

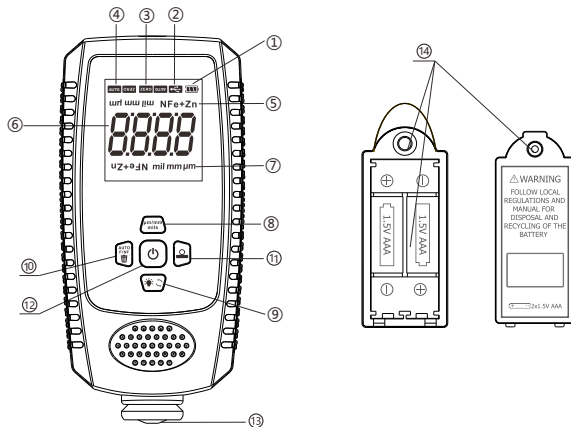
# User Manual V1.0.1

## Coating Thickness Gauge

### 1. Introductions

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

### 2. Product Description Diagram



①Battery Indicator

②USB prompt

③Zero calibration indicator

④Probe mode: AUTO, Fe, NFe

⑤Substrate (Fe: ferrous; NFe: non-ferrous; Fe+Zn: iron galvanized)

⑥Measurement reading

⑦Unit (μm, mm, mil)

⑧UP button (Switch unit, Switch stability)

⑨DOWN button (Backlight, Screen rotation)

⑩LEFT button (Switch probe mode, Clear data)

⑪RIGHT button (Zero calibration)

⑫On/Off button

⑬Probe

⑭The battery compartment and screw removal position

### 3. Battery Installation

(1) Insert the battery according to the positive and negative instructions inside the battery compartment.

(2) After installing the battery, close the battery cover and tighten the screws.

(3) When not using the instrument for a long time, be sure to remove the battery and place it properly.

### 4. Turn On and Off the Instrument

(1) Turn on: Press the power button to turn on the instrument.

(2) Turn off: In the boot state, long press the power button to turn off the instrument.

**Note:** By default, the instrument will automatically shut down without any operation (press the button or measure) for more than 3 minutes.

### 5. Measurement Step

**Step 1.** Prepare the object to be tested.

**Step 2.** Keep the probe at least 2cm away from the metal object and press the power button to turn it on.

**Step 3.** Fit the probe quickly to the surface of the object to be measured. During the shrinking process of the probe, it can automatically distinguish the properties of the substrate and measure the thickness of the coating (plating) layer. When the displayed thickness value is refreshed and accompanied by a "beep" sound prompt, raise the instrument so that the probe is at least 2cm away from the surface of the object to be measured, and then take the next measurement.

**Note:** When measuring, the screen interface shows "OL" to indicate that it exceeds the measurement range of the instrument.

## 6. Zero Calibration

Long press the right button until the screen flash "ZERO" and then release. At this time, attach the probe to the surface of the test object to trigger the instrument to perform zero calibration. When the value on the screen is zero and the word "ZERO" is flashing, the zero calibration is completed. At this time, short press the right button to exit the zero calibration, and the screen "ZERO" disappears.

## 7. Probe Mode

Short press the left button to switch the probe mode.

(1) Auto: The instrument measures in automatic mode. This mode is suitable for unknown metal substrates.

(2) Magnetic induction (Fe): The instrument will measure in magnetic induction mode. This mode is suitable for ferromagnetic metal substrates, such as iron or nickel.

(3) Eddy current (NFe): The instrument will measure in eddy current effect mode. This mode is suitable for non-ferromagnetic metal substrates, such as aluminum or copper.

## 8. Data Clearance

Long press the left button to clear the measurement data.

## 9. Switch Unit

Short press the up button to switch the unit;  $\mu\text{m}$ , mm and mil.

## 10. Measurement Stability

Long press the up button to switch the measurement stability mode.

(1) "HS" stands for High Stable. The measurement data in this mode is relatively stable.

(2) "US" stands for Ultra Stable. The measurement data in this mode is more stable.

(3) "nS" stands for Normal Stable. The measurement data in this mode changes sensitively.

## 11. Backlight and Rotating Screen

(1) Backlight: Short press the down button to turn on or off the screen backlight.

(2) Rotate the screen: Long press the down button, the screen will rotate 180 degrees.

## 12. Restore Factory Settings

Press and hold the power button when the instrument is turned on until the screen show "oooo" and then release it to finish restoring the factory settings.

## 13. Specifications

Probe	F Probe	N Probe
Measuring Principle	Magnetic Induction	Eddy Currents
Measuring Range	0~2000 $\mu\text{m}$	
Accuracy	$\pm(3\% + 1\mu\text{m})$	
Resolution	0.1 $\mu\text{m}$ (0~99.9 $\mu\text{m}$ ); 1 $\mu\text{m}$ ( $\geq 100\mu\text{m}$ )	
Calibration	Zero point calibration	
Unit	$\mu\text{m}$ , mm, mil	
Minimum Curvature Radius	Convex 5mm; Concave 25mm	
Minimum Measuring Area	Diameter 15mm	
Minimum Thickness of Substrate	Fe: 0.30mm	NFe: 0.05mm
Maximum Measuring Rate	2 readings/s	
Power Supply	2 PCS 1.5V AAA alkaline batteries 2 PCS 1.2V AAA Ni-MH batteries	
Operation Environment	Temperature: -10~50°C Humidity: 20~90%RH(Non-condensation)	
Storage Environment	Temperature: -20~60°C Humidity: 20~90%RH(Non-condensation)	
Size/Weight/Material	115*55*30mm/About 80g/ABS	