RHOPOINT INSTRUMENTS

Coating Thickness Gauge

Version: 1.1.0

Language: EN

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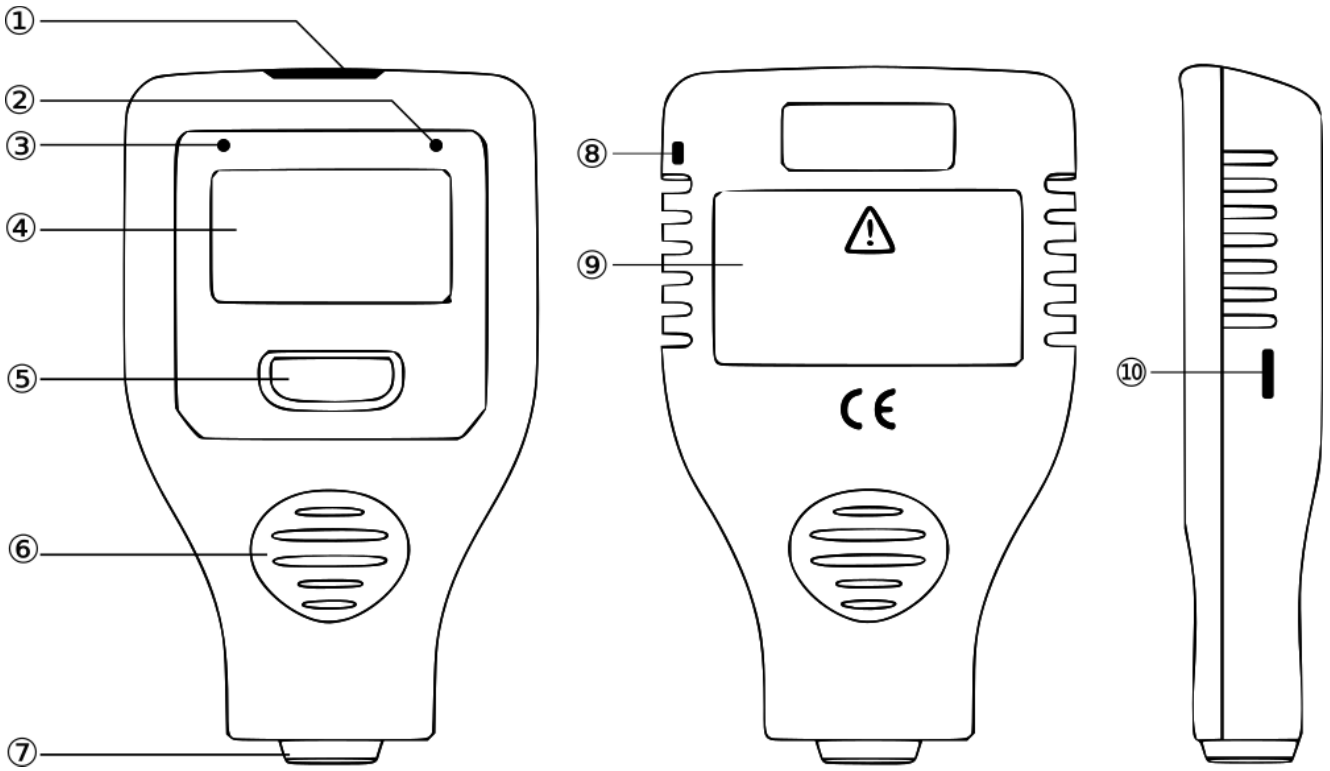
1. Introduction

The thickness gauge can continuously measure the thickness of metallic surfaces, including ferromagnetic metals (e.g., iron, nickel, cobalt). Specific applications include measuring the thickness of paint or galvanized coatings on iron and stainless steel, as well as paint or plastic films on aluminum and copper.

This instrument is suitable for detecting car paint. While measuring the paint thickness, it can also identify iron-galvanized materials and iron powder putty. The instrument has strong anti-interference capabilities and operates reliably even in complex electromagnetic environments.

2. Device schematic



① Top screen
② Green indicator light
③ Red indicator light
④ Main screen
⑤ Button
⑥ Anti-skid groove
⑦ Probe
⑧ Lanyard hole
⑨ Battery compartment
⑩ USB interface

3. Precautions

3.1 Battery Installation

1. Install the battery according to the polarity markings inside the battery compartment ⑨.
2. After inserting the battery, press the battery cover firmly to prevent it from popping open.
3. If the instrument will not be used for an extended period, remove the battery and store it properly.

3.2 Other

1. Avoid direct contact with corrosive chemicals.
2. Do not use the instrument in strong magnetic fields (e.g., near magnets), as this may damage the probe.
3. Avoid strong electrical or electrostatic impacts.

4. Powering the device

1. **Power on**: Single-button startup — press the button ⑤ to turn the device on.
2. **Power off**: Press and hold the button for 3 seconds to turn off the device. If there is no activity (no button press or measurement) for 2 minutes, the device will shut down automatically.

5. Display

1. Screen Brightness

If there is no user interaction, the instrument will automatically dim the screen after 30 seconds to extend battery life.

2. Screen Rotation

Hold the button (do not release it when the configuration menu appears) until the screen rotates 180°.

3. Substrate Properties

1. The instrument interface displays "iron": indicates that a ferromagnetic metal substrate has been detected.
2. The instrument interface displays "non-iron": indicates that a non-ferromagnetic metal substrate has been detected.
3. The instrument interface displays "iron zinc": indicates that an iron-galvanized substrate has been detected.
4. The instrument interface displays "iron powder putty": indicates that an iron powder putty substrate has been detected.

NOTE: On the standard model (with dot matrix LCD screen), "iron zinc" triggers a blue backlight alarm, and "iron powder putty" triggers a red backlight alarm.

4. Indicator Light Prompt

1. A bright green indicator light appears when the measurement data is within the normal range.
2. A red indicator light appears when the measurement range is exceeded or when the instrument detects an iron powder putty substrate.

6. Zero

When the instrument is used for the first time, after changing the battery, changing the measured material, or after a sudden change in ambient temperature, a zero adjustment should be performed to reduce measurement error. If only basic accuracy is required, the included standard substrate can be used for zeroing. If higher accuracy is needed, it is recommended to remove the coating or plating layer from the measured surface and perform zeroing on the exposed metal.

1. To zero the instrument, press and hold the button, then immediately place the probe vertically onto the standard substrate or metal surface. Keep the probe steady—do not tilt or shake it.
2. When the message "calibration completed" appears on the display, lift the instrument off the surface and release the button.

Note: If you press and hold the button for more than 3 seconds without performing a calibration, the instrument will shut down automatically.

7. Measurement steps

Step 1: Prepare the parts to be tested.

Step 2: Keep the probe at least 2 cm away from the metal object, and press the button to power on the device.

Step 3: Quickly place the probe onto the surface of the material to be measured. Keep the probe stable—do not tilt or shake it. As the probe retracts into the instrument, it will automatically identify the substrate type and measure the thickness of the coating (or plating) layer. Once the thickness value is updated and a "beep" sound is heard, lift the instrument so that the probe is again at least 2 cm away from the surface. You can then proceed with the next measurement.

8. Function settings

How to enter the configuration menu: During startup, press and hold the button until the configuration menu appears. This menu allows you to adjust various instrument settings.

How to set a function: Short press the button to select the desired function. After about 3 seconds, the instrument will confirm and apply the selected setting.

The available functions are:

8.1 Probe Mode

1. **Automatic**: The instrument performs adaptive measurements. This mode is suitable for unknown metal substrates.
2. **Magnetism**: The instrument uses magnetic induction mode, suitable for ferromagnetic metal substrates.
3. **Vortex Current**: The instrument uses eddy current mode, suitable for non-ferromagnetic metal substrates.

Note: The default factory setting is "Automatic" mode, which can identify iron, non-iron, iron-galvanized, and iron powder putty substrates.

8.2 Unit

Select from μm, mm, or mil.

8.3 Language

The user interface supports multiple languages.

8.4 Restore Factory Settings

Select the "Reset" option in the configuration menu. When the word "Success" appears, the settings have been restored.

8.5 Bluetooth (BLE)

Toggle Bluetooth ON or OFF.

Note: When Bluetooth is not in use, set it to "Off" to reduce power consumption and extend battery life.

9. Record and view the data

9.1 Record the data

The instrument can store up to 1,300 data points and display up to 10 on the device. To view additional data, you need to connect the instrument to the app or PC software. The device interface can show a maximum of 10 records; if more are added, the oldest entries will be automatically overwritten. These records are retained after shutdown but will be erased if the factory settings are restored.

9.2 View the Data

Check directly on the instrument

In the measurement interface, you can browse the recorded data one by one. The displayed data includes the latest measurement values (up to 10), along with the number, maximum, minimum, and average values.

Check via the Quick Report App

Open the app at app.rhopointinstruments.com and connect to the instrument via Bluetooth. Real-time measurement data, statistics, and graphical representations (such as curves or bar charts) can be viewed in the app. Relevant data can also be exported.

- User manual for the Quick Report App: app.rhopointinstruments.com/manual
- User manual for the Detailometer: app.rhopointinstruments.com/manual-detailometer

Check via a mobile device

The iOS/iPhone/iPad app can be downloaded from the Apple App Store: https://apps.apple.com/de/app/rhopoint-quick-report/id6470380453.

10. Related software

The device works best with the Rhopoint Quick Report App.

PC/Web Version

Open app.rhopointinstruments.com in Chrome or Edge. The web app also offers the option to install an offline version.

iOS/iPhone/iPad

The iOS app can be installed via the Apple App Store: