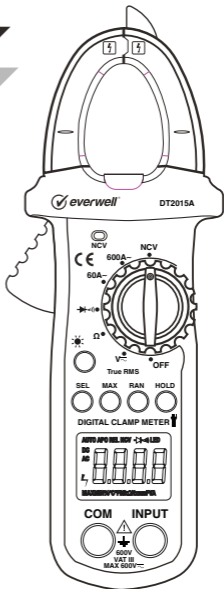




DT2015A

Digital Clamp Meter

OPERATOR'S INSTRUCTION MANUAL



WARNING

**READ AND UNDERSTAND THIS MANUAL
BEFORE USING THE INSTRUMENT.**

1. INTRODUCTION

This manual provides all safety information, operation instruction, specifications and maintenance for the meter, which is compact, handheld, and battery operated.

This instrument performs AC/DC voltage, AC current, resistance, audible continuity, diode measurements ect.. It is a 3 5/6 digits, 6000 counts auto ranging digital clamp multimeter.

It has the functions of polarity indication, data hold, maximum value hold, over range indication, automatic power-off ,electric torch, NCV, and RMS measure. It can be operated easily and is a precise instrument tool.

DT2015A digital clamp multimeter has been designed according to EN61010-1 oncoming electronic measuring instruments with an over voltage category (CAT III 600V) and Pollution degree 2.

Warning


To avoid possible electric shock or personal injury, and to avoid possible damage to the Meter or to the equipment under test, adhere to the following rules:

- Before using the meter inspect the case. Do not use the meter if it is damaged or the case (or part of the case) is removed. Look for cracks or missing plastic. Pay attention to the insulation around the connectors.
- Inspect the test leads for damaged insulation or exposed metal. Check the test leads for continuity.
- Do not apply more than the rated voltage, as marked on the Meter, between the terminals or between any terminal and grounding.
- The rotary switch should be placed in the right position and any changeover of range shall be made during measurement is conducted to prevent damage of the Meter.










- When the meter is working at an effective voltage over 60V in DC or 36V RMS in AC, special care should be taken since there is danger of electric shock.
- Use the proper terminals, function, and range for your measurements.
- Do not use or store the meter in an environment of high temperature, humidity, explosive, inflammable and strong magnetic field. The performance of the meter may deteriorate after dampened.
- When using the test leads, keep your fingers behind the finger guards.
- Disconnect circuit power and discharge all high-voltage capacitors before testing resistance, continuity or diodes.
- Replace the battery as soon as the battery indicator appears. With a low battery, the meter might produce false readings that can lead to electric shock and personal injury.
- Remove the connection between the testing leads and the circuit being tested, and turn the meter power off before opening the meter case.
- When servicing the meter, use only the same model number or identical electrical specifications replacement parts.
- The internal circuit of the meter shall not be altered at will to avoid damage of the meter and any accident.
- Soft cloth and mild detergent should be used to clean the surface of the meter when servicing. No abrasive and solvent should be used to prevent the surface of the meter from corrosion, damage and accident.
- The meter is suitable for indoor use.
- Turn the meter power off when it is not in use, and take out the battery when not using for a long time. Constantly check the battery as it may leak when it has been using for some time, replace the battery as soon as leaking appears.

A leaking battery will damage the Meter.

2. GENERAL CHARACTERISTICS

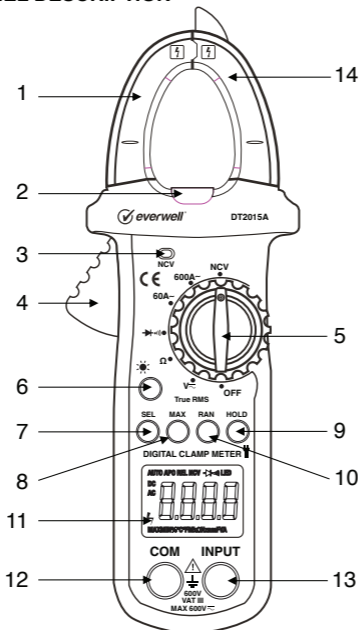
Display	LCD, 6000 counts updates 2/sec
Polarity Indication	"-" displayed automatically
Over-Range Indication	"OL" displayed
Low Battery Indication	"  " displayed
Range Select	Auto or manual
Operation Temperature	0°C to 40°C (32°F to 104°F), less than 80%RH
Storage Temperature	-10°C to 50°C (14°F to 122°F), less than 85%RH
Battery Type	3 × AAA
Dimension(HxWxD)	216x75x35mm (8.5x2.9x1.4in)
Weight Approx	235g (8.3oz) include battery

3. ELECTRICAL SYMBOLS

	DC (Direct Current).
	AC (Alternating Current)
	DC or AC
	Important safety information
	Refer to the manual
	Dangerous voltage maybe present
	Earth ground
	Low battery
	Diode
	Continuity test
AUTO	Auto Range
EF	NCV test

CE	Conforms to European Union directive
	Double insulated
	Electric torch

4. PANEL DESCRIPTION



1. **Transformer Jaws**

Read the AC Current flowing through the conductor.

2. **Electric torch**

Illuminate an area of work when it is on.

3. **Alarm indicator**

The indicator is lit when the meter is closer to a alive wire.

4. **Trigger**

Press the level to open the transformer jaws, when the level is released the jaws will close again.

5. **Function/ rotary Switch**

This switch can be used to select desired function and range.

6. **Back light button**

Press the button, backlight is on. Press the botton again backlight is off.

7. **Select button**

Press this button to select , or v measuring function when the function switch is set at corresponding range position.

8. **MAX button**

Press this button to display the maximum and minimum values in the current measurement process.

9. **Hold button and electric torch**

press this button quickly, LCD will show the last reading, and "H" symbol will appear till pushed again. Data holding will be cancelled automatically when the function switch is rotated.

Press the button for 2 seconds, flash light is on, press the button for 2 seconds to turn off.

10. **Range button**

Press this button to select a range suitable for testing.

11. **Display**

3 5/6 digital LCD, with a max. reading of 5999.

12. **COM Input Jack**

Low input for all voltage, resistance, and continuity

measurement will accept banana plugs.

13. Input Connect

High insulation resistance input for all voltage, resistance, and continuity, etc measurement will accept banana plugs. Such as frequency duty cycle. The temperature sensor may input here in addition.

14. NCV sensor

Can sense the strong electric field, lights the NCV indicator LED.

5. SPECIFICATIONS

Accuracy is guaranteed for 1 year $23^{\circ}\text{C}\pm 5^{\circ}\text{C}$ less than 80%RH

5-1. DC Voltage (auto ranging)

Range	Resolution	Accuracy
600mV	0.1mV	$\pm(0.8\% \text{ of rgd} + 5\text{dgts})$
6V	1mV	$\pm(0.8\% \text{ of rgd} + 3\text{dgts})$
60V	10mV	
600V	100mV	$\pm(0.1\% \text{ of rgd} + 5\text{dgts})$

Input Impedance: $10\text{M}\Omega$

Overload Protection: 600V DC/AC rms

Max. Input voltage: 600V DC

5-2. AC Current (auto ranging)

Range	Resolution	Accuracy
60A	100mA	$\pm(0.3\% \text{ of rgd} + 3\text{dgts})$
60-600A	1A	

Measuring voltage drop: 200mV

Frequency Range: 40 to 200Hz

5-3. AC Voltage (auto ranging)

Range	Resolution	Accuracy
600mV	0.1mV	$\pm(1.2\% \text{ of rgd} + 8\text{dgts})$
6V	1mV	$\pm(1.0\% \text{ of rgd} + 8\text{dgts})$
60V	10mV	
600V	100mV	$\pm(1.2\% \text{ of rgd} + 8\text{dgts})$

Input Impedance: 10M Ω

Frequency Range: 40Hz ~ 400Hz

Overload Protection: 600V DC/AC rms

Response: Average, calibrated in rms of sine wave

Max. Input voltage: 600V AC rms



5-4. Resistance (auto ranging)

Range	Resolution	Accuracy
600 Ω	0.1 Ω	$\pm(1.5\% \text{ of rgd} + 5\text{dgts})$
6K Ω	1 Ω	
60K Ω	10 Ω	
600K Ω	100 Ω	
6M Ω	1K Ω	
60M Ω	10K Ω	

Open Circuit Voltage: about 0.25V

Overload Protection: 250V DC/AC rms

5-5. Diode and Continuity

Range	Introduction	Remark
	The approximate forward voltage drop will be displayed	Open circuit voltage: about 1.5V
	The built-in buzzer will sound if the resistance is less than about 30 Ω .	Open circuit voltage: about 0.5V

Overload Protection: 250V DC/AC rms

For continuity test: When the resistance is between 30 Ω

and 100Ω , the buzzer may sound or may not sound. When the resistance is more than 100Ω , the buzzer won't sound.

6. OPERATION INSTRUCTION

6-1. Measuring Voltage

1. Connect the BLACK test lead to the "COM" jack and the RED to the "INPUT" jack.
2. Set the function switch to $V\approx$ range position.
3. Connect the test leads across the source or load to be measured.
4. Press the SEL button, to select $V\sim$ or $V\text{---}$ range
5. Read LCD display. The polarity of the RED lead connection will be indicated when making a DC measurement.


Note:

- a. In small range, the meter may display an unstable reading when the test leads have not been connected to the load to be measured. It is normal and will not affect the measurements.
- b. To avoid damage to the meter, don't measure a voltage which exceeds 600Vdc (for DC voltage measurement) or 600Vac (for AC voltage measurement).

6-2. Measuring Current

1. Set Function/Range Switch to the $A\sim$ range.
2. Press the trigger to open the transformer jaws and clamp one conductor only it is impossible to make measurements when two or three conductors are clamped at the same time.
3. Display reading is flowing the conductor AC current.

6-3. Measure Resistance





1. Connect the BLACK test lead to the "COM" jack and the RED to the "INPUT" jack (Note: The polarity of the red test lead is positive "+"). 
2. Set the range switch to Ω or $\Omega\text{---}$ range position.
3. Connect the test leads across the load to be measured.

4. Read the reading on the display.





Note:

- a. For resistance measurements $>1\text{M}\Omega$, the meter may take a few seconds to stabilize reading. This is normal for high-resistance measurement.
- b. When the input is not connected, i.e. at open circuit, the symbol “OL” will be displayed as an over range indicator.
- c. Before measuring in-circuit resistance, be sure that the circuit under test has all power removed and all capacitors are fully discharged.

6-4. Continuity Test

1. Connect the BLACK test lead to the “COM” jack and the RED to the “INPUT” jack (Note: The polarity of the red test lead is positive “+”). 
2. Set the range switch to  or Ω - range position.
3. Press the “SEL” Button to select continuity measurement mode, and the symbol “” will appear as an indicator.
4. Connect the test leads across the load to be measured.
5. If the circuit resistance is lower than about 30Ω , the built-in buzzer will sound.

6-5. Diode Test

1. Connect the BLACK test lead to the “COM” jack and the RED to the “INPUT” jack (Note: The polarity of the red test lead is positive “+”). 
2. Set the range switch to  or Ω - range position.
3. Press the “SELECT” Button to select continuity measurement mode, and the symbol “” will appear as an indicator.
4. Connect the red test lead to the anode of the diode to be tested and the black test lead to the cathode.
5. The meter will show the approximate forward voltage of the diode. If the connections are reversed, “OL” will be shown on the display.

6-6 NCV test

1. Set the rotary switch to "NCV" position, LCD display "EF".
2. Close the front end of the clamp to the measured socket.
3. When NCV detects AC voltage between 90v to 10v sound and light alarms at the same time. Distinguish live and neutral wires: Note sound and light alarmed when detecting neutral wire.
4. Sound and light alarmed when detecting live wire.

Caution: Do not input voltage at NCV mode.

Sound and alarm may appear in the meter when there is a strong electric field in the surrounding environment.

It is possible to make an error alarm.

At NVC position, press the backlight button and the NCV indicator LED is lit, which is normal.

Warning: Be cautions of electrical when detecting high voltage. NCV range: 90-1000v.

6-7. Use of electric torch

1. In a dark environment, the electric torch function of the meter can be used.
2. Press HOLD key more then 2 seconds, and the flashlight installed in the front end of the meter will be turned on.
3. Press HOLD key more then 2 seconds again, the electric torch function will be turned off.
4. Electric torch function is more power consumption, it is recommended not to use for a long time.

7. AUTO POWER OFF

If you don't operate the meter for about 15 minutes, it will turn off automatically. To turn on it again, just rotate the range switch or press a button.

If you press the “SEL” button to arouse the meter after it turns off automatically, the automatic power-off function will be disabled.

8. BATTERY REPLACEMENT

If the sign “ ” appear on the display, it indicates battery should be replaced. Remove screws and open the back case, replace the exhausted battery with new batteries (Size AAA, 1.5V x 3 or equivalent).

9. ACCESSORIES

Owners manual:1 piece Test leads:1 pair

WARRANTY

This Instrument is warranted to be free from defects in material and workmanship for a period of one year. Any instrument found defective within one year from the delivery date and returned to the factory with transportation charges prepaid, will be repaired, adjusted, or replaced at no charge to the original purchaser. This warranty does not cover expandable items such as batteries & fuses. If the defect has been caused by a misuse or abnormal operating conditions, the repair will be billed at a nominal cost.