iVibra-100
Pen Type Portable Vibration Tester

Instruction Manual



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1.Overview

The iVibra-100 portable vibration tester is mainly used to measure the vibration displacem ent,velocity(intensity) and acceleration of mechanical equipment. The current state of the equipment (fans, pumps, compressors, motors,etc) can be determined by comparing with the standard ISO2373 or using the standard of enterprises and machines.

Features

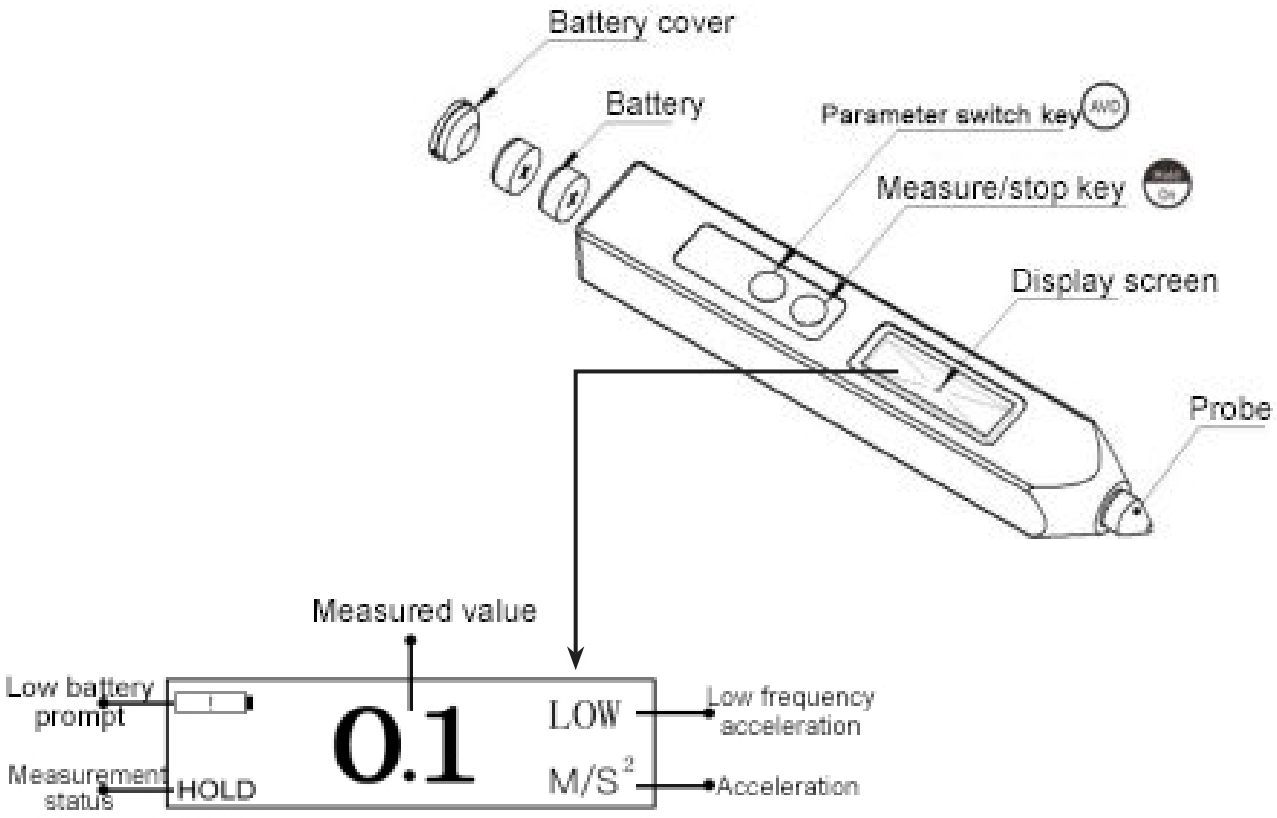
•It has comprehensive functions and can measure three parameters: acceleration,velocity and displacement.

•Small size,light weight,easy to carry.

•Single-key control,simple operation.

•It has automatic shutdown function to save power consumption.

2.Structure Description



3.Technical Indicators

Measurement Parameters		acceleration ,velocity,displacement
Measurement Range	Acceleration	0.1m/s2-290.0m/s2(peak value)
	Velocity	0.1mm/s-290.0mm/s(valid value)
	Displacement	0.001mm-2.900 mm(peak-peak value)
Frequency Range	Acceleration	10Hz ~ 1kHz(LO), 1kHz ~ 15kHz(HI)
	Velocity	10Hz ~ 1kHz
	Displacement	10Hz ~ 500Hz
Measurement Erro		±5%±2
Display:		LCD display
Battery		2* LR44 button batteries
Working Hours		continuous work for about 4 hours,intermittent use about 300 times
Use Environment		temperature: 0°C~40°C, relative humidity<85%
Size		152mm×22mm×16mm
Weight		90g

4. Usage Method

Instructions before use

When using,the sensor should be pressed against the measured part and try to keep the vibration tester perpendicular to the surface to be measured.The sensor should be in close contact with the surface of the measured object,and the pressure.

Is about 5~20N,so that the vibration of the measured object can be accurately transmitted to the sensor;The measuring point should be selected on the bearing,bearing supports or other structure components that have obvious response to the power and can represent the overall vibration characteristics of the machine for measurement;In order to determine the vibration characteristics of each measurement position,it is necessary to measure in three mutually perpendicular directions;This machine doesn't have data memory function,and if you need to keep the test data,you need to make a written record.

Method

1.Please hold the sensor vertically against the measured point. The device can measure "velocity", "displacement", "acceleration (HI)" and acceleration (LO). The measurement can be switched by pressing "AVD AVD" key.

2.After the device is powered on,the HOLD mode is default.Click the Hold On "HOLD/ON" key to start the measurement;Click the Hold On "HOLD/ON" key again to stop the measurement,and the word "HOLD" will be displayed in the lower left corner of the display screen.

3.In order to save power consumption,in the HOLD mode,the device will shut down automatically in about 10 seconds.

4.During equipment measurement,if it exceed the upper range,the measured value will display "---".

5.When the icon "" is displayed in the upper left corner of the display screen,it means that the power of the equipment is insufficient,and all batteries need to be replaced as soon as possible,otherwise the measured value cannot be guaranteed to be accurate.

5. Maintenance

1.To prevent the meaningless consumption of the battery power,click [hold] 

to stop after each measurement,and the device will shut down automatically.

2.When replacing the battery,it should be noted that the positive pole of the battery is facing down.

3.The machine doesn’t have data memory function,if you need to keep the test data,you need to make a written record.

4.The measuring point should be selected on the bearing,bearing supports or other structure components that have obvious response to the power and can represent the overall vibration characteristics of the machine for measurement; In order to determine the vibration characteristics of each measurement position,it is necessary to measure in three mutually perpendicular directions.

5.During measurement,keep the vibration tester perpendicular to the surface of the subject to be measured.The sensor of the vibration tester should be in close contact with the surface of the measured object,and the pressure is about 5~20N,so that the vibration of the measured measured object can be accurately transmitted to the sensor.

6. Appendix

ISO2372 machine vibration classification table

<table>
<tr><th rowspan="2">Small-sized
(I)</th><th rowspan="2">Medium-sized
(II)</th><th rowspan="2">Large rigidity
(III)</th><th rowspan="2">Large elasticity
(IV)</th><th>Effective value of speed</th></tr>
<tr><th>mm/s</th></tr>
<tr><td>good</td><td rowspan="2">good</td><td rowspan="3">good</td><td rowspan="4">good</td><td>0.71</td></tr>
<tr><td rowspan="2">satisfied</td><td>1.12</td></tr>
<tr><td rowspan="2">satisfied</td><td>1.80</td></tr>
<tr><td rowspan="2">dissatisfied</td><td rowspan="2">satisfied</td><td>2.80</td></tr>
<tr><td rowspan="3">dissatisfied</td><td rowspan="2">satisfied</td><td>4.50</td></tr>
<tr><td rowspan="3">unacceptable</td><td rowspan="2">dissatisfied</td><td>7.10</td></tr>
<tr><td rowspan="3">unacceptable</td><td rowspan="2">dissatisfied</td><td>11.20</td></tr>
<tr><td rowspan="2">unacceptable</td><td>18.00</td></tr>
<tr><td>unacceptable</td><td>45.00</td></tr>
</table>

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