

User Manual

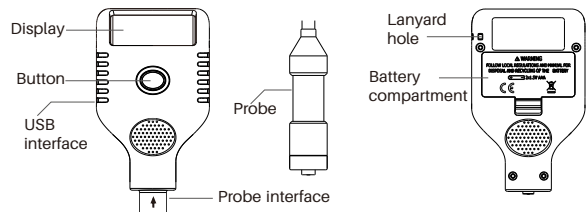
Automotive Paint Meter V1.0.4

1. Brief Description

This thickness gauge enables non-destructive measurement of non-conductive coatings on metal surfaces, as well as non-magnetic metal coatings on ferromagnetic metals (e.g., iron, nickel, and cobalt). Specific applications include measuring the thickness of paint or galvanizing layers on surfaces of iron, nickel, cobalt, or martensitic stainless steel; and determining the thickness of paint or plastic films on surfaces of aluminum, copper, gold, or austenitic stainless steel.

The instrument is suitable for car paint detection: While measuring paint thickness, it can also identify iron galvanized and iron powder putty materials. The instrument has strong anti-interference ability and can work normally in a more complex electromagnetic field environment.

2. Appearance Display



3. Notes

3.1 Battery Installation

- (1) Install the battery according to the positive and negative electrode instructions inside the battery compartment.
- (2) After installing the battery, please fasten the battery cover to prevent the battery from being ejected.

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- (3) When the instrument is not used for a long time, be sure to take out the battery and place it properly.

3.2 Others

- (1) Avoid contact with corrosive chemicals.
- (2) Avoid using it in a strong magnetic field environment (such as near a magnet) to avoid damage to the probe.
- (3) Strictly prevent strong electricity and electrostatic shock.

4. Power on/off

- (1) **Power on:** One-button power on, just press the button to power on.
- (2) **Power off:** Long-press the button for more than 3 seconds to shut down. If no operation is performed (no button press or measurement), the instrument will automatically shut down.

5. Display

- (1) **Rotate the screen:** When the measurement interface is displayed, press and hold the button until a "beep" sounds. Release the button and the screen will rotate 180°.

Note: If you do not release the button after hearing the first "beep" until the second "beep" sounds, the instrument will shut down.

- (2) **Font conversion:** When turning on the instrument, press and hold the button without letting go (do not let go when the menu configuration interface pops up on the screen). When the words "Switch Font" appear on the display interface, release the button to switch the font size display.
- (3) **Substrate properties:** ①**Fe:** Ferromagnetic metal substrate. ②**NFe:** Non-ferromagnetic metal substrate. ③**FZ:** Iron galvanized substrate. ④**Fe Putty:** Suspected iron powder putty.

6. Function settings

The method of enter the configuration menu interface: When power on, press and hold the button until the screen pops up the configuration menu interface, where the function of the

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instrument can be set.

The method of set one of these functions in the menu: Short press the button, select the corresponding function, wait for about 3 seconds, the instrument will complete the relevant function settings.

The specific functions are as follows:

6.1 Probe mode

- (1) **Automatic:** The instrument will make an adaptive measurement, this mode is suitable for unknown metal substrates.
- (2) **Magnetic induction:** The instrument will measure in magnetic induction mode. This mode is suitable for ferromagnetic metal substrates.
- (3) **Eddy current:** The instrument will measure in eddy current effect mode. This mode is suitable for non-ferromagnetic metal substrates.

Note: The factory default "automatic" mode can identify iron, non-iron, iron zinc and iron powder putty.

6.2 Unit

μm, mm and mil.

6.3 Restore factory settings

Select the "Reset" option in the configuration menu interface, after selecting it, the setting is completed until the word "Success" appears on the interface.

6.4 Bluetooth

Select Bluetooth "on"/"off".

Tips: When the Bluetooth function is not used, you can select "off" to reduce power consumption and prolong battery life.

7. Change probe (re-match the host with the probe)

Follow these steps:

- Step 1. Insert the probe and ensure the interface is securely connected.
- Step 2. Turn on the device, hold the button to enter the configuration menu, then release it.
- Step 3. Shortly press to cycle through menu options; select "Reset" and stop the operation.

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Step 4. When the screen displays "Resetting...", hold the button until the "OK!" message appears, then release it immediately. The host and probe are now matched successfully; the operation is complete.

8. Zero calibration

When using the instrument for measurement, press and hold the button and attach the probe end immediately to the surface of the object to be measured. During the process of retracting the probe into the instrument, the instrument can be triggered to perform zero calibration. When the word “calibration complete” appears on the display interface, lift the instrument off the surface of the object to be measured and release the button.

Note: Press and hold the button for more than 3 seconds, if there is no calibration action, it will trigger the instrument to power off.

9. Measurement steps

Step 1. Prepare the parts to be tested.

Step 2. Keep the probe end away from metal objects , and press the button to turn on the instruments.

Step 3. Quickly attach the probe end to the surface of the object to be measured, and the instrument can automatically distinguish the properties of the substrate and measure the thickness of the coating (plating) layer when the probe shrinks to the inside of the instrument. After the displayed thickness value is refreshed and accompanied by the “beep” sound prompt, lift the instrument so that the probe end is away from the surface of the measured object, and then the next measurement can be performed.

10. Record and view data

10.1 Record data

The instrument display interface can record up to 10 data. If there are more than 10, the instrument will automatically update the latest data and discard the oldest data. These data will not be lost after power-off, and can only be cleared by restoring to factory settings.

10.2 View data

(1) View directly on the instrument

In the measurement interface, short press the button to browse the data one by one. The data that can be viewed include the latest measurement values (up to 10), and their number, maximum value, minimum value and average value.

(2) View through APP

Open the APP software and connect with the instrument via Bluetooth. In the real-time data interface of the APP, you can view real-time measurement data, statistical data, and data graphs or histograms. In addition, relevant data can be exported through the APP.

(3) View through PC software

The instrument has the function of USB data transmission, and the instrument is connected to the computer via a USB cable. In the data interface of the computer software, real-time measurement data, statistical data, and data curves or histograms can be viewed. In addition, the relevant data can be exported through the software.

11. Use of related software

APP

(1) The APP software used by this instrument can be obtained by scanning the QR code on the APP manual or from the dealer.

(2) The software introduction and how to use it can be viewed by following the steps: Open the APP > click “Help” in the lower right corner > click “APP Help Documentation” to view.

Note: Before Bluetooth pairing and connection, the instrument Bluetooth, mobile phone Bluetooth and mobile phone GPS must be turned on.

PC software

(1) The PC software used by this instrument can obtain the software installation package from the dealer.

(2) The software introduction and its usage can be viewed by following the steps: open the software > click "About US" on the right side of the interface > click "Help Documentation" to view.

12. Technical parameter sheet

Measurement principle	Fe: Magnetic Induction; NFe: Eddy Current
Measurement range	0~3000μm
Accuracy	±(2% reading+1μm), ≤2000μm ±(3% reading+2μm), 2001~3000μm ±(5% reading+2μm), >3000μm
Resolution	0.1μm(0~99.9μm); 1μm(≥100μm)
Calibration	Zero Calibration
Unit	μm, mm, mil
Iron putty power recognition range	0~2000μm
Iron-galvanized substrate recognition range	3~1000μm
Minimum curvature radius	Convex 5mm; Concave 25mm
Minimum measuring area	Diameter 15mm
Minimum thickness of substrate	Fe: 0.20mm; NFe: 0.03mm
Measure reaction time	About 0.3 seconds
Display	LCD
Bluetooth and APP	Support
USB data transfer	Support
Operating temperature	-10~50°C
Storage temperature	-20~60°C
Power supply	2 AAA 1.5V alkaline batteries (recommended) 2 AAA 1.2V NI-MH batteries
Protection class	IP40
Dimension	103*62*27mm
Shell material	ABS
Weight	About 60g (without batteries and probe)