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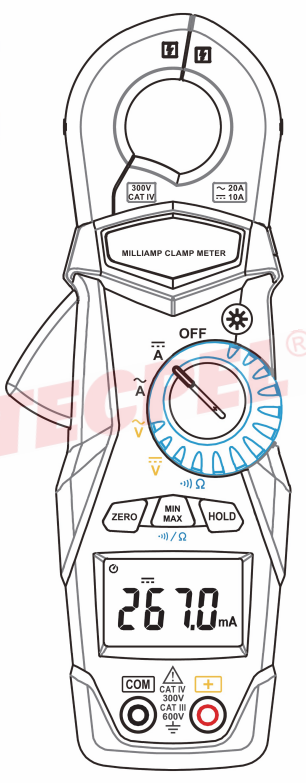
TRUE RMS
MILLIAMP CLAMP METER



Model: DCM-039A

INSTRUCTION MANUAL

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1. SAFETY INFORMATION

Do not operate the tester if the body of meter or the test lead looks broken.
Check the main function dial and make sure it is at the correct position before each measurement.
Do not perform resistance and continuity test on a live power system.
Do not apply voltage between the test terminals and test terminal to ground that exceed the maximum limit record in this manual.
Keep the fingers behind the protection ring while measuring with the test lead.
Change the battery when the symbol appears to avoid incorrect data.

Environmental Conditions

Operation Temperature:
0°C to 40°C(32°F to 104°F), < 80 % RH

Storage Temperature:
-10°C to 60°C(14°F to 140°F), < 80 % RH

Explanation Symbols

Attention refer to operation Instructions.

Dangerous voltage may be present at terminals.

This instrument has double insulation.

Approvals: CE EN61010 300V CAT IV / 600V CAT III

2. GENERAL SPECIFICATION

Digital Display:
4 digital liquid crystal(LCD), Maximum reading 5000.

Polarity:
When a negative signal is applied, the signal will appear.

Low Battery Indication:
When the battery is under the proper operation range, will appear on the LCD display.

Sample Rate:
2 times/sec for digital data.

Power Source:
1.5V size AAA battery X 2
Typical battery Life:
(alkaline battery, without buzzer, backlight)
30 hours at DCA function,
60 hours at ACA and ACV function,
100 hours at DCV and Ohm function.

Auto Power Off:
If there is no key or dial operation for 30 minutes, the meter will power itself off to save battery consumption. This function can be disabled by holding the " **HOLD** " button while powering on the unit.

Over Load:
When the signal larger than the maximum, LCD will show OL.

Maximum jaw opening:
∅ 23 mm

Dimensions:
207 x 76 x 34.5 mm

Weight:
281g (with battery)

Accessories:
Carrying case, Batteries, Test Leads & Instruction Manual.

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3.ELECTRICAL SPECIFICATION

The accuracy specification is defined as ± (percent of reading + digit) At 23±5°C, ≦80 %RH.

3-1 Direct Voltage

Range	Resolution	Accuracy
60V / 600V	0.01V / 0.1V	1.0% + 2dgts

Input impedance: 2 MΩ

3-2 Alternating Voltage (True RMS)

Range	Resolution	Accuracy(40~1KHz)
60V / 600V	0.01V / 0.1V	1.2% ± 5dgts

Input impedance: 2 MΩ

3-3 Direct Current

Range	Resolution	Accuracy
300.0mA	0.1mA	1.0% + 10dgts
3.000A	0.001A	
10.00A	0.01A	3.0% + 10dgts

Influence of terrestrial magnetism: less than ±1.0mA
Influence of CT opening and closing: less than ±1.0mA

3-4 Alternating Current (True RMS)

Range	Resolution	Accuracy(50~60Hz)
300.0mA	0.1mA	1.0% + 5dgts
3.000A	0.001A	
20.00A	0.01A	

3-5 Resistance (Ω)

Range	Resolution	Accuracy
600Ω	0.1Ω	1.0% + 2dgts
6KΩ	1Ω	
60KΩ	10Ω	
600KΩ	100Ω	

3-6 Continuity

Range	Buzzer Function
	Ohm < 100Ω

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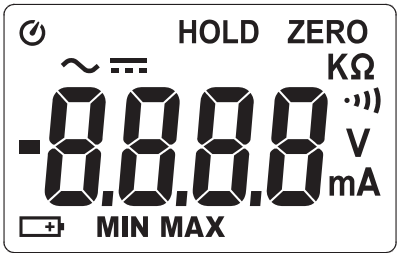
4. DESCRIPTION OF THE INSTRUMENT

4-1 Description Of The Display



	Auto power off indication
	Polarity indication
	Low battery indication
	AC measurement indication
	DC measurement indication
A	Current measurement indication
V	Voltage measurement indication
ZERO	ZERO indication
HOLD	Data hold indication
MAX	Maximum indication
MIN	Minimum indication
	Continuity test indication
K	Measurement unit
Ω	Resistance measurement indication
m	Measurement unit

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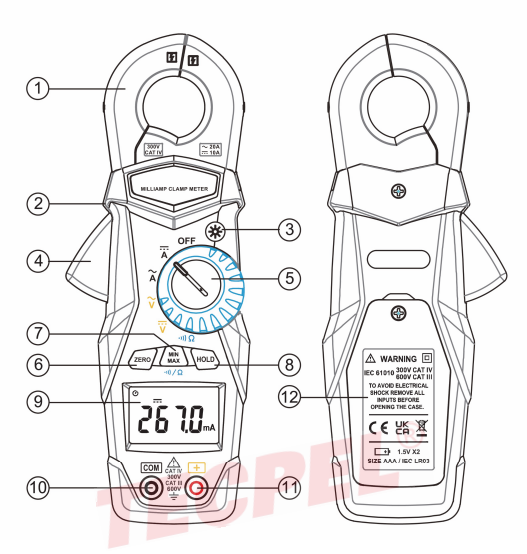
4-2 Description Of Front and Rear



① Current sensing clamp
② Safety protection ring
③ Backlight button
④ Clamp opening handle
⑤ Function select dial
⑥ ZERO button
⑦ Max/Min button
⑧ Data hold button
⑨ LCD display
⑩ COM input terminal
⑪ Positive input terminal
⑫ Battery cabinet

5. BUTTON INSTRUCTION

5-1 HOLD Function

It is possible to freeze the value displayed by pressing the "**HOLD**" button.

Press the "**HOLD**" button again to exit the Hold mode.

Press the "**HOLD**" button for 2 seconds to switch to manual measuring range selection.

Press the "**HOLD**" button for 2 seconds again to switch to automatic measuring range selection.

5-2 MAX/MIN Function

When the "MAX/MIN" button is pressed, the meter will enter MAX/MIN mode.

Press the button, to read MAX, MIN sequence. Press the button for 1 second or more to exit the MAX/MIN mode.

When you turn the rotary switch on the Continuity Test, press the "**MAX/MIN**" button to select Resistance measurement, press the "**MAX/MIN**" button again to select continuity test with buzzer.

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5-3 ZERO Function

Press "**ZERO**" button to enter the Zero mode, **ZERO** annunciate will appear and zero the display. The reading is stored as reference value for subsequent measurement.

Press the " **ZERO** " button again, to exit the zero mode.

5-4 BACKLIGHT Function

When the "☼" button is pressed, the backlight will be turned on and automatically turned off after 30 seconds.

To disable the function, press the button again.

6. MEASURING INSTRUCTION

6-1 ACA Measurement：

With the clamp disconnected from any conductor, switch the function selector to $\tilde{A}$ range.

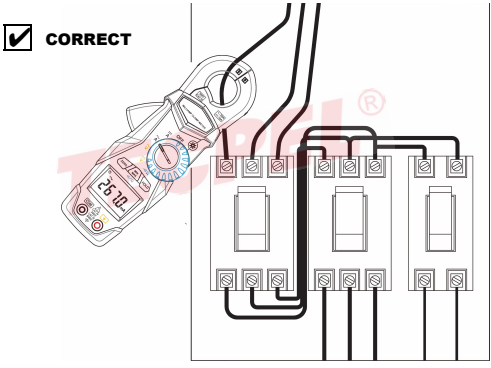
Open the clamp by pressing the jaw-opening handle and insert the cable to be measured into the jaw.

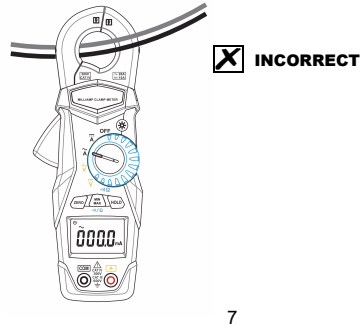
Close the clamp and get the reading from the LCD panel.

Note:

Before this measurement, disconnect any test lead with the meter for safety.

In some cases where reading is difficult, press the HOLD button and read the result later.



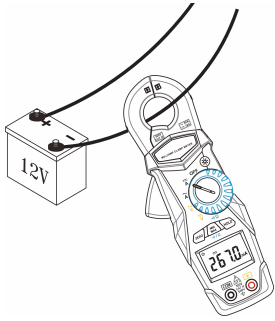


6.2 DCA measurement:

With the clamp disconnected from any conductor, switch the function selector to $\overline{\underline{A}}$ range.

Press "**ZERO**" button to enter the zero reading.

Open the clamp by pressing the jaw-opening handle and insert the cable to be measured into the jaw. Close the clamp and get the reading from the LCD.



Note:

Before this measurement, disconnect any test lead from the meter for safety.

In some cases where reading is difficult, press the "**HOLD**" button and read the result later.

6-3 ACV Measurement：

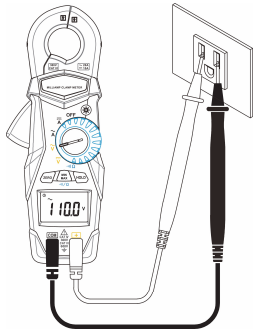
> **⚠ WARNING!**
> Maximum Input voltage is 600V AC/DC. Do not attempt to take any voltage measurement that may exceed this maximum to avoid electrical shock hazard and/or damage the instrument.

Switch the main function selector to $\tilde{\underline{V}}$ range.

Connect red test lead to "**+**" terminal and black one to the "COM" terminal.

Measure the voltage by touching the test lead tips to the test circuit where the value of voltage is needed.

Read the result from the LCD display.



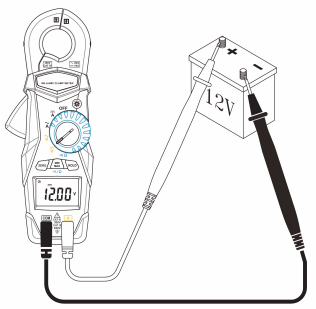
6-4 DCV Measurement：

Switch the main function selector to ⎓ V range.

Connect red test lead to "+" terminal and black one to the "COM" terminal.

Measure the voltage by touching the test lead tips to the test circuit where the value of voltage is needed.

Read the result from the LCD display.



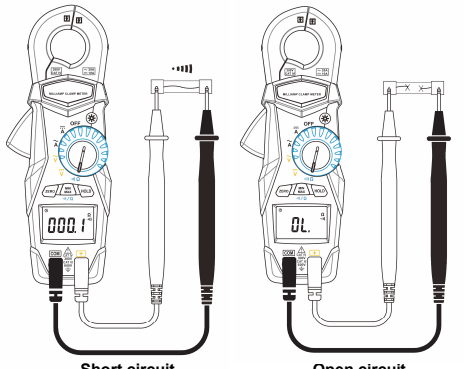
6-5 Continuity Test With Buzzer：

Switch the main function to ·ıı)) Ω range.

Connect red test lead to "+" terminal and black one to the "COM" terminal.

Connect tip of the test leads to the points where the conduction test is needed.

If the resistance is under 100Ω, the beeper will sound continuously.



Short circuit　　Open circuit

6-6 Resistance Measurement

Switch the main function to ·ıı)) Ω range.

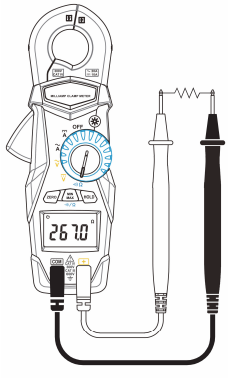
Connect red test lead to "+" terminal and black one to the "COM" terminal.

Connect tip of the test leads to the points where the value of the resistance is needed.

Read the result from the LCD display.

Note：

When take resistance value from a circuit system, make sure the power is cut off and all capacitors need to be discharged.



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7. BATTERY CHANGING

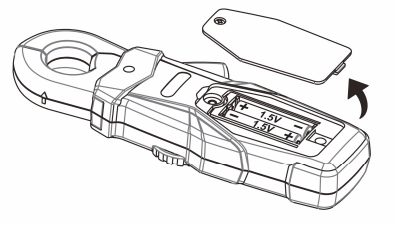
When the battery voltage drop below proper operation range, the symbol will appear on the LCD display and the battery needs to be changed.

Before changing the battery, switch the main dial to "OFF "and disconnect test leads.

Open the back cover by a screwdriver.

Replace the old batteries with two new 1.5V(AAA Size) battery.

Close the back cover and fasten the screw.



8. MAINTENANCE

> **⚠ WARNING!**
> Before opening the meter, disconnect both test leads and do not use the meter before the cover is closed.

> **CAUTION!**
> To avoid contamination or static damage, do not touch the circuit board without proper static protection.

8-1 REMARK:

- If the meter is not going to be used for a long time, take out the battery and do not store the meter in high temperature or high humidity environment.
- While taking current measurement, keep the cable at the center of the clamp will get more accurate test result.
- Repairs or servicing not covered in this manual should be performed only by qualified personal.

8-2 CLEANING:

Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on these instruments.

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