Testo 0563 1545

Testo 545 Digital Lux Meter User Manual

Model: 0563 1545

Brand: Testo

1. Introduction

The Testo 545 Digital Lux Meter is designed for precise and convenient determination of illuminance in various working environments. This instrument helps assess light conditions to promote productivity, well-being, and health, preventing issues such as concentration problems and headaches. Its app compatibility allows for easy setup, configuration, and data management, turning your smartphone into a second display for real-time monitoring and documentation.

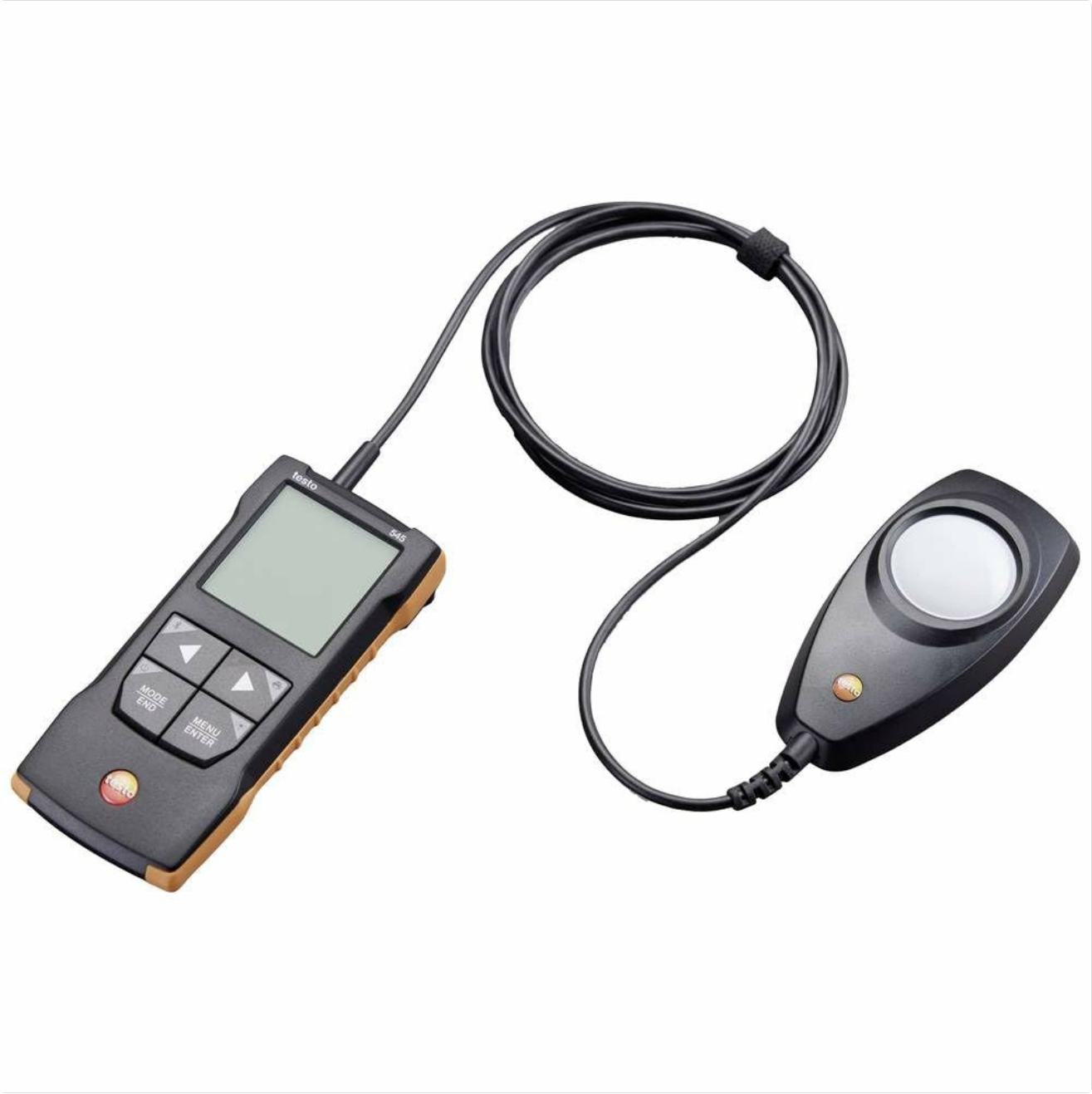

Figure 1.1: Testo 545 Digital Lux Meter with its external sensor.

Key Features:

- **Precise Measurement:** Accurate determination of illuminance for all common light sources according to the V-lambda curve.
- **Convenient Operation:** Automatic calculation and display of time and point averages, with audible alarm sounds for fast and reliable results.
- **Application Versatility:** Suitable for various environments, especially offices, to optimize light conditions for productivity and well-being.
- **LED Compatibility:** Compatible with most commercially available LEDs, excluding single-color blue LEDs.
- **App Connectivity:** Seamless integration with a smartphone or tablet app for graph history display, data viewing, storage, and documentation, or as a second display.

2. Safety Information

Please read this manual carefully before operating the Testo 545 Digital Lux Meter. Adhere to all safety instructions to ensure safe operation and prevent damage to the device or injury to personnel.

General Safety Guidelines:

- Do not expose the device to extreme temperatures, direct sunlight, or excessive humidity.
- Avoid strong impacts or vibrations.
- Do not open the device housing. Repairs should only be performed by authorized service personnel.
- Ensure batteries are inserted correctly according to polarity markings.
- Dispose of batteries and the device according to local regulations.
- Keep the sensor clean and free from dust or obstructions to ensure accurate measurements.

3. Package Contents

Verify that all items listed below are present in your package:

- Testo 545 Digital Lux Meter instrument
- Transport bag
- Calibration protocol (CoC)
- 3 x AA batteries

4. Setup

4.1 Battery Installation

The Testo 545 requires 3 AA batteries for operation. The battery compartment is located on the rear of the main unit.

1. Locate the battery compartment cover on the back of the device.
2. Open the cover by sliding or unlatching it as indicated.
3. Insert 3 AA batteries, ensuring correct polarity (+/-) as marked inside the compartment.
4. Close the battery compartment cover securely.

4.2 Initial Power On

After installing the batteries, the device is ready for its first use.

1. Press and hold the power button (usually marked with an ON/OFF symbol) until the display illuminates.
2. The device will perform a brief self-test.
3. Ensure the external sensor is securely connected to the main unit via its cable.

Figure 4.1: Front view of the Testo 545 main unit, showing the display and control buttons.

4.3 App Connection

The Testo 545 can connect to a smartphone or tablet via the Testo Smart App for enhanced functionality.

1. Download the "Testo Smart App" from your device's app store (Google Play Store for Android, Apple App Store for iOS).
2. Ensure Bluetooth is enabled on your smartphone/tablet.
3. Power on the Testo 545.
4. Open the Testo Smart App and follow the on-screen instructions to search for and connect to your Testo 545 device.
5. Once connected, you can view live readings, configure settings, and manage data directly from the app.

Figure 4.2: Using the Testo 545 in conjunction with the Testo Smart App on a smartphone.

Figure 4.3: Example screenshot of the Testo Smart App interface showing measurement trends.

5. Operating Instructions

5.1 Basic Illuminance Measurement

To take a basic illuminance reading:

1. Power on the Testo 545.
2. Position the external sensor at the point where you wish to measure illuminance. Ensure the sensor's light-sensitive surface is facing the light source and is not obstructed.
3. Allow a few seconds for the reading to stabilize on the display.
4. The current illuminance value will be shown in Lux (lx).

Figure 5.1: Measuring illuminance in an office setting with the Testo 545.

5.2 Advanced Measurement Functions

The Testo 545 offers advanced functions accessible via the device's buttons or the Testo Smart App.

- **Time and Point Averages:** The device automatically calculates and displays time and point averages. Refer to the on-screen menu or app interface for specific options to view these averages.
- **Hold Function:** Press the "HOLD" button (if available, or via app) to freeze the current reading on the display. Press again to release.
- **Min/Max Values:** The device can track and display minimum and maximum measured values during a measurement session. Access this feature through the menu.
- **Data Logging:** When connected to the Testo Smart App, you can log measurement data over time for analysis and reporting.

Figure 5.2: The Testo 545 being used for illuminance measurement on a workbench.

6. Maintenance

6.1 Cleaning the Device

To ensure optimal performance and longevity of your Testo 545:

- Wipe the device and sensor with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- Ensure the sensor's light-sensitive surface is kept clean and free of dust, fingerprints, or smudges, as these can affect measurement accuracy.
- Do not immerse the device or sensor in water.

6.2 Storage

When not in use, store the Testo 545 in its transport bag in a cool, dry place, away from direct sunlight and extreme temperatures.

6.3 Battery Replacement

Replace batteries when the low battery indicator appears on the display. Refer to section 4.1 for battery installation instructions.

7. Troubleshooting

This section provides solutions to common issues you might encounter with your Testo 545.

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly inserted batteries.	Check battery polarity. Replace batteries if necessary.
Inaccurate readings.	Dirty sensor; sensor not positioned correctly; external interference.	Clean the sensor surface. Ensure sensor is facing the light source directly. Move away from strong electromagnetic fields.
Cannot connect to Testo Smart App.	Bluetooth off; app not updated; device out of range.	Ensure Bluetooth is enabled on both devices. Update the app. Bring devices closer together. Restart both devices.
Display shows "OVER" or "---".	Measurement range exceeded.	The illuminance is above the maximum measurable range (100,000 Lux).

8. Specifications

Detailed technical specifications for the Testo 545 Digital Lux Meter:

Parameter	Value
Product Dimensions	10.9 x 7.5 x 3 inches (149 x 60 x 28 mm for main unit, 134 x 54 x 23 mm for probe)
Item Model Number	0563 1545
Batteries	3 AA batteries (included)
Light Measuring Range	0 to 100,000 Lux
Accuracy	Class C (F1 = 6% V(Lambda) adjustment, F2 = 5% cos-true evaluation, Total ≤ 15%, ±3% of mv ±1 Digit)
Resolution	0.1 Lux (<10000 Lux) / 1 Lux (≥ 10000 Lux)
Weight	1.54 Pounds (288 g)
Operating Temperature	-4 to +122 °F (-20 to +50 °C) for instrument, -4 to +158 °F (-20 to +70 °C) for probe
Housing Material	ABS + PC / TPE
Cable Length	4.593 ft. (1.4 m)
Protection Class	IP40 (instrument), IP20 (probe)
Battery Life	70 hours
Storage Temperature	-4 to +122 °F (-20 to +50 °C)

9. Warranty and Support

9.1 Warranty Information

Testo products are manufactured to the highest quality standards. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Testo website. Keep your proof of purchase for warranty claims.

9.2 Customer Support

If you encounter any issues not covered in this manual or require technical assistance, please contact Testo customer support. Contact details can typically be found on the Testo official website or on the product packaging.

For further information and resources, visit the Testo Store on Amazon.