

# VIBRATION METER

Model: VB-8216SD *ISO-9001, CE, IEC1010* 











The Art of Measurement

# SD Card real time data logger, Analog output Acceleration, Velocity, Displacement

# **VIBRATION METER**

Model: VB-8216SD

F	EATURES
*	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.
*	Analog output.
	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.
*	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
	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 6 batteries or DC 9V adapter.
*	RS232/USB PC COMPUTER interface.
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Custom (		of microproc	essor LSI
circuit.			
LCD size : 52 mm x 38 mm			
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sensor motionless , press Logger Button			
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Under M	ax. hold		t, press
it can co	nnect th	ne " Spectrum	analyzer APP
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	circuit. LCD size LCD with Velocity.  Accelerat RMS, J. Displace. P-P Cf Measurer Accelerat Velocity Displacen 10 Hz to *Sensiti the fire Refer Exclusive Accelerat To me value. Displace. To me pask ( Accelerat To me value. Displace. Under Accelerat To me pask t Under Accelerat	Custom one-chip circuit.  LCD size : 52 mr LCD with green!  Velocity, Acceler  Mcceleration, Velo RMS, Peak, M Displacement : p-p (peak-pe- Measurement Acceleration Velocity Displacement : 10 Hz to 1 KHz " Sensitivity relative frequency Refer to table Exclusive microc Acceleration, Velo To measure a peak (p-p) v Acceleration, Velo To measure a peak to peak Under Accelerati Sensor motionle: > 5 seconds. Under Max hold Logger Button > Export the Vibra meter's "Vibrati it can connect the or used for othe " When measur 100 m/s^2, be approx. AC Auto 1 secon  Manual Push th Osce Manual  Manual Push th Osce Manual SD memory carc SD memory carc	Custom one-chip of microprocicircuit.  LCD size: 52 mm x 38 mm LCD with green backlight (ON Velocity, Acceleration, Displace  Acceleration, Velocity: RMS, Peak, Max. Hold.  Displacement: p-p (peak-peak), Max-hold  Measurement Metric Acceleration meter/s^2,G Velocity mm/s, cm/s Displacement mm  10 Hz to 1 KHz "Sensitivity relative during the the frequency range meet 1: Refer to table 1, page Exclusive microcomputer circu  Acceleration, Velocity: To measure and update the value. Displacement: To measure and update the value.  Acceleration, Velocity: To measure and update the value.  Under Acceleration (RMS) measure and update the value.  Under Max. hold measurement Logger Button > 5 seconds.  Under Max. hold measurement Logger Button > 5 seconds.  Export the Vibration analog out; it can connect the "Spectrum or used for other application.  When measurement value is 100 m/s^2; the analog out it can connect the "Spectrum or used for other application.  When measurement value is 100 m/s^2; the analog out is 2, the analog out is

Power Supply	*.Alkaline or heavy duty DC 1.5 V battery
	( UM3, AA ) x 6 PCs, or equivalent.
	*.DC 9V adapter input. ( AC/DC power
	adapter is optional ).
Power Current	Normal operation ( w/o SD card save
İ	data and LCD Backlight is OFF):
	Approx. DC 15 mA.
	When SD card save the data and LCD
	Backlight is OFF) :
	Approx. DC 36 mA.
Weight	Meter:
	515 g/ 1.13 LB.
	Probe with cable and magnetic base :
	99 g/0,22 LB
Dimension	Meter:
	203 x 76 x 38 mm
	Vibration sensor probe:
	Round 16 mm Dia. x 37 mm.
	Cable length: 1.2 meter.
Accessories	* Instruction manual
Included	* Hard carrying case, CA-06 1 PC
	* Vibration sensor with cable 1 PC
	* Magnetic base1 PC
Optional	SD Card ( 2 G )
Accessories	AC to DC 9V adapter.
	USB cable, USB-01.
	RS232 cable, UPCB-02.
	Data Acquisition software, SW-U801-WIN.

#### ELECTRICAL SPECIFICATIONS (23±5°C)

## 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 % + 5 d) reading	
_	@ 160 Hz, 80 Hz, 23 ± 5 ℃	
Calibration	50 m/S^2 ( 160 Hz )	
Point		

Unit	G @ 1 G = 9.8 m/s^2
Range	0.05 to 20.39 G
Resolution	0.01 G
Accuracy	± (5 % + 5 d) reading
	@ 160 Hz, 80 Hz, 23 ± 5 ℃
Calibration	50 m/S^2 ( 160 Hz )
Point	

Jnit	ft/s^2
Range	2 to 656 ft/s^2
Resolution	1 ft/s^2
Accuracy	± (5 % + 5 d) reading
	@ 160 Hz, 80 Hz, 23 ± 5 °C
Calibration	50 m/S^2 ( 160 Hz )
Point	
Remark :	

temark: RMS : To measure the true RMS value. Peak : To measure and update the peak value. 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 % + 5 d) reading	
	@ 160 Hz, 80 Hz, 23 ± 5 ℃	
Calibration	50 mm/s ( 160 Hz )	
Point	, ,	

Unit	cm/s
Range	0.05 to 19.99 cm/s
Resolution	0. 01 cm/s
Accuracy	± (5 % + 5 d) reading
-	@ 160 Hz, 80 Hz, 23 ± 5 ℃
Calibration	50 mm/s ( 160 Hz )
Point	·

Uniil	Inch/s
Range	0.02 to 7.87 inch/s
Resolution	0.01 inch/s
Accuracy	± (5 % + 5 d) reading
	@ 160 Hz, 80 Hz, 23 ± 5 °C
Calibration	50 mm/s ( 160 Hz )
Point	
Remark :	
RMS : To measu	ure the true RMS value.

Peak: To measure and update the peak value.

Max. Hold: To measure and update the max. peak value.

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

Unit	mm
Range	0.014 - 1.999 mm
Resolution	0.001 mm
Accuracy	± (5 % + 5 d) reading
	@ 160 Hz, 80 Hz, 23 ± 5 ℃
Calibration	0.141 mm ( 160 Hz )
Point	

Unit	inch
Range	0.001 - 0.078 inch
Resolution	0.001 inch
Accuracy	± (5 % + 5 d) reading
-	@ 160 Hz, 80 Hz, 23 ± 5 ℃
Calibration	0.141 mm ( 160 Hz )
Point	

reman. P-P: To measure the Peak to Peak value. Max. Hold p-p: To measure and update the max. Peak to Peak value.



PATENT



