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Bside CCT01

Bside CCT01 Digital Coating Thickness Gauge User Manual

Model: CCT01

1. PRODUCT OVERVIEW

The Bside CCT01 Digital Coating Thickness Gauge is designed for non-destructive, fast, and precise measurement of coating thickness. It operates based on either the magnetic induction principle (F probe) or the eddy current principle (N probe), depending on the substrate material. This device is equipped with both internal F and N probes. The F probe is suitable for measuring non-magnetic coatings such as aluminum, chrome, copper, zinc, paint, varnish, enamel, and rubber on iron or steel substrates. It is also applicable to alloyed and hardened magnetic steel, but not austenitic steel.

The N probe is used for insulating coatings like paint, anodizing, and ceramics on all non-ferrous metals (e.g., aluminum, copper, zinc die casting, brass) and on austenitic stainless steels.



Figure 1: Front view of the Bside CCT01 Digital Coating Thickness Gauge, showing the LCD display, control buttons, and the Bside CCT01 branding.

2. KEY FEATURES

- **Display:** 128x128 dot matrix LCD with standard menu operations.
- **Measurement Modes:** Supports both single and continuous measurement.
- **Group Modes:** Two group modes: Direct (DIR) and General (GEN). Readings in Direct mode are lost upon power off, while General mode stores up to 80 readings per group.
- **Calibration:** Zero-point calibration and multi-point calibration (up to 4 points) for each group.
- **Data Management:** Ability to recall, delete specified readings, or delete entire group readings.
- **Statistics:** Displays mean, minimum, maximum, and standard deviation of readings.
- **Probe Modes:** Auto, Magnetic (F), and Eddy Current (N) probe selection.
- **Alarm Function:** User-definable high or low limit alarms for each group.
- **Power Management:** Automatic power-off feature.

- **Connectivity:** USB interface for data transmission to a computer.
- **Indicators:** Low battery and error indications.

3. SETUP

3.1 Battery Installation

1. Locate the battery compartment on the back of the device.
2. Using a small screwdriver, remove the screws securing the battery compartment cover.
3. Insert two 1.5V AAA batteries, ensuring correct polarity as indicated inside the compartment.
4. Replace the battery compartment cover and secure it with the screws.



Figure 2: View of the battery compartment, showing the placement for two 1.5V AAA batteries.



Figure 3: Rear view of the device, displaying the battery compartment cover and a warning regarding battery disposal and recycling.

3.2 Powering On/Off

- To power on, press and hold the **Power** button.
- The device will automatically power off after a period of inactivity to conserve battery life.

4. OPERATING INSTRUCTIONS

4.1 Measurement Modes

- **Single Mode:** For individual measurements. Press the probe onto the surface, read the value, then lift.
- **Continuous Mode:** For scanning a surface. Keep the probe on the surface and slide it to take multiple readings.

4.2 Group Modes

- **Direct (DIR) Group:** Readings are displayed but not stored in memory. Data is lost when the device powers off.
- **General (GEN) Group:** Readings are automatically stored. Up to 80 readings can be stored for each of the four

general groups. Each group maintains individual statistics, alarm limits, and calibration settings.

4.3 Calibration

Accurate measurements require proper calibration. The device supports zero-point and multi-point calibration.

1. **Zero-Point Calibration:** Used to set the zero reference on an uncoated substrate.
2. **Multi-Point Calibration (up to 4 points):** For enhanced accuracy across the measurement range, using calibration foils of known thickness.

Refer to the on-screen menu for detailed calibration steps.

4.4 Probe Modes

The device can automatically detect the substrate type or be manually set.

- **Auto Mode:** The gauge automatically selects between F (magnetic induction) and N (eddy current) probe principles.
- **Magnetic Mode (F Probe):** For non-magnetic coatings on ferrous substrates.
- **Eddy Current Mode (N Probe):** For insulating coatings on non-ferrous substrates.



Figure 4: Close-up view of the professional test probe at the bottom of the device, designed for accurate contact with the measurement surface.

4.5 Setting Alarms

Users can set high and low alarm limits for each group. An alarm icon will be displayed on the LCD when a reading exceeds these limits.

4.6 Data Management and Statistics

Navigate through the menu to:

- **Recall:** View stored readings.
- **Delete:** Remove specific readings or clear an entire group.
- **Browse Statistics:** View calculated statistics including the number of readings, mean, minimum, maximum, and standard deviation for the current group.

5. DATA TRANSFER

The Bside CCT01 features a USB interface for transferring measurement data to a computer. This allows for further analysis and record-keeping.



Figure 5: Close-up view of the USB interface located on the side of the device, used for data transmission.

6. MAINTENANCE

6.1 Battery Replacement

When the low battery indicator appears, replace the AAA batteries as described in Section 3.1. Always use fresh batteries for optimal performance.

6.2 Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Keep the probe tip clean and free of debris for accurate readings.

6.3 Storage

Store the device in its original packaging or a protective case when not in use. Avoid extreme temperatures and high humidity. If storing for extended periods, remove the batteries to prevent leakage.

7. TROUBLESHOOTING

- Low Battery Indication:** If the low battery icon appears, replace the batteries immediately.
- Error Indication:** If an error message is displayed, refer to the device's on-screen help or power cycle the device. If the issue persists, contact customer support.
- Inaccurate Readings:** Ensure the probe tip is clean, the device is properly calibrated, and the correct probe mode (F/N/Auto) is selected for the substrate.

8. SPECIFICATIONS

Parameter	F Probe (Magnetic Induction)	N Probe (Eddy Currents)
Measuring Range	0 to 1300um (0 to 51.2mils)	0 to 1300um (0 to 51.2mils)
Accuracy	(3% + 2um) / (3% + 0.078mils)	(3% + 2um) / (3% + 0.078mils)
Resolution	0.999um (1um), 1000-1300um (0.01mm) 0.39.39mils (0.01mils), 39.4-51.2mils (0.1mils)	0.999um (1um), 1000-1300um (0.01mm) 0.39.39mils (0.01mils), 39.4-51.2mils (0.1mils)
Calibration	One-point to four-point calibration, zero-point calibration	
Data Groups	One direct group (readings not stored), Four general groups (readings stored automatically)	
Statistics	Number of readings, mean, minimum, maximum, standard deviation	
Units	um, mm, mils	
Alarm	User-settable high/low alarm limits	
Minimum Curvature Radius (Convex)	1.5mm	
Minimum Curvature Radius (Concave)	25mm	
Minimum Measuring Area Diameter	6mm	
Minimum Substrate Thickness	0.5mm (0.02")	0.3mm (0.012")
Maximum Measuring Rate	Two readings per second	
Computer Interface	USB	
Power Supply	Two 1.5V AAA batteries (not included)	
Operation Environment	Temperature: 0 to 40°C (32 to 104°F); Humidity: 20% to 90% RH	
Storage Environment	Temperature: -20 to 70°C (-4 to 158°F)	
Standard Compliance	ROHS, WEEE	
Dimensions	110mm x 53mm x 24mm (4.33" x 2.09" x 0.94")	
Case Material	ABS	
Weight	92g (3.24 oz)	

9. PACKAGE CONTENTS

The standard package includes:

- Bside CCT01 Digital Coating Thickness Gauge
- USB Cable
- Calibration Foils
- Substrate Plates (Ferrous and Non-Ferrous)
- User Manual



Figure 6: The Bside CCT01 gauge shown with its included accessories, including calibration foils and a USB cable, on a car panel.

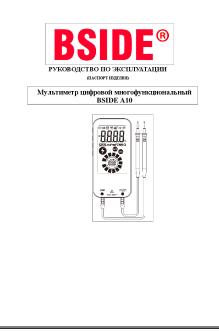
10. WARRANTY AND SUPPORT

Information regarding product warranty and customer support is typically provided with the purchase documentation or available on the manufacturer's official website. Please refer to those resources for details on warranty coverage, technical assistance, and service options.

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Related Documents - CCT01

	<p><u>BSIDE S10/S11 Smart Digital Multimeter User Manual</u></p> <p>Comprehensive guide for the BSIDE S10/S11 Smart Digital Multimeter, covering safety warnings, product structure, button descriptions, technical specifications, operating instructions, and maintenance. Learn how to measure DC/AC voltage, resistance, capacitance, continuity, frequency, duty cycle, and perform NCV and LIVE wire detection.</p>
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	<p>BSIDE ESR02 Pro Digital Component ESR Meter Multi-function Tester User Manual</p> <p>User manual for the BSIDE ESR02 Pro, a digital component ESR meter and multi-function tester. Learn about its features, function testing, usage instructions, and calibration.</p>
	<p>BSIDE A10 Digital Multimeter User Manual and Specifications</p> <p>Comprehensive user manual and technical specifications for the BSIDE A10 digital multimeter, covering operation, safety, features, and warranty information.</p>
	<p>BSIDE A1 Digital Multimeter User Manual and Specifications</p> <p>Comprehensive user manual for the BSIDE A1 digital multimeter, covering technical specifications, safety instructions, operation, and warranty information. Learn how to use your BSIDE A1 for accurate electrical measurements.</p>
	<p>BSIDE AVD06 Non-Contact Voltage Indicator User Manual</p> <p>Comprehensive user manual for the BSIDE AVD06 non-contact voltage indicator. This guide provides detailed information on product specifications, safe operation, features like auto/manual modes, sensitivity settings, AC voltage measurement, wire checking, and warranty details. Essential for electricians and DIY users.</p>
	<p>BSIDE S20 Digital Multimeter User Manual and Specifications</p> <p>Comprehensive user manual for the BSIDE S20 digital multimeter, covering technical specifications, operation, safety instructions, and warranty information.</p>