

Application manual of coating thickness gauge V1.0

Brief introduction

This product is mainly used to measure the thickness of non-conductive coating on metal surface, as well as the thickness of non-ferromagnetic coating on ferromagnetic metal (such as iron, nickel, cobalt, etc.), such as paint thickness on automobile surface, coating thickness of metal parts and so on. This product also has built-in magnetic induction and vortex double principle probe, can automatically identify the measured metal substrate, only need to be placed on the measured surface, can automatically calculate the thickness of the coating.



1. Probe mode: automatic (AUTO), magnetic induction (F), vortex (NFE)
2. Measurement reading
3. Statistical display (average, minimum, maximum, number)
4. Automatic shutdown instruction
5. Low power indicator
6. Substrate properties (Fe: iron; NFE: non-iron)
7. Unit switching (um micron, mm mm, Mill mils)
8. Up key (unit switch)
9. Right (zero calibration, switching average / minimum / maximum / number)
10. Down key (backlight switch, automatic shutdown switch)
11. Left key (probe mode switch, clear statistics)
12. Switch machine
13. Probe
14. Standard diaphragm
15. Substrate to be tested

Note: if the symbol is displayed, the battery is normal, and if the symbol is displayed, it means that the battery is almost exhausted and must be exhausted.

Install battery

Please prepare the 2 AAA batteries to be replaced. Disassemble the back of the casing and take out the batteries. Be sure to install new batteries in the direction indicated in the battery compartment.

Measurement step

Step 1. Prepare the parts to be tested.

Step 2. Stay away from the metal object at least 2 cm, press the switch key to turn on.

Note: it is suggested that the instrument should be zeroed with reference to "zero calibration" before testing.

Step 3. The probe is placed vertically and quickly on the surface to be measured until the drop is heard, and the measured value is displayed on the screen, and then the probe is lifted at least 2 cm away from the part to be measured, and the next measurement can be carried out.

Note: if the automatic shutdown function is turned on and there is no operation within 3 minutes, the instrument will automatically shut down.

This machine has two calibration methods:

1. Basic calibration: the basic calibration should be carried out when it is used for the first time, or has not been used for a long time, or when replacing the tested substrate material. There are 7 calibration points in the basic calibration, and the calibration unit is mm.

a. Prepare 6 pieces of standard film, the thickness of which is in 0.04 ~ 0.06, 0.09 ~ 0.11, 0.22 ~ 0.28, 0.45 ~ 0.55, 1.90 ~ 1.05, 1.90 ~ 2.00.

b. First hold down the up key to hold, then press the on key, LCD full screen kettle display, and then hear a BI, LCD display Display 00mm, the lower right corner of the LCD displays the CAL character, "Release the up button" indicating that the calibration screen is entered.

c. Press the probe lightly on the uncoated aluminum base, at which point the LCD displays 0.00, and then BI-BI calibrates twice.

d. Get rid of the probe and show the number of 0.05mm on the LCD. The second number calibration is carried out, and the probe is gently pressed on the aluminum base where the calibration sheet is placed. After adjusting the value displayed on the LCD and the thickness of the calibration sheet by pressing the upper and lower keys, remove the probe and Bi-Bi-Sound, the second calibration point has been calibrated.

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Zero calibration

In order to improve the test accuracy, it is suggested that the instrument should be calibrated to zero.

a. Preparation of uncoated substrate to be tested

b. Hold down the right hand until you hear the drop, and the "zero calibration (ZERO)" on the screen will begin to flicker.

c. The probe is placed vertically and quickly on the surface of the uncoated substrate to be tested. After hearing the dripping sound, the screen will display "0", and the probe can be lifted at least 2 cm away from the substrate, that is, to return to zero once.

Unit switching

Press up to switch micron um, millimeter mm, and Mill mils units.

Probe mode switching

Press "left" to switch probe mode.

In automatic (AUTO) mode, the instrument can automatically switch the probe and measure it.

In the magnetic induction (F) mode, the instrument will be measured by magnetic induction mode. At this time, it is suitable for the measurement of ferromagnetic substrate. In Eddy current (N) mode, the instrument will be measured by Eddy current mode. At this time, it is suitable for the measurement of non-ferromagnetic metal substrate.

Statistical display

a. Right-click to switch statistical display (average, minimum, maximum, number)

b. Hold down the left key for about 3 seconds to clear the statistics and start the new statistics at the same time. This instrument supports up to 50 data to carry on the statistics, when reaches 50, the latest data will replace the oldest data, the statistical value will be updated automatically.

Backlight

Press "Down key" to turn on and off the backlight.

Automatic shutdown

Hold down the Down key for about 3 seconds to turn on or off the automatic shutdown function. If the automatic shutdown function is turned on and there is no operation within 3 minutes, the instrument will automatically shut down and save batteries.

Troubleshooting

If a significant anomaly is found in the instrument, the user can unplug the battery for 2 seconds, reinstall the battery, and then boot and try again. If the problem cannot be solved, please turn off the machine, hold down the boot button and do not release until the screen appears "RS", release the button, at this time the instrument resumes the factory settings successfully. If you are still unable to solve the problem, please contact your dealer in a timely manner.

Technical index

Probe	F probe	N probe
Magnetic induction	Measuring principle	Eddy current effect
Measuring range	0~2000um	
Precision	±(3%+1um)	
Resolution	0um~99.9um(0.1um)	100um~999um(1um) >1000um(0.01mm)
Zero calibration	Support	
Statistics	Average, minimum, maximum, number	
Unit	um,mm,mils	
Minimum convex Radian	5mm	
Minimum concave Radian	25mm	
Minimum measured area	Diameter 20mm	
Minimum substrate thickness	0.2mm	0.05mm
Maximum measuring speed	2 readings per second	
Power supply	2 1.5V 7 battery	
Operating environment	Temperature:0 ~ 50 °C 20 ~ 90%rh (non-condensed)	
Preservation environment	Temperature:-10 ^ 60 °C 20 ^ 90%rh (non-condensation)	
Size / weight / material	113mmX53mmX24mm/80g/ABS	

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