

# Hantek2000 Series 3u1 Oscilloscope+DMM+AF generator

An all-new handheld oscilloscope-Hantek2000 series, it continues the compact and lightweight concept but with a new generation of 3 in 1 multifunction tester: oscilloscope, signal source and multimeter; A small volume of the non-profit grip by a single hand; The suspending stand was designed to support multi-angle adjustment; Ultra-low-power, Type C charging interface, each 2 hours battery charge allow working one full day or standby two months; High-definition color LCD screen display clear and delicate; Minimalist keyboard design simplify operation, easy to use.

- **Oscilloscope + Waveform Generator + Multimeter:** This multi-purpose station own three universal test instrument functions. It is outgoing right-hand product for engineers.
- **Intelligent charging control:** Its lithium batteries can be recharged by either high current-5V/2A or ordinary computer USB interface. Allow while charging, while using, very convenient and handy;
- **Ultra-low power design:** Type C charging interface, after every recharge of 2 hours, the device can be used continuously for a full day or standby more than two months;
- **Large-capacity lithium battery power supply:** 18650 replaceable lithium battery power system, free from replace battery;
- **5V/2A charger + Type C charging cable:** Type C power + data transfer interface, can share the charger and data cable with your mobile phone;
- **AUTO one-key test:** Magic tool and essential function for test newbie;
- **Volume small, one hand holding:** The 45 degree suspension bracket design provide you a work station anywhere anytime;
- One key page out, quick compare two groups of reference waveforms + 6 groups of waveforms storage, simple and effective;
- **Digital voltmeter function:** automatic frequency and amplitude measurement, convenient and worry-free;
- Its cursor measurement functions supports time and voltage manual measurement, and measure the required waveforms accurately;
- One-click switching its Chinese and English language menu;
- **Color LCD screen:** exquisite and smooth lines make the waveforms clear and undistorted when magnify;
- Minimalist keyboard design simplify operation, convenient to use;
- **Unibody casing:** fine touch feeling, favorable impact resistance, outstanding heat resistance, easy to disassemble;
- **Self-calibration function:** free from level drift after long time unused;
- **Universal multimeter function:** voltage, current, resistance, diode, capacitor, on-off test;
- **Waveform generator output function:** output sine, square, triangle, trapezoidal and other waveforms; sine up to 25MHz;
- **Function of video help :** scan code on back of machine to get help of video course;

Model	Channel	Bandwidth	Sample	Power	DMM	AFG
Hantek2C42	2 CH+DMM	40 MHz	250MSa/S	Direct charge	✓	-
Hantek2C72	2 CH+DMM	70 MHz	250MSa/S	Direct charge	✓	-
Hantek2D42	2 CH+AFG+DMM	40 MHz	250MSa/S	Direct charge	✓	✓
Hantek2D72	2 CH+AFG+DMM	70 MHz	250MSa/S	Direct charge	✓	✓

◆ Great function with small size!

**Minimalist keyboard design simplify operation, easy to use.**



### Great function with small size!

Color highlight LCD screen, legible even in bright sunlight;

Soft colors, clear waveforms display;

High quality casing + Silicon protective cover with fine touch feeling, favorable impact resistance, and outstanding heat resistance;

Powered by two 18650 lithium battery only; Be able to work continuously for a full day and standby over 8 weeks;

Minimalist keyboard design simplify operation, easy to use.

### ◆ Oscilloscope + Waveform Generator + Multimeter:

Multi-purpose station own three universal test instrument functions. Outgoing right-hand product for engineers.

### 3 in 1

Dual Channel Oscilloscope + Waveform Generator+Multimeter

### OSCILLOSCOPE

250M Sampling rate, 70/40MHz Bandwidth;

10mV~10V Vertical resolution;

Auto automatic measuring function;

Key tone settings;

Adjustable backlight brightness, backlight duration,

and auto power off time;

Digital voltmeter function;

Support Chinese and English menu switch;

Cursor measurement, reference waveform, waveform

Storage function.



## ◆ Waveform Generator Function

A multipurpose instrument that helps complete your tasks more quickly, improves work efficiency, and meets all your current and future test needs.

### WAVEFORM GENERATOR

250MSa/s Sampling rate, 12 bits vertical resolution;

Sine: 1Hz~25MHz

Square: 1Hz~10MHz

Triangular: 1Hz~1MHz

Trapezoid: 1Hz~5MHz

Frequency resolution: 1Hz

Output impedance: 50Ω

4 types arbitrary waveform;

A multipurpose tester that meet your current and

future testing demands.



## ◆ Multifunction Digital Multimeter Function

High sensitivity and accuracy, showing clear, strong anti-overload capability, easy to carry.

### MULTIMETER

All-series with standard multi-functional digital multimeter which can be used to measure AC/DC voltage/current, resistance, diode, capacitance, on-off test. High sensitivity and accuracy, clear display, strong overload ability, and ultra-portable.



## ◆ Intelligent Charging Control

Be able to recharged by 5V/2A large current or ordinary computer USB port, measurement can be done even while charging, convenience and user-friendly.

### INTELLIEGENT CHARGING CONTROL

It can be recharged by either high current-5V/2A or ordinary computer USB interface. Allow while charging, while using, very convenient and handy;



## ◆ Large-capacity Lithium Battery + Ultra Low Power + Type C Data Transfer/Charging Interface

18650 replaceable lithium battery power system, free from replace battery;

Be able to recharged by 5V/2A large current or ordinary computer USB port, allow while charging, while using, very convenient and handy;

Type C charging interface, after every recharge of 2 hours, the device can be used continuously for a full day or standby more than two months;

Type C power + data transfer interface, can share the charger and data cable with your mobile phone;

### BUILT-IN LARGE CAPACITY LITHIUM BATTERY

18650 replaceable lithium battery power system, free from replace battery;

### 5V/2A CHARGER

### TYPE C CHARGING AND DATA TRANSMISSION CABLE

Type C power + data transfer interface, can share the charger and data cable with your mobile phone;

### ULTRA LOW POWER DESIGN

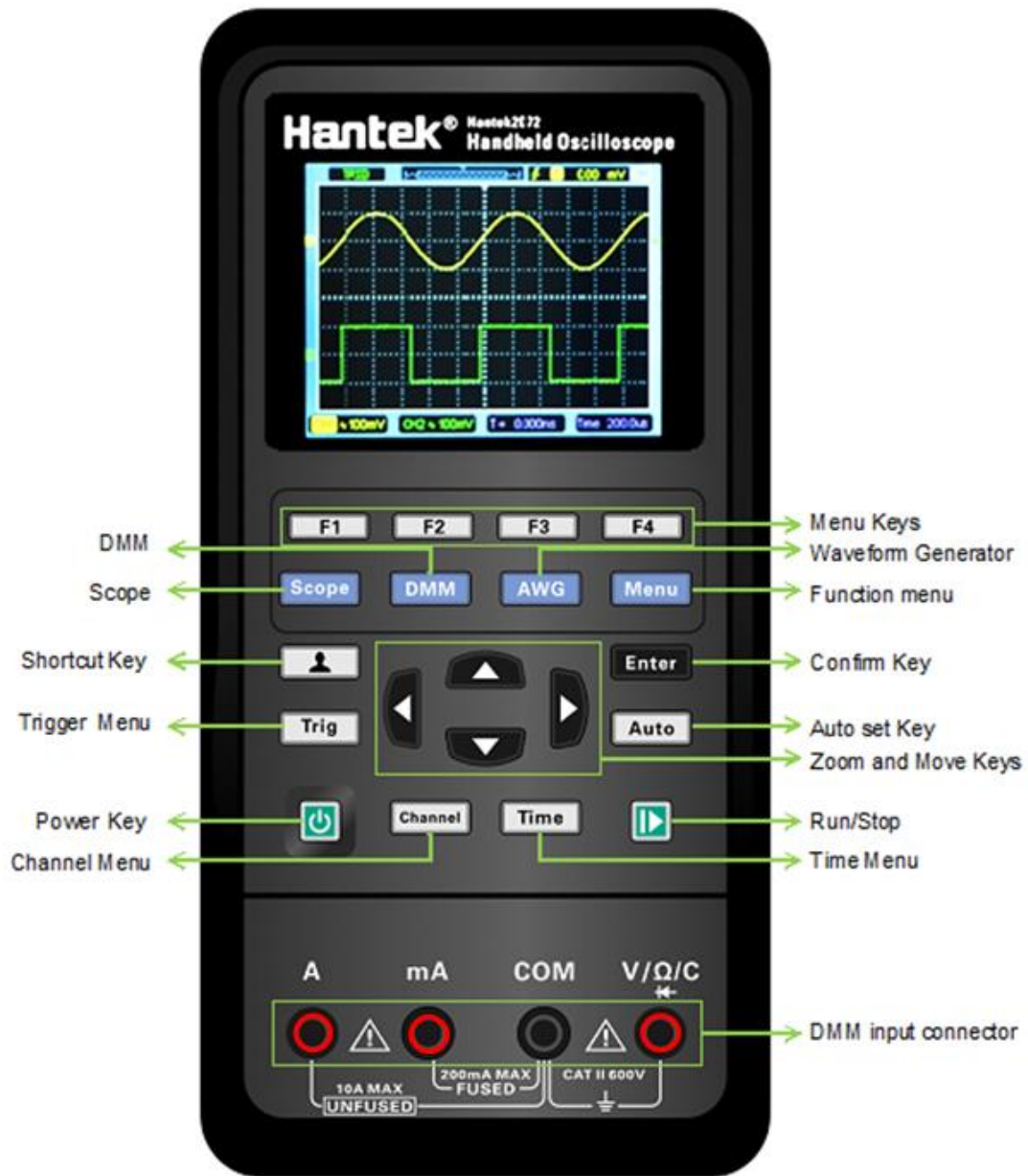
Each 2 hours battery charge allow working one full day or standby two months;



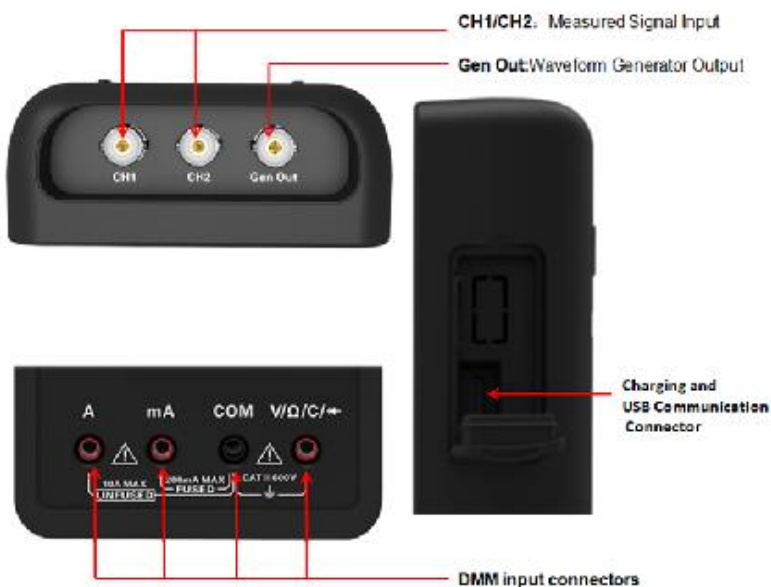
## ◆ Suspended Support, Multiangular Adjusting, Let you Enjoy Convenience



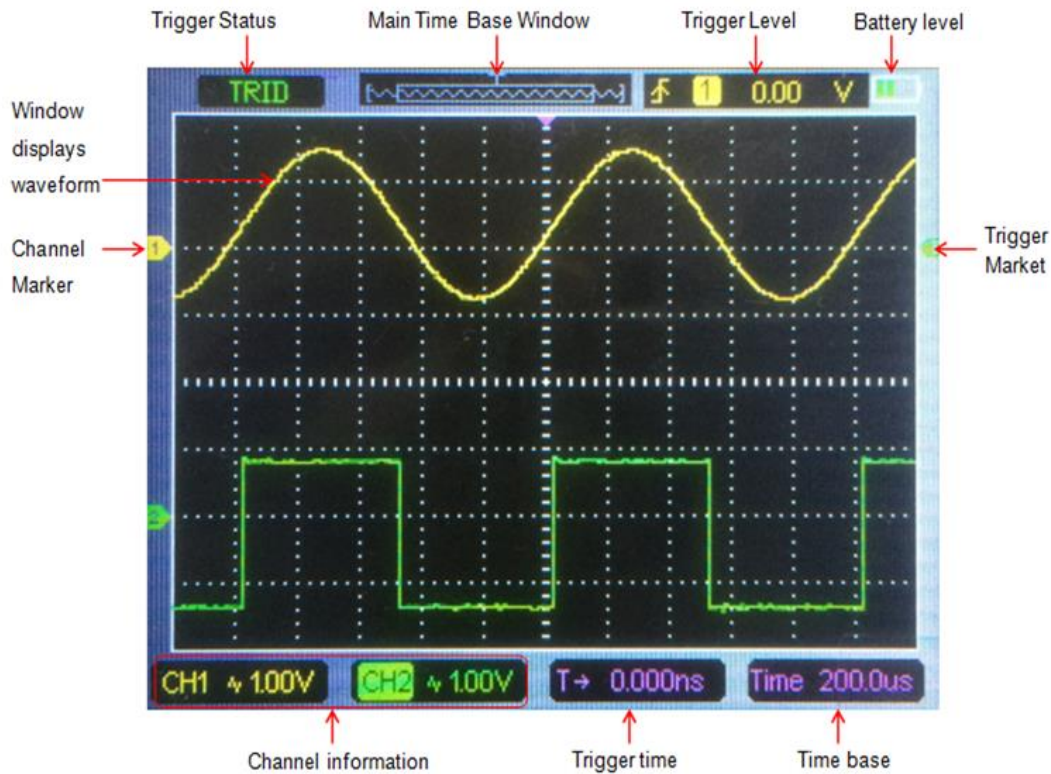
## ◆ Function Review



## ◆ Connectors Review

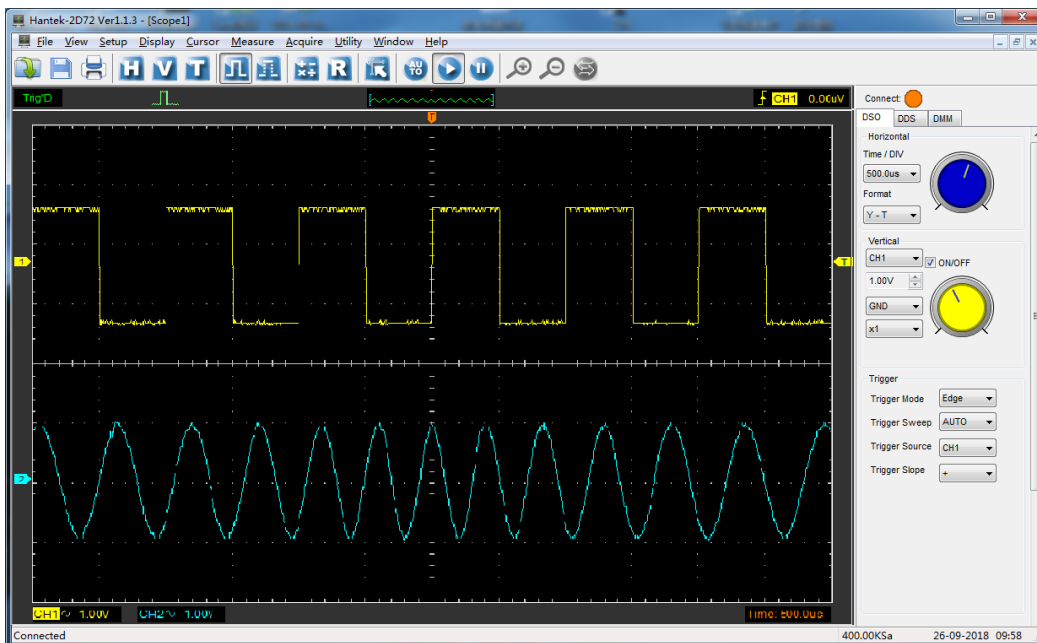


## Interface Review

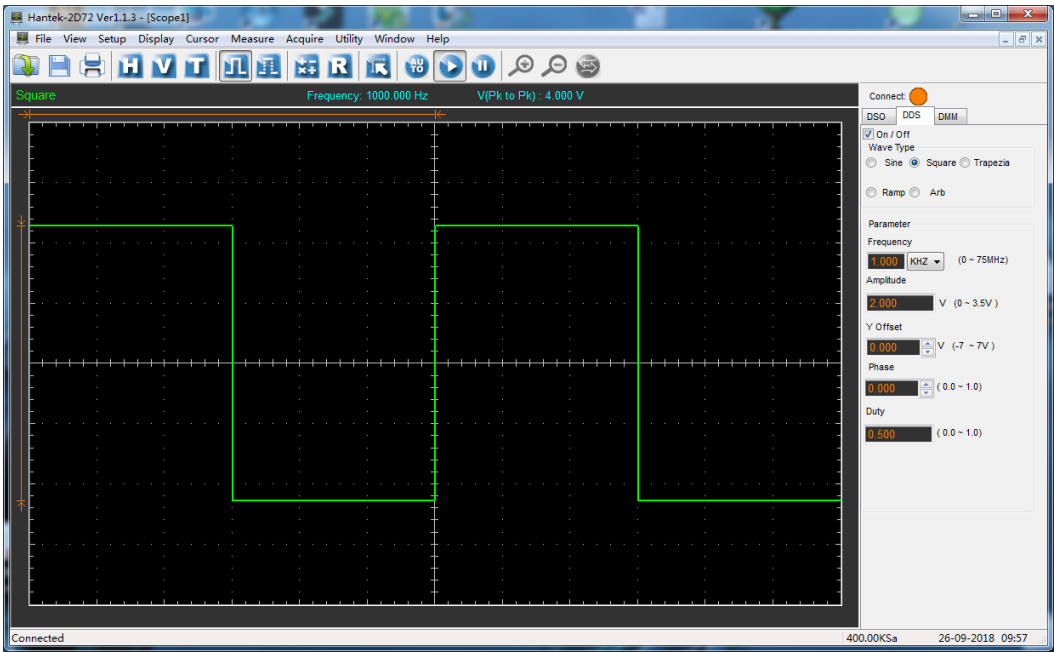


## Powerful PC software

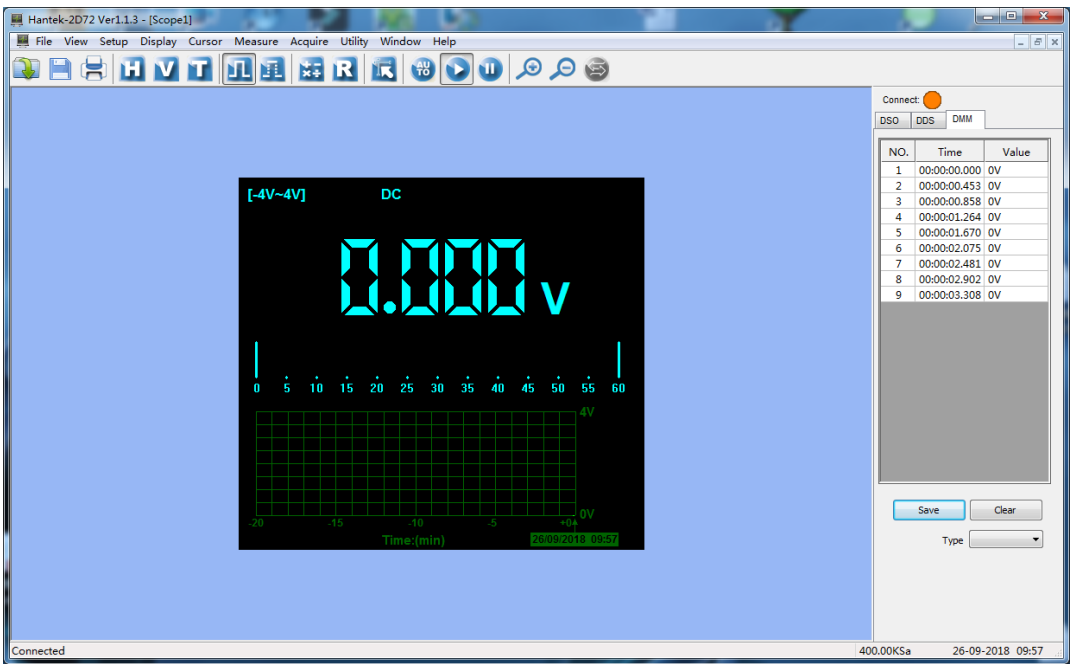
Oscilloscope powerful functions: 20 kinds of automatic measurement, cursor measurement, waveform printing and saving functions, REF and Math functions, Pass / Fail functions.



The waveform generator is able to draw and output arbitrary waveforms on its PC software



Its multimeter with recorder function, which support the measurement results to generate the curves and analyze them.



## Accessories





Model	Hantek2D72	Hantek2D42	Hantek2C72	Hantek2C42
Oscilloscope Mode				
Bandwidth	70MHz	40MHz	70MHz	40MHz
Channel	2CH+DMM+AWG	2CH+DMM+AWG	2CH+DMM	2CH+DMM
Horizontal				
Sample Rate Range	250MSa/s(Single-channel), 125MSa/s(Dual-channel)			
Waveform Interpolation	(sin x)/x			
Record Length	Max. 6K for single-channel; 3K samples per dual-channel			
SEC/DIV Range	5ns/div~500s/div 1, 2, 5 sequence			
Vertical				
A/D Converter	8-bit resolution,each channel sampled simultaneously			
VOLTS/DIV Range	10mV/div~10V/divat input BNC			
Bandwidth Limit, typical	20MHz			
Low Frequency Response (-3db)	≤10Hz at BNC			
Rise Time at BNC, typical	≤5ns			
DC Gain Accuracy	±3% for Normal or Average acquisition mode, 10V/div to 10mV/div			
Note: Bandwidth reduced to 6MHz when using a 1X probe.				
Acquisition				
Acquisition Modes	Normal			
Trigger				
Type	Edge			
Mode	Auto, Normal, single			
Level	±4 divisions from center of screen			
Trigger Level Accuracy	0.2div × volts/div within ±4 divisions from center of screen			
Slope	Rising, Falling, Rising & Falling			
Source	CH1/CH2			
Input				

Coupling	DC, AC or GND		
Input Impedance,	25pF±3 pF, 1MΩ±2%		
DC coupled			
Probe Attenuation	1X, 10X		
Supported Probe Attenuation Factors	1X, 10X, 100X, 1000X		
Maximum Input Voltage	150V <sub>RMS</sub>		
Measurement			
Cursor	Voltage difference between cursors: ΔV		
	Time difference between cursors: ΔT		
Automatic Measurements	Frequency, Amplitude		
Arbitrary Waveform Generator Mode			
Waveform Frequency	Sine: 1Hz~25MHz	-	-
	Square: 1Hz~10MHz	-	-
	Ramp: 1Hz~1MHz	-	-
	EXP: 1Hz~5MHz	-	-
Sampling	250MSa/s	-	-
Amplitude	2.5Vpp(50Ω)	-	-
	5Vpp(High impedance)	-	-
Frequency Resolution	0.10%	-	-
Channel	1CH waveform output	-	-
Waveform Depth	512Sa	-	-
Vertical Resolution	12 bit	-	-
Output Impedance	50 Ω	-	-
DMM			
Maximum Resolution	4000 Counts		
DMM Testing Modes	Voltage, Current, Resistance, Capacitance, Diode & On-Off		
Maximum Input Voltage	AC: 600V, DC: 800V		
Maximum Input Current	AC: 10A, DC: 10A		
Input Impedance	10MΩ		

Measurement Term	Range	Accuracy	Resolution	
DC Voltage	400.00mV	$\pm (0.8\% + 5)$	100uV	
	4.000V		1mV	
	40.00V		10mV	
	400.0V		100mV	
	600.0V	$\pm (1\% + 2)$	1V	
	Overload protection: 400mV: 250V, other: 600Vrms.			
AC Voltage	4.000V	$\pm (1.2\% + 5)$	1mV	
	40.00V		10mV	
	400.0V		100mV	
	600.0V	$\pm(1.5\% + 5)$	1V	
	Frequency: 40Hz~400Hz;			
	Frequency of 400V and 600V: 40Hz~100Hz			
DC Current	40.00mA	$\pm (1\% + 2)$	10uA	
	200.0mA	$\pm (1.5\% + 2)$	100uA	
	4.000A	$\pm (1.8\% + 2)$	1mA	
	10.00A	$\pm (3\% + 2)$	10mA	
	Overload protection:			
	self restoring fuse: 200mA/250V, 4A and 10A range no fuse.			
AC Current	40.00mA	$\pm (1.3\% + 2)$	10uA	
	400.0mA	$\pm (1.8\% + 2)$	100uA	
	4.000A	$\pm (2\% + 3)$	1mA	
	10.00A	$\pm (3\% + 5)$	10mA	
	Frequency: 40Hz~400Hz;			
	self restoring fuse: 200mA/250V, 4A and 10A range no fuse.			
Resistance	400.0 $\Omega$	$\pm(1\% + 3)$	0.1 $\Omega$	
	4.000K $\Omega$	$\pm(1.2\% + 5)$	1 $\Omega$	
	60.00K $\Omega$		10 $\Omega$	
	400.0K $\Omega$		100 $\Omega$	
	4.000M $\Omega$		1K $\Omega$	
	40.00M $\Omega$	$\pm (1.5\% \pm 3)$	10K $\Omega$	

	Overload protection: 220Vrms	
Capacitance	40.00nF	±(3% + 5)
	400.0nF	
	4.000uF	
	40.00uF	
	100.0uF	
	10pF	
	100pF	
	1nF	
	10nF	
	100nF	
	Overload protection: 220Vrms	
Diode	0V~2.0V	
On-Off	<50Ω	
General Specifications		
Display		
Display Type	2.8 inch64K color TFT	
Display Resolution	320 horizontal by 240 vertical pixels	
Display Contrast	Adjustable	
Power Supply		
Supply Voltage	100V-240VAC, 50Hz-60Hz; DC INPUT: 5VDC, 2A	
Power Consumption	<2.5W	
Fuse	T, 3A	
Battery	2600mA*2	
Environmental		
Operating Temperature	0~50 °C (32~122 °F)	
Storage Temperature	-40~+71 °C (-40~159.8 °F)	
Humidity	≤+104°F(≤+40°C): ≤90% relative humidity	
	106°F~122°F (+41°C ~50°C): ≤60% relative humidity	
Cooling Method	Convection	
Altitude	Operating and	3,000m (10,000 feet)
	Nonoperating	
Mechanical Shock	Random Vibration	0.31g <sub>RMS</sub> from 50Hz to 500Hz, 10 minutes on each axis
	Nonoperating	2.46g <sub>RMS</sub> from 5Hz to 500Hz, 10 minutes on each axis
	Operating	50g, 11ms, half sine

Mechanical				
Dimension	199 x 98x 40mm (L x W x H)			
Weight	624g			
Standard Accessories	Probe*1,Clip Probe*2, Type Charging Cable*1, Power Adapter*1, Multimeter Probe*1	Probe*1,Clip Probe*2, Type Charging Cable*1, Power Adapter*1, Multimeter Probe*1	Probe*1,Clip Probe*1, Type Charging Cable*1, Power Adapter*1, Multimeter Probe*1	Probe*1,Clip Probe*1, Type Charging Cable*1, Power Adapter*1, Multimeter Probe*1