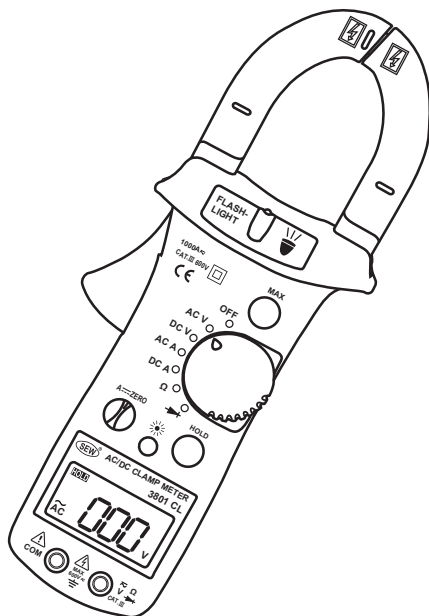




3801 CL

AC/DC CLAMP METER



INSTRUCTION MANUAL

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1. INTRODUCTION

NOTE

This meter has been designed and tested according to CE Safety Requirements for Electronic Measuring Apparatus, EN61010-1, EN 61010-2-32 and other safety standards. Follow all warnings to ensure safe operation.



WARNING

READ "SAFETY NOTES" (NEXT PAGE) BEFORE USING THE METER.

2. SAFETY NOTES

Read the following safety information carefully before attempting to operate or service the meter.

- Use the meter only as specified in this manual, otherwise the protection provided by the meter may be impaired.
- Always keep hands behind the meter barrier.
- Use extreme caution when clamping around uninstalled conductors or bus bars.
- Never clamp around any conductor carrying a voltage above 600V R.M.S.
- Rated environmental conditions:
 1. Indoor use.
 2. Installation Category III.
 3. Pollution degree II.
 4. Altitude up to 2000 Meter.
 5. Relative Humidity 80% Max.
 6. Ambient Temperature 0~40°C.
- Observe the international Electrical Symbols listed below:



Meter protected throughout by double insulation or reinforced insulation.



Warning ! Risk of electric shock.



Caution ! Refer to this manual before using the meter.



Alternating current.



Earth (ground) terminal.

3. FEATURES

- Full Autorange for all functions.
- Data Hold function freezes the reading.
- Max Hold function holds the absolutely maximum of readings.
- LCD backlight function.
- Flashlight function.
- Low battery indication.
- Safety design throughout with no exposed metal parts, shielded banana plugs and recessed input terminals.
- The Ohm function is ideal for checking continuity of relays, transformers and motor coils.
- Diode check function.

4. SPECIFICATIONS

Ranges:

AC Voltage: 400/600 V

AC Current: 400/1000 A

DC Voltage: 400/600 V

DC Current: 400/1000 A

Resistance: 400/2000 Ω

Diode: 400/2000 mV at 1mA

ACV / ACA

Range	Resolution	Accuracy
400V	0.1V	$\pm(1.0\%rdg+3dgt)$
600V	1V	
400A	0.1A	$\pm(1.5\%rdg+3dgt)$
1000A	1A	

*Frequency Response 40Hz~500Hz

DCV / DCA

Range	Resolution	Accuracy
400V	0.1V	$\pm(0.75\%rdg+3dgt)$
600V	1V	
400A	0.1A	$\pm(1.5\%rdg+3dgt)$
1000A	1A	

Resistance

Range	Resolution	Accuracy
400 Ω	0.1 Ω	$\pm(1.0\%rdg+3dgt)$
2000 Ω	1 Ω	

*Buzzer sounds below 38.0 Ω

Diode

Range	Resolution	Accuracy
400mV	0.1mV	$\pm(1.0\%rdg+3dgt)$
2000mV	1mV	

- **Overload protection**

ACV 750V rms.

DCV 1000V.

Diode & Ohm 600V rms.

- **Conductor Size**

Approx. 40mm Max.

- **Operating Principle:** Dual slope integration.

- **Over Range Indication:** "O.L" indicated.

- **Low Battery Indication:** " " sign appears on the display.

- **Response Time:**

Approx.1 second.

- **Sample Rate:**

Approx.2 times per second.

- **Temperature & Humidity for Guaranteed**

0°C~40°C at 80% max. relative humidity.

- **Storage Temperature & Humidity:**

-10°C~50°C at 80% max. relative humidity.

- **Dimensions**

255(L) x 80(W) x 35(D)mm.

- **Weight**

Approx. 420g (battery included).

- **Power Source**

9V (6F22) x 1.

- **Accessories:**

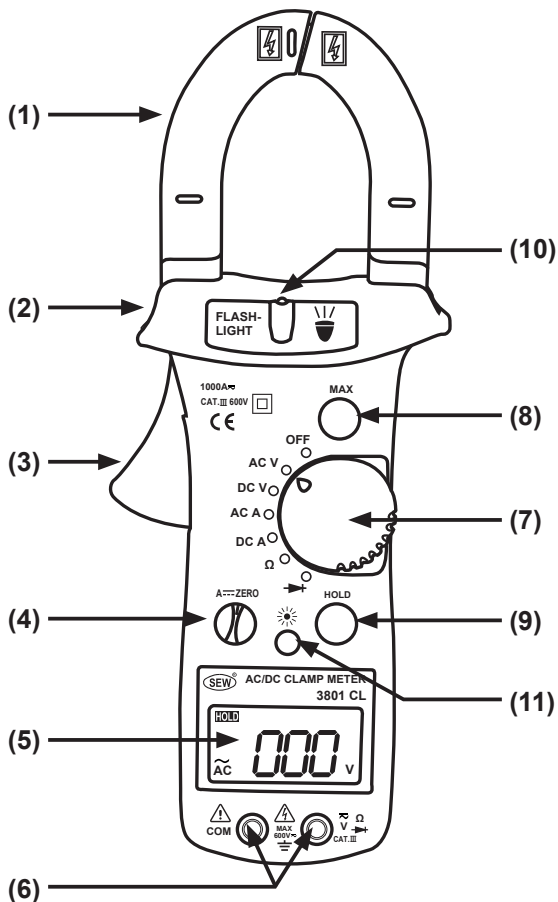
Test leads.

Soft pouch.

Instruction manual.

9V (6F22) x 1.

5. INSTRUMENT LAYOUT



(1) Transformer Jaws

Pick up the conductor within the jaws center.

(2) Barrier

Provide a protective distance from hands to conductor.

(3) Jaw Trigger

Press to open the jaws.

(4) DCA zero adjustment shaft

(5) LCD Display

3¾ digit LCD with the maximum reading of 3999.

(6) Input Terminals

(7) Function Switch

(8) Max Button

Hold the absolute maximum of readings with " MAX " indicated.

(9) Data Hold Button

Freeze the reading for all ranges with " HOLD " indicated.

(10) Flashlight LED

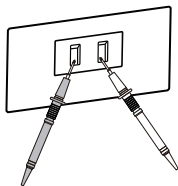
(11) Backlight and LED button

6. MEASUREMENT

Before proceeding with measurement ,read the safety notes.

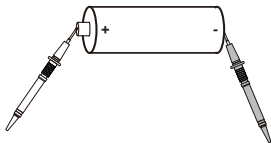
(1) AC Voltage measurement

- Insert the BLACK test lead to COM and the RED one to the other terminal.
- Set the function switch to ACV.
- Connect the test leads to the object to be measured. when measuring AC voltage, the polarity of the leads can be ignored.
- Read the display.



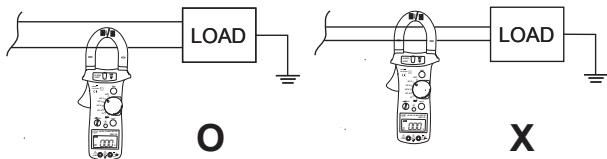
(2) DC Voltage measurement

- Insert the BLACK test lead to COM and the RED one to the other terminal.
- Set the function switch to DCV.
- Connect the test leads to the object to be measured.
- Read the display.
- ※ Reversing the polarity of the test leads displays a negative value.



(3) AC Current measurement

- Set the function switch to ACA.
- Press the jaw trigger to open the transformer jaw and clamp onto one conductor only.
- Read the display.



(4) DC Current measurement

- Set the function switch to DCA.
 - ※ If the initial reading of DCA is not zero, adjust the "DCA zero adjustment shaft" until the display shows zero.
- Press the jaw trigger to open the transformer jaw and clamp onto one conductor only.
- Read the display.

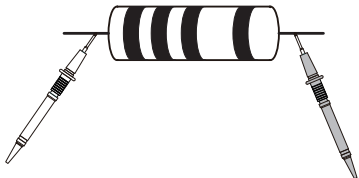
(5) Resistance & Diode measurement

CAUTION!

Make sure that there is no voltage in the circuit or components being measured.

For resistance test:

- Insert the BLACK test lead to COM and the RED one to the other terminal.
- Set the function switch to Ω .
- Connect the test leads to the object to be measured.
- Read the display.



For Diode test:

- Connect the test leads to the diode for testing.
- Read the forward Voltage of diode directly from the display.
- ※ Reversing the polarity of the test leads displays O.L.

7. MAINTENANCE

Battery Replacement:

When the low battery warning sign appears, replace with a new battery as follows:

- (1) Disconnect the test leads from the clamp meter and turn off the power.
- (2) Unscrew the battery cover and replace with a new Battery.

Cleaning and Storage:



WARNING

To avoid electrical shock or damage to the meter, do not get water inside the case.

Periodically wipe the case with a damp cloth and detergent. Do not use abrasives or solvents.

If the meter is not to be used for a long time over 60 days, please remove the battery for storage.