
| * 4 channels vibration recorder, use SD card to save the 4 channels' data along with time information, paperless. |
| * 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. |
| * Channels no. : 4 channels ( CH1 to CH4 ) vibration measurement. |
| * 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, Max hold, Peak value measurement. |
| * Max. Hold reset button, Zero button. |
| * 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. |
| * Real time SD memory card Datalogger, it Built-in Clock and Calendar, real time data recorder , sampling time set from 1 second to 3600 seconds. |
| * Manual datalogger is available ( set the sampling time to 0 ), during execute the manual datalogger function, it can set the different position ( location ) No. ( position 1 to position 99 ). |
| * Innovation and easy operation, computer is not need to setup extra software, after execute datalogger, just take away the SD card from the meter and plug in the SD card into the computer, it can down load the all the 4 channels measured value with the time information ( year/month/date/ hour/minute/second ) to the Excel directly, then user can make the further data or graphic analysis by themselves. |
| * SD card capacity : 1 GB to 16 GB. |
| * LCD with green light backlight, easy reading. |
| * Can default auto power off or manual power off. |
| * Data hold, record max. and min. reading. |
| * Microcomputer circuit, high accuracy. |
| * Power by UM3/AA ( 1.5 V ) x 8 batteries or DC 9V adapter. |
| * RS232/USB PC COMPUTER interface. |
| * Include 1 PC vibration sensor, VB-83. |
| * Extra vibration sensor, VB-83 can be ordered. When change the VB-83, it is not necessary to make calibration again. |

**GENERAL SPECIFICATIONS**

| | | | |
|---|---|---|---|
| Circuit | Custom one-chip of microprocessor LSI circuit. | | |
| Display | LCD size : 82 mm x 61 mm.<br>** with green color backlight.* | | |
| Channels | 4 channels :<br>CH1, CH2, CH3, CH4. | | |
| Measurement | Velocity, Acceleration, Displacement | | |
| Function | *Acceleration, Velocity :*<br>RMS, Peak, Max Hold.<br>*Displacement :*<br>p-p ( peak-peak ), Max Hold p-p. | | |
| Unit | *Measurement* | *Metric* | *Imperial* |
| | Acceleration | meter/s^2, g | ft/s^2, |
| | Velocity | mm/s, cm/s | inch/s |
| | Displacement | mm | inch |
| Frequency range | 10 Hz to 1 KHz<br>** Sensitivity relative during the the frequency range meet ISO 2954*<br>*Refer to table 1, page 28* | | |
| Circuit | Exclusive microcomputer circuit. | | |
| Peak Measurement | *Acceleration, Velocity :*<br>To measure and update the peak value.<br>*Displacement :*<br>To measure and update the peak to peak ( p-p ) value. | | |
| Max Hold Measurement | *Acceleration, Velocity :*<br>To measure and update the max. peak value. | | |
| | *Displacement :*<br>To measure and update the max. peak to peak ( p-p ) value. | | |
| Zero Button | Under Acceleration ( RMS ) measurement, sensor motionless , press Logger Button ( 3-6, Fig. 1 ) > 5 seconds. | | |
| Max. Hold Reset Button | Under Max. hold measurement, press Logger Button ( 3-6, Fig. 1 ) > 5 seconds. | | |
| Datalogger Sampling Time Setting range | Auto | 1 second to 3600 seconds<br>*@ Sampling time can set to 1 second, but memory data may loss.* | |
| | Manual | Push the data logger button once will save data one time.<br>*@ Set the sampling time to 0 second.*<br>*@ Manual mode, can also select the 1 to 99 position ( Location ) no.* | |
| Data error no. | ≦ 0.1 % no. of total saved data typically. | | |
| Memory Card | SD memory card 1 GB to 16 GB. | | |
| Advanced setting | * Set clock time ( Year/Month/Date, Hour/Minute/ Second )<br>* Decimal point of SD card setting<br>* Auto power OFF management<br>* Set beep Sound ON/OFF<br>* Set sampling time<br>* SD memory card Format | | |
| Data Hold | Freeze the display reading.<br>** Only available for the RMS function.* | | |
| Memory Recall | Maximum & Minimum value.<br>** Only available for the RMS function.* | | |
| Data Output | RS 232/USB PC computer interface.<br>** Connect the optional RS232 cable UPCB-02 will get the RS232 plug.*<br>** Connect the optional USB cable USB-01 will get the USB plug.* | | |

| | |
|---|---|
| Sampling Time of Display | Approx. 1 second. |
| Operating Temperature and Humidity | 0 to 50 ℃.<br>Less than 85% R.H. |
| Power Supply | *** .Alkaline or heavy duty DC 1.5 V battery ( UM3, AA ) x 8 PCs, or equivalent. |
| | *** .DC 9V adapter input. ( AC/DC power adapter is optional ). |
| Power Current | Normal operation ( w/o SD card save data and LCD Backlight is OFF) :<br>*Approx. DC 12 mA.* |
| | When SD card save the data and LCD Backlight is OFF) :<br>*Approx. DC 35 mA.* |
| Weight | *Meter :* 515 g/ 1.13 LB. |
| | *Probe with cable and magnetic base :*<br>99 g/0,22 LB |
| Dimension | *Meter :* 203 x 76 x 38 mm<br>*Vibration sensor probe:*<br>Round 16 mm Dia. x 37 mm.<br>Cable length : 1.2 meter. |
| Accessories Included | * Instruction manual.....1 PC<br>* Vibration sensor set, VB-83 with cable.....1 PC<br>* Magnetic base.....1 PC |
| Optional Accessories | * Vibration sensor set, VB-83 with cable<br>* SD Card ( 2 G )<br>* AC to DC 9V adapter.<br>* USB cable, USB-01.<br>* RS232 cable, UPCB-02.<br>* Data Acquisition software,SW-U801-WIN. |

**ELECTRICAL SPECIFICATIONS (23± 5 ℃)**

**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<br>*@ 160 Hz, 80 Hz, 23 ± 5 ℃* |
| 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<br>*@ 160 Hz, 80 Hz, 23 ± 5 ℃* |
| Calibration Point | 50 m/S^2 ( 160 Hz ) |

| | |
|---|---|
| Unit | ft/s^2 |
| Range | 2 to 656 ft/s^2 |
| Resolution | 1 ft/s^2 |
| Accuracy | ± ( 5 % + 2 d ) reading<br>*@ 160 Hz, 80 Hz, 23 ± 5 ℃* |
| Calibration Point | 50 m/S^2 ( 160 Hz ) |
| *Remark :*<br>*RMS : To measure the true RMS value.*<br>*Peak : To measure and update the peak value.*<br>*Max. Hold : To measure and update the max. peak value.* | |

**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<br>*@ 160 Hz, 80 Hz, 23 ± 5 ℃* |
| 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<br>*@ 160 Hz, 80 Hz, 23 ± 5 ℃* |
| 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<br>*@ 160 Hz, 80 Hz, 23 ± 5 ℃* |
| Calibration Point | 50 mm/s ( 160 Hz ) |
| *Remark :*<br>*RMS : To measure the true RMS value.*<br>*Peak : To measure and update the peak value.*<br>*Max. Hold : To measure and update the max. peak value.* | |

**Displacement ( p-p, Max Hold p-p )**

| | |
|---|---|
| Unit | mm |
| Range | 1.999 mm |
| Resolution | 0.001 mm |
| Accuracy | ± ( 5 % + 2 d ) reading<br>*@ 160 Hz, 80 Hz, 23 ± 5 ℃* |
| Calibration Point | 0.141 mm ( 160 Hz ) |

| | |
|---|---|
| Unit | inch |
| Range | 0.078 inch |
| Resolution | 0.001 inch |
| Accuracy | ± ( 5 % + 2 d ) reading<br>*@ 160 Hz, 80 Hz, 23 ± 5 ℃* |
| Calibration Point | 0.141 mm ( 160 Hz ) |
| *Remark :*<br>*p-p :*<br>*To measure the Peak to Peak value.*<br>*Max. Hold p-p :*<br>*To measure and update the max. Peak to Peak value.* | |