

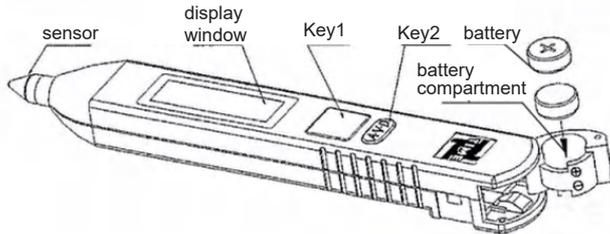


**0020-A199
VIBRATION PEN
(THREE PARAMETERS)
OPERATION MANUAL**

PLEASE SCAN QR CODE TO
WATCH THE OPERATION
VIDEO OF PRODUCTS.



Structure



Main features

- Tested parameter: three parameters displacement, velocity and acceleration can be tested.
- Small size, lightness and portability.
- Easy using, double-key control
- Automatically switched off, power saved.

Operation

Operation principle

- Push the sensor on the plane being tested while keep the instrument perpendicular to it.
- Make sure the sensor to touch the tested surface tightly with force of about 5~20N in order to make the vibration of tested object transmitted to the pen completely.
- Testing points should be on bearing, bearing support or any parts which have obvious response to driving force or show the vibration of the machine accurately.
- For the accurate testing of vibration, it is necessary to test at three different directions which are vertical with each other.
- The pen doesn't have the function of data memory, so you need to record them by writing.

Operation

Operation method

- When the vibrometer is off, press and hold the key for about 2s to start the machine.
- Push the sensor on the plane being tested while keep 0020-A199 perpendicular to it . Start test by pressing the key1. When the measurement results exceed the upper limit, The LCD will show $\overline{1.}$. After releasing the key, the LCD will show "HOLD". The result of the release time will be hold for about 15 seconds, and then 0020-A199 will turn down automatically.
- When the LCD show "BATT", that means we should change batteries, or an error result may be given out. Additionally, two batteries must be changed simultaneously.

Performance

Testing parameter: Velocity、 Displacement、 Acceleration

Testing range

Velocity: 0.01mm/s~199.9mm/s (virtual value)

Displacement: 0.001mm~1.999mm (peak ~ peak value)

Acceleration: 0.01m/s²~199.9m/s² (peak value)

Frequency range

Velocity: 10Hz~1kHz

Displacement: 10Hz~500Hz

Acceleration: 10Hz~1kHz

Relative error:

Indeterminacy of sensitivity: $\leq 3\%$

Linear relative error of amplitude: $\pm(5\%+2\text{units})$

Relative error of frequency response:

10Hz $\leq f < 20$ Hz: $-20\% \sim +10\%$

20Hz $\leq f \leq 1000$ Hz: $\pm 5\%$

Display: 3 1/2digital LCD

Power supply: 2 button battery(LR44 or Sr44)

Life of battery: continuous working 10h

Operating temperature: 0°C~40°C

Humidity: $< 85\%$ RH

Dimension: 150mm×22mm×18mm

Weight: about 55g(including 2 batteries)

Maintenance

- Vibration pen is a close gauge, and should be seriously protected from collision, damp, strong electromagnetic field, smear and dust.
- Pay attention to and make sure the anode towards while changing the battery.
- Please take the battery off when the pen will not be used for a long time.
- Please do not dismantle the pen optionally in case of damaging the circuit.
- Polish the screen with clean water only, not alcohol or diluent which will corrode the screen.