Laserliner 082.150A

Laserliner CoatingTest-Master 082.150A Instruction Manual

Model: 082.150A | Brand: Laserliner

1. Introduction and Overview

The Laserliner CoatingTest-Master 082.150A is a precision instrument designed for non-destructive measurement of coating thicknesses on various metal surfaces. It utilizes both magnetic induction and eddy current principles to accurately determine the thickness of non-metallic layers.

This device is capable of measuring non-magnetic coatings such as paint and zinc on steel, as well as insulating coatings like paint and anodized layers on non-ferrous metals. It features automatic identification of the base material (ferrous/ferromagnetic or non-ferrous/non-ferromagnetic), an internal memory for 400 measured values, and options for one-point and two-point calibration. Data transfer and evaluation are facilitated via a USB interface. The illuminated display provides Min/Max/Avg readings for comprehensive analysis.

Figure 1: Laserliner CoatingTest-Master 082.150A device.

2. Package Contents

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

- Laserliner CoatingTest-Master 082.150A device
- Protective carrying case
- USB cable for data transfer
- Calibration foils/plates (for one-point and two-point calibration)

- Instruction manual (this document)
- Software CD (for data evaluation)
- Batteries (if included)

Figure 2: Contents of the CoatingTest-Master package.

3. Setup

3.1 Battery Installation

The CoatingTest-Master requires batteries for operation. Locate the battery compartment on the back of the device. Insert the specified battery type (e.g., AAA batteries) ensuring correct polarity as indicated inside the compartment. Close the battery cover securely.

3.2 Powering On/Off

Press and hold the **Power** button (usually marked with a power symbol) to turn the device on. The display will illuminate. To turn off the device, press and hold the **Power** button again until the display shuts down.

4. Operating Instructions

4.1 Basic Measurement

To perform a basic coating thickness measurement:

1. Ensure the device is powered on.
2. Place the small measuring head firmly and perpendicularly onto the surface to be measured. The device will automatically detect the base material (ferrous or non-ferrous).
3. The coating thickness reading will be displayed on the screen in micrometers (µm).
4. Lift the measuring head from the surface to prepare for the next measurement.

Figure 3: The device features a small measuring head for pinpoint accuracy.

4.2 Calibration

For accurate measurements, especially when measuring different types of coatings or base materials, calibration is essential. The CoatingTest-Master supports one-point and two-point calibration.

4.2.1 One-Point Calibration

This method uses a single known thickness to adjust the device. Refer to the on-screen prompts or specific manual section for detailed steps on using the provided calibration foils.

4.2.2 Two-Point Calibration

This method uses two known thicknesses (e.g., zero and a specific thickness) for more precise calibration across a range. Follow the device's on-screen instructions for this procedure.

4.3 Data Management

The device has an internal memory for up to 400 measured values. Use the navigation buttons to review stored data. To transfer data to a computer, connect the device via the provided USB cable and use the accompanying software for evaluation.

4.4 Display Functions

The illuminated display shows the current measurement, and can also cycle through Minimum (Min), Maximum (Max), and Average (Avg) values of a series of measurements. Consult the device's on-screen menu for accessing these display modes.

5. Maintenance

Proper maintenance ensures the longevity and accuracy of your CoatingTest-Master.

- **Cleaning:** Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the measuring head is kept clean and free of debris.
- **Storage:** When not in use, store the device in its protective carrying case in a dry, dust-free environment, away from extreme temperatures and direct sunlight.
- **Battery Replacement:** Replace batteries promptly when the low battery indicator appears on the display to avoid interruption of measurements and potential data loss.

6. Troubleshooting

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Check battery polarity; replace batteries.
Inaccurate readings.	Device not calibrated; dirty measuring head; incorrect measurement technique.	Perform calibration; clean measuring head; ensure proper contact with surface.
USB data transfer failure.	Incorrect cable connection; software not installed or running; driver issues.	Ensure secure USB connection; install/reinstall software and drivers; try a different USB port.

7. Specifications

Feature	Detail
Measuring Principle	Magnetic Induction (FE) / Eddy Current (NFe)
Measuring Range (FE)	0 – 1250 µm
Accuracy (FE)	0–850 µm: ±(3% + 1 µm); 850–1250 µm: ±5%
Measuring Range (NFe)	0 – 1250 µm
Accuracy (NFe)	0–850 µm: ±(3% + 1 µm); 850–1250 µm: ±5%
Base Material Identification	Automatic (Ferrous / Non-Ferrous)
Memory	400 measured values

Feature	Detail
Calibration	One-point and Two-point
Interface	USB
Display	Illuminated, Min/Max/Avg display

8. Warranty and Support

Laserliner products are manufactured with high quality standards. For information regarding warranty coverage, technical support, or service, please refer to the warranty card included with your product or visit the official Laserliner website. Keep your purchase receipt as proof of purchase for any warranty claims.
For further assistance, you may contact Laserliner customer service through their official channels. Contact details are typically available on the manufacturer's website or in the product packaging.

Related Documents - 082.150A

	LaserRange-Master Gi8 Pro Laser Distance Meter User manual for the Laserliner LaserRange-Master Gi8 Pro, a precision laser distance meter providing accurate measurements with essential safety instructions, operational guidance, and maintenance information.
	Laserliner Quadrum/Quadrum Green Fully Automatic Rotary Laser - User Manual This document provides comprehensive instructions for the Laserliner Quadrum and Quadrum Green fully automatic rotary lasers, covering features, operation, safety guidelines, and technical specifications.

	[Laserliner EasyCross-Laser Bedienungsanleitung] Umfassende Bedienungsanleitung für den Laserliner EasyCross-Laser, die Funktionen, Sicherheitshinweise und technische Daten beschreibt.
	[LaserRange-Master T4 Pro Laser Distance Meter User Manual] Comprehensive user manual for the Laserliner LaserRange-Master T4 Pro, detailing its features, operation, safety guidelines, and technical specifications for accurate length, area, and volume measurements.
	[LaserRange-Master Gi4 Mini User Manual and Technical Specifications] Comprehensive user manual and technical specifications for the Laserliner LaserRange-Master Gi4 Mini laser distance meter, covering features, safety, operation, and troubleshooting.
	[Laserliner Quadrum DigiPlus 2-Axis Grade Laser: User Manual & Specifications] Comprehensive user manual for the Laserliner Quadrum DigiPlus 2-axis grade laser. Includes setup, operation, safety instructions, features like ADS, battery charging, calibration, and technical specifications.