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TESMEN TN-213-GN

TESMEN TN-213 Non-Contact Voltage Detector User Manual

Model: TN-213-GN | Brand: TESMEN

INTRODUCTION

The TESMEN TN-213 Non-Contact Voltage Detector is a portable and reliable tool designed for safely detecting AC voltage in various electrical components. It features visual and audible alerts, dual-range sensitivity, and a built-in flashlight, making it an essential device for electricians, DIY enthusiasts, and homeowners.

WHAT'S IN THE BOX

- 1x TESMEN TN-213 Non-Contact Voltage Tester
- 2x AAA Batteries
- 1x User Manual



Image: The TESMEN TN-213 Voltage Tester shown alongside the two included AAA batteries.

SAFETY INFORMATION

Always prioritize safety when working with electricity. The TN-213 is designed with safety features, but proper precautions must always be taken.

- **CAT III 1000V, CAT IV 600V:** This device is rated for high voltage environments, ensuring safe operation within specified limits.

- **IP66 Rated:** Provides protection against dust and powerful water jets, enhancing durability in various working conditions.
- Do not use the device if it appears damaged or is not operating correctly.
- Ensure batteries are correctly installed before use.
- Always test on a known live circuit first to verify the tester's functionality.

SETUP

Battery Installation

1. Unscrew the battery cap at the bottom of the tester.
2. Insert two AAA batteries, ensuring correct polarity (+ and - ends match the markings inside the compartment).
3. Securely screw the battery cap back on.

Power On/Off

- To power on, press and hold the power button () for approximately 2 seconds until the LCD screen illuminates.
- To power off, press and hold the power button again for approximately 2 seconds. The device will also automatically shut down after 5 minutes of inactivity to conserve battery life.

OPERATING INSTRUCTIONS

Non-Contact Voltage (NCV) Detection

The TN-213 uses NCV technology to detect AC voltage without physical contact, enhancing safety.

- Place the tip of the tester near the wire, outlet, or electrical component you wish to test.
- If AC voltage is detected, the tip will emit a red light, the LCD screen will turn red, and an audible alarm will sound. The frequency of the light and alarm increases with higher detected voltage.
- The LCD screen will display a percentage value and bar graphs, indicating the strength of the detected voltage.



Stay Secure

with NCV Detection



CAT. III 1000V

CAT. IV 600V

Image: The TN-213 detecting voltage in an electrical outlet, with the tip glowing red and the screen indicating detection.

Voltage Strength Visualized

Tester with Percentage & Analog Bar

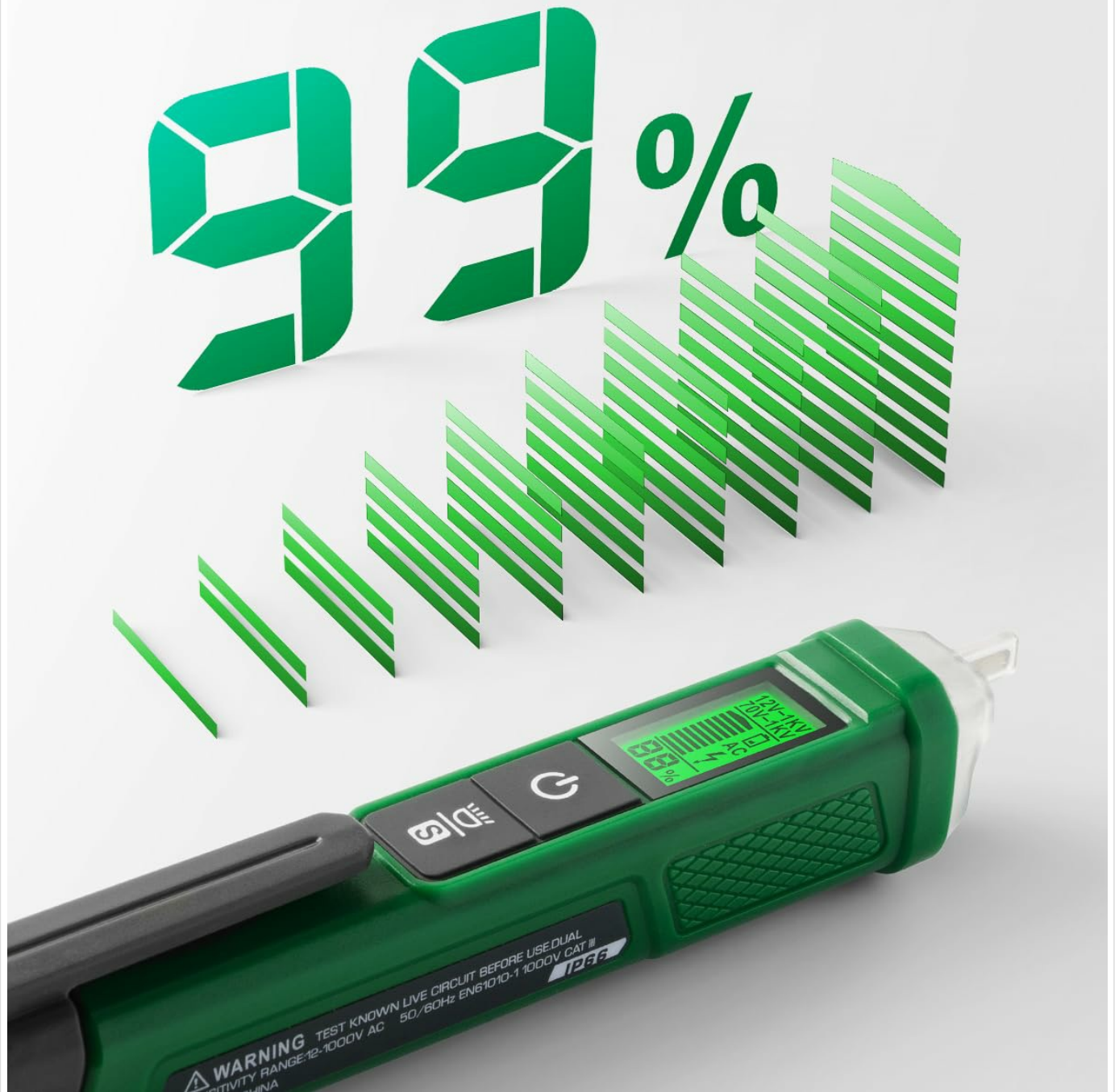


Image: Close-up of the TN-213's LCD display showing a high voltage reading of 99% with corresponding bar graphs.

Dual-Range Sensitivity

The TN-213 offers two sensitivity modes for different testing needs:

- **High Sensitivity (12V-1000V AC):** Ideal for detecting low voltage signals, such as those in motorized curtains, irrigation wiring, or for general wire tracing. This is the default mode upon power-on.
- **Low Sensitivity (70V-1000V AC):** Suitable for standard household voltage detection, like testing outlets or circuit breakers.

- To switch between sensitivity modes, short press the 'S' button ().

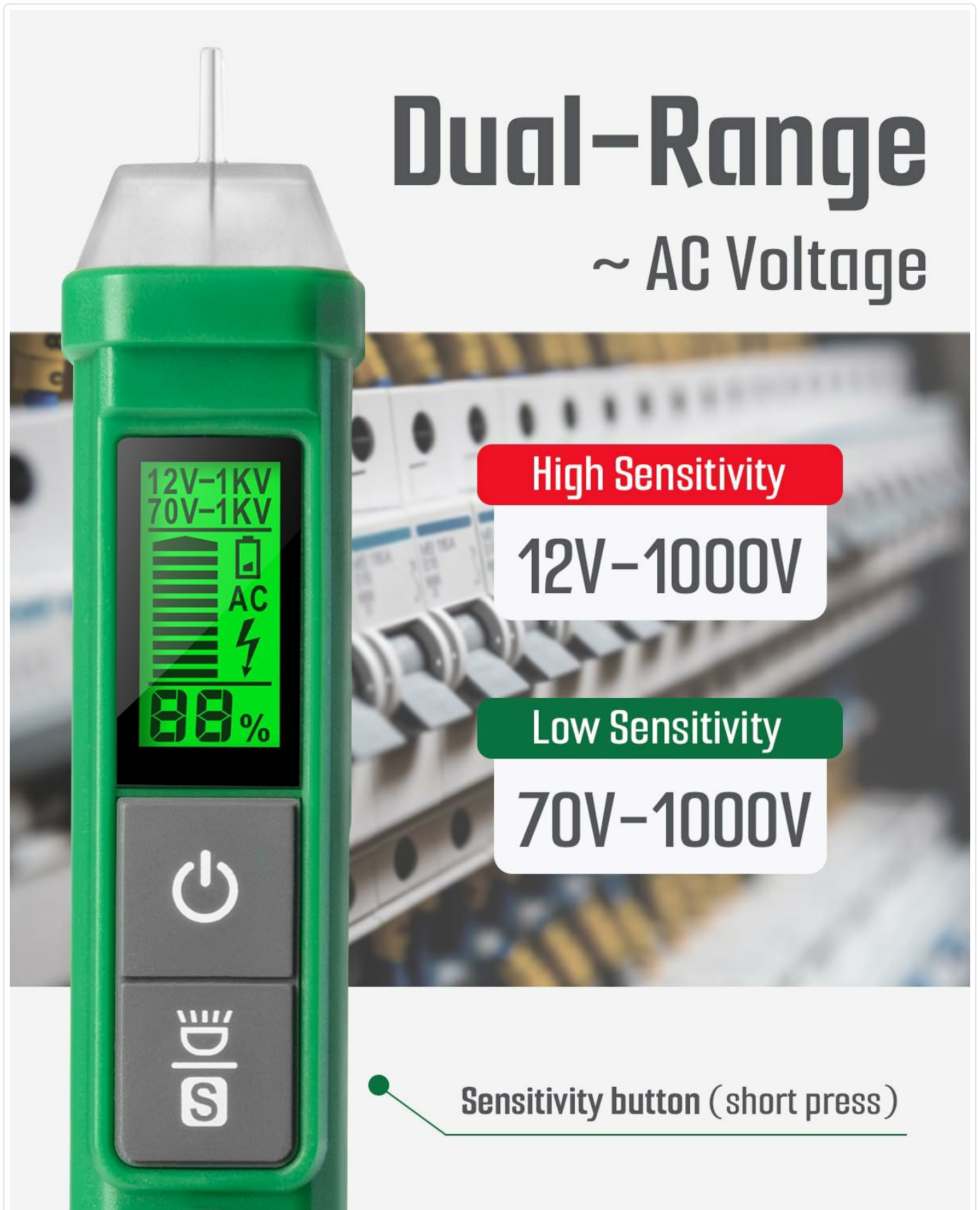


Image: The TN-213 displaying its dual-range sensitivity options: 12V-1000V (High) and 70V-1000V (Low).

Live and Neutral Wire Test

In low sensitivity mode, the TN-213 can help distinguish between live and neutral wires:

- When the tester is near a live wire, it will provide visual (red light) and audible alerts.

- When near a neutral wire, there will be no visual or audible alert.

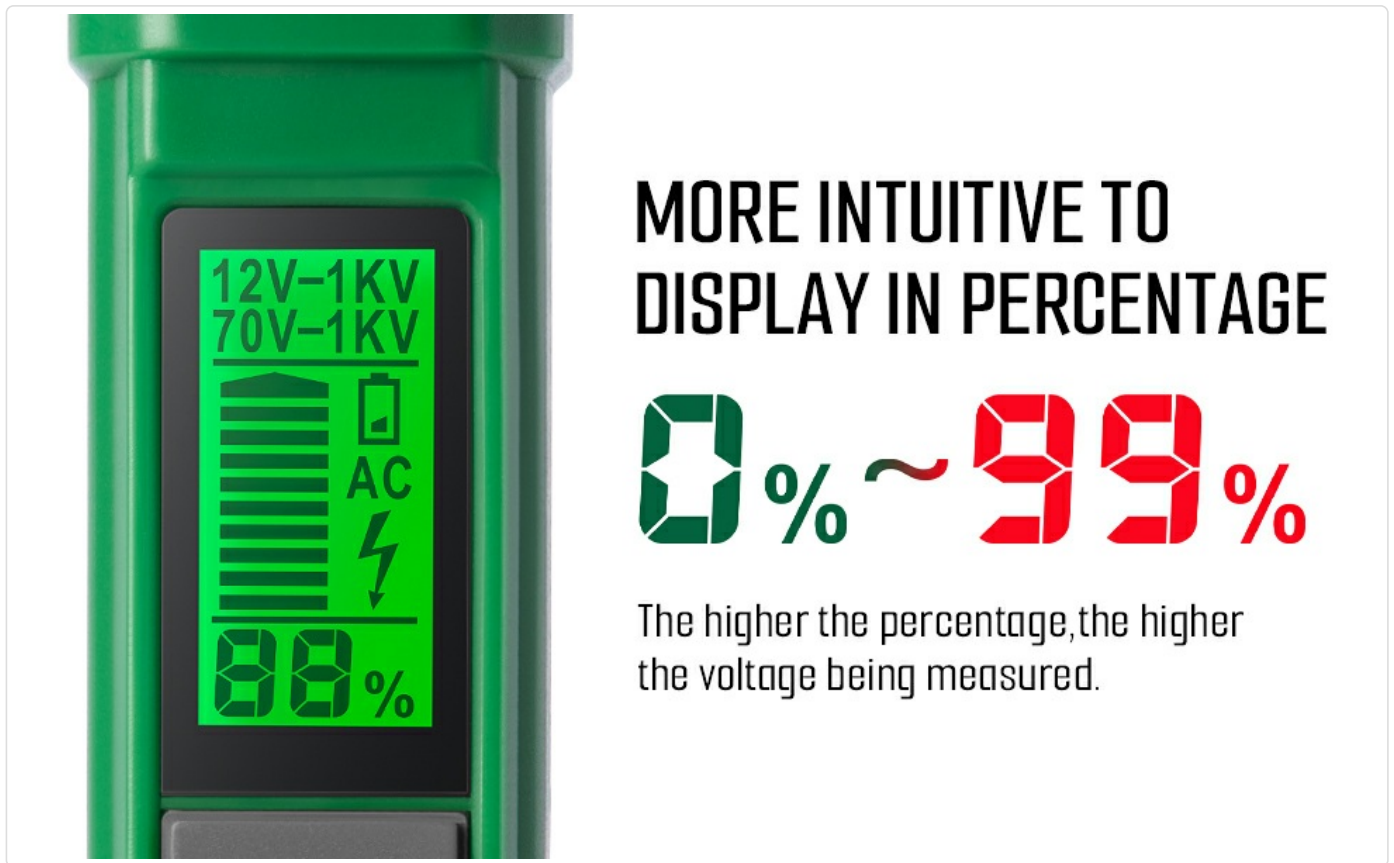


Image: Illustration demonstrating the TN-213's response when testing a neutral wire (no alert) versus a live wire (red light and alarm).

Wire Breakpoint Finder

In high sensitivity mode, the TN-213 can assist in locating breakpoints in wires:

- Move the tester along the length of a wire.
- The alerts will cease at the point where the wire is broken, indicating the breakpoint.

Visual & Audible Alert (In low sensitivity mode)



Image: The TN-213 being used to identify a breakpoint in a power cord, showing the alert stopping at the break.

Flashlight Function

The built-in flashlight allows for testing in low-light conditions:

- Short press the flashlight button () to turn the flashlight on or off.

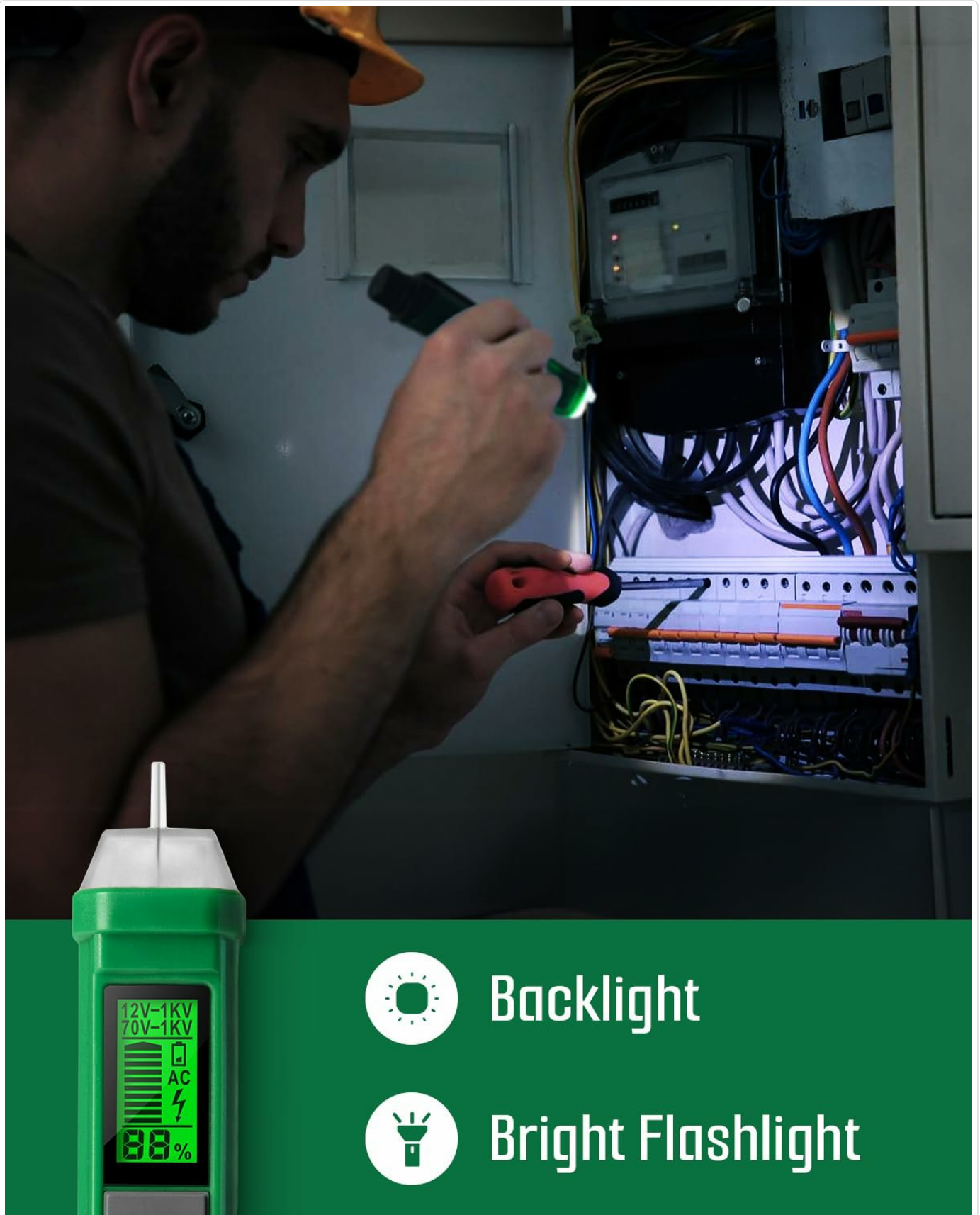


Image: A user utilizing the TN-213's flashlight to illuminate the inside of a circuit breaker box.

LCD Display

The LCD screen provides clear visual feedback:

- Displays the detected AC voltage range (12V-1KV or 70V-1KV).
- Shows a percentage value (0-99%) and bar graphs, indicating voltage strength. Higher percentage and more bars mean higher voltage.

- Indicates battery level.



Image: Detailed view of the TN-213's LCD screen, highlighting the percentage display for voltage strength.

Automatic Power-Off

To conserve battery life, the device automatically shuts down after 5 minutes of inactivity.

MAINTENANCE

- Keep the device clean and free from dust and moisture.
- Replace batteries when the low battery indicator appears on the LCD screen.
- Store the device in a cool, dry place when not in use.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Replace batteries or ensure correct polarity.
No detection when testing.	No voltage present, or device in wrong sensitivity mode.	Verify power source with a known live circuit. Switch sensitivity modes.
Inconsistent readings.	Interference from other electrical fields or low battery.	Move away from other electrical devices. Replace batteries.

SPECIFICATIONS

Feature	Detail
Product Dimensions	1.61 x 1.02 x 6.22 inches; 2.89 ounces
Item Model Number	TN-213-GN
Batteries	2 AAA batteries required (included)
Manufacturer	TESMEN
Power Source	Battery Powered
Min. Operating Voltage	12 Volts
Safety Rating	CAT III 1000V, CAT IV 600V, RoHS certified
Ingress Protection	IP66 (Waterproof and Dustproof)

OFFICIAL PRODUCT VIDEOS

Watch these official videos from the seller for additional guidance and demonstrations.

Your browser does not support the video tag.

Video: "Non-Contact Voltage Tester" by Tesmen Direct. This video demonstrates the basic non-contact voltage detection features of the TN-213.

WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the contact details provided in the physical user manual included with your product or visit the official TESMEN website.

You can also visit the TESMEN Store on Amazon for more products and information.