

Hantek®

Bluetooth/USB Data Logger

USER'S MANUAL

Hantek 365A/B/C/D



www.hantek.com

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General Safety Summary

Review the following safety precautions carefully before operate the device to avoid any personal injuries or damages to the device and any products connected to it. To avoid potential hazards use the device as specified by this user's guide only.

- ◆ **To Avoid Fire or Personal Injury.**
- ◆ **Correctly Plug in and Pull out.** When the Data Logger probes are connecting to the voltage source, please do not plug in or pull out.
- ◆ **Check All Terminal Ratings.** To avoid fire or shock hazard, observe all ratings and markings on the product. Consult the product manual for further ratings information before making connections to the product.
- ◆ **Do Not Operate With Suspected Failures.** If suspected damage occurs with the device, have it inspected by qualified service personnel before further operations.
- ◆ **Provide Proper Ventilation.** Refer to the installation instructions for proper ventilation of the device.
- ◆ **Do not operate in Wet/Damp Conditions.**
- ◆ **Do not operate in an Explosive Atmosphere.**
- ◆ **Keep Product Surfaces Clean and Dry.**

Safety Information

In order to ensure the correct using and the best efficient service, please carefully read the user's manual.

System Symbols

These symbols may appear in this manual or on the Data Logger.



Warning: "Warning" identifies conditions and actions that pose hazards to the users.



Caution: "Caution" identifies conditions and actions that may damage the product or other properties.



DANGER:
High Voltage



Refer to
the manual



Protective
Conductor Terminal



Chassis ground



Earth(ground)
Terminal

System Terms

The following terms may appear on the Data Logger:

Danger: The term "Danger" is used in the manual to indicate that when you read this mark, personal injury may be caused to immediately.

Warning: The term "Warning" is used in the manual to indicate that when you read this mark, personal injury may not be caused to you immediately, but you need to be cautionary.

Notice: The term "Notice" is used in this manual to indicate that damages may be caused on this product or other properties.

Chapter 1 Getting Start

1.1 General Check

When you have got a new Hantek365 series Data Logger, it is suggested that you should perform a general inspection on the instrument according to the following steps:

◆ **Check the shipping container for damage:**

Keep the damaged shipping container or cushioning material until the contents of the shipment have been checked for completeness and the instrument has been checked mechanically and electrically.

◆ **Check the accessories:**

Accessories supplied with the instrument are listed in “Accessories” in this manual. If the contents are incomplete or damaged, please notify our distributor at your local area or the sales department.

◆ **Check the instrument:**

In case there is any mechanical damage or defect, or the instrument does not operate properly or fails performance tests, please notify our distributor at your local area or the sales department.

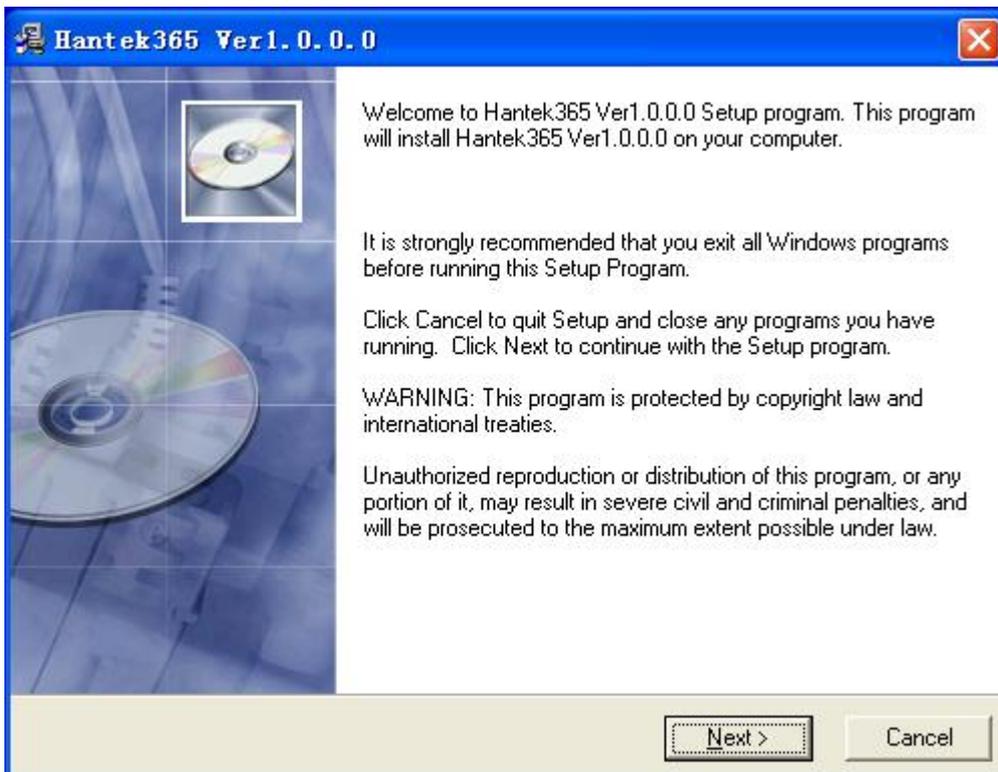
1.2 Install Software

Caution: You must install the software before using the Data Logger.

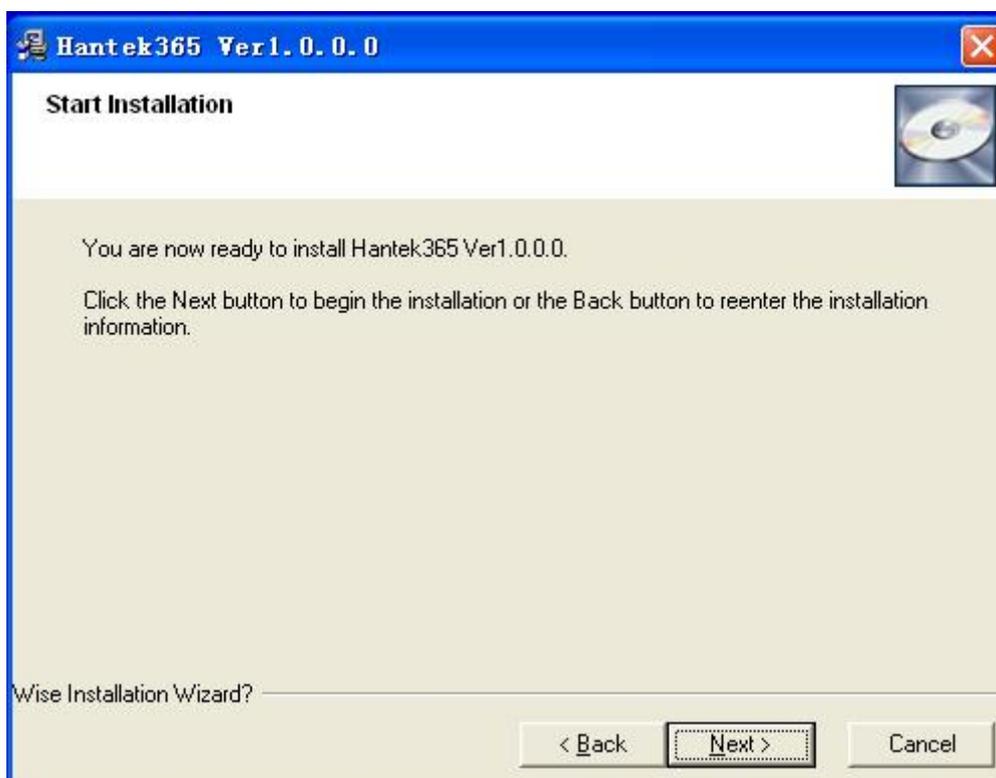
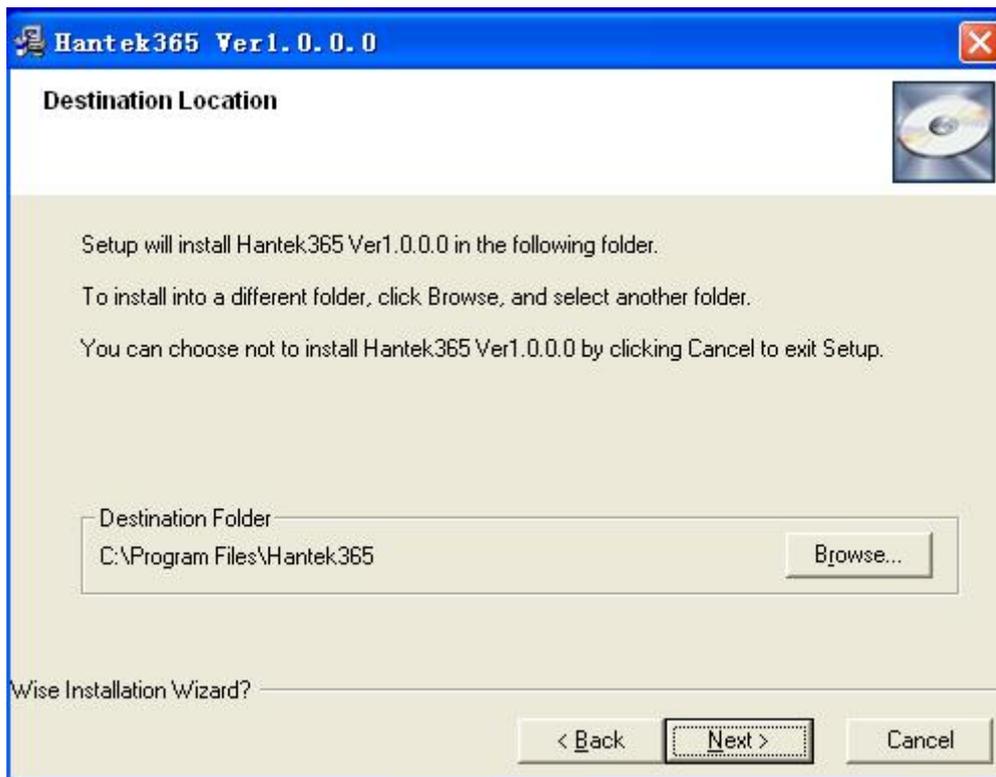
1. While in Windows, insert the installation CD into the CD-ROM drive.
2. The installation should start up automatically. Otherwise in Windows Explorer, switch to the CD-ROM drive and run Setup.exe.



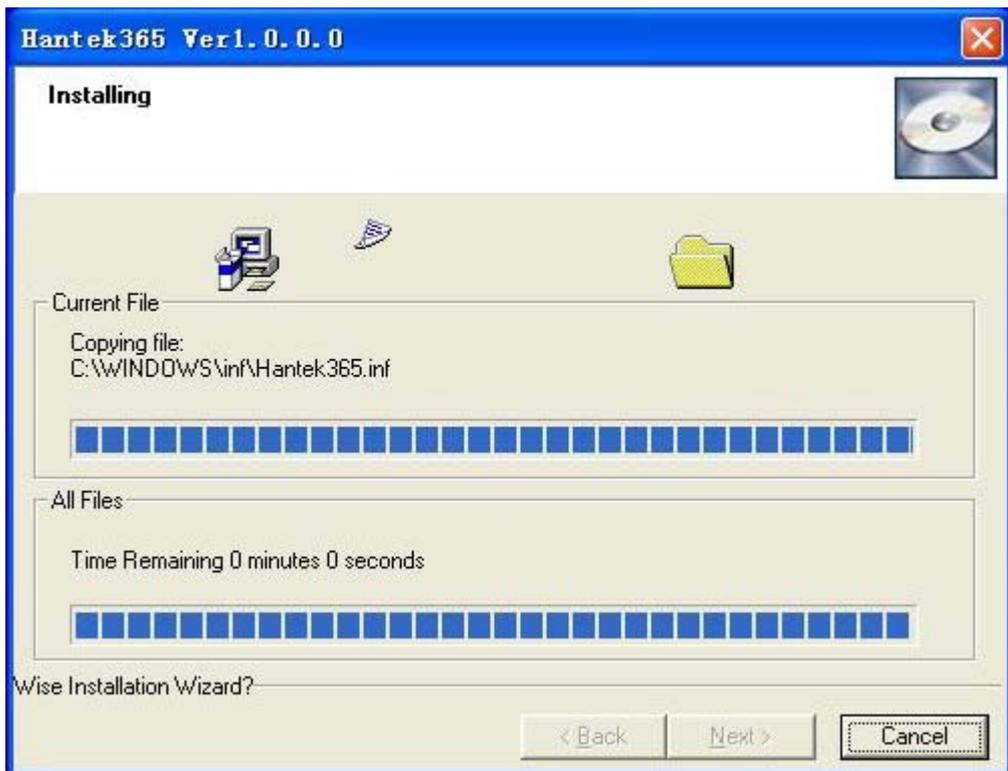
3. The software Installation is started. Click 'Next' to continue.



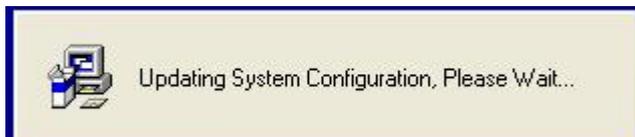
4. Choose a Setup Type directory. Click 'Next' to continue.



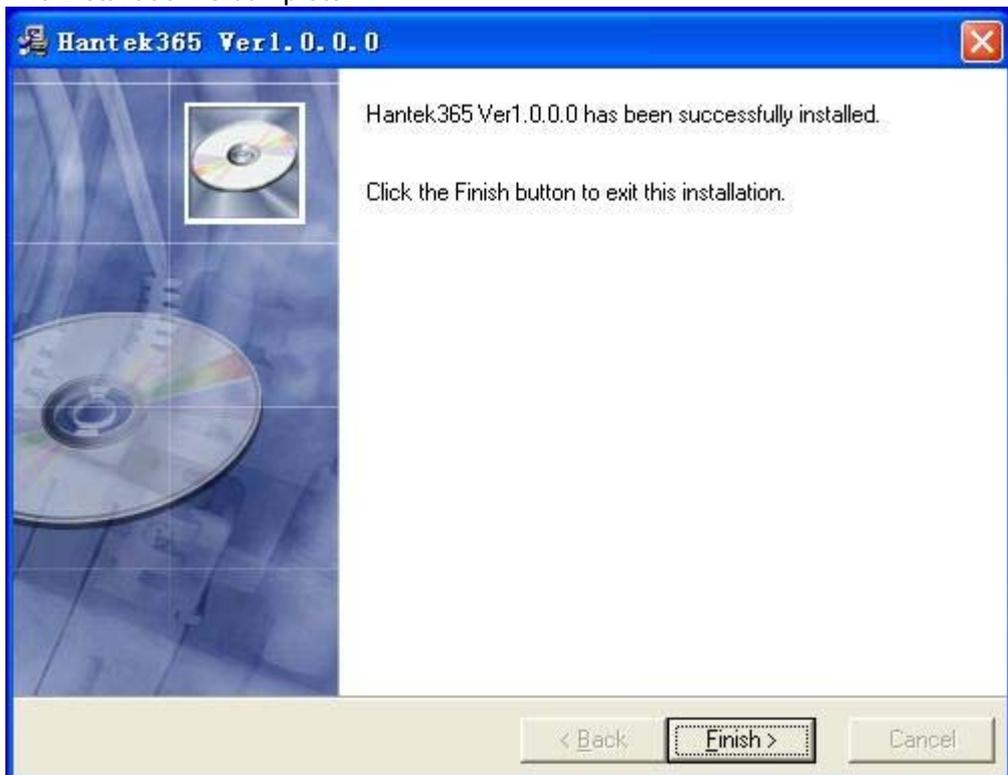
5. Check the setup information. Click Next to start copying of Files.



6. Updating System Configuration.



7. The installation is complete.



1.3 Install Driver

1. Connect the A-Type Plug of USB cable to your PC'S USB port.



2. Connect the B-Type Plug of USB cable to Hantek365's USB port.



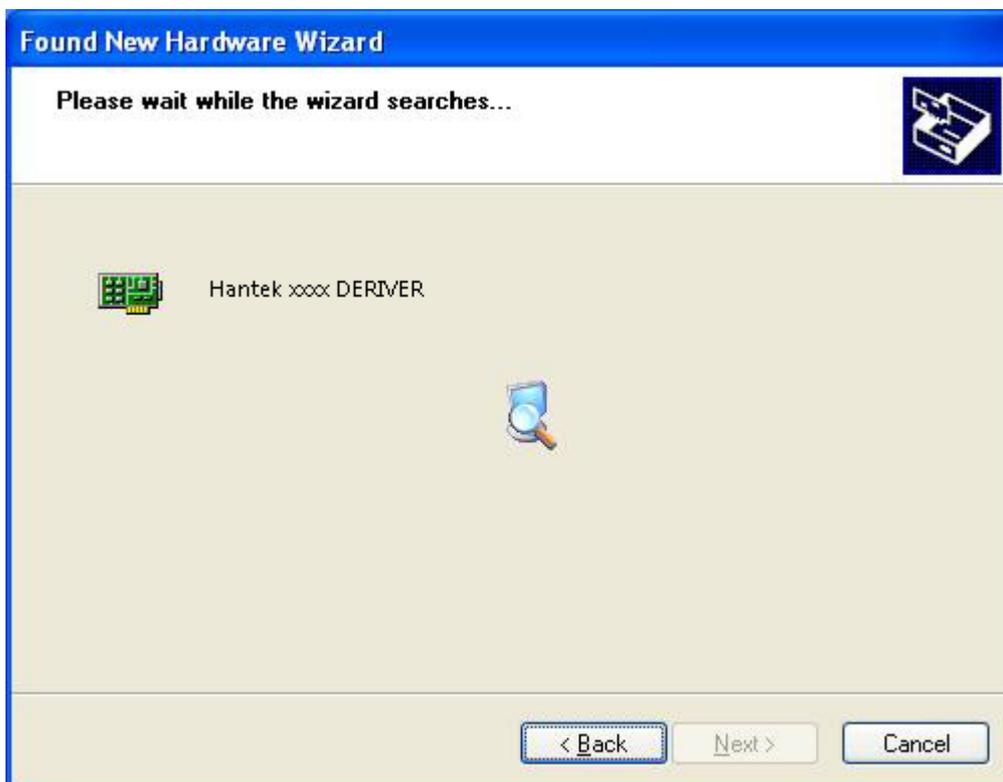
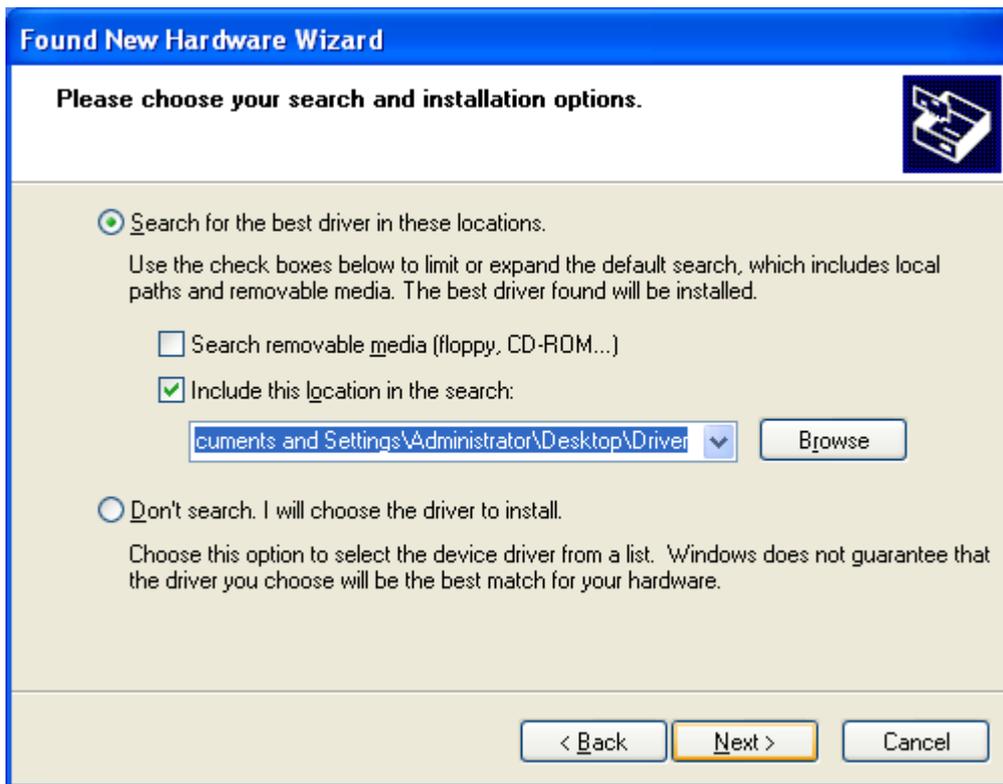
3. New hardware is found.



4. New hardware search wizard starts.



5. New hardware search wizard starts to search the driver.



6. New hardware wizard installs "DRIVER".



7. The wizard has finished installing for "DRIVER".



Chapter 2: Operating Data Logger

The user should know how to determine the system setup from the status bar of a Data Logger. This chapter will give guides to show how to use the menus and perform basic measurements.

2.1 Making Voltage Measurement

1. Making a DC Voltage Measurement

To measure a DC voltage, follow these steps:

1. Click the “V” key and DC appears at the top of the screen.
2. Connect the black lead into the COM banana jack input and the red lead into the V/ Ω /C banana jack input.
3. Connect the red and black leads to the measured points and the voltage value of measured points is displayed on the screen.

Connect Data Logger probes(HT325) with Hantek365 as illustrated in the following figure:



Figure 2-1

Then, the following figure will be displayed:

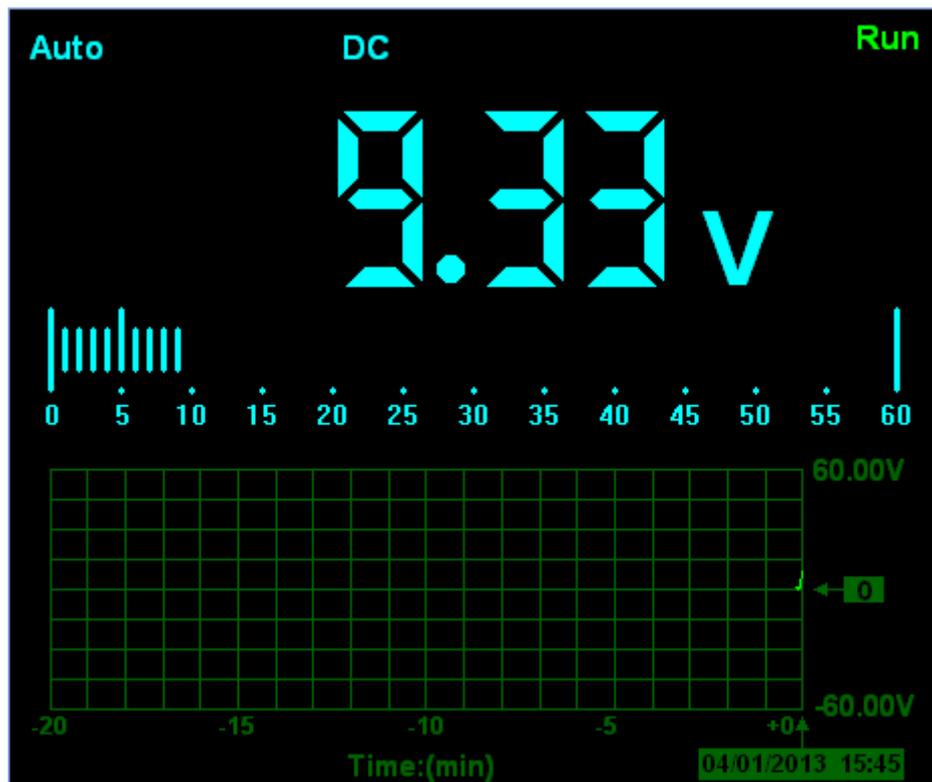


Figure 2-2 DC Voltage Measurement

: Save data as .txt.

: Clear the right data list.

: Start to acquire data.

: Get users' help.

Data Interval : Set data interval 1s, 2s, 5s, 10s.

2. Making an AC Voltage Measurement

To measure the AC voltage, follow these steps:

- 1) Click the "V" key and DC appears on the screen.
- 2) Click "DC" key and AC appears on the screen.
- 3) Connect the black lead into the COM banana jack input and the red lead into the V/ Ω /C banana jack input.
- 4) Connect the red and black leads to the measured points and the AC voltage value of measured points will be displayed on the screen.

Connect Data Logger probes(HT325) with Hantek365 as illustrated in the following figure:



Figure 2-3

Then, the following figure will be displayed:

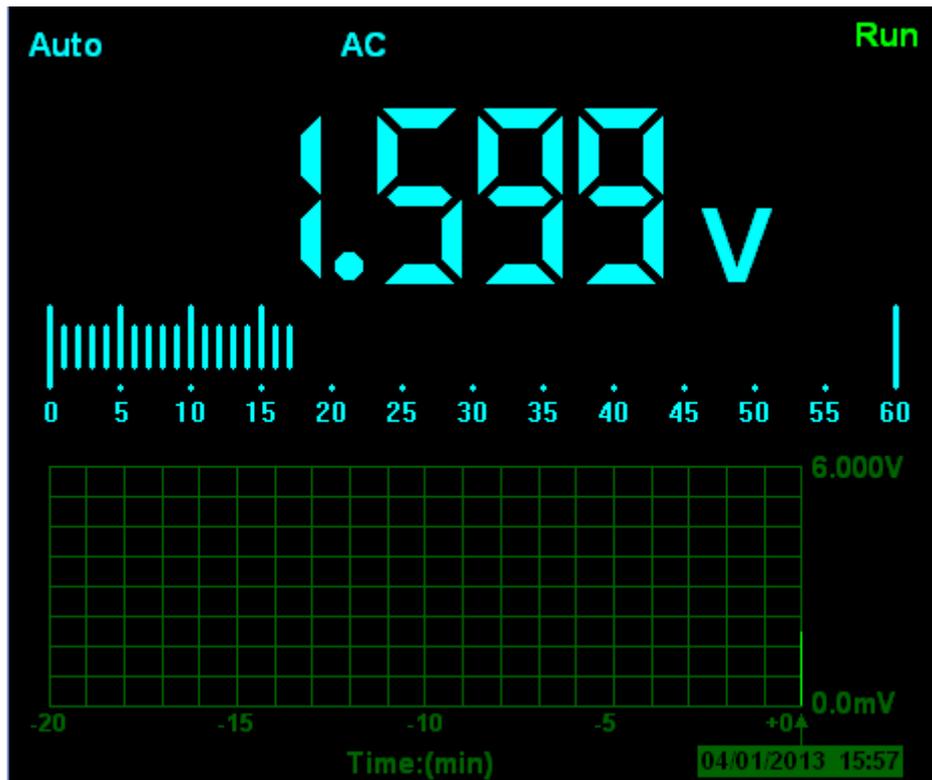


Figure 2-4 AC Voltage Measurement

The user can select Auto measure and Manual measure. Voltage range can be set 60.00mV, 600.0mV, 6.000V, 60.00V, 600.0V.

2.2 Making Current Measurement

1. Making a DC Current Measurement

To measure a DC current which is less than 600mA, follow these steps:

- 1) Click the "A" key and then "DC" appears on the screen. The unit on the main reading screen is "mA". Click "A" key to switch the measurement between mA and A. The default is 600mA. Click "Auto" key to switch the measurement range from 60mA to 600mA.
- 2) Connect the black lead into the COM banana jack input and the red lead into the mA

banana jack input.

3) Connect the red and black leads to the measured points and the DC current value of measured points will be displayed on the screen.

Connect Data Logger probes(HT325) with Hantek365 as illustrated in the following figure:

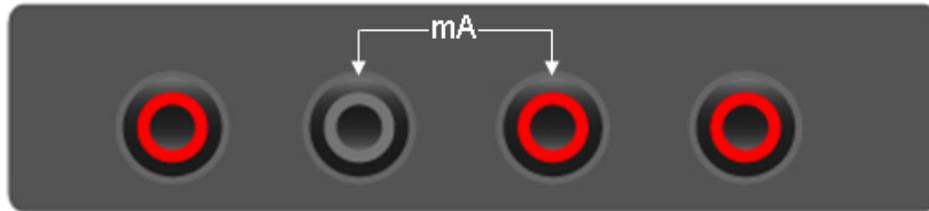


Figure 2-5

Then, the following figure will be displayed on the screen:



Figure 2-6 DC current Measurement for 600mA

To measure a DC current which is larger than 600mA, follow these steps:

- 1) Click the “A” key and then “DC” appears on the screen. The unit on the main reading screen is mA.
- 2) Click “A” key to switch to 10A measurement, the unit on the main reading screen is A.
- 3) Connect the black lead into the COM banana jack input and the red lead into the 10A banana jack input.
- 4) Connect the red and black leads to the measured points and the DC current value of the measured points will be displayed on the screen.
- 5) Click “A” to return to 600mA measurement.

Connect Data Logger probes(HT325) with Hantek365 as illustrated in the following figure:

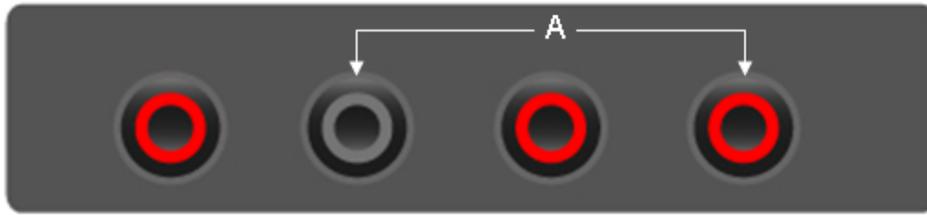


Figure 2-7

Then, the following figure will be displayed on the screen:



Figure 2-8 DC current Measurement for 10A

2. Making an AC Current Measurement

To measure an AC current which is less than 600mA, follow these steps:

- 1) Click the "A" key and then "DC" appears on the screen. The unit on the main reading screen is "mA", and "mA" will display on the screen, Click "mA" to switch the measurement between mA and 10A. The default is 600mA.
- 2) Click "DC" key and AC will display on the screen.
- 3) Connect the black lead into the COM banana jack input and the red lead into the mA banana jack input.
- 4) Connect the red and black leads to the measured points and the AC current value of measured points will be displayed on the screen.

Connect Data Logger probes(HT325) with Hantek365 as illustrated in the following figure:

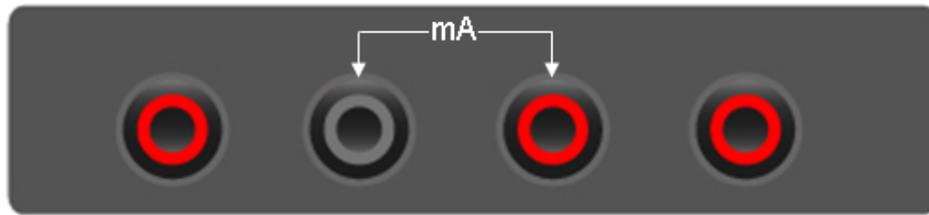


Figure 2-9

Then, the following figure will be displayed on the screen:

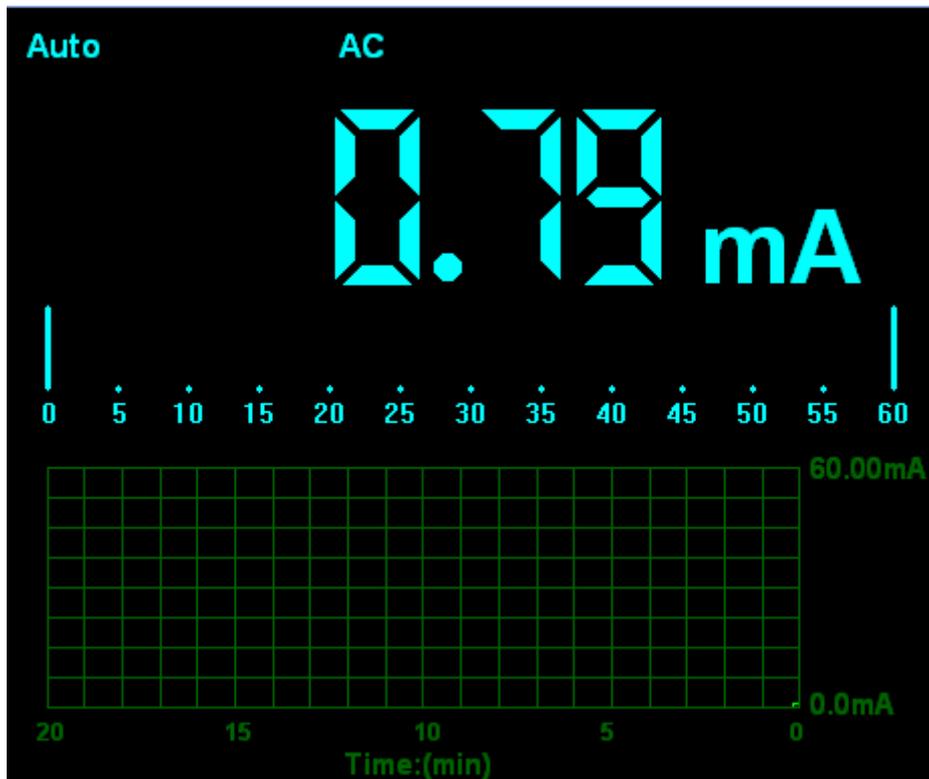


Figure 2-10 AC current Measurement for 600mA

To measure an AC current which is larger than 600mA, follow these steps:

- 1) Click the "A" key and then "DC" appears on the screen. The unit on the main reading screen is mA.
- 2) Click the "DC" key and then "AC" appears on the screen.
- 3) Click "mA" key to switch to 10A measurement, the unit on the main reading screen is A.
- 4) Insert the black lead into the COM banana jack input and the red lead into the 10A banana jack input.
- 5) Connect the red and black leads to the measured points and the AC current value of the measure points will be displayed on the screen.
- 6) Click "A" to return to 600mA measurement.

Connect Data Logger probes(HT325) with Hantek365 as illustrated in the following figure:

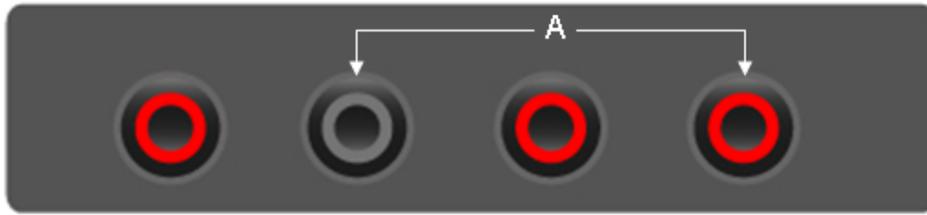


Figure 2-11

Then, the following figure will be displayed on the screen:

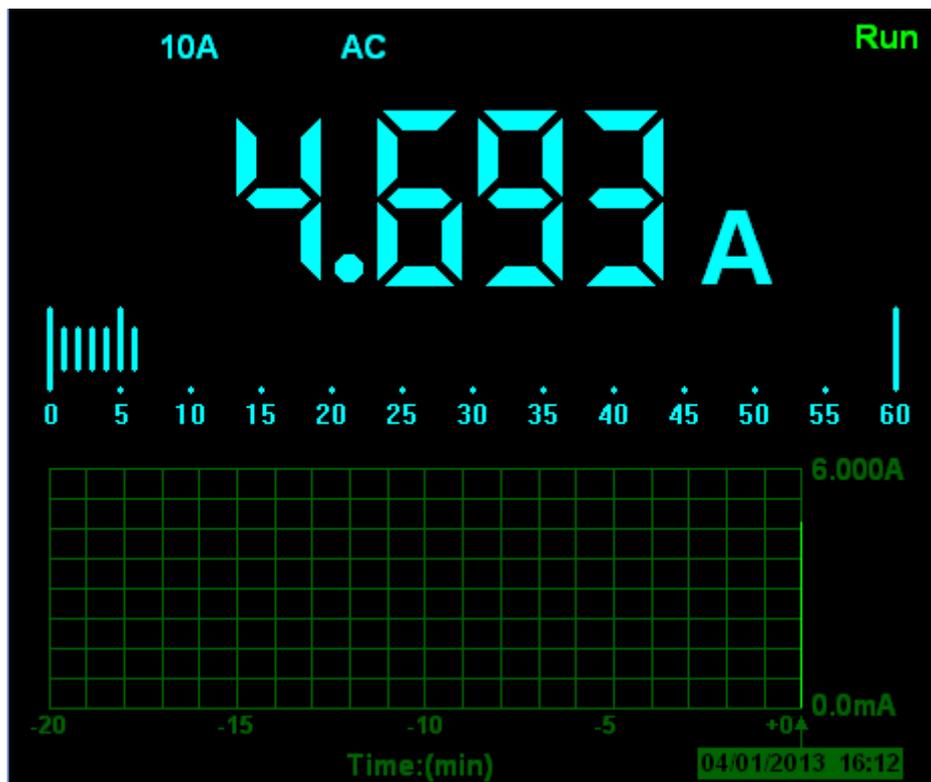


Figure 2-12 AC current Measurement for 10A

2.3 Measuring Resistance Values

To measure a resistance, follow these steps:

- 1) Click the "OHM" key and then resistance measurement window appears on the screen.
- 2) Connect the black lead into the COM banana jack input and the red lead into the V/ Ω /C banana jack input.
- 3) Connect the red and black test leads to the resistor. The resistance value is shown on the screen in Ohm.

Connect Data Logger probes(HT325) with Hantek365 as illustrated in the following figure:



Figure 2-13

Then, the following figure will be displayed on the screen:

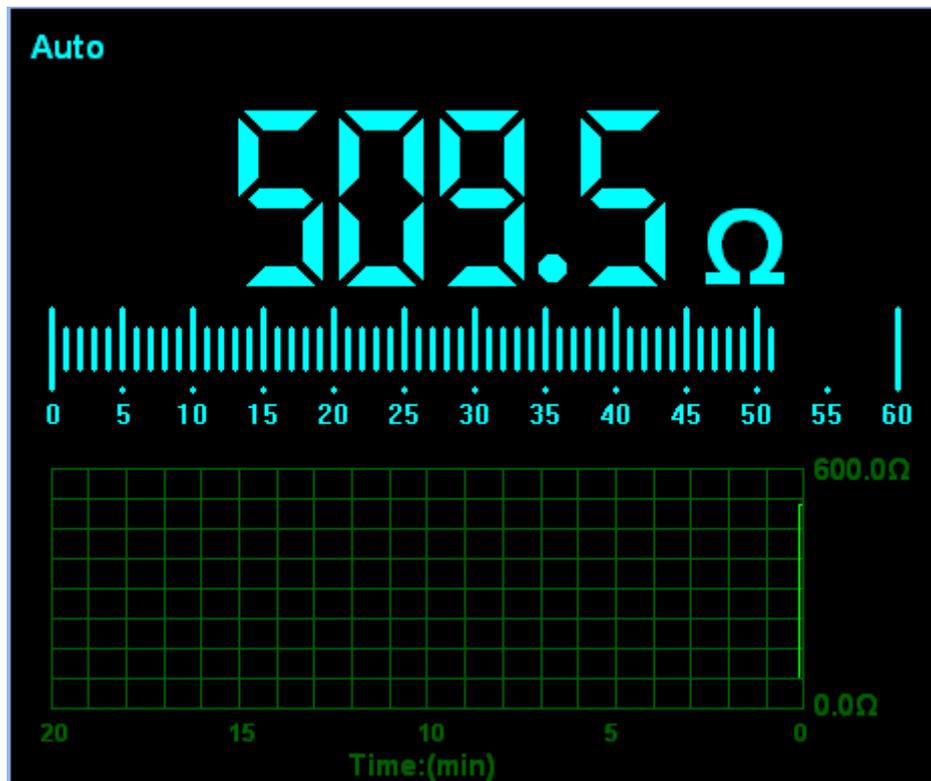


Figure 2-14 Resistance Measurement

2.4 Making a Diode Measurement

To make a measurement on the diode, follow these steps:

- 1) Click the “Diode” key and a diode symbol appears at the top of the screen.
- 2) Connect the black lead into the COM banana jack input and the red lead into the V/Ω/C banana jack input.
- 3) Connect the red and black leads to the diode and the voltage value of the diode is displayed on the screen in volt.

Connect Data Logger probes(HT325) with Hantek365 as illustrated in the following figure:

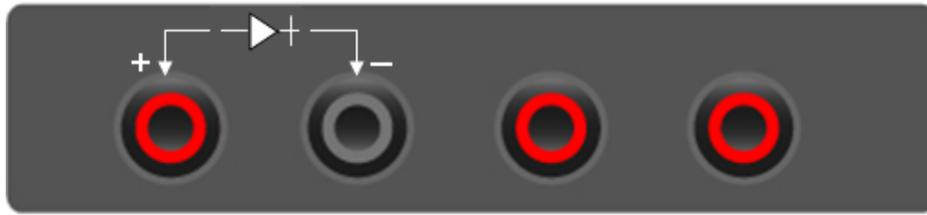


Figure 2-15

Then, the following figure will be displayed on the screen:

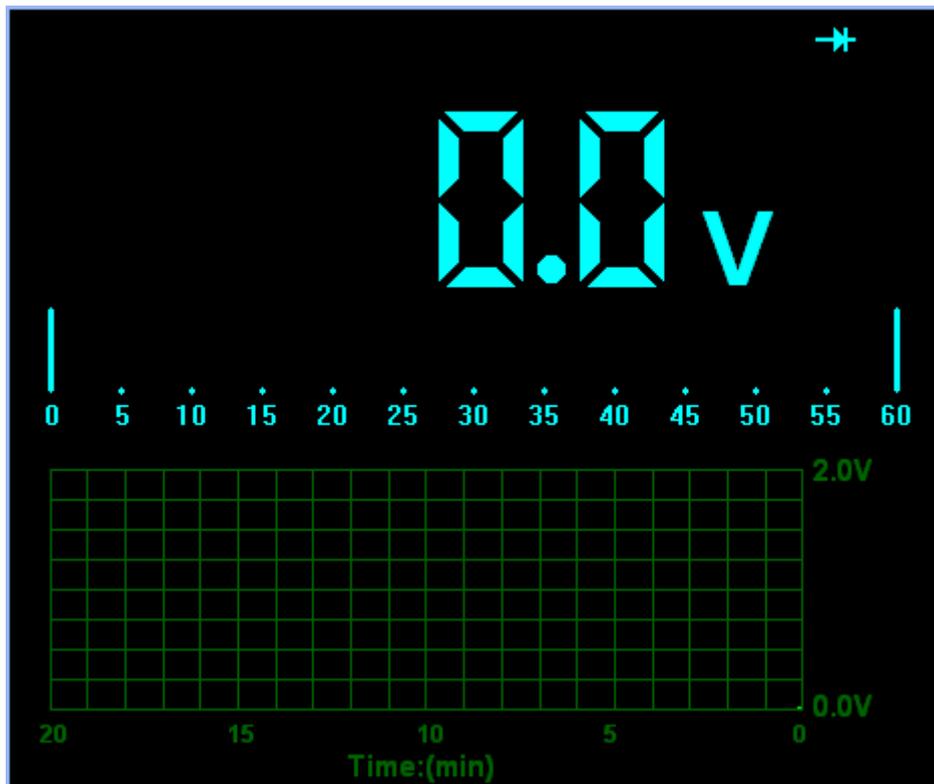


Figure 2-16 Diode Measurement

To perform an On-Off test, follow these steps:

- 1) Click the “CONTI” key and then On-Off indicator appears on the top of the screen.
- 2) Connect the black lead into the COM banana jack input and the red lead into the V/ Ω /C banana jack input.
- 3) Connect the red and black leads to the tested points. If the resistance value of the test points is less than 10 Ω , you will hear beep sound from the test tool.

Connect Data Logger probes(HT325) with Hantek365 as illustrated in the following figure:



Figure 2-17

Then, the following figure will be displayed on the screen.

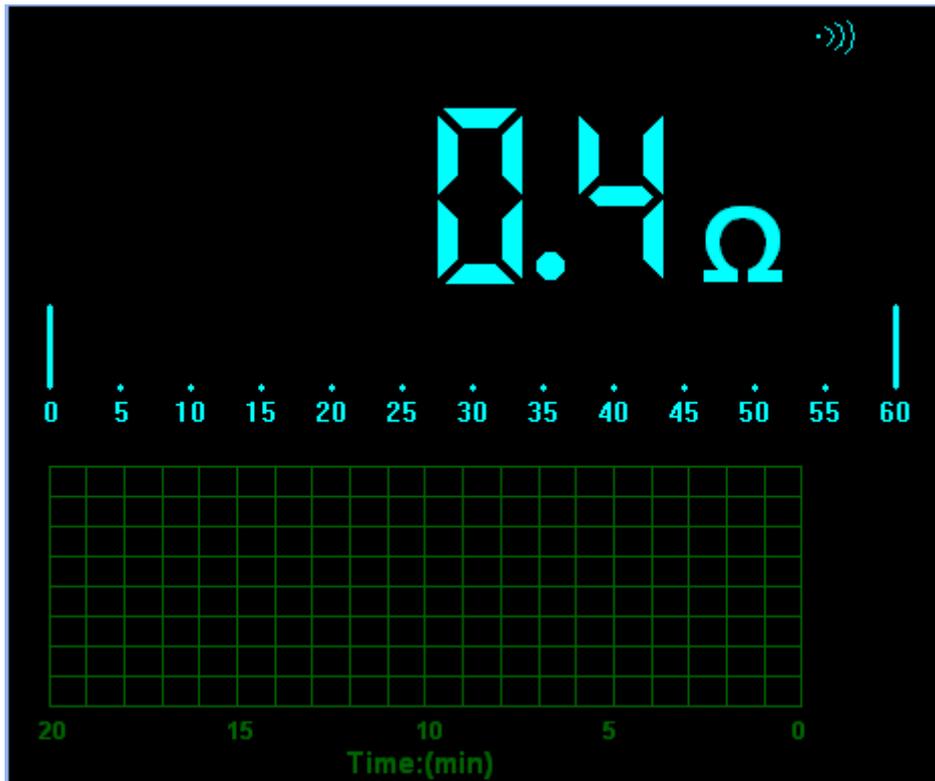


Figure 2-18 On-Off Measurement

2.5 Making a Capacitance Measurement

To measure a capacitance, follow these steps:

- 1) Click the “CAP” key and a capacitor symbol appears on the top of the screen.
- 2) Connect the black lead into the COM banana jack input and the red lead into the V/Ω/C banana jack input.
- 3) Connect the red and black leads to the capacitor and the capacitance value is displayed on the screen in μF or nF .

Connect Data Logger probes(HT325) with Hantek365 as illustrated in the following figure:



Figure 2-19

Then, the following figure will be displayed on the screen.

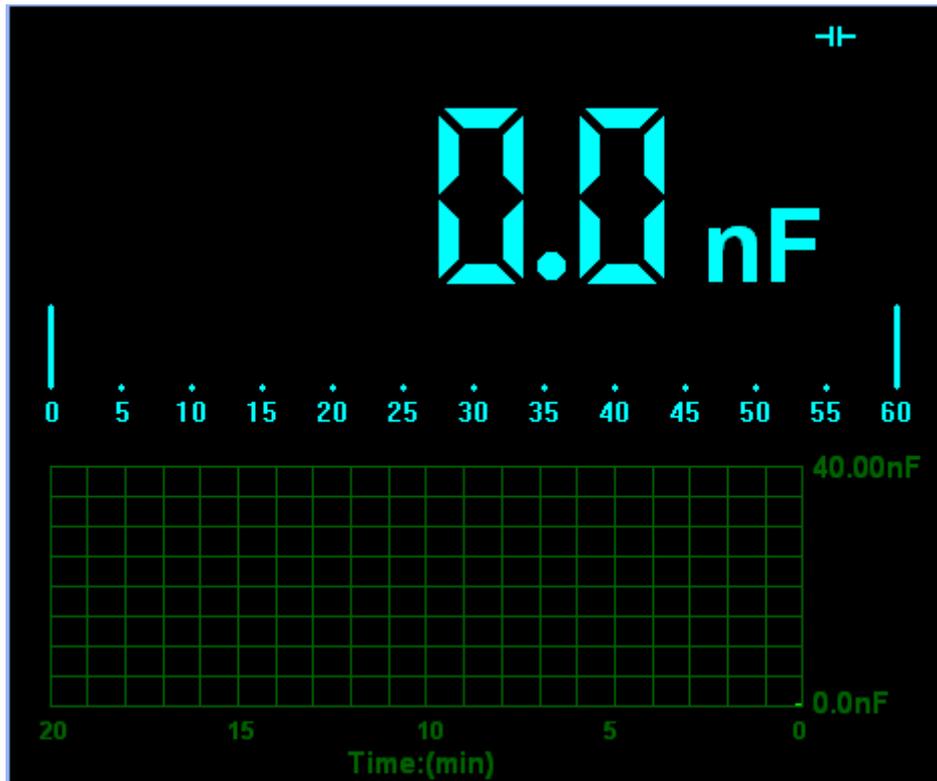


Figure 2-20 Capacitance Measurement

2.6 Selecting Automatic/Manual Range Adjustment

The default range mode of the instrument is automatic range. If you are using the DC/AC mode, to switch to the manual range, do these steps:

- 1) Click “Auto” key to enter the manual range mode and then Manual is displayed on the top of the screen.
- 2) Under the manual range mode, the measuring range is increased by a stage, Click “Auto” to switch manual.
- 3) Click “Manual” key to switch back to the automatic range mode and then Auto is displayed on the top of the screen.

Attention: capacitance measurement without manual range mode.

2.7 Taking a Relative Measurement

A currently measured result relative to the defined reference value is displayed in a relative measurement.

The following example shows how to take a relative measurement. At first, it is required to acquire a reference value.

- 1) Click the V/A/OHM/CAP key.
- 2) Connect the black lead into the COM banana jack input and the red lead into the V// Ω /C banana jack input.
- 3) Connect the red and black test leads to the tested device. The value is shown on the screen.
- 4) Click  key then  is displayed on the top of the screen. The saved reference value is displayed beside.

Then, the following figure will be displayed on the screen.

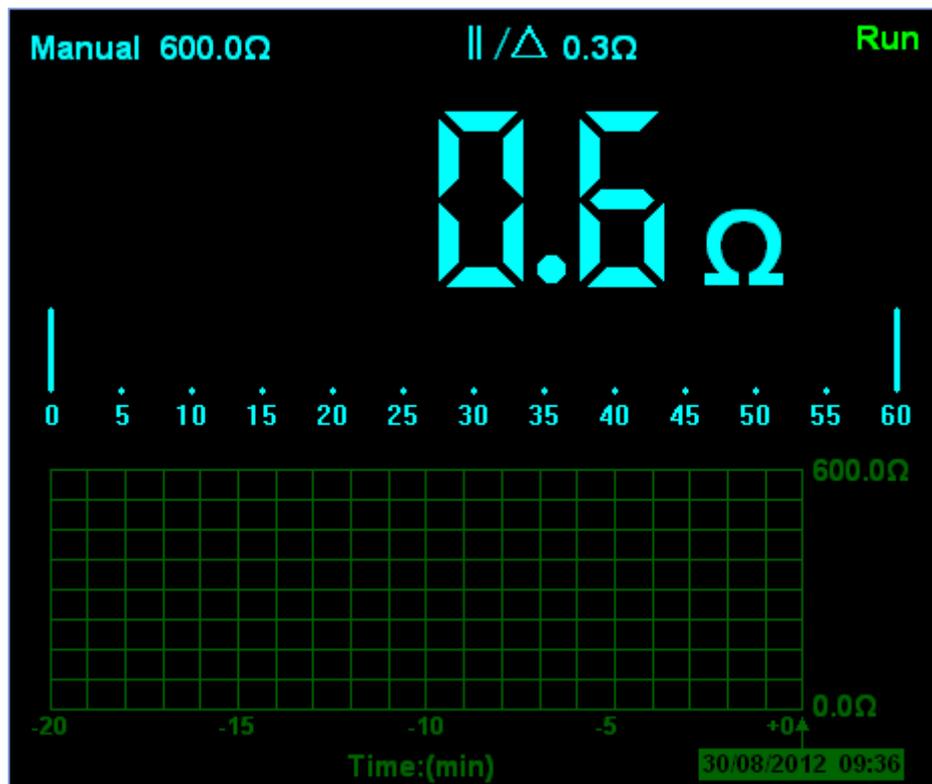


Figure 2-21 Relative Measurement

Chapter 3: Appendix

- ◆ Appendix A: Specifications
- ◆ Appendix B: Accessories
- ◆ Appendix C: General maintenance

Appendix A Specifications

Specification:

Meter Mode	
Maximum Resolution	6000 Counts
DMM Testing Modes	Voltage, Current, Resistance, Capacitance, Diode & Continuity
Maximum Input Voltage	AC: 600V DC: 800V
Maximum Input Current	AC: 10A DC: 10A
Input Impedance	10MΩ

Meter Specification			
Range		Accuracy	Resolution
DC Voltage	60.00mV	±1%±1 digit	10uV
	600.00mV		100uV
	6.000V		1mV
	60.00V		10mV
	600.0V		100mV
	800V		1V
AC Voltage	60.00mV	±1%±3 digit	10uV
	600.0mV		100uV
	6.000V		1mV
	60.00V		10mV
	600.0V		100mV
DC Current	60.00mA	±1.5%±1 digit	10uA
	600.0mA	±1%±1 digit	100uA
	6.000A	±1.5%±3digit	1mA
	10.00A		10mA
AC Current	60.00mA	±1.5%±3digit	10uA
	600.0mA	±1%±1 digit	100uA
	6.000A	±1.5%±3digit	1mA
	10.00A		10mA
Resistance	600.0	±1%±3digit	0.1Ω
	6.000K	±1%±1digit	1Ω
	60.00K		10Ω
	600.0K		100Ω
	6.000M		1KΩ

	60.00M	$\pm 1.5\% \pm 3$ digit	10K Ω
Capacitance	40.00nF	$\pm 1\% \pm 1$ digit	10pF
	400.0nF		100pF
	4.000uF		1nF
	40.00uF		10nF
	400.0uF		100nF
	Attention: The smallest capacitance value that can be measured is		
Diode	0V~2.0V		
On-Off Test	<10 Ω		

Difference:

Type	Bluetooth	Lithium battery	RMS
Hantek365A	-	-	-
Hantek365B	-	-	Yes
Hantek365C	Yes	Yes	-
Hantek365D	Yes	Yes	Yes

Appendix B: Accessories

- ◆ Data Logger Probes x 2
- ◆ A USB Cable
- ◆ A PC software CD of the Data Logger

Appendix C: General Maintenance

General Care

Do not store or leave the Data Logger where the device will be exposed to direct sunlight for long periods of time.

Caution

To avoid damages to the device or probes, do not expose them to sprays, liquids or solvents.

To avoid damages to the surface of the device or probes not use any abrasive or chemical cleaning agents.

Cleaning

Inspect the device and probes as often as operating conditions require. Make sure the device disconnect form all power sources.

To clean the exterior surface, perform the following steps:

1. Remove loose dust on the outside of the Data Logger and probes with a lint-free cloth to avoid scratching the clear glass display filter.
2. Use a soft cloth dampened with water to clean the device.