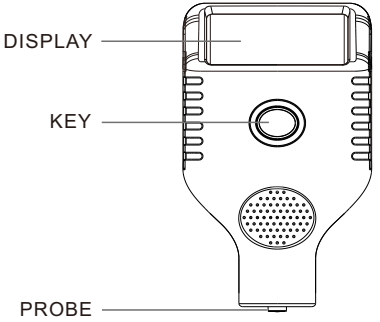
# User Manual V1.3.8

Coating Thickness Gauge

## 1. Introductions

This compact gauge can be used for non-destructive coating thickness measurement of non-magnetic coatings, e.g. paint, enamel, chrome on steel, and insulating coatings, e.g. paint and anodizing coatings on non-ferrous metals.

## 2. Appearance




## 3. Battery Installation Instructions

(1) Insert the battery according to the positive and negative indication in the battery compartment.

(2) After inserting the battery, please fasten the battery cover to prevent the battery from being ejected.

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

## 4. Switch on and off

### 4.1 Switch on

One-key to power on, just press the button to turn on.

### 4.2 Switch off

(1) Press and hold for 3 seconds to turn off.

(2) If there is no operation (press a button or measurement) for more than 2 minutes, the instrument will automatically shut down.



## 5. Backlight

After the operation (press the key or measure), the instrument automatically turns on the backlight for 30 seconds; if there is no operation for more than 30 seconds, the backlight automatically goes off.

## 6. Zero Calibration

When using the instrument for measurement, press and hold the button and immediately attach the probe tip to the surface of the test object. When the probe is retracted into the instrument, it can trigger the instrument to perform zero calibration. When the word “Calibration Complete” appears on the display interface, lift the instrument off the surface of the measured object and release the button.

**Note:** Press and hold the button for more than 3 seconds. If there is no calibration action, the instrument will be shut down.

## 7. Measurement Step

**Step 1.** Prepare the object which will be tested.

**Step 2.** Keep the probe tip at least 2cm away from metal objects, and press the button to turn on.

**Step 3.** Quickly attach the probe tip to the surface of the test object. During the process of the probe shrinking into the instrument, the instrument can automatically distinguish the properties of the substrate and measure the thickness of the coating (plating). After the displayed thickness value is refreshed and accompanied by a “DI” prompt sound, lift the instrument so that the probe tip is at least 2 cm from the surface of the measured object, and then the next measurement can be performed.

## 8. Function Settings

The way enter into the configuration menu interface: When powering on, press and hold the button without letting go until the screen pops up the configuration menu interface, under this interface you can set the functions of the instrument.

To set one of these functions: Short press the button, select the corresponding function, wait for about 3 seconds, and the instrument will complete the related function settings.

The detailed functions are as follows:

### 8.1 Probe Mode

(1) AUTO: The instrument will perform the self-adaptive measurement.

(2) Magnetic induction (MAG): The instrument will measure in magnetic induction mode. This mode is suitable for ferromagnetic metal substrates.

(3) Eddy current effect (EDDY): The instrument will measure in eddy current effect mode. This mode is suitable for non-ferromagnetic

metal substrates.

**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, and select it until “Success” appears on the interface, and the setting is complete.

**8.5 Bluetooth**(Some models are supported, please refer to the specifications table for details)

Select Bluetooth “Disable” or “Enable”.

Tips: When not using the Bluetooth function, you can select “Disable” to save battery energy.

## 9. Screen Rotation

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.

## 10. Font Size Switch

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.

## 11. Record and View Data

**11.1 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 when the machine is turned off, and can only be cleared by restoring factory settings.

**11.2 Viewing Data**

(1) View directly on the device

Press the button on the measurement interface to scroll through the data one by one. The viewable data includes the latest measurement values.(Up to 10), and their number, maximum,minimum, and average.

(2) View via mobile APP

Run the mobile phone APP and connect with the device via Bluetooth. In the real-time data interface, you can view real-time measurement data, statistical data, and data curve or histogram. In addition, relevant data can be exported through APP.



## 12. Use of Related Software

**Mobile Phone Bluetooth APP**(Some models are supported, please refer to the specifications for details)

(1) The Bluetooth APP software used by this instrument can be obtained from the dealer.

(2) The software introduction and its usage instruction can be viewed in the following steps: Open the APP> click “Help” in the lower right corner> click “APP Help Document” to view.

**Note:** Before connecting to APP, you must enable the Bluetooth of mobile phone and device, positioning function of mobile phone also.

## 13. Specifications

| Probe Type | Standard Probe  | Precious Probe  | Cryogenic Probe  |
|---|---|---|---|
| Measuring Principle | Fe: Magnetic Induction; NFe: Eddy Current | | |
| Measuring Range | 0~2000μm | | |
| Accuracy | ±(3%+1μm) | ±(2%+1μm) | ±(2.5%+2μm) |
| Resolution | 0.1μm(0~100μm); 1μm(>100μm) | | |
| Calibration | Zero Point Calibration | | |
| Unit | μm, mm, mil | | |
| Minimum Curvature Radius | Convex 5mm; Concave 25mm | | |
| Minimum Measuring Area | Diameter 15mm | | |
| Minimum Thickness of Substrate | Fe: 0.30mm<br>NFe: 0.05mm | Fe: 0.20mm<br>NFe: 0.03mm | Fe: 0.20mm<br>NFe: 0.03mm |
| Maximum Measuring Speed | 2 times/s | | |
| Display | LCD | | OLED |
| Bluetooth&APP | Not support | Support | Not support |
| Operation Temperature | -10~50℃ | | -40~50℃ |
| Storage Temperature | -20~60℃ | | -50~60℃ |
| Power Supply | 2 PCS AAA Batteries or 2 PCS AAA 1.2V NiMH Rechargeable Batteries | | |
| Protection Class | IP40 | | |
| Size | Housing: 103*62*27mm;<br>Cable: Φ3.5*1000mm(only for the device with ext. probe)<br>Probe: Φ17*67mm(only for the device with ext. probe) | | |
| Material | ABS | | |
| Weight | device with int. probe: About 57g(No battery)<br>device with ext. probe: About 112g(No battery) | | |
| Warranty | 12 months | | |