

USER'S MANUAL

For the

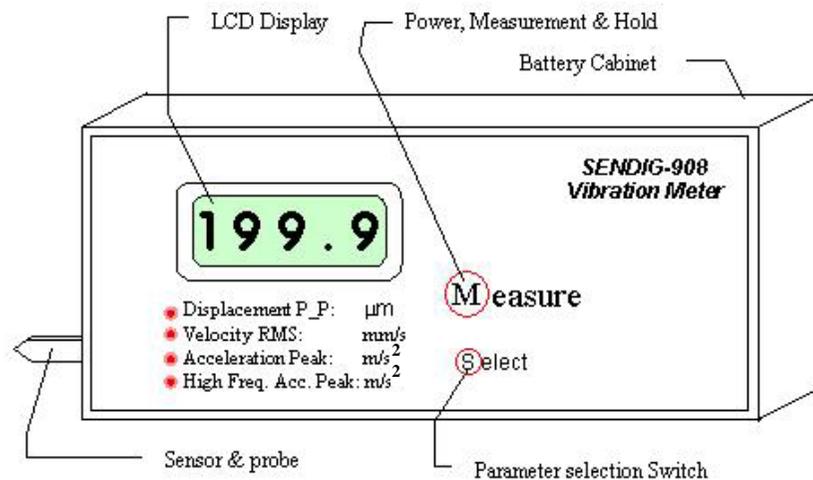
SERIES-908

Model SVM-140

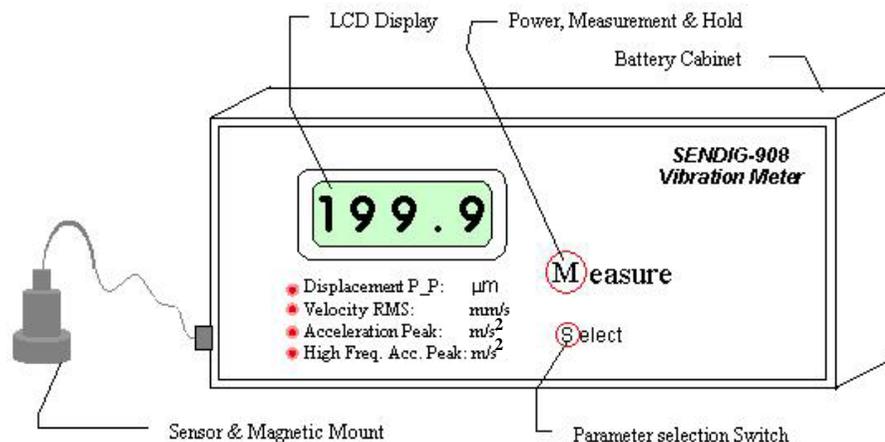
A Portable Vibration Analyzer

True RMS measurement

4 parameters Metric version



Standard Configuration: inside accelerometer with probe



Optional: Outside accelerometer with magnetic mount and probe

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1. Preparation

1). Check the voltage of the battery:

Press <Measure> key, observe the display on the screen. If there is an arrow on the top left corner, you need to replace the battery with a new one.

2). Set-up probe

The standard SVM-140 has two probes while outside sensor has 1 probe and 1 magnetic mount. When changing, take hold of the screw cover to avoid rotation and damage of the sensor.

2. Measurement

1). Select the measure parameters:

The SVM-140 has 4 vibration parameters. They are:

- a) Displacement (unit: $\mu\text{m} = 1/1000 \text{ mm}$): Equivalent peak-peak value
- b) Velocity (unit: mm/s): True RMS Value;
- c) Acceleration (unit: m/s^2): Equivalent peak
- d) High Frequency Acceleration (unit: m/s^2): Equivalent peak

2). Functions of the <Measure> key:

- a). Key press: Power on and begin measuring;
- b). Key release: Hold the measured value for twenty seconds and then power off automatically.

3). Stick the probe to the measured object (the pressure should be about 0.5—1 kg.)

3. Notes

- 1). Avoid intense impact, high temperature and immersed in water.
- 2). Keep the sensor plug clean and dry, and use it carefully.
- 3). Low battery indication: a bar will appear at the upper left corner of the LCD
- 4). Install the battery:
 - a) Open the small back cover of battery cabinet (2 screws at the

end far away from the sensor at backside, see figure);

b) Place a battery (6F22, 9V) correctly according to the polarity;

c) Close the back cover and screw the screws tightly;

d) If it has been put aside long-term, please take out the battery in case of the outflow of the battery liquid;

5) If the sensor has been used for over one year, please re-calibrate the vibrometer to ensure the precision.

4. Specifications

1). Measurement condition:

Temperature: 5-50°C, Humidity < 85%, Non-causticity environment, without strong electric-magnetic field & strong impact

2). Amplitude Ranges:

Displacement 1–1999 μm peak-peak (*)

Velocity 0.1–199.9 mm/s true RMS

Acceleration and High Frequency Acceleration:

0.1–199.9 m/s^2 peak (*)

***Note:** peak-peak and peak are equivalent value means:

peak-peak = 2.828 * RMS while peak = 1.414 * RMS

3). Measurement accuracy: $\pm 5\%$ of display ± 2 digits

Noise Level (without input): ACC < 0.3 m/s^2 , VEL < 0.5 mm/s , Disp < 3 μm

Frequency response accuracy: $\pm 5\%$; $\pm 10\%$ for ACC 4.5 kHz-10 kHz

Non-linearity: $\pm 5\%$

4). Sensor type: Piezoelectric Accelerometer

5). Frequency response: 10–1000 Hz (Inside accelerometer)

10–5000 Hz (Outside accelerometer, depending on model)

High Frequency Acceleration: 1000-5000 Hz $\pm 10\%$

6). Battery: 9V 6F22, 25 hours of continuous operation.

7). Configuration:

Standard: Inside accelerometer with 2 handheld probes

Optional: Outside accelerometer with magnetic mount and probe

8). Dimensions: 13×6×2.3 cm; Weight: 200 g.

5. Warranty

1 year but not include those caused by mishandling.