

# User Manual

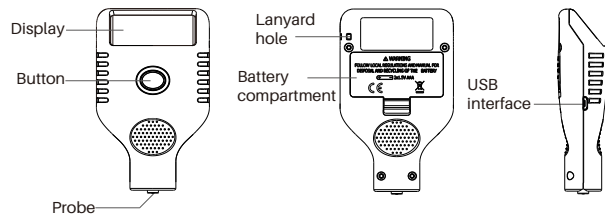
## Coating Thickness Gauge V1.1.1

### 1. Brief Description

Coating thickness gauge can non-destructively measure the thickness of non-conductive coatings on metal surfaces, as well as the thickness of non-ferromagnetic metal coatings on ferromagnetic metals (such as iron, nickel, and cobalt, etc.). The specific use of the instrument includes coating thickness measurement on iron, stainless steel surface or galvanized layer, coating thickness on aluminum, copper surface or plastic film, etc.

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:** Press and hold for 3 seconds to power off. If there is no operation (pressing the button or measuring) for more than 2 minutes, the instrument will automatically power off.

### 5. 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.

### 6. Measurement steps

- Step 1.** Prepare the parts to be tested.
- Step 2.** Keep the probe end away from metal objects at least 2cm, 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,

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lift the instrument so that the probe end is at least 2cm away from the surface of the measured object, and then the next measurement can be performed.

### 7. 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**Zn:** Iron galvanized substrate. ④**Fe Putty:** Suspected iron powder putty. **Note:** Standard model (use dot matrix LCD screen), "iron zinc" has blue backlight alarm, "iron powder putty" has red backlight alarm.

### 8. 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 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:

#### 8.1 Probe mode

- (1) **Automatic:** The instrument will make an adaptive

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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.

**8.2 Unit**  
μm,mm and mil.

**8.3 Language**  
Multiple languages are available.

**8.4 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.

**8.5 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.

9. Record and view data

**9.1 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.

**9.2 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.

10. 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.

11. Technical parameter sheet

Probe selection	Standard Model 		Low Temperature Model 
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	OLED	
Bluetooth and APP	Support		
USB data transfer	Support		
Operating temperature	-10~50°C		-40~50°C
Storage temperature	-20~60°C		-50~60°C
Power supply	2 AAA 1.5V alkaline batteries(recommended) 2 AAA 1.2V Ni-MH batteries		
Protection level	IP40		
Dimension	103*62*27mm		
Shell material	ABS		
Weight	About 60g (without batteries)		

**FCC Warning:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Caution:** Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0cm between the radiator and your body.