

# TV200 Vibration Pen

## Manual

*Eastern Energy Co., Ltd.  
40/4 Vitoondumri Rd., Banbueng  
Banbueng, Chonburi, Thailand*



*Tel: 66-3844-6117  
sale@ete.co.th  
www.eastern-energy.com*

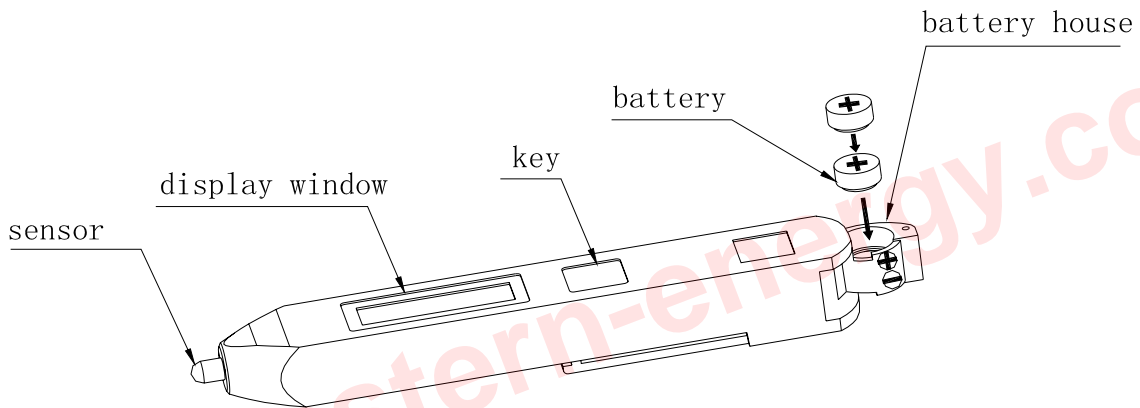


**TIME Group Inc.**

# Content

<b>1. STRUCTURE</b> .....	<b>3</b>
<b>2. OPERATION</b> .....	<b>3</b>
<b>3. FEATURES</b> .....	<b>3</b>
<b>4. ATTENTIONS</b> .....	<b>4</b>
<b>5. REPAIR</b> .....	<b>4</b>
<b>6. NON-WARRANTY PARTS</b> .....	<b>4</b>
<b>-----APPENDIX-----</b> .....	<b>5</b>
<b>1. ISO2372 MACHINE VIBRATION GRADES</b> .....	<b>5</b>

## 1. Structure



## 2. Operation

- Push the sensor on the plane being tested while keep TV200 perpendicular to it. Start test by pressing the key.
- After releasing the key, the LCD will show “HOLD”. The result of the release time will be hold for about 40 seconds, and then TV200 will turn down automatically.
- The upper limit of TV200 is 199.9mm/s (rms). The LCD will show  if vibration exceed the upper limit.
- 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.

## 3. Features

Tested parameter	RMS of vibration velocity ( mm/s )
Range	0.1mm/s ~ 199.9mm/s
Transmission band	10Hz ~ 1kHz
Accuracy	±5%±2
Relative error of transmission	20Hz f 1000Hz, ±10%
	10Hz f < 20Hz, +10% -20%

Display	$3\frac{1}{2}$ digits LCD , refresh interval about 0.5 second.
Power supply	two buttony batteries ( LR44 or SR44 )
Battery capacity	10 hours continuously or 400 times testing
Operation environment	Temperature: 0 ~ 40 ; Relative humidity: <85%
Dimensions	150mm × 22mm × 18mm (W×D×H)
Weight	55g ( include two batteries )

#### 4. Attentions

- While changing batteries, with the anode towards “⊕”.
- TV200 has no remember function. To keep the record, please write it down.
- Test points should be chosen at the bearing, bearing support or other structure components that show the vibration characteristic explicitly.
- If it is possible, the best choice to know the vibration characteristic is measuring in three perpendicular directions.
- To keep the sensor contacting the plane being test close, pressure should between 5N and 20N. Also, the pen should perpendicular to the plane.

#### 5. Repair

If any trouble occurs, user should not try to dismantle and repair it. The device should be returned to the manufacturer for checking and repair, together with the warranty card and the specimen provided and a statement about the trouble (Excluding the easy damage parts, see appendix 2).

Please keep in constant touch with the marketing department of our company or our sales agents.

#### 6. Non-warranty parts

- Sheath
- Transducer
- Battery
- Accessories

## -----Appendix-----

### 1. ISO2372 Machine vibration grades

Notes:

- Class 1 is small motor ( less than 15Kw ) , class 2 is medium motor(15Kw~75Kw), class 3 is big motor(hard base), class 4 is big motor(soft base).
- The result should be gotten from three perpendicular directions of the bearing shell.

Velocity (RMS) mm/s				
0.28	excellent	excellent	excellent	excellent
0.45				
0.71				
1.12	good	good	good	Good
1.8				
2.8	bad	bad	bad	Bad
4.5				
7.1	forbidden	forbidden	forbidden	forbidden
11.2				
18				
28				
45				