Assark 85D Digital Multimeter Voltage Tester Instruction Manual

Contents

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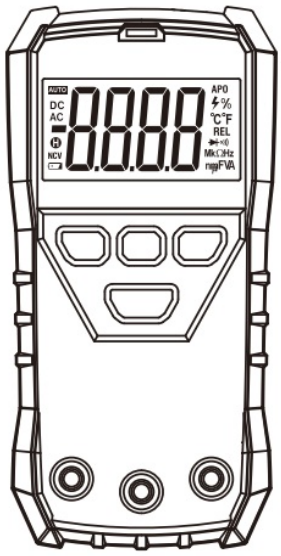

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Why need to activate the warranty as soon as possible? I case you meet the following conditions: «You have problems with the product but do not know how to contact customer service * You request a retur or a refund but Amazon retur window is closed « Other reasonable situations

What you will get after activating the warranty? * Your product is backed by the Assark 1 Year Limited Warranty now, which allows you to request a product replacement or a refund, from the date of purchase:

Warranty Period	Amazon	Assark
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Exceeding 30 days	✗	✓
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INTRODUCTION

Assark 85D is a multi-purpose true-RMS digital multimeter that can automatically select the appropriate function and range according to the input measurement signals for easy, fast, and convenient slectrical measuring. This high-performance Meter is equipped with a 6000-count LCD display to give clear and accurate readings. Itis designed to meet safety standard [EC61010-1 CAT Ill 600V, and provides overload protection on all ranges to ensure safe and reliable operation.
“This battery-powered Meter is expert in meastring AC/DC voltage, AC/DC current, resistance, capacitance, testing diode and continuity, and tracing live wires. With a lot of practical features, such as auto power off, NCV (Non-Contact Voltage) detector, backlight, and built-in torch, it is an ideal entry-level tool for lab, schoal, factory, and home use.

SAFETY NOTES

The Meter conforms to [EC61010-1 CAT Ill 600V safety standard. Please read all safety information and allinstructions carefully before you use the Meter. 1. Limit operation to the specified measurement category, voltage, or amperage. ratings. Do not apply more than the rated voltage, between the terminals or between each terminal and earth ground, 2. The safety voltage is not higher than 36V. Before measuring voltage higher than 36V DC or 25V AC, check the connection and insulation of test leads to avoid electric shock. When the input voltage (AC or DC) is higher than 24V, the high voltage warning symbol 4 * wil appear on the display. Remove test leads from the Meter before changing function mode or range. Use the correct terminals, function, and range for measurements. Install the batteries and lock the battery door before operating the Meter. To avoid electic shock, injury, or damage to the Meter, disconnect circuit power and discharge all high-votage capacitors before testing resistance, continuity, diodes, or capacitance. Turn off the power and remove test leads from the Meter before replacing the batteries or fuse. Always adhere to local and national safety codes. Use personal protective ‘equipment (such as rubber insulating gloves, goggles, flame-resistant protective clothing etc.) to prevent shock and arc blast injury where hazardous live conductors are exposed. 9. Always use probes, test leads, and accessories that have the same. measurement category, voltage, and amperage ratings as the Meter. 10. Do not use the Meter around explosive gas, vapor, o in damp or wet environments.

Do not expose the Meter to magnetic fields, extreme heat, or expose to direct sunlight for long periods of time. 12. Do not use the Meter with damaged probes, test leads, and accessories o after the Meter malfunctions or is dropped or damaged in any manner, please contact our customer service for a replacement.

Safety and Electrical Symbols

PRODUCT OVERVIEW

Technical Specifications.

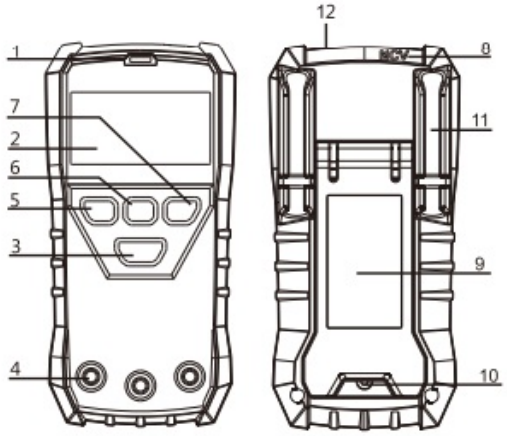
LCD Digita Display: 6000 counts (3 5/6), auto polaity incication Sampling Rate: approx. 3 times per second Measuring Technology: A/D converter Over Range Indication: “OL” appears on the screen Low Battery Indication: “€ appears on the screen Operating Environment: 0°C to 40°C, elative humidiy < 75% Storage Environment: -20°C to 60°C, relative humidity < 85% Power Supply: 2 1.5V AAA batteries Size: 146mm x 72mm x Somm Weight: approx. 210 (batteries are included)

Box Contents:

Assark 85D Digital Multimeter (1 piece) | Probe Test Leads (1 pair)
Aligator Clip Test Leads (1 pair) 1.5V AAA Batteries (2 pieces)
Carrying Box (1 piece] User Manual (1 piece)

Product Description

8 . 10. Battery door screw 11. Test lead holder
Sound alarm indicator 6000-Count LCD display PowerlLive wire tester/ Auto range button Input terminal Function selection button (“FUNC”) Torch/NCV detector button (et INCV”) : Data hold/Backlight button (“HOLD BIL”) NCV sensing area Support stand



Display

1	Auto Range	2	DC Measurement
3	AC Measurement	4	Data Hold
5	NCV (Non-Contact ACV Measurement)	6	Low Battery
7	Auto Power Off	8	High Voltage/Duty Cycle
9	Celsius/Fahrenheit	10	Relative Value Measurement
11	Diode/Continuity Test	12	Resistance/Frequency Units
13	Capacitance/Voltage/Current Units		

1. Function Buttons ower/Live wire tester/Auto range button Long press this button for more than 2 seconds to turn on/off the Meter, short press to select auto range o live wire detector mode.
2. Function selection button (“FUNC”) 2.1 Short press to change under the following modes: DC voltage, AC voltage, resistance, continuity and diode, capacitance, and auto range. 2.2 Short press to choose AC or DC current measurement mode when meastiring current in acircuit insert the red test lead into “mA/A” jack)
3. Torch/NCV detector button (*=< / NCV) Short press this button to turn on/off NCV detector mode, long press more than 2 seconds to switch on/off the torch
4. Data hold/Backiight button (“HOLD B/L”) Short press to turn on/off data hold (display hold) mode, “®” will appear on the screen when the mode is turned on. Long press for more than 2 seconds to power on/off backlight, the backlight will automatially turn off after 15seconds.
   AAWARNING: To prevent possible electric shock, fire, or personal injury, do not use data hold mode to determine if a circuit i live or measure unknown voltage in a circuit. When data hold mode is turned on, the LCD screen will keep original data even you measure a different voltage.

IV. OPERATING INSTRUCTIONS

Always check the battery status before using the Meter, select the correct measured range according to your needs. If the Meter s out of power, “ea” will appear on the display. Please kindly note the sign “4¢ beside the terminas, it ‘warns that test voltage and current cannot excaed the specified value in this manual or on the product. * AUTO range mode: Can be used for measuring resistance, continuity, DC/AC voltage, and DC/AC current. « Manual mode: You can manually change the measurement mode by pressing the “FUNC” button, which can measure DC/AC voltage, continuity (6002, diode, and capacitance.

1. DC/AC Voltage Messuremen

1.1 According to your actual reqirements, select DC or AC voltage measurement mode under AUTO or Manual mode 1.2 Connect the test lads across to the tested circuit, the voltage and polarity of the red test lead will show on the display: 1.3 Insert the biack test lead into “COM” jack and red test lead into “J8″ jack. 1.4 Read measurement results on the display.
2 Nots <1 “OL” shows on the screen, it means “over range”. – When measuring a high voltage (above 220V), use personal protective ‘equipment to prevent shock and arc blast injury where hazardous ive conductors are exposed.

2. DC/AC Current Measurement

2.1 Insert the red test lead into “mA/A” jack, the Meter defauits to DC current measurement mode.
2.2 Short press the “FUNC button to choose AC current measurement mode. if needed.
2.3 Insert the black test lead into “COM” jack, and the red test lead into “MA/A” jack.
2.4 Connect the Meter in-series in the circuit using the test leads.
25 Read measurement results on the display.
2 Nots – Before connecting the Meter in the circuit (using the test leads), you should turm off the power of the circuit first, and then check if the input terminal and range/mode function wel. Do not use the current jack (“mA/A”) to measure avoltage.

– The maximum measuring current is 10A.

The Meter alarms when exceading the maximum measuring range. Overload input or wrong operation will blow the fuse. – When measuring a large current (above 5A), continuous measurement vl cause heat in the circult, affect measurement accuracy and even damage the Meter. Measuring time shall not exceed 10 seconds, and please allow the. Meter to recover for more than 15 minutes before the next measurement,

3.1 In AUTO mode

, connect the test leads across the tested resistance.
3.2 Insert the black test lead into “COM” jack, and the red st lead into “J8K” jack
3.3 Read measurement results on the display.
Not The screen shows “OL* when the tested e dbows slected mesrement () ange e (over range”), When tested e |0 il ke ew seconds to obtain the accurate reading. It is normal for high S=le) esitance measurement A – To avid elsctrc shock, iy, or damage o the Meter, disconnectcirult power and discharge al hgh-voltage o capacitors before testing resistance

4 4.1 Enter capacitance measurement

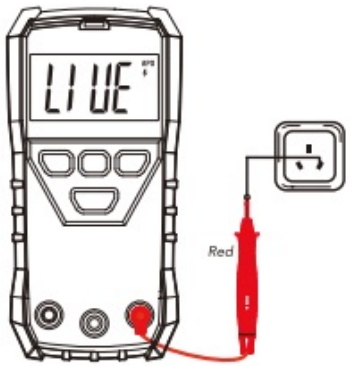
mode manually by pressing the “FUNC” button, and connect the test leads to the tested capacitor. Make sure the polarity of the red test lead is “+ 4.2 Connect the black test lead to “COM” jack and the red test lead to “2 jack 4.3 Read measurement results on the display. 5 Note
– The measurement range of capacitance will ety ey oot (o Soron o e anch s over || 1000 Ton e iy et i measurement range of capacitance is 60mF. OO0 – The distributed capacitance of the lead wire UD and the Meter may affect capacitance measurement results (the Meter wil display a resicual reading), especially for measuring small capacitor, The residual reading canbe @ subtracted from the measurement result to getan aceurate value, – When measuring large capacitance, the reading may not stable caused by capacitor leakage or breakdown. The Mater willtake fow seconds to stabilize. Itis normal for arge capacitance measurement, To avoid elecric shock, injury, or damage to the Meter, disconnect circuit power and discharge all high-voltage capacitors before testing capacitance.

5.Dl Tt

5.1 Select diode test mode manually by [p—=_=\ e e T e e . e eront ot omeiode 500 5.2 Insert the biack test lead into “COM” jack and the red one into “J8R jsck Make sur the polaity ofthe red test =) lead i “+ 5.3 When the reacing is a close approximation of positve voltage crop of he diode, o itindicatesforward bias. “OL* on the scrsen indicates reverse biss.

6. Continuity Test

6.1 Select continuity test mode under [\ AUTO or Manual mod. TR 6.2 Insert the black test lead into “COM” UL – jack and the red one into W8 jack 6.3 Connect the test leads to the circuit D00y to be tested. If the resistance is less O, then around 502, 1″ shows on the – screen, the buzzer beeps. In Manual mode, the screen displays “OL” when &) the resistance is more than 6002

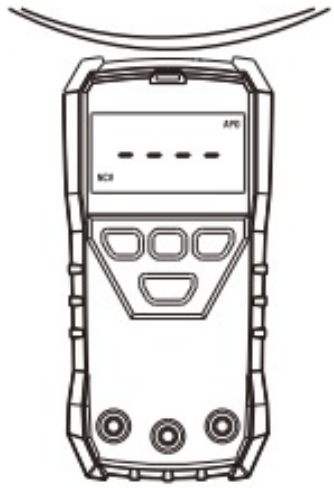


7. Live Wire Detector

7.1 Short press the “POWER/Live” button to select live wire detector mode. n 7.2 Insert the red test lead into “W8K” jack, HUE and contact the measured point using the red test lead. (wal=) 1 A=) 7.3 I the red indicator flashes and the buzzer beeps, the measured line is e wire. If nothing changes, the measured «] line contacted by the red test lead is

8. Non-Contact Voltage (NCV)

Detector ~ =” 81 Short pres the “=<= /NCV” button to
‘switch to NCV detector mode. 3 8.2 The voltage range can be detected is . from 48V to 250V place the top o the 5 Meter (NCV sersing are) close o the So0 ‘AC.power n 1 be estd. When AC ctage s detecte the sreen shows o the re inetor shes, s e buruerbaops. The sronger the AC voltage & detected ho more © 0) hoizotal nes ” show an he sree, e faser th IncicatorRashesand busserbeeps.



Nots

When the measured electric field voltage i higher than AC 100V, make sure the conductor of the measured elecric field i insulated to avoid elecric shock.
9. Auto Power Off (APO) To save battery power and extend service lfe, APO function is already set by default when you tur on the Meter. It will automatically power of in 14 minutes. without any operation. Before shutdown, the Meter gives 3 short beeps first, and then a long beep if il no further operation.

V. ELECTRICAL SPECIFICATIONS

Accuracy is specified for 1 year after calibration, at operating temperatures of 18°C to 28°C, with relative humidity at 0 % to 75 %. Accuracy specifications take the form of; = (% of Reading | + [Counts)
DC Voltage

VII. MAINTENANCE

1. Never disassemble the Meter or change the inner circuit 2. Keep the Meter away from water and dust 3. Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. 4. Remove the batteries when the Meter is not in use for a long period.

TROUBLESHOOTING

If the Meter does not wark properly, please read the table below:

Problem Description	Solution
No reading on the LCD display	1. The Meter is turned off: Long press the Power button for more than 2 seconds to turn on the Meter 2. The measurement mode is wrong: Select the appropriate mode 3. Replace the batteries
"▭" appears on the screen	Replace the batteries
No current input	Replace the fuse
Big measurement error	Replace the batteries
Backlight is not bright	Replace the batteries

IX. DISPOSAL

EC REP Make sure you dispose of the product, accessories, batteries, and packaging in accordance with your local laws and regulations.

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Herstale: Xi’an Beicheng Elecronics o, Lt Adresse: Jngyuen 7th Rosd, Jinghe ndustrial Park, Gacling District, X’, Chins, 710000 EMait somvico@assark com Telefonmummer (Germany): +49 351 838 03753 Derzsit nur i Engiich verighsr)
ECrossStumeb.de 4971191222069

Documents / Resources

	**Assark 85D Digital Multimeter Voltage Tester** [pdf] Instruction Manual 85D, 85D Digital Multimeter Voltage Tester, Digital Multimeter Voltage Tester, Multimeter Voltage Tester, Voltage Tester, Tester

References

- **User Manual**