A3380B

3 $^{1}/_{2}$ DIGITAL AC CLAMP MULTIMETER

OPERATION MANUAL

1. SAFETY INFORMATION

The following safety information must be observed to insure maximum personal safety during the operation at this meter.

1.1 Do not operate the meter if the body of meter or the test lead look broken.
1.2 Check the main function dial and make sure it is at the correct position before each measurement.
1.3 Do not perform resistance, temperature, diode and continuity test on a live power system.
1.4 Do not apply voltage between the test terminals and test terminal to ground that exceed the maximum limit record in this manual.
1.5 Exercise extreme caution when measuring live system with voltage greater than 60V DC or 30V AC.
1.6 Keep the fingers after the protection ring when measuring through the test lead.
1.7 Change the batteries when the symbol appears to avoid incorrect data.

2. SPECIFICATIONS

2.1 GENERAL SPECIFICATIONS

Display: 3 $^{1}/_{2}$ digit LCD with a max. reading of 1999.
Polarity: Automatic negative polarity indication.
Zero adjustment: Automatic.
Overrange indication: Only the "1"
Low battery indication: Display "" sign.
Data hold: Display "DH" sign.
AUTO power off select
Clamp opening size: 40mm
Safety Standards: The meter is up to the standards of IEC1010 Double Insulation, Pollution Degree 2, Overvoltage Category Ⅱ.
Operating Environment: Temperature 32~104 ℉ (0~40℃), Humidity ≤ 80% RH.
Storage Environment: Temperature -4~140℉ (-20~60 ℃), Humidity ≤ 90% RH.
Power supply: 3V (CR2032)battery ∅ 3.
Dimension: 190∅69∅24mm.
Weight: Approx.150g (including batteries).

2.2 ELECTRICAL SPECIFICATIONS

Accuracies are ± (% of reading + number in last digit)
At 23±5℃, ≤ 75% RH.

2.3 2.2.1 DC Voltage

Range	Accuracy	Resolution
600V	± (0.8%+2)	1V

Overload protection: 600V DC or AC rms
Impedance: 10MΩ

2.4 2.2.2 AC Voltage

Range	Accuracy	Resolution
600V	± (1.5%+3)	1V

Average sensing, calibrated to rms of sine wave
Frequency: 50~100Hz
Overload protection: 600V DC or AC rms
Impedance: 10MΩ

2.5 2.2.3 AC Current

Range	Accuracy	Resolution
2A	± (2.0%+5)	1mA
20A	± (1.5%+5)	10mA
200A	± (1.5%+5)	0.1A
500A	± (2.0%+5)	1A

Average sensing, calibrated to rms of sine wave
Frequency: 50~60Hz
Overload protection: AC 600A within 60 seconds

2.6 2.2.4 Resistance

Range	Accuracy	Resolution
2KΩ	± (0.8%+2)	1Ω

Overload protection: 250V DC or AC rms

2.7 2.2.5 Diode and Audible continuity test

Range	Description	Test condition
⊳|	Display read approximately forward voltage of diode	Forward DC current approx. 1mA Reversed DC voltage approx. 3V
•)))	Built-in buzzer sounds if resistance is less than 70Ω ± 30Ω	Open circuit voltage approx. 3V

Overload protection: 250V DC or AC rms

3. OPERATION

3.1 *DC Voltage Measurement*

1) Connect the black test lead to "COM" socket and red test lead to the " V Ω ⊢▶⊣ " socket.
2) Set the selector switch to " 600V " position.
3) Measure the voltage by touch the test lead tips to the test circuit where the value of voltage is needed.
4) Read the result from the LCD panel.

3.2 *AC Voltage Measurement*

1) Connect the black test lead to "COM" socket and red test lead to the " V Ω ⊢▶⊣ " socket.
2) Set the selector switch to " 600V~ " position.
3) Measure the voltage by touch the test lead tips to the test circuit where the value of voltage is needed.
4) Read the result from the LCD panel.

3.3 *AC Current Measurement*

1) Set the selector switch to desired "2A", "20A", "200A" or "600A" position.
2) Open the clamp by pressing the jaw-opening handle and insert the cable to be measured into the jaw.
3) Close the clamp and get the reading from the LCD panel.

   Note:

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

   B) If the current range is not known before hand, set the selector switch to high range and work down.

3.4 *Resistance Measurement*

1) Connect the black test lead to "COM" socket and red test lead to the "V Ω ⊢▶⊣ " socket.
2) Set the selector switch to "2K Ω " position.
3) Connect tip of the test leads to the points where the value of the resistance is needed.
4) Read the result from the LCD panel.

   Note:

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

3.5 *Diode and Audible Continuity Test*

1) Connect the black test lead to "COM" socket and red test lead to the "V Ω ⊢▶⊣ " socket.
2) Set the selector switch to " ⊢▶⊣ " position.
3) Connect the test leads across the diode under measurement, display shows the approx. forward voltage of this diode.
4) Connect the test leads to two point of circuit, if the resistance is lower than approx. 70 Ω ±30 Ω , the buzzer sounds.

   Note:

   Make sure the power is cut off and all capacitors need to be discharged under this measurement.

3.6 *Data Hold*

On any range, push the "DH" button to lock display value, and the "DH" sign will appear on the display, push it again to exit.

3.7 *P.ON*

After the Meter enters the "Sleep mode",Press the "P.ON" button to open power again.

3.8 *Back Light*

On any range, push the "☼" button to light the back light then it will auto light off approx. 5 seconds.

4. Battery replacement

1) When the battery voltage drop below proper operation range, the "▭" symbol will appear on the LCD display and the battery need to changed.
2) Before changing the battery, push the "POWER" button to power off. Open the cover of the battery cabinet by a screwdriver.
3) Replace the old batteries with the same type batteries.
4) Close the battery cabinet cover and fasten the screw.

5. MAINTENANCE

1) Before open the battery door, disconnect both test lead and never uses the meter before the battery door is closed.
2) To avoid contamination or static damage, do not touch the circuit board without proper static protection.
3) If the meter is not going to be used for a long time, take out the batteries and do not store the meter in high temperature or high humidity environment.
4) When take current measurement, keep the cable at the center of the clamp will get more accurate test result.
5) Repairs or servicing not covered in this manual should only by qualified personal.
6) Periodically wipe the case with a dry cloth and detergent. Do not use abrasives or solvents on the meter.