Version：WT63C-EN-01
Executive Standard: Q/HTY 008-2018

wintact®

MODEL：WT63C

Instruction Manual of Vibration Meter

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A.Introduction

This product is based on piezoelectric effect of artificially polarized ceramics. It is suitable for conventional vibration measurement of mechanical equipment, especially for rotating and reciprocating machinery. It can measure vibration acceleration,velocity,displacement and frequency, and is widely used in fields like machinery manufacturing, electric metallurgy and general aerospace.

B.Notice

1. Do not use the instrument in a flammable or explosive environment.
2. Keep away from dangerous voltage in case of injury.
3. Avoid strong impact, high temperature and water immersion.
4. Take out batteries if not in use for a long time.
5. Install batteries in correct polarity; replace batteries when the power is low.
6. Do not disassemble this meter or try to change internal parts.
7. Alcohol, diluent and so on are corrosive to the case, especially to the screen, so use a little water to clean the case.
8. Please operate the instrument carefully near rotating equipment. Do not leave wires and bands outside.

C. Functions

- Acceleration/Velocity/Displacement;
- Screen flipping;
- Switch acceleration measurement between high and low frequency; high frequency (1KHz~4KHz) /low frequency (10Hz~1KHz)
- Curve display;
- Store and view files;

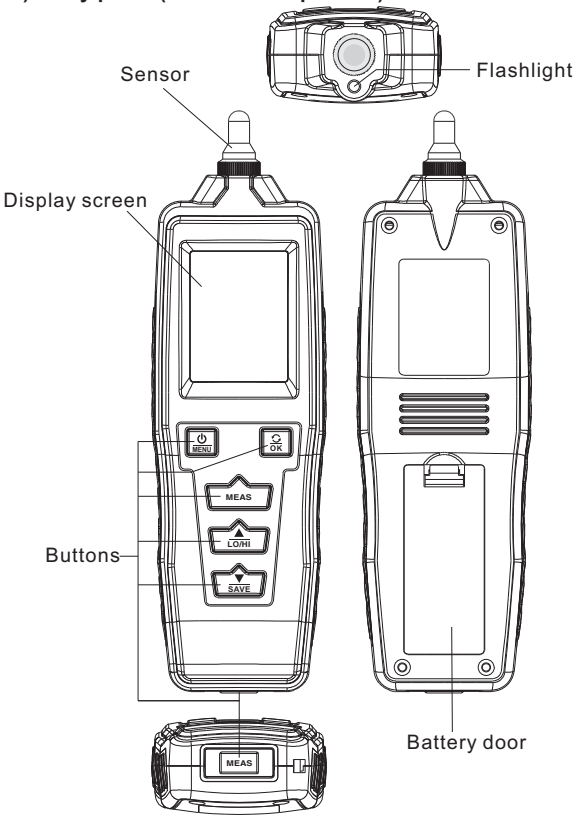
- Power indicator;
- Double measurement button;
- Flashlight;
- Brightness control;
- Select Chinese/English;
- Shutdown time setting;
- Selection of machine level;
- Measurement of vibration frequency.

D.Technical parameters

Technical parameters	Technical indicators
Vibration acquisition	Piezoelectric ceramic accelerometer (shear type)
Measurement range	Acceleration：0.1~199.9m/s^2 Velocity：0.1~199.9mm/s Displacement：0.001~1.999mm Frequency:0Hz~4KHz
Measurement accuracy	±10%
Frequency range of acceleration measurement	High frequency：1KHz～4KHz (HI) Low frequency：10Hz～1KHz (LO)
Frequency range of speed measurement	10Hz～1KHz (LO)
Frequency range of displacement measurement	10Hz～1KHz (LO)
Maximum groups of data storage	500 pieces (5 groups * 100 pieces/group)
Power supply	1.5V AAA battery*2
Temperature range for operation	0~40℃
Humidity range for operation	30~90%RH
Size	180x54x30mm
Weight	>150g(with batteries)

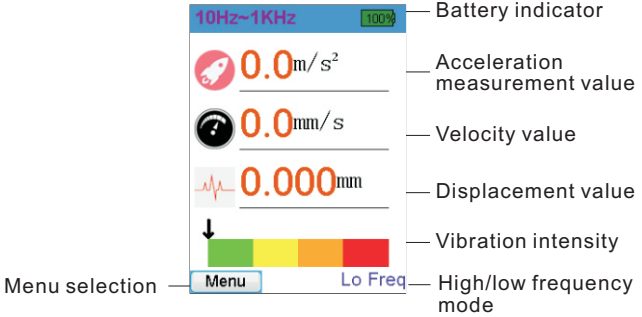
E. Instruction of parts and interface display

1) Body parts (as shown in picture)

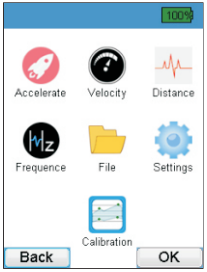


Buttons	Names of parts	Function Description
MENU	Power on/off/menu button	Short press to turn on the meter, long press to turn it off; after powering on, short press to switch menu or return
OK	Rotate/OK button	During measurement, short press to rotate screen setting and confirm selection
MEAS	Measurement button	Long press to start measurement
LO/HI	Up/frequency button	During measurement, short press to switch between high and low frequency settings and make selection.
SAVE	Down/save button	During measurement, press to save selection settings and make selection.
MEAS	Measurement button on the bottom	Short press to start measurement

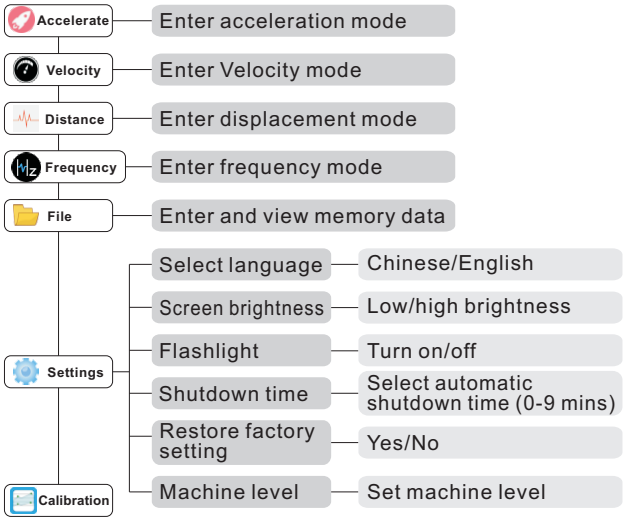
2) Instruction of full display interface



3) Menu interface description / divergence diagram of menu



a. Divergence diagram of menu functions:



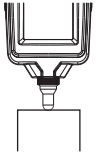
F.Preparation for measurement

1. Install batteries;

Put batteries into battery compartment correctly, paying attention to the polarity of battery.
Press " MENU " button to turn on the meter, after powering on, check battery status. If power is low, please replace battery in time.

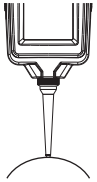
2. Select probe for measurement;

Based on measurement requirements, users can select different probes. Measuring with different probes may yield different evaluations on measurement results.



Short (S) probe measurement

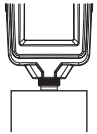
a. Measure with short (S) probe:
This probe is installed randomly and suitable for a wide range of vibration measurements with better response values.



Long (L) probe measurement

b. Measure with long (L) probe:
This probe is an accessory in the package and is mainly used on narrow or special objects with faster response.

c. Remove hardware probe to measure: this way is for measurement on flat object surface with stable data.



Remove hardware probe measurement

G.Operation instruction

1.Power on / off

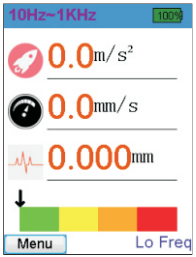
Short press " MENU "button to power on, long press" MENU "button to shut down.

2. Screen rotation

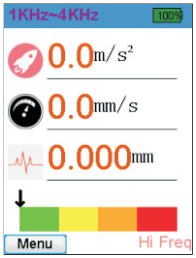
After powering on, press " OK " button to rotate screen. Only acceleration measurement, speed measurement, displacement measurement and full display interface support screen rotation. Each rotation will clear cached data.

3. Full display measurement

Press " MENU " to turn on the meter, full display interface appears after powering on; short press" LO/HI " to switch between high frequency and low frequency mode. Long press" MEAS "button or short press " MEAS " button to start automatic measurement, short press again to exit measurement. When cached data is over 0, press" SAVE "to save and window prompt pops up to indicate successful operation, then press " OK "button to OK storage.
(The cache can hold up to 20 data, and the first data will be automatically removed if the cache is more than 20; the maximum data storage is 7 groups, and there will be a prompt when storage is full.)

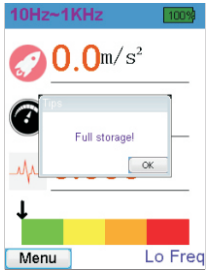


Full display interface (low frequency mode)



Full display interface (high frequency mode)

Success prompt of data storage



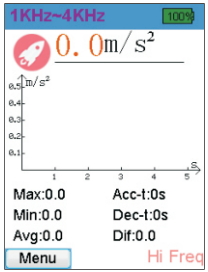
Indicator of full memory

4. Menu

Full display interface appears after powering on, press " MENU " button to enter menu interface, press up/ down button to select, press" OK " button to enter the corresponding interface. Short press" MENU " button again to return to the previous screen.

5. Acceleration measurement

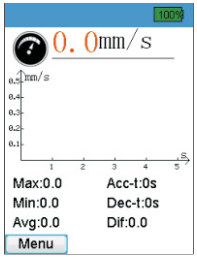
Enter menu interface, press up/ down button to select acceleration measurement, press " OK " button to enter the interface. This interface also has graph analysis function.
Short press " LO/HI " to switch high/low frequency mode measurement, short press " SAVE " to save data and short press " MENU " to return to the previous interface.



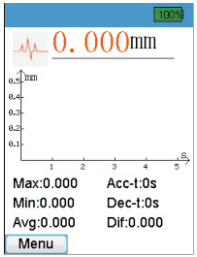
Acceleration interface

6. Velocity / Displacement measurement

Enter menu interface, press up/ down button to select Velocity / Displacement measurement, press" OK " button to enter the interface. This interface also has graph analysis function. Short press" SAVE " to save data and short press " MENU " to return to the previous interface.



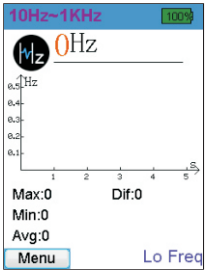
Velocity interface



Displacement interface

7. Frequency measurement

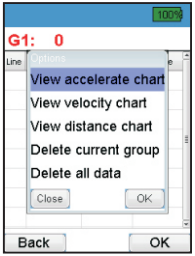
Enter menu interface, press up/ down button to select frequency measurement, press " OK " button to enter the interface. This interface also has graph analysis function.
Short press " LO/HI " to switch high/low frequency mode measurement, short press " SAVE " to save data and short press " MENU " to return to the previous interface.



Frequency interface

8. View files

Enter menu interface and select file item, the saved data can be viewed under file interface; press up/down button to scroll, long press for fast reading. Press OK button, a window showing up with operations like View accelerate chart/View velocity chart/View distance chart/Delete current group/Delete all data.



9. Settings

Enter menu interface and select setting item. Language setting / screen brightness / flashlight / shutdown time / restoring factory setting / machine level are displayed under setting interface, among which settings of language switching, screen brightness and shutdown time can be memorized.

a. Language selection;

Users can choose English/Chinese interface.

b. Screen brightness;

Users can choose low /high brightness.

c. Flashlight;

Users can choose to turn flashlight on/off.

d. Shutdown time;

Users can set automatic shutdown time from 0 min to 9 mins. 0 min means that automatic shutdown is prohibited.

e. Restore factory settings;

Users can choose whether to restore factory settings.

f. Machine grade;

four levels to choose from:

Ⅰ : Small（P<15kW）

Ⅱ : Medium（15KW<P<=75KW）

Ⅲ : Large hard base（P>75KW）

Ⅳ : Large soft base（P>75KW）

10. Calibration

a. Select calibration interface to enter.

b. Press up/down button to select item and press OK button to enter.(Note: There is no order for calibration)

(1)Zero point calibration.

(2)Calibration for the point at $10m/s^2$ & 80Hz after the machine reaches the steady status.

(3)Calibration for the point at $10m/s^2$ & 2000Hz.

c. (Optional) Short press measurement button 1 to flip the page.
d. Select start item and press OK to initialize. At this time, the first three items read "Number--Number", the right side represents ADC value, and the left side represents the converted vibration value.
e. Display under different calibration items:
(1) Press again to perform zero calibration with “Set Zero” showing up, and wait until progress bar reaches 100%.
(2) Adjust the output of vibrating machine to a stable state corresponding to the condition above. Press OK button again to calibrate slope value with “Set Slope” showing up,and wait until progress bar reaches 100%.
(3)After the calibration is successful, the progress bar disappears and displays "Done".
f. After completing the required calibration, press Menu button to return.
g. If calibration value is wrong, users can restore factory setting in the settings.

H. Other notices

1. When the amount of data is large, it will take some time to enter file interface and operation also needs some response time. It is recommended to delete some unnecessary data.
2. When acceleration value is beyond measurement, try to switch frequency.
3. The meter will automatically shut down when the battery is low.
4. Machine level is represented by green, yellow, orange, red status bar in the full display measurement interface. Refer to the figure below for details.

Vibration intensity (ISO 10816-1)					
Machinery		Class I small machine	Class II medium machine	Class III large hard base	Class IV large soft base
Vibration speed Vrms	mm/s				
	0.28				
	0.45				
	0.71		Good		
	1.12				
	1.80				
	2.80		Satisfactory		
	4.50				
	7.10		Unsatisfactory		
	11.20				
	18.00				
	28.00		Unacceptable		
	45.90				

Comparison table for vibration intensity

WARRANTY:
1. Please refer to warranty card provided for your warranty.
2. If the user disassembles our products and for damages caused by improper transportation, improper storage after purchase, and failure to operate according to instruction, and for anyone who smears warranty card or does not possess purchase certificate, our company does not guarantee warranty.

Specific Declarations:
Our company shall hold no any responisibility resulting from using output from this product as an direct or indirect evidence.
We reserves the right to modify product design and specification without notice.