Abizarch HW-300PRO

Abizarch HW-300PRO Paint Thickness Gauge User Manual

Model: HW-300PRO

PRODUCT OVERVIEW

The Abizarch HW-300PRO Paint Thickness Gauge is a professional, multifunctional instrument designed for non-destructive measurement of coating and paint thickness on various metal substrates. It utilizes both electromagnetic induction (F probe) and eddy current effect (N probe) principles to automatically detect substrate properties, making it suitable for measuring paint/enamel/chrome on steel, and paint/anodized coatings on aluminum/copper.

This device is essential for material surface treatment, widely used in manufacturing, metal processing, chemical industries, and quality inspection. It provides precise measurements for automotive paints, powder coatings, and more.

Front view of the Abizarch HW-300PRO Paint Thickness Gauge, showing its display and control buttons.

PACKAGE CONTENTS

Upon opening the package, please verify that all the following items are included:

- 1 × Coating Thickness Gauge (HW-300PRO)
- 1 × User Manual

- 6 × Calibration Sheets (various thicknesses)
- 1 × Hand Rope
- 1 × Substrate (Aluminum plate for calibration)

PRODUCT SPECIFICATIONS

Product Name	Paint Thickness Gauge Meter
Material	ABS
Product Size	122mm × 50mm × 22mm (4.8 x 1.97 x 0.87 inches)
Resolution	1 µm (0-999 µm)
Measuring Range	0-2000 µm
Measurement Accuracy	±(3% + 1 µm)
Power Supply	2 × 1.5V AAA Batteries (Not Included)
Operating Temperature	-10°C to 50°C (14°F to 122°F)
Measurement Units	µm, mm, mils
Certification	CE, FCC
Item Weight	3.84 ounces (Product + Packaging Weight: 109g)

SETUP AND CALIBRATION

1. Battery Installation

The HW-300PRO requires two 1.5V AAA batteries (not included). Open the battery compartment cover on the back of the device and insert the batteries, ensuring correct polarity. Close the cover securely.

2. Initial Calibration

For accurate measurements, it is crucial to calibrate the device before first use and periodically thereafter. The device comes with a set of calibration sheets and an aluminum substrate.

Zero Calibration & Multi-point Calibration

The HW-300PRO gauge shown with its included calibration sheets and standard aluminum plate.

1. **Prepare Calibration Materials:** Lay out the aluminum plate and the six plastic calibration sheets in ascending order of thickness (0.05mm, 0.10mm, 0.25mm, 0.50mm, 1.00mm, 2.00mm).

2. **Enter Calibration Mode:** While holding down the "**um/mm mils**" key (or the "up" button), press and release the center "**ON**" button. The device will enter calibration mode. The display will show the expected thickness for the current step.

3. **Calibrate Zero Point (Aluminum):** Place the gauge's probe firmly on the bare aluminum plate. Wait for the beep. The display should read "0" (or very close to it), indicating the zero thickness reference.

4. **Calibrate Thicknesses:** For each subsequent step, place one of the plastic calibration sheets on top of the aluminum plate. Then, place the gauge's probe firmly on the plastic sheet. The device will automatically detect the thickness and beep. Continue this process for all six plastic sheets in the specified order.

5. **Completion:** After all seven measurements (aluminum + 6 plastic sheets) are made, the word **End**" will appear on the display, indicating successful calibration.

Note: The unit defaults to millimeters (mm) in calibration mode as the test samples are labeled in mm. Ensure you are

reading the correct units during calibration.

OPERATING INSTRUCTIONS

1. Powering On/Off

- **Power On:** Press the center "**ON**" button to turn on the device.
- **Power Off:** Press and hold the center "**ON**" button until the display turns off. The device also features an automatic shutdown function; if left idle for 3 minutes, it will power off to conserve battery.

2. Taking Measurements

The HW-300PRO automatically detects the substrate type (Fe for magnetic metals like steel, NFe for non-magnetic metals like aluminum/copper).

Using the HW-300PRO to measure coating thickness on a surface.

1. Ensure the device is powered on and calibrated.

2. Place the probe tip firmly and perpendicularly onto the coated surface you wish to measure.

3. The measurement will be displayed instantly on the large LCD screen. The display shows the metal type (Fe/NFe), operating mode, quantity, battery status, and the reading in the selected unit.

4. Lift the gauge from the surface to prepare for the next measurement.

Illustration of the HW-300PRO's highly sensitive probe, capable of detecting both magnetic (Fe) and non-magnetic (NFe) coatings.

3. Changing Measurement Units

The device supports three measurement units: micrometers (μm), millimeters (mm), and mils. To cycle through these units, press the "**um/mm mils**" button during operation.

4. Data Recording and Statistics

The HW-300PRO can record and display various statistical data, including average value, maximum value, minimum value, and difference (DIF). It supports up to 50 data points for statistical analysis, providing more accurate and convenient numerical data.
Refer to the on-screen indicators for MAX, MIN, AVG, and DIF values. The "NUM" indicator shows the number of measurements recorded.

MAINTENANCE

- **Cleaning:** Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the probe tip is

clean and free of debris for accurate readings.

- **Storage:** Store the gauge in a cool, dry place away from direct sunlight and extreme temperatures. If storing for an extended period, remove the batteries to prevent leakage.
- **Battery Replacement:** When the battery indicator on the display shows low power, replace the AAA batteries promptly to ensure continued accurate operation.
- **Probe Care:** Handle the probe tip with care. Avoid dropping the device or subjecting the probe to excessive force, as this can affect its accuracy.

TROUBLESHOOTING

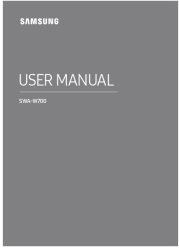| Problem	Possible Cause	Solution
Device does not power on.	○ No batteries or incorrect battery installation. ○ Dead batteries.	○ Install 2 × 1.5V AAA batteries, ensuring correct polarity. ○ Replace with new batteries.
Inaccurate or inconsistent readings.	○ Device not calibrated correctly. ○ Probe tip is dirty or damaged. ○ Surface being measured is not flat or clean. ○ Measuring on non-metal or non-ferrous/non-magnetic substrate.	○ Perform a full calibration as described in the "Setup and Calibration" section. ○ Clean the probe tip. If damaged, contact support. ○ Ensure the measurement surface is clean, dry, and flat. ○ Confirm the material is a metal suitable for measurement (Fe or NFe).
Display shows "End" unexpectedly.	Accidental entry into calibration mode and completion.	This is normal after completing calibration. If not intended, simply power off and on again to return to measurement mode.

WARRANTY AND SUPPORT

Specific warranty details for the Abizarch HW-300PRO Paint Thickness Gauge may vary depending on your region and point of purchase. Please refer to the warranty information provided at the time of purchase or contact your retailer for details.

For technical support, troubleshooting assistance, or inquiries regarding replacement parts, please contact Abizarch customer service or the seller from whom you purchased the product. Keep your purchase receipt or order number handy for faster service.

Contact information for Abizarch can typically be found on their official website or through the platform where the product was purchased.

Related Documents - HW-300PRO

	[Coating Thickness Gauge Application Manual](#) This manual provides detailed instructions for using the coating thickness gauge, including installation, measurement steps, calibration, and troubleshooting. The device measures non-conductive coatings on metal surfaces and non-ferromagnetic coatings on ferromagnetic metals.
	[Samsung SWA-W700 Soundbar Subwoofer User Manual: Setup, Safety, and Specifications](#) User manual for Samsung SWA-W700 Soundbar Subwoofer. Includes safety instructions, connection guide, product specifications, troubleshooting, compatible models, and warranty details.
	[How to Reset Samsung Soundbar and Multi-Room Speakers](#) A guide on how to reset various Samsung Soundbar and Multi-Room speaker models, including instructions for initialization and reconnection.
	[Samsung Soundbar Firmware Upgrade Guide: Step-by-Step Instructions](#) Comprehensive guide for upgrading the firmware on Samsung Soundbar models using a USB drive. Includes detailed steps for preparing the USB and performing the update for various HW-Q and HW-S series models.
	[Morton Machine Works: Quality Tooling Components Catalog](#) Explore Morton Machine Works' comprehensive catalog of high-quality tooling components, including handwheels, handles, knobs, screws, and more. Serving industries for over 70 years.
	[Offre de Remboursement Samsung : Jusqu'à 200€ sur les Barres de Son](#) Profitez de l'offre Samsung « Le son des vagues jusque chez vous » pour obtenir jusqu'à 200€ remboursés sur une sélection de barres de son. Offre valable du 23 juillet au 29 septembre 2025. Découvrez les conditions et comment participer en ligne.