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VAR TECH V92S

VAR TECH V92S Smart Digital Multimeter User Manual

Model: V92S

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective operation of your VAR TECH V92S Smart Digital Multimeter. The V92S is a True RMS, fully auto-ranging digital multimeter designed for precise measurements across various electrical parameters. Please read this manual thoroughly before use and retain it for future reference.

2. SAFETY INFORMATION

Always adhere to basic safety precautions when using this multimeter to prevent personal injury or damage to the instrument. Improper use can result in electric shock or fire.

- Do not exceed the maximum input values specified for each function.
- Ensure test leads are properly connected and in good condition before making measurements.
- Do not use the multimeter if it appears damaged or if the battery cover is not securely closed.
- Exercise extreme caution when working with voltages above 60V DC or 30V AC RMS, as these pose a shock hazard.
- Always disconnect power to the circuit under test before measuring resistance, capacitance, or continuity.
- Replace batteries promptly when the low battery indicator appears to ensure accurate readings.
- Do not operate the multimeter in explosive atmospheres or near flammable materials.

3. KEY FEATURES

The VAR TECH V92S Smart Digital Multimeter offers a range of advanced features for comprehensive electrical testing:

- Smart Digital Multimeter with Auto Detection TRMS (True Root Mean Square)
- 600 V AC/DC & 10 A AC/DC measurement capabilities
- 6000 Counts HD Display with Primary & Secondary display and Analog bar graph
- Capacitance Test: 6 nF to 60 mF
- Frequency Test: 6 Hz to 10 MHz
- Temperature Test: -40 °C to 1000 °C
- Diode & Continuity Test

- NCV (Non-Contact Voltage) test for live wire detection
- Integrated Torch for illumination in dark environments
- Auto Power Off function to conserve battery life
- Data Hold function to freeze readings on the display
- Low Battery indicator
- Jack Prompt for correct test lead insertion
- Burnt Fuse Prompt for safety and easy maintenance
- Resistance measurement: 600 Ω to 60 M Ω



Figure 3.1: Front view of the VAR TECH V92S Smart Digital Multimeter, showcasing its display and control buttons.



Figure 3.2: The VAR TECH V92S Multimeter held in hand, illustrating its compact and ergonomic design.

4. PRODUCT COMPONENTS

The VAR TECH V92S Smart Digital Multimeter package includes the following items:

- VAR TECH V92S Digital Multimeter
- Test Leads (Red and Black)
- Instruction Manual (this document)
- Carrying Pouch
- 4 AAA Batteries (pre-installed or included separately)



Figure 4.1: Contents of the VAR TECH V92S package, including the multimeter, test leads, manual, and carrying pouch.

5. SETUP

5.1. Battery Installation

The VAR TECH V92S requires 4 AAA batteries for operation. If batteries are not pre-installed, or if replacement is needed:

1. Ensure the multimeter is powered off.
2. Locate the battery compartment on the back of the device.
3. Use a screwdriver to open the battery compartment cover.
4. Insert 4 AAA batteries, observing the correct polarity (+/-) as indicated inside the compartment.
5. Securely close the battery compartment cover.

5.2. Connecting Test Leads

Proper connection of test leads is crucial for accurate and safe measurements.

- Insert the black test lead into the "COM" (Common) jack.

- For most voltage, resistance, continuity, capacitance, frequency, and temperature measurements, insert the red test lead into the “INPUT” jack.
- For current measurements (mA/A), insert the red test lead into the “mA/A” jack.

INPUT JACK PROMPT LIGHT

When turning on or when changing ranges, the corresponding input socket
Prompt light will flash 8 times prompting to insert the
Probe into the corresponding socket

≡



Figure 5.1: The input jack prompt light feature. When turning on or changing ranges, the corresponding input socket light flashes to indicate where to insert the probe.

6. OPERATING INSTRUCTIONS

6.1. Power On/Off

Press the **Power** button (red circle with line) to turn the multimeter on or off.

6.2. Function Selection

The V92S features an auto-ranging function, automatically detecting the measurement type in “SMART” mode. For specific functions, use the **SEL** and **FUNC** buttons:

- **SEL (Select) Button:** Used to switch between different measurement types within a primary mode (e.g., AC Voltage and DC Voltage, or Diode and Continuity).
- **FUNC (Function) Buttons:** Used to directly select specific measurement functions like Capacitance, Frequency, or Temperature.

6.3. Measurement Modes

Ensure test leads are correctly inserted for the desired measurement.

6.3.1. Voltage Measurement (AC/DC)

1. Insert the red lead into the “INPUT” jack and the black lead into the “COM” jack.
2. Turn on the multimeter. It will typically default to auto-ranging voltage measurement.
3. If needed, press **SEL** to switch between AC and DC voltage.
4. Connect the test probes in parallel to the circuit or component to be measured.

6.3.2. Current Measurement (AC/DC)

1. Insert the red lead into the “mA/A” jack and the black lead into the “COM” jack.
2. Turn on the multimeter. The device automatically enters the current measurement function when the probe is inserted into the mA/A socket.
3. If needed, press **SEL** to switch between AC and DC current.
4. Connect the test probes in series with the circuit to be measured.

AUTOMATIC IDENTIFICATION OF CURRENT MEASUREMENT

When the probe is inserted into the mA/A socket, the device automatically jumps to the "A \tilde{A} " position to enter the current measurement function. At this time shifting ranges will not be allowed



Figure 6.1: Automatic identification of current measurement. The multimeter automatically adjusts to the current measurement function when the probe is inserted into the mA/A socket.

6.3.3. Resistance, Capacitance, Frequency, Temperature, Diode, Continuity

For these measurements, ensure the red lead is in the "INPUT" jack and the black lead in the "COM" jack. Use the **SEL** or **FUNC** buttons to select the desired mode. Connect probes to the component or circuit as appropriate for each measurement type.

6.3.4. NCV (Non-Contact Voltage) Test

The NCV function allows for detection of AC voltage without direct contact with conductors.

1. Select the NCV function using the appropriate button.
2. Bring the top of the multimeter near the conductor or outlet.
3. The instrument will emit an audible beep and the alarm indicator light will illuminate when AC signals are detected. A “-H” display indicates a strong signal, while “-L” indicates a weak signal.

AUDIBLE AND VISUAL ALARM

When measuring non-contact AC voltage induction or identifying live wires, the instrument will emit a beep and the alarm indicator light will light up when detecting AC signals



Figure 6.2: Auditory and visual alarm during NCV (Non-Contact Voltage) testing, indicating the presence of AC voltage.

6.4. Data Hold Function

Press the **HOLD** button to freeze the current reading on the display. Press it again to release the hold function.

6.5. Flashlight Function

The multimeter includes a built-in flashlight for illuminating work areas. Activate the flashlight using the designated button (often integrated with the HOLD button or a separate light icon). Press again to turn it off.

FLASHLIGHT LIGHTING FUNCTION

The instrument has a flashlight function, which can be used in the dark or at night



Figure 6.3: The integrated flashlight function, useful for working in dimly lit environments.

7. MAINTENANCE

7.1. Cleaning

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the multimeter is powered off and disconnected from all circuits before cleaning.

7.2. Battery Replacement

When the low battery indicator appears on the display, replace the batteries as described in Section 5.1.

7.3. Fuse Replacement

The V92S features an intelligent anti-burn function with a built-in safety fuse to protect the circuit. If the safety fuse burns out, the display screen will show a “FUSE” symbol to prompt replacement.

1. Ensure the multimeter is powered off and all test leads are disconnected.
2. Open the battery compartment cover on the back of the device.
3. Carefully locate and remove the blown fuse.
4. Replace it with a fuse of the same type and rating (refer to specifications for fuse type).
5. Securely close the battery compartment cover.

INTELLIGENT ANTI BURN FUNCTION PROMPT

Built in safety fuse to protect the circuit. When the safety fuse burns out, the display screen displays a "≡" symbol to remind you to replace it in a timely manner



Figure 7.1: The intelligent anti-burn function prompt, indicating the location of the fuse for replacement.

8. TROUBLESHOOTING

If you encounter issues with your VAR TECH V92S, refer to the following common problems and solutions:

- **No Display:** Check battery installation and ensure batteries are not depleted. Replace if necessary.
- **Incorrect Readings:** Verify test lead connections. Ensure the correct measurement function is selected. Check if the fuse is intact for current measurements.
- **“OL” or Overload Indication:** The measured value exceeds the range of the selected function. Select a higher range if available, or ensure the input is within the multimeter's capabilities.
- **“FUSE” Display:** The fuse has blown. Refer to Section 7.3 for fuse replacement.

If the problem persists, contact VAR TECH customer support for assistance.

9. TECHNICAL SPECIFICATIONS

Parameter	Specification
Model	V92S
Display	6000 Counts HD Display
True RMS	Yes
DC Voltage	Up to 600 V
AC Voltage	Up to 600 V
DC Current	Up to 10 A
AC Current	Up to 10 A
Resistance	600 Ω to 60 MΩ
Capacitance	6 nF to 60 mF
Frequency	6 Hz to 10 MHz
Temperature	-40 °C to 1000 °C
Continuity Test	Yes
Diode Test	Yes
NCV (Non-Contact Voltage)	Yes
Power Source	4 AAA batteries (included)
Item Weight	300 g
Product Dimensions (L x W x H)	14 x 7 x 5 cm
Safety Rating	CAT III 600V
Certifications	CE, ISO 9001

Model	BUDGET D.M.M.s			PREMIUM D.M.M.s			L.C.R. D.M.M	AC CLAMP METER		AC / DC CLAMP METER		
	V MAS 830 LB	V 830 L+	V M 890 G	V 92	V 890 D	V 8222 G	V68	V 8222 H	V 266	V 2266	M 2101	V 2101+
Basic Features												
Counts	2000	2000	2000	6000	2000	2000	4000	2000	2000	6000	6000	6000
True RMS	-	TRMS	-	TRMS	TRMS	TRMS	TRMS	-	TRMS	TRMS	TRMS	TRMS
Measurements												
Voltage	DC	600 V	600 V	1000 V	600 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1500 V
	AC	600 V	600 V	750 V	600 V	750 V	1000 V	750 V	750 V	750 V	750 V	1000 V
Current	DC	10 A	10 A	20 A	10 A	20 A	20 A	10 A	20 A	-	-	1000 A
	AC	-	-	20 A	10 A	20 A	20 A	10 A	20 A	1000 A	1000 A	1000 A
Resistance	Range	2 M Ω	200 M Ω	20 M Ω	60 M Ω	20 M Ω	40 M Ω	200 M Ω	20 K Ω	6 M Ω	60 M Ω	60 M Ω
Capacitance	Range	-	-	20 μ F	2 mF	20 mF	6 mF	100 mF	2 mF	-	-	6000 μ F
Frequency	Range	-	-	20 kHz	2 MHz	In ACV Range only	20 MHz	20 MHz	-	-	20 MHz	10 MHz
Temperature	Range	-	-	-40 °C – 1370 °C	-20 °C – 1000 °C	-	-20 °C – 1000 °C	-20 °C – 1000 °C	-	-	-20 °C – 1000 °C	-20 °C – 1000 °C
Special Features	200 μ A range	20 μ A range	-	600 μ A range	200 μ A range	40 mV & 400 μ A range	200 μ A range	-	-	600 μ A range	VFC	
Features												
Continuity Check	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Min / Max	-	-	-	-	-	-	-	Yes	-	Yes	-	-
Data Hold	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Diode Test	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes
Tr. Test (hFE)	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	-	-	-	Yes
Low Battery Indication	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes
Auto Power Off	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes
Auto / Manual Ranging	Manual	Manual	Manual	Auto	Manual	Manual	Auto / Manual	Manual	Manual	Auto	Auto / Manual	Auto
Other Features	-	NCV, Torch	-	NCV, Torch, REL	NCV, Torch, REL	NCV, Torch, REL	NCV, Torch, REL	L.C.R., Torch, REL	-	NCV, Torch, Low Z	-	NCV, Torch, Low Z
Safety Rating	CAT II 600 V	CAT III 600 V	CAT II 1000 V	CAT III 600 V	CAT II 1000 V CAT III 600 V	CAT II 1000 V CAT III 600 V	CAT III 1000 V CAT IV 600 V	CAT II 1000 V CAT III 600 V	CAT II 1000 V CAT III 600 V	CAT II 1000 V CAT III 600 V	CAT II 1000 V CAT IV 600 V	CAT III 1000 V CAT IV 600 V

1 Year Warranty Against Manufacturing Defects

Figure 9.1: A comparison table illustrating the features of various VAR TECH multimeter models, including the V92S.

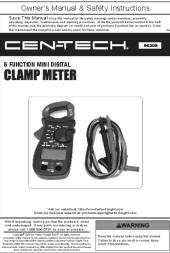
10. WARRANTY AND SUPPORT

The VAR TECH V92S Smart Digital Multimeter comes with a 1-year warranty against manufacturing defects. For warranty claims or technical support, please contact VAR TECH directly.

Manufacturer: V A R TECH, www.var-tech.com

Related Documents - V92S

	<p>VAR TECH V 92 S Digital Multimeter - True RMS, Auto Ranging Specifications</p> <p>Explore the comprehensive specifications of the VAR TECH V 92 S Digital Multimeter. This advanced device features a 3 5/6 digit (6000 counts) display, True RMS measurement, Auto Ranging, NCV detection, Data Hold, and a built-in torch. Ideal for professionals and hobbyists requiring precise electrical measurements.</p>
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	<p><u>Cen-Tech 6 Function Mini Digital Clamp Meter Owner's Manual and Safety Instructions</u></p> <p>This manual provides safety warnings, precautions, assembly, operating, inspection, maintenance, and cleaning procedures for the Cen-Tech 6 Function Mini Digital Clamp Meter. Learn how to measure AC current, AC/DC voltage, resistance, continuity, and diodes.</p>
	<p><u>CEN-TECH TRMS AC 600V CAT III Basic Clamp Meter User Manual and Safety Instructions</u></p> <p>Comprehensive owner's manual and safety instructions for the CEN-TECH TRMS AC 600V CAT III Basic Clamp Meter (Model 59458). Covers setup, operation, specifications, maintenance, and warranty.</p>
	<p><u>Major Tech MT766 600A AC/DC Clamp Meter with IR Thermometer Instruction Manual</u></p> <p>Comprehensive instruction manual for the Major Tech MT766, a 600A AC/DC clamp meter with an integrated IR thermometer. Learn about safety, specifications, and operation for accurate electrical measurements.</p>
	<p><u>HTC 15S Smart Digital Clamp Meter User Manual</u></p> <p>User manual for the HTC 15S Smart Digital Clamp Meter, providing detailed instructions on safety, operation, measurements, and maintenance for this versatile electrical testing device.</p>
	<p><u>Major Tech MT870 True RMS Digital Multimeter - User Manual and Specifications</u></p> <p>Comprehensive user manual and technical specifications for the Major Tech MT870 True RMS Digital Multimeter, covering operation, safety precautions, general specifications, testing procedures, battery and fuse replacement, maintenance, and accessories.</p>

Documents - VAR TECH – V92S

no relevant documents