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› TESMEN TCM-300A Smart Digital Clamp Meter and TSM-522S Digital Multimeter Bundle User Manual

TESMEN TCM-300A & TSM-522S Bundle

TESMEN TCM-300A Smart Digital Clamp Meter and TSM-522S Digital Multimeter Bundle User Manual

Model: TCM-300A & TSM-522S Bundle | Brand: TESMEN

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective use of your TESMEN TCM-300A Smart Digital Clamp Meter and TSM-522S Digital Multimeter bundle. These instruments are designed to meet a variety of electrical measurement needs, offering precision and user-friendly features for both professional and everyday applications.



Figure 1: The TESMEN TCM-300A Smart Digital Clamp Meter (left) and TSM-522S Digital Multimeter (right).

2. SAFETY INFORMATION

Both the TSM-522S and TCM-300A are certified for safety with CAT III 600V ratings. They include comprehensive protection features such as overload protection and non-contact voltage testing, ensuring reliable and secure operation for all your electrical tasks. Always adhere to local and national safety codes.

- Always inspect the meter and test leads for any damage before use.
- Do not use the meter if it appears damaged or is not operating properly.
- Ensure the correct function and range are selected before making measurements.
- Avoid contact with live circuits when replacing batteries or fuses.
- Always wear appropriate personal protective equipment (PPE).

3. SETUP

3.1 Unboxing and Contents

Upon opening the package, verify that all components are present:

- TESMEN TSM-522S Digital Multimeter
- TESMEN TCM-300A Smart Digital Clamp Meter
- Test Leads (for both meters)
- Storage Bag
- Temperature Probe Pens
- Batteries (pre-installed or included for installation)
- User Manuals (this document)

3.2 Battery Installation (TCM-300A)

The TCM-300A requires 3 AAA batteries. To install:

1. Locate the battery compartment on the back of the clamp meter.
2. Use a screwdriver to open the battery cover.
3. Insert the batteries, ensuring correct polarity (+/-).
4. Replace the battery cover and secure it with the screw.

3.3 Initial Power On

Press the power button () on each device to turn it on. The display will illuminate, indicating readiness for use.

4. OPERATING INSTRUCTIONS

4.1 Smart Automatic Mode

Both meters feature a smart automatic mode for fast and accurate measurements. In this mode, the meter automatically identifies the type of measurement (AC/DC voltage, resistance, continuity) and selects the appropriate range.

FAST & INTELLIGENT MEASUREMENT



Figure 2: Clamp Meter operating in Smart Auto Mode.

4.2 Measuring AC/DC Voltage

Connect the test leads to the appropriate input jacks (COM and VΩHz for TSM-522S, or COM and V for TCM-300A). The meter will automatically detect AC or DC voltage in Smart Auto mode.

LCD

Bigger Display



2.56 Inch

Color Smart Screen

More intuitive and clearer, easy to read

Figure 3: Measuring AC Voltage from an outlet and DC Voltage from a car battery.

4.3 Measuring AC Current (TCM-300A only)

The TCM-300A clamp meter allows for non-contact AC current measurement. Open the clamp jaws and encircle a single conductor. The current reading will appear on the display.

4.4 Inrush Current Measurement (TCM-300A only)

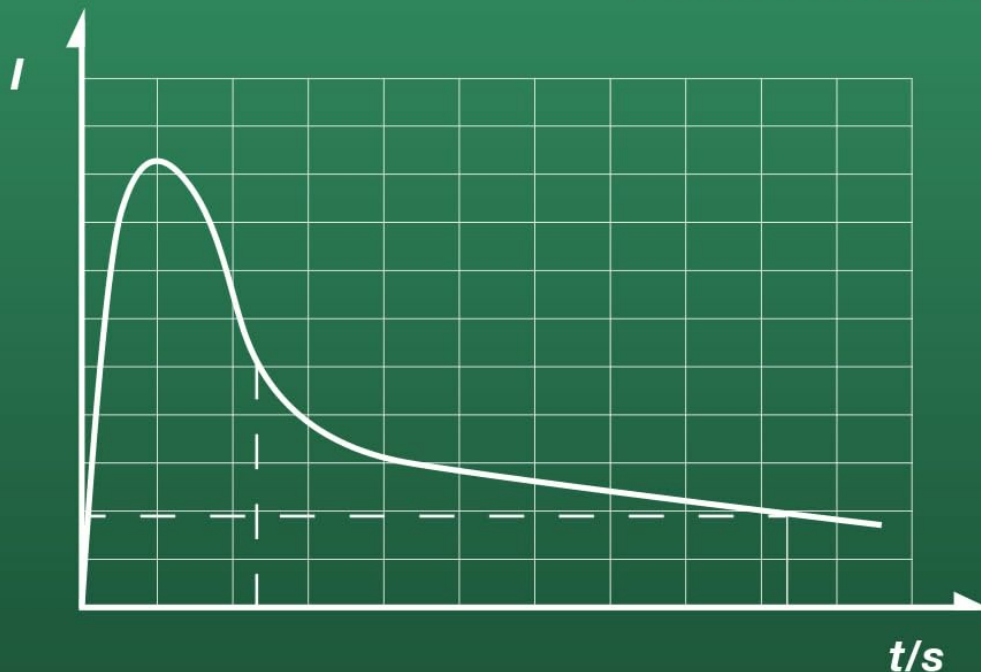
The TCM-300A supports inrush current measurement, useful for capturing the initial surge of current when a device is

powered on. Use the "INRUSH" button to activate this function.



Inrush Current Test

Measurement range is



5A
|
600A

Figure 4: Inrush Current Test measurement range (5A - 600A).

4.5 Resistance and Continuity Testing

In Smart Auto mode, connect the test leads across the component to measure resistance or check for continuity. A low resistance reading or an audible beep indicates continuity.

4.6 Capacitance Measurement

To measure capacitance, select the capacitance function using the **FUNC/AUTO** button. Connect the test leads to the capacitor terminals. Ensure the capacitor is discharged before testing.

4.7 Temperature Measurement

Use the included temperature probe pens. Select the temperature function (°C/°F) and connect the probe to the meter. Place the probe at the desired measurement point.

4.8 Non-Contact Voltage (NCV) Testing

The NCV function allows for safe detection of AC voltage without direct contact. Place the NCV sensing area near a live conductor. The meter will indicate voltage presence with an audible alarm and visual indicator.



AC Voltage



DC Voltage



Diode



Capacitance



Resistance



Continuity



Frequency



NCV



Live Wire



Flashlight

Figure 5: NCV function indicating voltage levels.

4.9 Data Hold and Auto Power Off

Press the **HOLD** button to freeze the current reading on the display. The meters also feature an auto power-off function to conserve battery life, automatically shutting down after a period of inactivity.

4.10 Flashlight Function

Both instruments are equipped with a built-in flashlight for improved visibility in dimly lit environments. Long press the

flashlight button to activate/deactivate.

5. MAINTENANCE

5.1 Cleaning

Wipe the meter's casing with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the meter is completely dry before storage or next use.

5.2 Storage

Store the meters in the provided storage bag in a cool, dry place, away from direct sunlight and extreme temperatures. If storing for extended periods, remove the batteries to prevent leakage.

FULLY WRAPPED CASE



**Ensure
Your Safety**



**Preventing
Electrocution**

Figure 6: TSM-522S Multimeter with its fully wrapped protective case.

5.3 Battery Replacement

When the low battery indicator appears on the display, replace the batteries promptly following the instructions in Section 3.2.

6. TROUBLESHOOTING

- **Meter not powering on:** Check battery installation and ensure batteries are not depleted.
- **Inaccurate readings:** Verify test lead connections, ensure correct function selection, and check for external interference.
- **Display shows "OL":** This indicates an overload or out-of-range measurement. Select a higher range or ensure the measurement is within the meter's capabilities.

7. SPECIFICATIONS

Feature	Specification
Brand	TESMEN
Model	TCM-300A Smart AC Clamp Meter & TSM-522S Multimeter
Safety Rating	CAT III 600V
Power Source	Battery Powered
Color	Green
Measurement Capabilities (TCM-300A)	AC Current, Inrush Current, AC/DC Voltage, Resistance, Capacitance, Temperature, Continuity, Diode, Frequency, NCV, Live Wire, Data Hold
Measurement Capabilities (TSM-522S)	Smart Automatic Mode, AC/DC Voltage, Resistance, Capacitance, Continuity, Diode, Frequency, NCV, Live Wire, Flashlight
Display	LCD Color Smart Screen (TSM-522S: 2.56 Inch)
Count (TCM-300A)	6000 Counts (T-RMS)
Count (TSM-522S)	4000 Counts (True RMS)

T-RMS 6000 Counts



AC Current



AC/DC Voltage



Resistance



Continuity



Diodes



Frequency



Capacitance



Temperature



Non-Contact
Voltage



Live wire



Data hold



Inrush



Figure 7: Key features of the TCM-300A Clamp Meter.



NCV

Non-Contact AC Voltage

Figure 8: Key features of the TSM-522S Multimeter.

VOLTAGE MEASUREMENT

AC
~

AC Voltage Measurement



DC
—

DC Voltage Measurement



Figure 9: TSM-522S Multimeter's 2.56-inch Color Smart Screen.

8. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the official TESMEN website or contact the seller directly. Keep your purchase receipt as proof of purchase.

Visit the TESMEN Store: [TESMEN Official Store](#)

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question