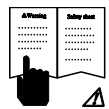
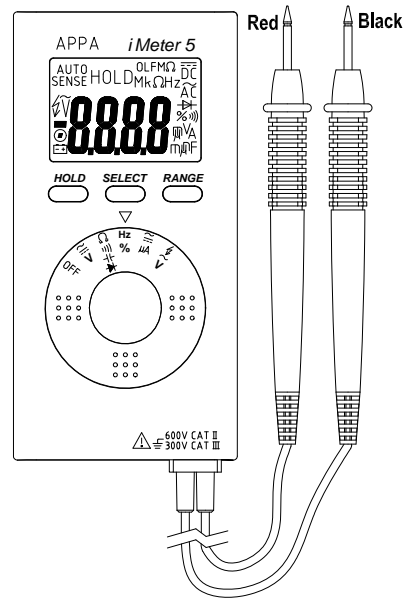


APPA
APPA iMeter 5
Card Meter *Instruction Card*



Read First

Safety Information

- Use the Meter only as specified in this manual or the protection by the Meter might be impaired.
- Always use proper terminals, switch position, and range for measurements.
- Do not apply more than the rated voltage, as marked on Meter, between terminals or between any terminal and earth ground.
- To avoid false readings that can lead to electric shock and injury, replace battery as soon as low battery indicator E3 appears.
- Disconnect circuit power and discharge all high-voltage capacitors before testing resistance, continuity, diodes, or capacitance.
- Do not use Meter around explosive gas or vapor.
- To reduce the risk of fire or electric shock do not expose this product to rain or moisture.

Symbols as marked on the meter and Instruction card

	Risk of electric shock
	See instruction card
	Equipment protected by double or reinforced insulation
	Battery
	Earth
	Conforms to EU directives
	Application around and removal from hazardous live conductors is permitted
	Do not discard this product or throw away

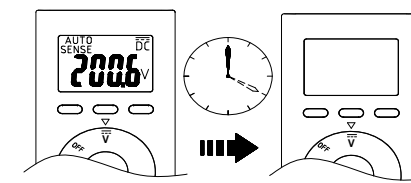
Maintenance

Do not attempt to repair this Meter. It contains no user-serviceable parts. Repair or servicing should only be performed by qualified personnel.

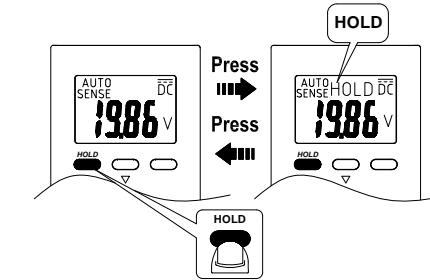
Cleaning

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

Auto Power Off



Display Hold

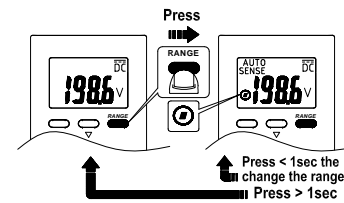


The internal sounder will operate continuously with LCD display flashing in two situations in the Data Hold mode:

1. The Meter measure a signal different from the LCD reading.
2. The measured signal is the same unit as the LCD reading and is larger 50 counts than the LCD reading.

.1.

Auto Range / Manual Range



Selecting Function

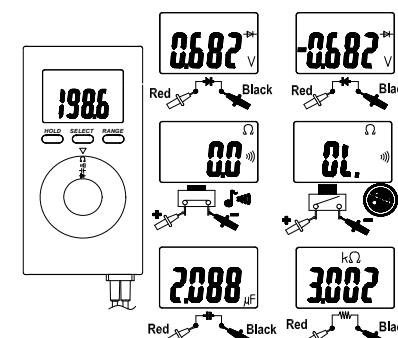
Press "SELECT" key to select function.

Switch Position	Select Key Actions
$\frac{\Omega}{V}$	AutoSense \rightarrow DCV \rightarrow ACV
$\frac{\mu A}{\mu A}$	AutoSense \rightarrow μA \rightarrow μA
$\frac{\Omega}{\rightarrow}$	Ω \rightarrow \rightarrow \rightarrow \rightarrow
Hz%	Hz \rightarrow %

.4.

.2.

Resistor / Capacitor / Continuity / Diode

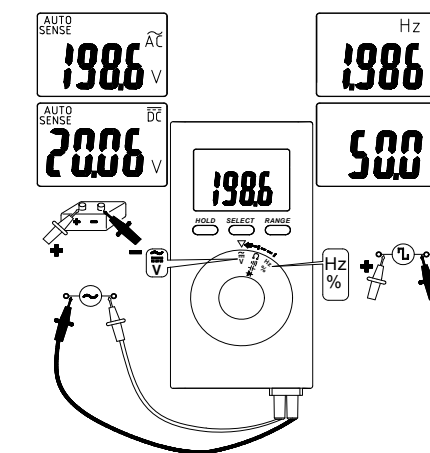


- For better measurement accuracy of small value capacitance, subtract the residual capacitance of the Meter and leads from measurement.
- Under diode mode, LCD displays "bad" when measuring a diode conducted at forward and reverse bias.

.5.

.3.

AC V / DC / Hz / Duty



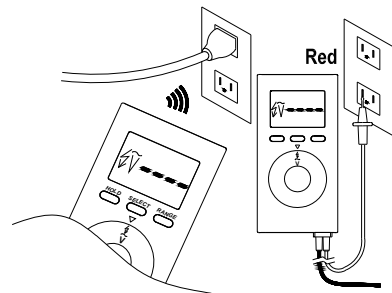
Caution

When connecting the test leads to the circuit or device, connect the black lead first, then connect the red lead; when removing the test leads, remove the red lead first, then remove the black lead.

.6.

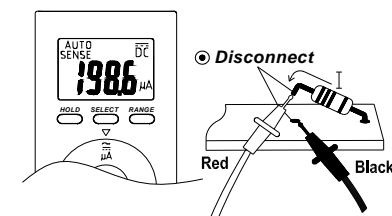
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 http://www.appatech.com

Volt Sense



- The number of dashes displaying on the LCD indicates the electric field intensity. If no indication, voltage could still be present.
- Using only red test probe to work as mains voltage indicator.

AC A / DC A



.7.

AC Conversion Type : AC Coupled Average Sensing, RMS Indication.
Input Impedance : 10MΩ, <100pF.
Overload protection : 600V rms.

Function	Range	Resolution	Accuracy
DCV	400.0mV	0.1mV	± (0.7%+ 5 D)
	4.000V	0.001V	± (0.6%+ 2 D)
	40.00V	0.01V	
	400.0V	0.1V	
	600V	1V	± (0.7%+ 5 D)

Input Impedance : 10MΩ, <100pF.
Overload protection : 600V rms.

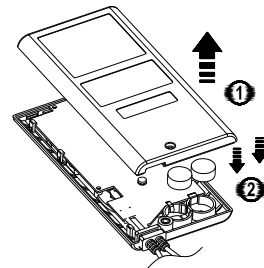
Function	Range	Resolution	Accuracy
ohm	400.0	0.1	± (0.9%+ 5 D)
	4.000K	0.001K	± (0.9%+ 2 D)
	40.00K	0.01K	
	400.0K	0.1K	
	4.000M	0.001M	± (1.5%+ 5 D)
	40.00M*	0.01M	

Open Circuit Voltage : 0.4V
 * There is a little rolling less than ± 2%
Overload protection : 600V rms.

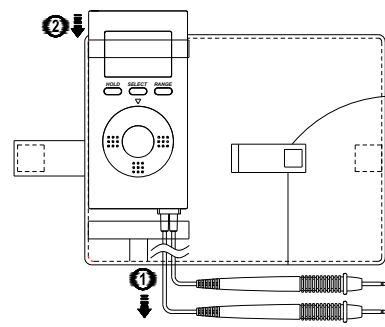
.11.

Battery Replacement

Refer to the following figure to replace the Battery :



Carry Case Assembling



.8.

CONTINUITY CHECK

Continuity Threshold : Approx. <50Ω
Continuity Indicator : 2.7KHz Tone Buzzer.
Input Protection : 600V rms.

Function	Range	Resolution	Accuracy
Cap	40.00nF	0.01nF	±(5%+ 0.4nF)
	400.0nF	0.1nF	±(2.9%+ 5 D)
	4.000μF	0.001μF	
	40.00μF	0.01μF	
	400.0μF	0.1μF	

Measuring Time : <30sec. (400.0μF range), <10sec. (40.0μF range), <3sec. (other range)
Overload protection : 600V rms.

Function	Range	Resolution	Accuracy
Hz	40.00Hz	0.01Hz	±(0.3%+ 5 D)
	400.0Hz	0.1Hz	
	4.000KHz	0.001KHz	
	40.00KHz	0.01KHz	

Sensitivity : > 10Vp-p (40KHz range)
 > 1.5Vp-p (other range)
 The signal must have positive and negative waveform of a cycle.
Max.Sensitivity : 600V rms.
Overload protection : 600V rms.

.12.

Specifications

1-1 General Specifications

LCD display digits : 4000 counts digit large scale LCD readout.
Measuring rate : 3 times / sec.
Polarity Indication : Automatic, positive implied.
Overrange display : "OL" or "-OL"
Unit symbol indication.
Automatic power off time : Approximately 20 minutes after power on.
Low battery indicator : is displayed.
Power requirement : 1.5V x 2 batteries.
Battery life : 50 hours (GPA76P)

1-2 Environmental Conditions

Indoor Use.
Calibration : One year calibration cycle.
Operating temperature :
 0°C ~ 30°C (≤80% RH)
 30°C ~ 40°C (≤75% RH)
 40°C ~ 50°C (≤45%RH)
Storage temperature :
 -20 to +60°C, 0 to 80% RH (batteries not fitted).
Temperature coefficient : Add 0.2 x (Specified accuracy) / °C, < 18°C, > 28°C .
Shock vibration : Sinusoidal vibration per MIL-T-28800E (5 ~ 55 Hz, 3g maximum).
Drop Protection : 4 feet drop to hardwood on concrete floor.

.9.

Function	Range	Resolution	Accuracy
%	0.1 - 99.9%	0.1%	± (0.5%+10 D) *

* : 30% ≤ Duty ≤ 70%,
 Square Wave (5 Hz ~ 1KHz)
Sensitivity : 1.5Vp-p
Overload protection : 600V rms.

Function	Range	Resolution	Accuracy
ACA	400.0μA	0.1μA	± (1.5%+ 5 D)
	4.000mA	0.001mA	

Frequency Response : 50 ~ 500Hz
AC Conversion Type : AC Coupled Average Sensing, RMS Indication.
Input Impedance : Approx. 3KΩ
Overload protection : 600V rms.

Function	Range	Resolution	Accuracy
DCA	400.0μA	0.1μA	± (0.9%+ 5 D)
	4.000mA	0.001mA	

Input Impedance : Approx. 3KΩ
Overload protection : 600V rms.
DIODE TEST
Test Current : Typical. 350μA
Open Circuit Voltage : Max. 1.8V DC
Input Protection : 600V rms.

.13.

Overvoltage category :

IEC 61010-1 300V CAT.III. , 600V CAT.II.

CAT. Application field

CAT.	Application field
I	The circuits not connected to mains.
II	The circuits directly connected to Low-voltage installation.
III	The building installation.
IV	The source of the Low-voltage installation.

Operating altitude : 2000m (6562 ft)
Pollution degree : 2
EMC : EN 61326-1
Dimensions (WxHxD) : 56 x 12 x 112mm
Weight : 115g
Accessories : Battery (installed), carry case and Instruction Card.

1-3 Electrical Specifications

Accuracy is ±(% reading + number of digits) at 23°C ± 5°C < 80%RH.

Function	Range	Resolution	Accuracy
ACV	400.0mV	0.1mV	± (1.5%+ 5 D)
	4.000V	0.001V	± (0.9%+ 5 D)
	40.00V	0.01V	
	400.0V	0.1V	
	600V	1V	

Frequency Response : 50 ~ 500Hz

.10.

Limited Warranty

This Meter is warranted to the original purchaser against defects in material and workmanship for two years from the date of purchase. During this warranty period, manufacturer will, at its option, replace or repair the defective unit, subject to verification of the defect or malfunction. This warranty does not cover fuses, disposable batteries, or damage from abuse, neglect, accident, unauthorized repair, alteration, contamination, or abnormal conditions of operation or handling. Any implied warranties arising out of the sale of this product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. The manufacturer shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expense or economic loss. Some states or countries laws vary, so the above limitations or exclusions may not apply to you.

.14.