

**VICTOR**<sup>®</sup>  
**YITENSEN**<sup>®</sup>

## NEW PRODUCTS CATALOG

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Официальный дистрибьютор в России

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# COMPANY PROFILE

VICTOR is a brand belongs to Xi'an Beicheng Electronics Co.Ltd. which was established in 2013,VICTOR specializes in producing test instruments, especially digital multimeters. Our products include digital multimeters, clamp-meters, calibrators , megohmmeters, thermometers, tachometers, vibrometers, lux meters, function generators, LCR Meters, oscilloscopes and other electronic testing and measuring equipment.

We also provide electronic test tools, measurement solutions, environmental products and ODM and OEM services to specific customers.

As before, our factory(Shenzhen VICTOR Hi-Tech Co.,Ltd.) is in Shenzhen city, To expand production demand,we moved to Xi'an city in 2013. And then we registered two new trademarks (YITENSEN and Ruoshui) for promotion of our VICTOR products to overseas market.

While paying attention to product research and development, VICTOR strictly stresses the product quality, and establishes and implements the quality management system according to the requirements of ISO9001.

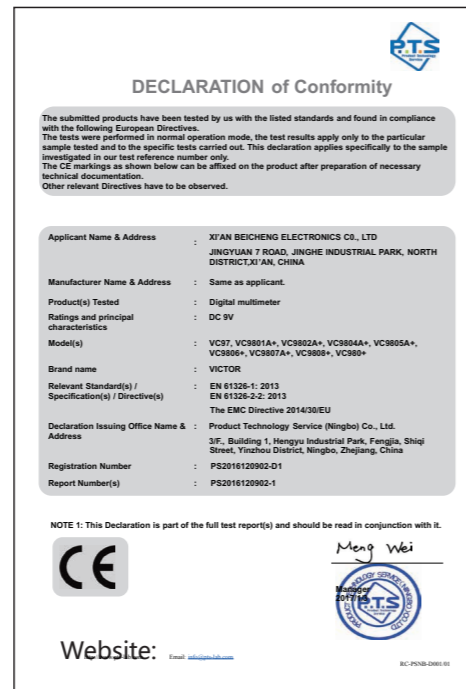
Most of the products comply with international quality standards(CE, RoHS,UKCA) and are greatly appreciated in a variety of different markets throughout the world.

We have a strong R & D team for design of differents kinds of multimeters and digital calibrators and other test instruments. We have construction engineer, software engineer,tooling engineer,products designer.etc. to provide OEM/ODM projects for special customers.

Nowadays, we have agents and representatives in most city of China. Meanwhile, we successfully enter the overseas market in many countries such as the USA,Germany, Poland, Brazil,South Africa, India, Russia,Koreal.etc.we strive to provide the best products and most considerate services to all customers.



TUV ISO9001



CE CERTIFICATE

8045-II



**Technical data**

Basic Function	Range	Basic accuracy	RESOLUTION
DC Voltage	200mV/2V/20V/200V	±(0.05%+5)	210uV/100uV/1mV/10mV
	1000V	±(0.1%+5)	100mV
AC Voltage	200mV	40Hz~1kHz:±(0.7%+30) 1kHz~10kHz:±(2%+30) 10kHz~20kHz:±(3%+60) 20kHz~50kHz:±(10%+250)	10uV
	2V	40Hz~1kHz:±(0.5%+30) 1kHz~10kHz:±(2%+30) 10kHz~20kHz:±(5%+60)	100uV
	20V	40Hz~1kHz:±(0.5%+30) 1kHz~10kHz:±(2%+30) 10kHz~20kHz:±(5%+60)	1mV
	200V	40Hz~1kHz:±(0.5%+30) 1kHz~5kHz:±(2%+30)	10mV
	1000V	40Hz~200Hz:±(0.8%+10) 200Hz~400Hz:±(1.2%+80)	100mV
DC Current	200uA/2mA/20mA/200mA	±(0.35%+10)	0.01uA/0.1uA/1uA/10uA
	2A	±(0.8%+10)	100uA
	20A	±(2.0%+15)	1mA
AC Current	20mA/200mA/2A	±(0.8%+80)	1uA/10uA/100uA
	20A	±(2.5%+35)	1mA
Resistance	200Ω	±(0.5%+30)	0.01Ω
	2kΩ/20kΩ/200kΩ/2MΩ	±(0.5%+40)	0.1Ω/1Ω/10Ω/100Ω
	20MΩ	±(0.6%+50)	1kΩ
Frequency	20Hz~200kHz/200kHz~2MHz/2MHz~20MHz	±(0.1%+3)	0.01Hz~0.1kHz/0.1kHz~0.01MHz/0.001MHz~0.01MHz
	20nF/200nF/2uF/20uF	±(3.5%+20)	1pF/10pF/100pF/1nF
Capacitance	200uF/2000uF	±(5%+30)	10nF/100nF

4 1/2



**Accuracy: ±0.05%  
TRUE RMS**

RESOLUTION	
Diode test	√
Frequency	√
Resistance	√
Triode test	√
Continuity buzzer	√
Overload protection	√
ACV frequency response	50kHz
Operation way	Manual range
Max. Display	19999
Dimension	260mm*220mm*82mm
Weight	Approx:1Kg
Power	AC220V/110V 47Hz-62Hz

8155



**Technical data 5 1/2**

Model		8155
Display screen		3.5" TFT LCD (resolution of 320*480)
Number of display digits		5 1/2
Signal terminal		Front
Fastest measuring speed		6 readings/s
Function	No.	Uncertainty, ±(% of reading + least significant digit)
DCV	Uncertainty	0.015%+3
	Measurement range	1 uV~1000 V
	Maximum resolution	1uV
ACV	Uncertainty	0.2%+100
	Measurement range	1 uV~750 V
	Maximum resolution	1uV
DCA	Frequency range	40Hz ~ 100kHz
	Uncertainty	0.05%+10
	Measurement range	0.001 uA ~ 10 A
ACA	Maximum resolution	0.001uA
	Uncertainty	0.3%+400
	Measurement range	0.001 uA ~ 10 A
Resistance	Maximum resolution	0.001uA
	Frequency range	40 Hz ~ 5kHz
	Uncertainty	0.02%+6
Frequency/cycle	Measurement range	0.001Ω ~ 20MΩ
	Maximum resolution	0.001Ω
	Uncertainty	0.1%+3
Capacitance	Measurement range	200Hz ~ 20 MHz
	Maximum resolution	0.001Hz
	Uncertainty	2%+5
Mathematical functions:		Relative measurement, max/min, dB, dBm, reading hold
Data storage/reading		Yes
Interfaces		USB Device, RS232,(Optional :USB Host LAN,Gpib)
Trigger measurement		Yes
Squarewave output		Yes
Fast measurement		Yes
Resistance 4-line measurement		Yes
External trigger measurement		Yes
AC+DC measurement		Yes
Calibration		Yes
On-off/diode		Yes
Limit test function		Yes

8165A/8165



### Technical data 6 1/2

Model		8165A	8165
Display		3.5 inches color screen (with resolution of 320*480)	
Displayed digit		6 1/2	
Signal terminal		Front/Rear	Front
Maximum measuring speed		2300 readings/second	
Function	Item	Uncertainty, ± (% measurement value + % measurement range)	
DCV	Uncertainty	0.0030+0.0005	
	Measurement range	0mV-1000V	
	Maximum resolution	100nV	
ACV	Uncertainty	0.06+0.03	
	Measurement range	1mV-750V	
	Maximum resolution	100nV	
	Frequency range	3Hz-300kHz	
DCA	Uncertainty	0.05+0.006	
	Measurement range	0uA-12A	
	Maximum resolution	100pA	
ACA	Uncertainty	0.10+0.04	
	Measurement range	1uA-12A	
	Maximum resolution	100pA	
Resistance	Uncertainty	0.01+0.001	
	Measurement range	0Ω-1GΩ	
	Maximum resolution	10uΩ	
Frequency/period	Uncertainty	0.007	
	Measurement range	3Hz-300kHz	
	Maximum resolution	1uHz	
Capacitance	Uncertainty	1+0.3	
	Measurement range	0nF-100mF	
	Maximum resolution	1pF	
On-off/Diode		Yes	
Proportion (DC: DC)	Reference terminal range	100mV-10V	
	Input terminal range	100mV-1000V	
Temperature	Type	Platinum resistance, thermistor and user-defined sensor	
	Maximum resolution	0.001°C	
Math function		Relative (ax+b), maximum/minimum/average, standard deviation, dB, dBm, reading-keeping and limits test	
Graph		Histogram and tendency chart	
Interface		RS-232, IEEE 488, LAN, USB Device, USB Host, Trig IN/OUT	
Programming language		SCPI compatible with Agilent 34401A and Fluke 45	

85C

### Technical data

Mode	85C		85D	
basic skills	Range	Precision	Range	Precision
DC voltage	2V/20V/200V	±(0.5%+3)	6V/60V	±(0.5%+3)
	600V	±(1.0%+10)	600V	±(1.0%+10)
AC voltage	2V	±(1.0%+5)	6V	±(0.8%+5)
	20V/200V	±(0.8%+5)	60V	±(1.2%+10)
	600V	±(1.2%+10)	600V	±(1.2%+10)
DC current	600mA	±(1.0%+5)	600mA	±(1.0%+5)
	6A	±(1.5%+10)	6A	±(1.5%+10)
	10A	±(2.0%+5)	10A	±(2.0%+5)
AC current	600mA	±(1.5%+10)	600mA	±(1.5%+10)
	6A	±(2.0%+5)	6A	±(2.0%+5)
	10A	±(3.0%+10)	10A	±(3.0%+10)
Resistance	2000Ω	±(1.3%+5)	600Ω	±(1.3%+5)
	20kΩ/200kΩ	±(0.8%+3)	6kΩ/60kΩ/600kΩ	±(0.8%+3)
	2MΩ	±(1.5%+3)	6MΩ	±(1.5%+3)
	20MΩ	±(2.0%+10)	60MΩ	±(2.0%+10)
Capacitance	*		60nF/600nF/6uF/60uF/600uF	±(3.5%+20)
			6mF/60mF	±(5.0%+10)



85D

Features	85C	85D
Display	LCD digital display	LCD digital display
Operation	Full intelligent automatic range	Full intelligent automatic range
Max display	1999	5999
Diode test	*	√
CAP	*	√
Firewire recognition	√	√
HOLD	√	√
NCV	√	√
Backlight	√	√
Overload	OL displayed on LCD	OL displayed on LCD
Low voltage	√	√
On-off beep	√	√
Operating°C	0~40°C <75%RH	0~40°C <75%RH
Store (°C)	-20~60°C <85%RH	-20~60°C <85%RH
Shut-down	√	√
Unit symbol	√	√
Resistance	10MΩ	10MΩ
Frequency response	40~1KHz	40~1KHz
Power supply	AAA 1.5V*2	AAA 1.5V*2
Product Size	146*72*50mm	146*72*50mm
Weight	210g	210g






201



202



203

Function	Range	201	202	203
DCV	200mV	±(0.5%+5)	±(0.5%+5)	±(0.5%+5)
	2V/20V/200V	±(0.5%+3)	±(0.5%+3)	±(0.5%+3)
	600V	±(1.0%+10)	±(1.0%+10)	±(1.0%+10)
ACV	200V/600V	±(1.2%+10)	±(1.2%+10)	±(1.2%+10)
	200uA	±(1.0%+10)	±(1.0%+10)	±(1.0%+10)
	200mA	±(1.2%+8)	±(1.2%+8)	±(1.2%+8)
DCA	10A	±(2.0%+5)	±(2.0%+5)	±(2.0%+5)
	200Ω	±(0.8%+5)	±(0.8%+5)	±(0.8%+5)
	2kΩ/20kΩ/200kΩ	±(0.8%+3)	±(0.8%+3)	±(0.8%+3)
Resistance	2MΩ		±(1.0%+5)	
	20MΩ	±(1.0%+5)		±(1.0%+5)
	200MΩ		±[5.0%+30]	
Capacitance	200uF		±(5.0%+10)	
Frequency	20kHz			±(1.0%+10)
Temperature	-20°C~1000°C			<400°C ±(1.0%+5) ≥400°C ±(1.5%+15)
	-4°F~1832°F			< 752°F ±(1.0%+5) ≥752°F ±(1.5%+15)
	Battery measurement function	√		
Diode test	√	√	√	
Continuity alarm	√	√	√	
Data hold	√	√	√	
Torch function	√	√	√	
Back light function	√	√	√	
NCV measurement	√	√	√	
Auto shutdown	√	√	√	
True RMS	√	√	√	
Operating method	Manual range	Manual range	Manual range	
Low voltage display	"  " appears.			
Display method	LCD display			
Max. display	1999 (3 1/2 digits) Auto polarity display			
Measuring method	AD conversion measurement			
Sampling rate	About 3 times/s			
Over range indication	The MSD displays "OL"			
Dimension	146mm*72mm*50mm			
Weight	About 232g (include batteries)			


205



205A



## Technical data

Function	Range	205	205A
DCV	600mV	±(0.5%+5)	±(0.5%+5)
	6V/60V	±(0.5%+3)	±(0.5%+3)
	600V	±(1.0%+10)	±(1.0%+10)
ACV	6V/60V	±(0.8%+5)	±(0.8%+5)
	600V	±(1.2%+10)	±(1.2%+10)
	600uA/6000uA		±(1.0%+10)
DCA	60mA		
	600mA	±(1.2%+8)	±(1.2%+8)
	6A		
ACA	10A	±(2.0%+5)	±(2.0%+5)
	600uA/6000uA		±(1.0%+10)
	60mA		
Resistance	600Ω	±(1.5%+15)	±(1.5%+15)
	6kΩ		
	60kΩ/600kΩ/6MΩ	±(0.8%+5)	±(0.8%+5)
Capacitance	60MΩ	±(0.8%+4)	±(0.8%+4)
	10nF	±(5.0%+40)	±(5.0%+40)
	100nF/1uF/10uF/100uF	±(3.5%+20)	±(3.5%+20)
Frequency	2mF	±(5.0%+40)	±(5.0%+40)
	10Hz/100Hz/1kHz/10kHz/100kHz/2MHz	±(1.0%+10)	±(1.0%+10)
Temperature	-20°C~1000°C		<400°C ±(1.0%+5) ≥400°C ±(1.5%+15)
	-4°F~1832°F		< 752°F ±(1.0%+5) ≥752°F ±(1.5%+15)
	Diode test	√	√
Continuity alarm	√	√	
Data hold	√	√	
Torch function	√	√	
Back light function	√	√	
NCV measurement	√	√	
Auto shutdown	√	√	
True RMS	√	√	
Operating method	Manual range	Auto range	
Low voltage display	"  " symbol appears.		
Display method	LCD display		
Max. display	5999 (3 5/6 digits) Auto polarity display		
Sampling rate	About 3 times/s		
Over range indication	The MSD displays "OL"		
Dimension	146mm*72mm*50mm		
Weight	About 232g (include batteries)		

9205



### Technical data

Model	VC9205		VC9208	
	Resolution	Accuracy	Resolution	Accuracy
DC Voltage	200mV/2V/20V/200V	±(0.5%+4)	200mV/2V/20V/200V	±(0.5%+4)
	1000V	±(0.8%+15)	1000V	±(0.8%+15)
AC Voltage	2V/20V/200V	±(0.8%+8)	2V/20V/200V	±(0.8%+8)
	750V	±(1.2%+15)	750V	±(1.2%+15)
DC Current	200uA/2mA/20mA	±(1.5%+10)	*	*
	200mA	±(1.5%+10)	200mA	±(1.5%+10)
AC Current	10A	±(2.5%+15)	10A	±(2.5%+15)
	200mA	±(2.0%+15)	200mA	±(2.0%+15)
AC Current	10A	±(3.5%+15)	10A	±(3.5%+15)
	200mA	±(2.0%+15)	200mA	±(2.0%+15)
Capacitance	20nF/2uF	±(2.5%+20)	20nF/2uF	±(2.5%+20)
	200uF	±(5.0%+10)	200uF	±(5.0%+10)
	6mF	±(3.5%±10)	6mF	±(3.5%±10)
	60mF	±(3.5%±10)	60mF	±(3.5%±10)
Frequency	*	*	2kHz/200kHz	±(3.0%+18)
	200Ω	±(0.8%±5)	200Ω	±(0.8%±5)
	2kΩ/20kΩ/200kΩ	±(0.8%±3)	2kΩ/20kΩ/200kΩ	±(0.8%±3)
	20MΩ	±(1.0%+25)	20MΩ	±(1.0%+25)
Resistance	200MΩ	±5%(reading-10)+30	*	*
	200MΩ	±5%(reading-10)+30	*	*
Celsius	(-20 - 1000)°C			±(15%+15)≥400°C
Fahrenheit	(-4 - 1832)°F			

Special Function	VC9205	VC9208
Display		LCD
Transistor test		√
Low voltage indication		√
Data Hold		√
Auto power off		1999 (31/2 digits) digit automatic
Max. Display		polarity display
Size		174 * 87 * 34mm
Weight		About 190g
Power		9V Battery (6F22)
Color		Orange + Black
Dimensions		61*32mm

9208



830L

### Technical data

Basic Function	Range	Basic accuracy	
		VC830L	VC921
DC Voltage	200mV/2V/20V/200V/600V	±(0.5%+4)	
	400mV/4V/40V/400V/600V		±(0.5%+4)
AC Voltage	200V/600V	±(1.2%+10)	
	400mV/4V/40V/400V/600V		±(0.8%+6)
DC Current	20uA/200uA/2mA/20mA/200mA/10A	±(1.5%+3)	
	200Ω/2kΩ/20kΩ/200kΩ/20MΩ	±(0.8%+5)	
Resistance	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ		±(0.8%+4)
	4nF/40nF/400nF/4uF/40uF/2000uF		±(3.5%+8)
Capacitance	100Hz/1000Hz/10kHz/100kHz/1MHz/10MHz		±(0.5%+4)
Frequency			

3 1/2



Special Function	VC830L	VC921
Max. value measurement		√
Data hold		√
Auto power off		√
Diode test / Continuity buzzer	√	√
Low battery indication	√	√
Shock proof protection	√	√
Duty cycle measurement		√
Input impedance	10MΩ	10MΩ
Sampling rate	3 times/s	3 times/s
AC Frequency response	(40-400)Hz	(40-400)Hz
Operation way	Manual range	Auto range
Max. Display	1999	3999
LCD size	57×33mm	55×43mm
Battery	9V(6F22)	3V(1.5V×2)

921

3 3/4



### General Characters

Product Net Weight	Approx.:180g 150g(830L)
Product dimension	145×80×28mm 138×72×35mm (830L)
Standard Accessories	Test leads; battery; instruction manual
Standard Quantity Per Carton	60PCS
Carton size	470×325×350mm
Standard Gross Weight	Approx.:16.4 kg

925



### Technical data

Model	925	
Basic Function	Range	Accuracy
DC Voltage	10V/100V	±(0.5%+3)
	600V	±(1.0%+10)
AC Voltage	10V/100V	±(0.8%+5)
	600V	±(1.2%+10)
DC Current	60mA	±(1.0%+5)
	600mA	±(1.5%+10)
AC Current	60mA	±(1.5%+10)
	600mA	±(2.0%+5)
Capacitance	100nF/1000nF	±(4.0%+20)
	10uF/100uF/1000uF/1mF	±(3.5%+20)
	10mF/100mF	±(10%±10)
Frequency	10Hz~1MHz	±(0.1%±5)
Resistance	1000Ω	±(1.3%+5)
	10kΩ/100kΩ/1MΩ	±(0.8%±3)
	10MΩ	±(1.5%+3)
	20MΩ	±(2.0%±10)

Special Function	
High battery indication	√
Auto power off	√
Diode	√
Display	LCD displaying
Over range indication	MSD displays "OL"
Max. Display	9999
Size	137×70×20 mm
Weight	approx.133g
Power	built-in 3.7V 500mA lithium battery
Operating environment	Temperature (0 - 40)°C, humidity<75%RH
Storage environment	Temperature (-20 - 60)°C, humidity<85%RH

17



### Technical data

Model	17	
Basic Function	Range	Accuracy
DC Voltage	400mV	±(1.0%+10)
	4V/40V/400V/1000V	±(0.5%+3)
DCmV	400mV	±(1.0%+10)
ACmV	400mV	±(3.0%+3)
AC Voltage	4V/40V/400V/750V	±(1.0%+3)
DC Current	400uA/4000uA/40mA/400mA/10A	±(1.5%+3)
AC Current	400uA/4000uA/40mA/400mA/10A	±(1.5%+3)
Resistance	400Ω	±(0.5%+3)
	4kΩ/40kΩ/400kΩ/4MΩ	±(0.5%+2)
	40MΩ	±(1.5%+3)
Capacitance	10nF	±(0.5%+20)
	100nF/1uF/10uF/100uF	±(2.0%+5)
	1000uF	±(5.0%+5)
Diode test	√	
Continuity buzzer	√	
Low battery indication	√	
Data Hold	√	
Auto power off	√	
Restorable Fuse protection	√	
Shock proof protection	√	
Sampling rate	3times/s	
AC Frequency response	(40-400)Hz	
Operation way	Auto range	
Max. Display	3999	
Max/Min	√	
REL test	√	
Battery	2*1.5V	



6012C



## VICTOR 6012C VICTOR 6012D 3 5/6 Pen Type Multimeter Instruction manual

### Summary

It is a pen-type multimeter with 3 5/6 digit display, stable performance, high precision, high reliability, clear reading. 180-degree flip display and overload protection function. Powered by AAA 1.5V battery, the instrument features a LCD display, it is easy to carry and can measure AC/DC voltage (True RMS). AC/DC current, resistance and on-off test, capacitance, diode, zero-line judgment, non-contact voltage detection. It is a multi-meter with excellent performance, the ideal tool for laboratories, factories, radio enthusiasts and families.

Model	VICTOR 6012C		VICTOR 6012D	
	Resolution	Accuracy	Resolution	Accuracy
DC Voltage	6V/60V/600V	±(0.5%+4)	6V/60V/600V/1000V	±(0.5%+4)
	1000V	±(0.8%+10)	1000V	±(0.8%+10)
AC Voltage	6V/60V/600V	±(0.5%+4)	6V/60V/600V	±(0.5%+4)
	750V	±(0.8%+10)	750V	±(0.8%+10)
Capacitance	10nF/100nF/1μF/10μF/100μF/1mF/10mF	±(3.5%+20)	10nF/100nF/1μF/10μF/100μF/1mF/10mF	±(3.5%+20)
	60mF	±(5%+3)	60mF	±(5%+3)
Frequency			10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/8MHz	±(0.1%+3)
Resistance	600Ω	±(0.8%±5)	600Ω	±(0.8%±5)
	6kΩ/60kΩ/600kΩ/6MΩ	±(0.8%±3)	6kΩ/60kΩ/600kΩ/6MΩ	±(0.8%±3)
	60MΩ	±(2.5%±3)	60MΩ	±(2.5%±3)
Environmental temperature	(-20~50)°C/(0~122)°F	±(1.0%+5)	(-20~50)°C/(0~122)°F	±(0.75%+5)

Special Function	VICTOR 6012C	VICTOR 6012D
Diode	✓	✓
Continuity buzzer	✓	✓
Flashlight Function	✓	✓
Data Hold	✓	✓
Display	Black and White screen	Color screen
Auto power off	✓	✓
Flashlight	✓	✓
Sample rate	about 3/sec	about 3/sec
Overrange indication	The highest digit displays "OL"	The highest digit displays "OL"
Phase sequence measurement		✓
Zero/Fire Line measurement	✓	✓
NCV measurement	✓	✓
Operation way	Auto range	Auto range

Size	170X24X21mm
Weight	Approx.50g
Power supply	1* 1.5V AAA
Display size	30x11.5mm
Color	Black + Orange

6012D



86B

3 3/4



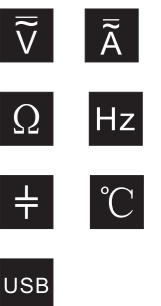
### Technical data

Basic Function	Range	Basic accuracy	
		86B	86C
DC Voltage	400mV/4V/40V/400V/1000V	±(0.5%+4)	±(0.5%+4)
AC Voltage	400mV/4V/40V/400V/750V	±(0.8%+10)	±(0.8%+10)
DC Current	400uA/4000uA/40mA/400mA/4A/10A	±(1.0%+10)	±(1.0%+10)
AC Current	400uA/4000uA/40mA/400mA/4A/10A	±(1.5%+10)	±(1.5%+10)
Resistance	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ	±(0.8%+4)	±(0.8%+4)
Capacitance	50nF/500nF/5uF/50uF/100uF/40nF/400nF/4uF/40uF/200uF	±(3.5%+8)	±(3.5%+8)
Frequency	4Hz/40Hz/400Hz/4kHz/40kHz/400kHz/4MHz/30MHz/10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/30MHz	±(0.5%+4)	±(0.5%+4)
Temperature	(-20 ~ 1000)°C	±(1.0%+5°C)	±(1.0%+5°C)
Celsius	(0~1832)°F	±(1.5%+15°F)	±(1.5%+15°F)

Special Function	86B	86C
Diode test	✓	✓
Continuity buzzer	✓	✓
Low battery indication	✓	✓
Data hold	✓	✓
Auto power off	✓	✓
Bar graph display		41segment(30time/s)
RS232 interface jack	✓	✓
Max./ Min		✓
Function protection	✓	✓
Shockproof protection	✓	✓
Frequency /duty cycle		0.1%~99.9%
Input impedance		10MΩ
Sampling rate		3 times/s
AC Frequency response		(40-400)Hz
Operation way		Manual range/Auto range
Max. Display		3999
LCD Size		70×50mm
Power		3V (1.5V×2)

86C

3 3/4



86D



3 5/6  $\bar{V}$   $\bar{A}$   $\Omega$  Hz  
 $\frac{+}{-}$   $^{\circ}C$  hFE USB

86E



4 1/2  $\bar{V}$   $\bar{A}$   
 $\Omega$  Hz  
 $\frac{+}{-}$   $^{\circ}C$   
 USB

### Technical data

Basic Function	Range	Basic accuracy	
		86D	86E
DC Voltage	600mV/6V/60V/600V/1000V	$\pm(0.5\%+4)$	
	220mV/2.2V/22V/220V		$\pm(0.05\%+8d)$
	1000V		$\pm(0.1\%+10d)$
AC Voltage	6V/60V/600V/750V	$\pm(0.8\%+10)$	
	220mV		$\pm(0.5\%+25d)$
	2.2V/22V/220V		$\pm(0.5\%+5d)$
DC Current	600uA/6000uA/60mA/600mA/6A/10A	$\pm(1.0\%+10)$	
	220uA/2200uA/22mA/220mA/10A		$\pm(0.5\%+4d)$
	600uA/6000uA/60mA/600mA/6A/10A	$\pm(1.5\%+10)$	
AC Current	220uA/2200uA/22mA/220mA/10A		$\pm(0.8\%+15d)$
	600 $\Omega$ /6k $\Omega$ /60k $\Omega$ /600k $\Omega$ /6M $\Omega$ /60M $\Omega$	$\pm(0.8\%+4)$	
	220 $\Omega$		$\pm(0.5\%+30d)$
Resistance	2.2k $\Omega$ /22k $\Omega$ /220k $\Omega$ /2.2M $\Omega$		$\pm(0.4\%+5d)$
	22M $\Omega$		$\pm(0.5\%+25d)$
	220M $\Omega$		$\pm(5\%+10d)$
Capacitance	40nF/400nF/4uF/40uF/200uF	$\pm(3.5\%+8)$	
	22nF/220nF/2.2uF/22uF/220uF		$\pm(2.5\%+30d)$
	2.2mF/22mF		$\pm(5.0\%+50d)$
Frequency	220mF		$\pm(7.0\%+50d)$
	100Hz/1kHz/10kHz/100kHz/1MHz/30MHz	$\pm(0.5\%+4)$	
	22Hz/220Hz/22kHz/220kHz/2.2MHz/22MHz		$\pm(0.1\%+4d)$
Temperature	50MHz		$\pm(0.2\%+4d)$
	(-20 ~ 1000) $^{\circ}C$	$\pm(1.0\%+5^{\circ}C)$	
	$\geq 400$ -1000 $^{\circ}C$		$\pm(1.0\%+5^{\circ}C)$
Celsius	(0~1832) $^{\circ}F$	$\pm(1.0\%+5^{\circ}F)$	
	-4~752 $^{\circ}F$		$\pm(1.2\%+6^{\circ}F)$
	$\geq 752$ ~1832 $^{\circ}F$		$\pm(1.9\%+25^{\circ}F)$

Special Function	86D	86E
Diode test	✓	✓
Transistor test	✓	✓
Continuity buzzer	✓	✓
Low battery indication	✓	✓
Data hold	✓	✓
Auto power off	✓	✓
Bar graph display	61segment(30time/s)	46segment(20time/s)
RS232 interface jack	✓	✓
Max./Min	✓	
Function protection	✓	✓
Shockproof protection	✓	✓
Frequency /duty cycle	0.1%~99.9%	5.0%~94.9%
Input impedance	10M $\Omega$	10M $\Omega$
Sampling rate	3 times/s	2 times/s
AC Frequency response	(40-400)Hz	(40-400)Hz
Operation way	Manual range/Auto range	Manual range/Auto range
Max. Display	5999	22000
LCD Size	70×50mm	70×50mm
Power	3V	9V

### Technical data

Basic Function	Range	Basic accuracy
DC Voltage	600mV/6V/60V/600V/1000V	$\pm(0.5\%+4)$
AC Voltage	6V/60V/600V/750V	$\pm(0.8\%+10)$
DC Current	60mA/600mA/6A/10A	$\pm(1.0\%+10)$
AC Current	60mA/600mA/6A/10A	$\pm(1.5\%+10)$
Resistance	600 $\Omega$ /6k $\Omega$ /60k $\Omega$ /600k $\Omega$ /6M $\Omega$ /60M $\Omega$	$\pm(0.8\%+4)$
Capacitance	40nF/400nF/4uF/40uF/200uF	$\pm(3.5\%+8)$
Frequency	10Hz / 100Hz/1000Hz/10kHz/100kHz/1MHz/20MHz	$\pm(0.3\%+2)$
Celsius	(-20~1000) $^{\circ}C$	$\pm(1.0\%+5^{\circ}C)$
Fahrenheit	(0~1832) $^{\circ}F$	$\pm(1.5\%+15^{\circ}F)$

### Special Function

USB interface jack	✓
Backlight	✓
61 section analog bar graph display	30times/second
Key-press operation	✓
Misoperation protection	✓
Diode test & Continuity buzzer	✓
Low battery indication	✓
Data Hold	✓
Auto power off/Shock proof protection	✓
mA/10A fuse protection	✓
Unit symbol display	✓
Max.value measurement	✓
Relative value measurement	✓
Duty cycle measurement	0.1%~99.9%
Input impedance	10M $\Omega$
Sampling rate	3time/s
AC Frequency response	(40~400)Hz
Max. Display	5999 (3 5/6)
LCD size	68×47mm
Battery	3V(1.5V×2)

### General Characters

Product color	Case:Black;Holster color:orange
Product Net Weight	Approx: 410g(contain battery)
Product dimension	185×91×49mm
Standard Accessories	Test leads; battery; instruction manual ; Holster ; TP01 temperature probe, PC line, CD
Standard inner packing	Color box
Carton size	465×375×506mm
Standard Quantity Per Carton	30PCS
Standard Gross Weight	23kg

70C



3 5/6  $\bar{V}$   $\bar{A}$   $\Omega$  Hz  
 $\frac{+}{-}$   $^{\circ}C$   
 USB

**88B**



3 1/2



## Technical data

Basic Function	Range	Basic accuracy	
		88B	88C
DC Voltage	200mV/2V/20V/200V/1000V	±(0.5%+3)	±(0.5%+3)
	2V/20V/200V/750V	±(0.8%+5)	
AC Voltage	200mV/2V/20V/200V/750V		±(0.8%+5)
	200uA/2mA/20mA/200mA/20A	±(0.8%+4)	
DC Current	2mA/20mA/200mA/20A		±(0.8%+3)
	20mA/200mA/20A	±(1.0%+5)	
AC Current	2mA/20mA/200mA/20A		±(1.0%+5)
	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/200MΩ	±(0.8%+3)	
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/200MΩ		±(0.8%+3)
	20nF/200nF/2uF/20uF/200uF/2000uF	±(2.5%+20)	
Capacitance	20nF/200nF/2uF/20uF/200uF		±(2.5%+20)
	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz	±(3.0%+15)	
Frequency	2kHz/20kHz/200kHz/2000kHz/10MHz		±(0.5%+4)
	2mH/20mH/200mH/2H/20H		±(2.5%+20)
Inductance	(-20~1000)°C	±(1.0%+3)	±(1.0%+4)
	Fahrenheit (0~1832)°F	±(1.5%+15)	
Celsius			
Fahrenheit			

Special Function	88B	88C
Diode test	✓	✓
Continuity buzzer	✓	✓
Low battery indication	✓	✓
Backlight	✓	✓
Data hold	✓	✓
Auto power off	✓	✓
Function protection	✓	✓
Restorable Fuse Protection	✓	✓
Shock proof protection	✓	✓
Input impedance	10MΩ	10MΩ
Sampling rate	3 time/s	3 time/s
AC Frequency response	(40-400)Hz	(40-400)Hz
Operation way	Manual range	Manual range
Max.Display	1999	1999
LCD size	65×45mm	65×45mm
Battery	9V(6F22)	9V(6F22)

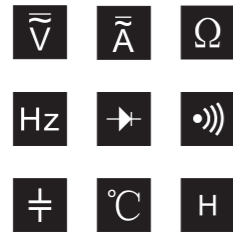
## General Characters

Product color	Case:Black;Holster color:orange
Product Net Weight	Approx:400g
Product dimension	189×97×35mm
Standard Accessories	Test leads; battery; instruction manual ;TP01 temperature probe(88B/C); Testing accessories ;
Standard inner packing	Color box
Carton size	465×317×506mm
Standard Quantity Per Carton	30PCS
Standard Gross Weight	Approx: 21kg

**88C**



3 1/2



## Technical data

Basic Function	Range	Basic accuracy	
		88D	88E
DC Voltage	200mV/2V/20V/200V/1000V	±(0.1%+5)	
	400mV/4V/40V/400V/1000V		±(0.5%+4)
DC Voltage	40mV/400mV		±(0.5%+4)
	2V/20V/200V/750V	±(0.8%+25)	
AC Voltage	4V/40V/400V/750V		±(0.8%+6)
	40mV/400mV		±(1.6%+6)
DC Current	200uA/2mA/20mA/200mA/20A	±(0.5%+4)	
	400uA/4mA/40mA/400mA/20A		±(1.0%+10)
AC Current	2mA/20mA/200mA/20A	±(1.5%+25)	
	400uA/4mA/40mA/400mA/20A		±(1.5%+5)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/200MΩ	±(0.4%+5)	
	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ		±(0.8%+4)
Capacitance	20nF/200nF/2uF/20uF/200uF/2000uF	±(3.5%+10)	
	40nF/400nF/4uF/40uF/200uF		±(2.5%+8)
Frequency	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz	±(3.0%+150)	
	100Hz/1000Hz/10kHz/100kHz/1MHz/10MHz		±(0.5%+4)
Celsius	(-20~1000)°C	±(0.8%+40)	±(1.0%+4)
	Fahrenheit (0~1832)°F		±(0.8%+5)

Special Function	88D	88E
Diode test	✓	✓
Continuity buzzer	✓	✓
Low battery indication	✓	✓
Relative value measurement		✓
Max./Min. Value selection		✓
Backlight	✓	
Data hold		✓
Auto power off	✓	✓
Bar graph display	✓	✓
Function protection	✓	✓
Restorable Fuse Protection	✓	✓
Shock proof protection	✓	✓
Input impedance	10MΩ	10MΩ
Sampling rate	3 time/s	3 time/s
AC Frequency response	(40-400)Hz	(40-400)Hz
Operation way	Manual range	Manual/Auto range
Max.Display	19999	3999
LCD size	65×45mm	65×45mm
Battery	9V(6F22)	9V(6F22)

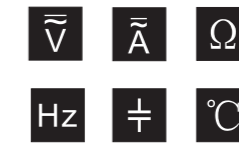
## General Characters

Product color	Case:Black;Holster color:orange
Product Net Weight	Approx:400g
Product dimension	189×97×35mm
Standard Accessories	Test leads; battery; instruction manual ; TP01 temperature probe(with temperature function)
Standard inner packing	Color box
Carton size	465×317×506mm
Standard Quantity Per Carton	30PCS
Standard Gross Weight	Approx: 23kg

**88D**



3 3/4



**88E**



4 1/2



89A



### Technical data

Basic Function	Range	Basic accuracy	
		89A	89B
DC Voltage	200mV/2V/20V/200V/1000V	±(0.5%+3)	±(0.5%+3)
AC Voltage	2V/20V/200V/750V	±(0.8%+5)	±(0.8%+5)
DC Current	2mA/20mA/200mA/20A	±(1.2%+8)	
	20mA/200mA/20A		±(1.2%+8)
AC Current	20mA/200mA/20A	±(1.5%+15)	
	20mA/200mA/20A		±(1.5%+15)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/200MΩ	±(0.8%+3)	±(0.8%+3)
	20MΩ		±(1.0%+25)
Capacitance	20nF/200nF/2uF/20uF/200uF/2000uF	±(2.5%+20)	±(2.5%+20)
Celsius	(-20~1000)°C (0-1832)°F		±(0.8%+4)

3 1/2

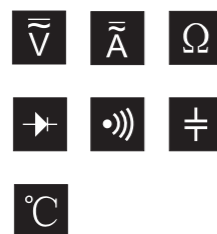


Special Function	89A	89B
Diode test	✓	✓
Continuity buzzer	✓	✓
Low battery indication	✓	✓
Data Hold	✓	✓
Auto power off	✓	✓
Function protection	✓	✓
Restorable Fuse protection	✓	✓
Shock proof protection	✓	✓
Input impedance	10MΩ	10MΩ
Sampling rate	3 times/s	3 times/s
AC Frequency response	40~400Hz	40~400Hz
Operation way	Manual range	Manual range
Max. Display	1999	1999
LCD size	61×36mm	61×36mm
Battery	9V(6F22)	9V(6F22)

### General Characters

Product color	Case:Black;Holster color:orange
Product Net Weight	Approx:270g
Product dimension	155×90×48mm
Standard Accessories	Test leads; battery; instruction manual ; Tp01 temperature probe(with temperature function)
Standard inner packing	Color box
Carton size	435×335×425mm
Standard Quantity Per Carton	30PCS
Standard Gross Weight	Approx:18.1kg

3 1/2



89B



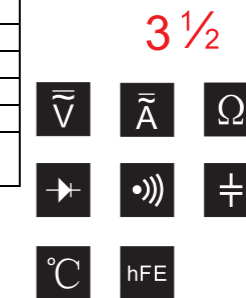
### Technical data

Basic function	Range	Accuracy VC890C+	Accuracy VC890D
DCV	200mV/2V/20V/200V	±(0.5%+3)	±(0.5%+3)
	1000V	±(0.8%+10)	±(0.8%+10)
ACV	2V/20V/200V	±(0.8%+5)	±(0.8%+5)
	750V	±(1.2%+10)	±(1.2%+10)
DCA	200uA/2mA/20mA	±(0.8%+10)	±(0.8%+10)
	200mA	±(1.2%+8)	±(1.2%+8)
	20A	±(2.0%+5)	±(2.0%+5)
ACA	20mA		±(1.0%+15)
	200mA	±(2.0%+5)	±(2.0%+5)
Resistance	20A	±(3.0%+10)	±(3.0%+10)
	200Ω	±(0.8%+5)	±(0.8%+5)
	2kΩ/20kΩ/200kΩ/2MΩ	±(0.8%+3)	±(0.8%+3)
Capacitance	20MΩ	±(1.0%+25)	±(1.0%+25)
	6nF	±(5.0%+40)	±(5.0%+40)
	60nF/600nF/6uF/60uF	±(3.5%+20)	±(3.5%+20)
Celsius	600uF/6mF/20mF	±(5.0%+10)	±(5.0%+10)
	(-20~1000)°C (-4~1832)°F	<400°C±(1.0%+5) ≥400°C±(1.5%+15)	

Special Function	VC890C+	VC890D
Diode & Continuity test	✓	
Backlight	✓	
Continuity buzzer	✓	
Low battery indication	✓	
Auto power off	✓	
Function protection	✓	
200mA/20A Protection	✓	
TRUE RMS	✓	
NCV measurement	✓	
Torch function	✓	
Shock proof protection	✓	
Input impedance	About 10MΩ	
Sampling rate	3 times/s	
Frequency response	(40-1000)Hz	
Operation way	Manual Range	
Max. Display	1999	
LCD size	61 x 36mm	
Battery	2*1.5V AA LR6	

General Characters	
Product Color	Case: black ; Holster color: orange
Product Net Weight	Approx . 358g (including battery)
Product Dimension	178*86*52mm
Standard Accessories	Test leads , battery , manual , K-type probe
Standard inner packing	Color box
Carton size	435*335*425mm
Standard Quantity /Carton	30Pcs
Standard Gross Weight	Approx . 18.2kg

VC890C+



VC890D



890H+

890G+

TRUE RMS



## Technical data

Basic function	Range	Accuracy VICTOR 890H+	Accuracy VICTOR 890G+
DCV	600mV/6V/60V/600V/1000V	±(0.5%+3)	±(0.5%+3)
ACV	600mV/6V/60V/600V/750V	±(0.8%+5)	±(0.8%+5)
ACV	6V/60V/600V/750V		±(0.8%+5)
DCA	600µA/6000µA/60mA/600mA/10A	±(1.2%+3)	
DCA	60µA/60mA/600mA/10A		±(1.2%+3)
ACA	600µA/6000µA/60mA/600mA/10A	±(1.5%+3)	
	60mA/600mA/10A		±(1.5%+3)
Resistance	600Ω/6kΩ/60kΩ/600kΩ	±(1.0%+3)	±(1.0%+3)
	6MΩ/60MΩ	±(1.5%+3)	±(1.5%+3)
Capacitance	10nF/100nF/1000nF/10µF/100µF/1000µF	±(4%+5)	±(4%+5)
	10mF/100mF	±(5%+5)	±(5%+5)
Frequency/duty cycle	10Hz/100Hz/1000Hz/10kHz/100kHz/1000kHz	±(1.0%+3)	±(1.0%+3)
	10MHz/1~99%	±(3.0%+3)	±(3.0%+3)
<b>Special function</b>		<b>890H+</b>	<b>890G+</b>
Temperature	-20°C~1000°C -4°F~1832°F	√	
NCV test		√	√
Live wire test		√	√
Battery test		√	√
Input terminal prompt		√	√
High voltage prompt		√	√
Diode test		√	√
Continuity alarm		√	√
Low battery		√	√
Backlight		√	√
Flashlight		√	√
Auto power off		√	√
Function protection		√	√
shakeproof protection		√	√
Input impedance		10MΩ	10MΩ
ACV frequency response		10Hz ~ 1kHz	10Hz ~ 1kHz
Operation method		auto range	auto range
Display		6000 counts	6000 counts
Supply		Battery 2*1.5V AA	Battery 2*1.5V AA

## Technical data

Basic Function	Range	Basic accuracy 97
DC Voltage	400mV/4V/40V/400V/1000V	±(0.5%+4)
AC Voltage	400mV/4V/40V/400V/750V	±(0.8%+10)
DC Current	400uA/4000uA/40mA/400mA/10A	±(1%+10)
AC Current	400uA/4000uA/40mA/400mA/10A	±(1.5%+10)
Resistance	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ	±(0.8%+4)
Capacitance	10nF	±(5.0%+20)
	100nF/1uF/10uF/100uF	±(3.5%+8)
	1mF/10mF/100mF	±(5.0%+10)
Frequency	100/1000/10k/100k/1M/30MHz	±(0.5%+10)
Celsius	(-20~1000)°C	±(1.0%+5)
Fahrenheit	(-4~1832)°F	±(1.0%+5)

## General Characters

Product color	Case: black ; Holster color: orange
Product Net Weight	Approx:420g
Product dimension	190×93.5×37mm
Standard Accessories	Test leads; battery; instruction manual ;Tp01 temperature probe(with temperature function)
Standard inner packing	Color box
Standard Quantity Per Carton	40PCS
Carton size	465×317×506mm
Standard Gross Weight	Approx:22kg

## Special Function 97

Diode/Transistor	√
Continuity buzzer	√
Low battery indication	√
Data hold	√
Auto power off	√
Analog bar graph	√
Shockproof protection	√
Function protection	1%~99%
Input impedance	10MΩ
Sampling rate	3 time/s
AC Frequency response	(40-400)Hz
Operation way	Auto range
Max.Display	3999
LCD size	70×50mm
Battery	9V

3 3/4



VC97 old model



## VC97 new model



## VC97 3 3/4 Auto Range Digital Multimeter

- New type holster, streamline design.
- Large LCD makes the reading clearly. Backlight.
- Metallic screen board with stronger antimagnetic and anti-interferential function.
- Full function protection, anti-high voltage circuit design.
- CAT-IV
- True RMS
- NCV

## Technical data

Basic Function	Range	Accuracy
DC Voltage	4V/40V/400V	±(0.5%+4)
DC Voltage	1000V	±(1.0%+6)
DC mV	40mV/400mV	±(0.5%+5)
ACmV (True RMS)	40mV/400mV	±(1.0%+6)
AC Voltage (True RMS)	4V/40V/400V	±(0.8%+10)
AC Voltage (True RMS)	750V	±(1.2%+10)
DC Current	400uA/4000uA/40mA/400mA/4A/10A	±(1%+10)
AC Current (True RMS)	400uA/4000uA/40mA/400mA/4A/10A	±(1.5%+10)
Resistance	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ	±(0.8%+4)
Capacitance	6nF	±(5.0%+40)
	60nF/600nF/6uF/60uF/600uF	±(3.5%+20)
	6mF	±(5.0%+10)
	60mF/100mF	±10%
Frequency	10/100/1000/10k/100k/1M/20MHz	±(0.5%+10)
Celsius	-20~1000°C (-4~1832)°F	±(1.0%+5)

Special Function	
NCV	√
Flashlight	√
Diode	√
Transistor	√
Continuity buzzer	√
Low battery indication	√
Data Hold	√
Auto power off	√
Analog bar graph	√
Shockproof protection	√
Function protection	1%~99.%
Input impedance	10MΩ
Auto power off	3 times/s
Analog bar graph	40~400Hz
Shockproof protection	Auto range
Function protection	3999
Input impedance	65×35mm

## Technical data

Basic Function	Range	VC9801A+ VC9802A+	VC9804A+
DC Voltage	200mV	±(0.5%+5)	±(0.5%+5)
	2V/20V/200V	±(0.5%+3)	±(0.5%+3)
	1000V	±(1.0%+10)	±(1.0%+10)
AC Voltage	2V/20V/200V	±(0.8%+5)	±(0.8%+5)
	1000V	±(1.2%+10)	±(1.2%+10)
DC Current	200uA/2mA/20mA/200mA	±(1.2%+8)	±(1.2%+8)
	2A	±(1.5%+10)	
AC Current	200mA	±(1.5%+15)	±(1.5%+15)
	2A	±(2.0%+5)	
Resistance	200Ω	±(0.8%+5)	±(0.8%+5)
	2kΩ/20kΩ/200kΩ/2MΩ	±(0.8%+3)	±(0.8%+3)
	20MΩ	±(1.0%+25)	±(1.0%+25)
	200MΩ	±(5.0%+30)	±(5.0%+30)
Capacitance	6nF	±(5.0%+40)	±(5.0%+40)
	60nF/600nF/6uF/60uF	±(3.5%+20)	±(3.5%+20)
	600uF/6mF	±(5.0%+10)	±(5.0%+10)
Frequency	20mF	±(5.0%+40)	±(5.0%+40)
	10Hz	*	±(1.0%+10)
	100Hz	*	
	1kHz	*	
	10kHz	*	
	100kHz	*	
1MHz	*		
Temperature	20MHz	*	
	(-20~1000)°C (-4~1832)°F	*	√

Special Function		
Diode/Transistor	√	√
Triode hEE	√	√
Continuity Buzzer	√	√
Low battery indication	√	√
Data Hold	√	√
Auto power off	√	√
Backlight	√	√
Function protection	√	√
200mA protection	√	√
NCV	√	√
Flashlight	√	√

## VC9801A+



## VC9802A+



## VC9804A+



**VC9805A+**



**VC9808A+**



**VC980+**



Basic Function	Range	Accuracy		
		VC9805A	VC9808+	VC980+
DC Voltage	200mV/2V/20V/200V	±(0.5%+3)		±(0.05%+5)
	1000V	±(1.0%+10)		±(0.1%+5)
AC Voltage	200mV	±(1.0%+5)		±(1.0%+25)
	2V/20V/200V	±(0.8%+5)		±(0.8%+25)
DC Current	750V	±(1.2%+10)		±(1.2%+50)
	200uA/2mA /20mA	±(1.2%+10)		±(0.5%+4)
	200mA	±(1.2%+10)		±(0.8%+6)
	20A	±(2.0%+5)		±(2.0%+15)
AC Current	200uA/2mA /20mA	±(1.5%+15)		*
	200mA	±(1.5%+15)		±(1.5%+15)
	20A	±(3.0%+10)		±(2.5%+35)
	200Ω	±(0.8%+5)		±(0.4%+10)
Resistance	2kΩ/20kΩ/200kΩ/2MΩ	±(0.8%+3)		±(0.3%+5)
	20MΩ(VC9805A/VC9808+) 2MΩ(VC980+)	±(1.0%+25)		±(1.2%+25)
	200MΩ	±(5.0%+30)		±(5.0%+45)
	20MΩ(VC980+)			
Inductance	2mH/20mH/200mH/2H	±(2.5%+30)		*
	20H	±(5.0%+20)		*
Capacitance	20nF/200nF/2uF/20uF	±(3.5%+20)		±(4.0%+50)
	200uF/2mF (VC9805A/VC9808+) 20uF/200uF/2000uF(V.C980+)	±(5.0%+10)		±(4.0%+50)
Frequency	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/20MHz (VC9805A/VC9808+)	±(1.0%+10)		*
	200Hz/2kHz/20kHz/200kHz/2MHz (VC980+)	*		±(0.1%+3)
Celsius	(-20 ~ 1000)°C	±(1.0%+5)		*
Fahrenheit	(-4 ~ 1832)°F	±(1.0%+5)		*

Special Function		
Diode/Transistor	√	√
Continuity Buzzer	√	√
Low battery indication	√	√
Hold	Peak Hold	Data Hold
Auto power off	√	√
Backlight /Torch	√	√
Function protection	√	√
200mA/20A protection	√	√
Input impedance	10MΩ	10MΩ
Sampling rate	3 times/s	3 times/s
AC frequency response	40-1000Hz	40-20000Hz
Square wave		√
Operation way	Manual range	Manual /Auto range
Max. Display	1999	19999
LCD Size	65*42mm	65*42mm
Battery	1.5V*4	1.5V*4

General Characters		
Model	VC9805A/VC9808+	VC980+
Product Color	Case: black ; Holster color: orange	Case: black ; Holster color: orange
Product Net Weight	Approx. 380g(Including battery)	Approx. 390g(Including battery)
Product dimension	190*96*46mm	190*96*46mm
Standard Accessories	Test leads , battery ,instruction manual,TP01 K style temperature probe (with temperature function)	Test leads , battery ,instruction manual
Standard Quantity Per Carton	30Pcs	30Pcs
Standard inner packing	Color box	Color box
Carton Size	46.5*317*50.6mm	46.5*317*50.6mm

**VC9806+**



**VC9807A+**



## Technical data

Basic Function	Range	Accuracy	
		VC9806+	VC9807A+
DC Voltage	200mV/2V/20V/200V	±(0.05%+5)	±(0.1%+5)
	1000V	±(0.1%+5)	±(0.2%+5)
AC Voltage	200mV	±(1.0%+25)	
	2V/20V/200V	±(0.8%+25)	
DC Current	750V	±(1.2%+50)	
	200uA/2000uA/20mA	±(0.5%+4)	
AC Current	200mA	±(0.8%+6)	
	20A	±(2.0%+15)	
Resistance	20mA	±(1.5%+15)	
	200mA	±(1.5%+15)	
Conductance	20A	±(2.5%+35)	
	200Ω	±(0.4%+10)	
	2kΩ/20kΩ/200kΩ	±(0.4%+5)	
Capacitance	2MΩ	±(1.2%+25)	
	20MΩ/200MΩ	±(5.0%+45)	
Frequency	(0.1~100)nS	±(1.0%+30)	
	20nF/200nF/2uF/20uF/200uF/2mF	±(4.0%+50)	
	200Hz/2kHz/20kHz/200kHz/2MHz	±(0.1%+3)	

Special Function		
Diode	√	√
Transistor test	√	√
Continuity buzzer	√	√
Low battery indication	√	√
Data Hold	√	√
Auto power off	√	√
Backlight	√	√
Function protection	√	√
Shockproof protection	√	√
True RMS	√	√
Input impedance	10MΩ	10MΩ
Sampling rate	3 times/s	3 times/s
AC Frequency response	40~400Hz	40~400Hz
Operation way	Manual range	Manual range
Max. Display	19999	19999
LCD size	70×50mm	70×50mm
Battery	9V (6F22)	9V (6F22)

9820



## Technical Specifications

Basic Function	Range	Accuracy
DC Voltage	600mV	±(0.5%+5)
	6V/60V/600V/1000V	±(0.5%+4)
	2000V	±(1.0%+6)
AC Voltage	6V/60V/600V/750V	±(0.8%+10)
	2000V	±(1.2%+10)
DC Current	600uA/6000uA	±(1.0%+10)
	60mA/600mA	±(1.2%+10)
AC Current	600uA/6000uA/60mA/600mA	±(1.5%+10)
Resistance	600Ω	±(0.8%+5)
	6kΩ/60kΩ/600kΩ/6MΩ	±(0.8%+4)
	60MΩ	±(1.2%+10)
Capacitance	10nF	±(5.0%+40)
	100nF/1uF/10uF/100uF	±(3.5%+20)
	1mF	±(5.0%+10)
	20mF	±(10%+0D)
Frequency	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz	±(0.5%+10)
Temperature	(-20~1000)°C	<400°C±(1.0%+5); ≥400°C±(1.5%+15)
	(-4~1832)°F	<752°F±(1.0%+5); ≥752°F±(1.5%+15)

Features	
Diode	√
Continuity buzzer	√
Low battery indication	√
Backlight	√
Data Hold	√
True RMS	√
Auto power off	√
Shockproof protection	√
Storage environment	Temperature (-20 - 60) C ,humidity<85%RH
Operating environment	Temperature (0 - 40) C ,humidity<75%RH
Overload protection	OL
Input impedance	10MΩ
Sampling rate	3 times/s
AC Frequency response	40~1000Hz
Operation way	Auto Range
Max. Display	5999 (3 5/6) auto polarity indication
Size	(186X92X52) mm
Weight	395g
Power	5V AAA Battery .LR03

2003A/2004A/2006A



## Two-channel Function/ Arbitrary Waveform Generator

These series two-channel function/arbitrary waveform generator is equipped with direct digital synthesis (DDS) technology which enables output signal to be stable and accurate.

### Key Features

- 3.5-inch 480×320TFT LCD with clear graphic interface
- Chinese / English menu available
- Press key for help and information
- File management supporting USB flash disk and local storage
- Two-channel output with the highest output frequency is “2003A” Model is 25MHz, “2004A” Model is 40MHz, “2006A” Model is 60MHz.
- Sampling rate: 200MSa/S, vertical resolution: 13 bit and storage depth: 8k
- 5 basic waveforms and 32 arbitrary waveforms in-built
- Pulse wave output set in edge time
- Internal/external AM, FM, PM, ASK, FSK and PSK modulation function
- Output of linear/logarithmic frequency sweep and burst waveform
- Frequency meter of high precision of 100MHz and 32-bit counter
- With RS232 interface, USB Device, USB Host interface supporting USB flash disk storage (USB Host Optional)
- Multi-functional arbitrary waveform editing software equipped



## General Technical Specifications

- Supply voltage:220V±10%, 45~65Hz, Or 110V±10%, 45~65Hz
- Power consumption:< 15W
- Types:3.5-inch TFT LCD screen, Resolution480×320, 16M color
- Environment:Operation 10 °C ~ +40 °C \ Non-operation -10 °C ~+60 °C
- Humidity range:Within the range of 0 ~ 40 °C , ≤90% relative humidity
- Interface:RS232,USB Device;USB Host(optional)
- Display: 3.5 inch TFT LCD screen, 480 x 320 resolution
- Size: 265 \* 105 \* 305 mm (width x height x deep)
- Weight: 2.6 kg

## Accessories

### Standard accessories:

- 1 piece of 30A51 three-wire power line;
- 1 piece of 33A52 BNC coaxial cable;
- 1 CD-ROM
- 1User guide.

### Optional accessories:

- BNC alligator clip line (33P01);
- Cabinet installation suit (32P02);
- RS232 serial line (32P04);
- USB data line (32P05).

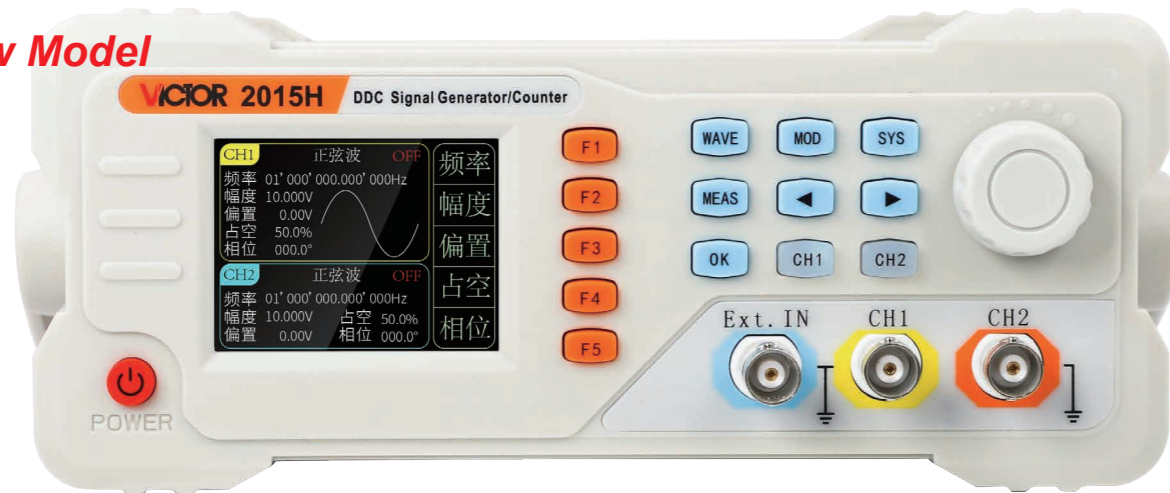
## Technical Specifications

Frequency Characteristics			
MODEL	2003A	2004A	2006A
Sine	1μHz ~ 25MHz	1μHz ~ 40MHz	1μHz ~ 60MHz
Square	1μHz ~ 15MHz	1μHz ~ 15MHz	1μHz ~ 15MHz
Triangle	1μHz ~ 15MHz	1μHz ~ 15MHz	1μHz ~ 15MHz
Pulse	100μHz ~ 6MHz	100μHz ~ 6MHz	100μHz ~ 6MHz
Arbitrary	1μHz ~ 6MHz	1μHz ~ 6MHz	1μHz ~ 6MHz
Noise (-3dB)	7MHz Bandwidth		
Frequency Resolution	1μHz		
Frequency Accuracy	±5ppm		
Frequency Stability	±1ppm/3hour		
Frequency Characteristics			
Waveform Types	Sine, square, triangle, pulse, noise and arbitrary waves (including DC). There are 32 kinds of arbitrary waves and 50 kinds of user-defined waves.		
Waveform Length	8192 points		
Waveform Sampling Rate	200 MSa/s		
Waveform Vertical Resolution	13 bits		
Sine Wave Characteristics			
Sine Wave	Harmonic Distortion	≥45dBc(<1MHz);≥40dBc(1MHz~20MHz)	
	Total Harmonic Distortion	<0.8%(20Hz ~ 20kHz, 0dBm)	
Square Wave Signal Characteristics			
Square Wave	Rise/Fall	<20ns	
	Overshoot	<5%	
	Duty Cycle	freq<100kHz: 1%~99%;100kHz≤freq<5MHz: 20% ~ 80%; 5MHz≤freq: 40% ~ 60%(0.1% resolution)	
Pulse Wave Characteristics			
Pulse Wave	Pulse Width	Min 20ns; 1ns resolution	
	Edge Transition Time	Min 20ns;	
	Overshoot	<5%	
	Jitter	6ns+0.1% Period	
Ramp Wave	Linearity Degree	≥98%(0.01Hz~10kHz)	
	Symmetry	0.0 ~ 100.0%(resolution 0.1%)	
Output Characteristics			
Amplitude			
Amplitude Range	freq<10MHz	10MHz≤freq<30MHz	30MHz≤freq
	2mVpp ~ 20Vpp	2mVpp ~10Vpp	2mVpp ~5Vpp
Amplitude Resolution	1mV		
Amplitude Stability	±1% set value±1mVpp(1kHz Sine, 0 offset, >10mVpp)		
Amplitude Flatness (relative to 1K Sine, 1 Vpp)	±0.4dB <10MHz;		
	±1.0dB ≥10MHz.		
Output Impedance	50Ω±10%(Typical)		
Protection	All the signal output terminal can be shorted within 60s		
DC Offset			
	Output Amplitude>0.1V	2mV<Output Amplitudes≤0.1V	
Offset Adjusting Range	±10Vpk, ac + dc		±0.250Vpk, ac + dc
Offset Resolution	1mV		

External Measurement Function			
Frequency Meter	Frequency measurement range	1Hz ~ 100MHz	
	Measurement accuracy	Gate time continuously adjusted between0.01s~10s	
Counter Function	Counting region	0 ~ 4294967295	
	Control mode	Manual operation	
Input Signal Voltage Range	2Vpp~20Vpp		
Coupled Mode	AC or DC		
Pulse Width Measurement	1ns (resolution), 20s (MAX measuring time)		
Period Measurement	1ns (resolution), 20s (MAX measuring time)		
SYNC Output		Trigger Input	
Output Channel	CH1 or CH2, default CH1	Signal Range	2Vpp~20Vpp
Level	TTL	Coupling	AC or DC
Impedance	50Ω	Pulse Width	>100ns
Rise/Fall Time	< 25ns	Reaction Time	<500ns(Burst) <10μs(Sweep)
Maximum Frequency	25MHz		
Phase characteristics		Modulation Input	
Phase Adjusting Range	0~359.9°	Impedance	1MΩ
Phase Resolution	0.1°	Signal range	±2.5V ac+dc
AM Modulation		FM Modulation	
Output Channel	CH1 or CH2, default CH1	Output Channel	CH1 or CH2, default CH1
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)	Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/External	Source	Internal/External
Modulation Wave	Sine, square, triangle and ramp	Modulation Wave	Sine, square, triangle and ramp
Modulation Frequency	2mHz~20kHz	Modulation Frequency	2mHz~20kHz
Modulation Depth	0%~120%	Frequency Offset	0~Maximum carrier frequency
PM Modulation		ASK Modulation	
Output Channel	CH1 or CH2, default CH1	Output Channel	CH1 or CH2, default CH1
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)	Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/External	Source	Internal/External
Modulation Wave	Sine, square, triangle and ramp	Modulation Wave	Square wave of 50% duty ratio
Modulation Frequency	2mHz~20kHz	Keying Frequency	2mHz~1MHz
Phase Offset	0°~ 360°	Modulation Amplitude	0~Carrier Amplitude
FSK Modulation		PSK Modulation	
Output Channel	CH1 or CH2, default CH1	Output Channel	CH1 or CH2, default CH1
Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)	Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Source	Internal/External	Source	Internal/External
Modulation Wave	Square wave of 50% duty ratio	Modulation Wave	Square wave of 50% duty ratio
Keying Frequency	2mHz~1MHz	Keying Frequency	2mHz~1MHz
Hop Frequency	Carrier frequency range	Modulation Phase	0°~ 360°
Frequency Sweep		Burst Characteristics	
Output Channel	CH1 or CH2, default CH1	Output Channel	CH1 or CH2, default CH1
Types	Linearity/Logarithm	Carrier Wave	Sine, square, ramp, pulse and arbitrary waveforms (excluding DC)
Sweep Frequency Time	1ms ~ 500.000s	Pulse Count	1~65535 or infinite, gated
Start/Stop Frequency	1μHz~Maximum carrier frequency	Start/Stop Phase	0~360°
Sweep Direction	Forward, Backward	Internal Period	1μs~500s
Trigger Source	Manual operating, internal, external	Gating Source	External
		Trigger Source	Internal, external, manual operating

2015H/2040H/2060H

**New Model**



## Technical data

Model	2015H	2040H	2060H
<b>Sine wave</b>	1μHz ~ 20MHz	1μHz ~ 40MHz	1μHz ~ 60MHz
<b>Square wave</b>	1μHz ~ 15MHz	1μHz ~ 15MHz	1μHz ~ 15MHz
<b>Triangle wave</b>	1μHz ~ 15MHz	1μHz ~ 15MHz	1μHz ~ 15MHz
<b>Pulse wave</b>	100μHz ~ 6MHz	100μHz ~ 6MHz	100μHz ~ 6MHz
<b>Arbitrary</b>	1μHz ~ 6MHz	1μHz ~ 6MHz	1μHz ~ 6MHz
<b>Frequency resolution</b>	1uHz		
<b>Frequency accuracy</b>	±20ppm		
<b>Frequency stability</b>	±1ppm/3hours		
<b>Waveform characteristics</b>			
<b>Waveform type</b>	Sine, Square, triangular wave, pulse, noise, arbitrary wave (including DC).		
<b>Wave length</b>	8192 points		
<b>Waveform sampling rate</b>	200MSa/s		
<b>Waveform vertical resolution</b>	13-bits		
<b>Sine wave characteristics</b>			
<b>Sine wave</b>	Harmonic Suppression	≥45dBc(<1MHz); ≥40dBc(1MHz~20MHz)	
	Total harmonic distortion	<0.8%(20Hz~20kHz, 0dBm)	
<b>Square wave signal characteristics</b>			
<b>Square wave</b>	Rise/Fall time	<20ns	
	Overshoot	<5%	
	Duty cycle range	Frequency < 100 KHz: 1% ~ 99%; 100kHz≤ frequency <5MHz: 20% ~ 80%; 5MHz≤ frequency: 40% ~ 60%(0.1% resolution)	
<b>Pulse wave characteristics</b>			
<b>Pulse wave</b>	Pulse width	Minimum 20ns; 1 ns resolution.	
	Edge jumping time	Minimum 20ns	
	Overshoot	<5%..	
	Shaking	6ns+0.1% period cycle	
<b>Sawtooth wave characteristics</b>			
<b>Sawtooth wave</b>	Linearity	≥98%(0.01Hz~10kHz)	
	Symmetry	0.0 ~ 100.0%(resolution 0.1%)	
<b>Trigger Input</b>			
<b>Signal Range</b>	2Vpp~20Vpp		
<b>Coupling</b>	AC or DC		
<b>Pulse Width</b>	>100ns		
<b>Reaction Time</b>	<500ns(Burst)		
	<10μs(Sweep)		
<b>Modulation Input</b>			
<b>Impedance</b>	1MΩ		
<b>Signal Range</b>	±2.5V ac+dc		

## Output characteristics

Amplitude	2015H	2040H	2060H
<b>Amplitude range</b>	Frequency <10MHz	10MHz ≤ Frequency ≤ 30MHz	30MHz ≤ Frequency
	2mVpp~20Vpp	2mVpp~10Vpp	2mVpp~5Vpp
<b>Amplitude resolution</b>	1mV		
<b>Amplitude accuracy</b>	1% +2mVpp of set value (1kHz sine wave, 0 offset, >10mVpp)		
<b>Amplitude flatness (Relative to 1k sine wave, 1Vpp)</b>	±0.4dB <10MHz; ±1.0dB ≥10MHz		
<b>Output impedance</b>	50Ω±10% (typical)		
<b>Protection</b>	All signal outputs can work within 60 when the load is short-circuited.		
<b>Offset</b>			
<b>Output range</b>	Output amplitude > 0.1V	2mV < Output amplitude ≤ 0.1V	
	±10Vpk, ac + dc	±0.250Vpk, ac + dc	
<b>Offset resolution</b>	1mV		
<b>Phase characteristics</b>			
<b>Phase adjustment range</b>	0~359.9°		
<b>Phase resolution</b>	0.1°		
<b>External measurement function</b>			
<b>Frequency meter function</b>	Frequency measurement range 1Hz~100MHz		
	Gate time	0.01S~10s continuous adjustment	
<b>Counter function</b>	Counting range 0-4294967295		
	Counting method	Manually	
<b>Input signal voltage range</b>	2Vpp~20Vpp		
<b>Coupling</b>	DC or AC		
<b>Pulse width measurement</b>	1ns resolution, maximum measurable 20s		
<b>Period measurement</b>	1ns us resolution, maximum measurable 20s		

AM Modulation		FM Modulation	
<b>Output channel</b>	CH1 or CH2	<b>Output Channel</b>	CH1 or CH2
<b>Signal Carrier</b>	Sine, square, sawtooth, pulse and arbitrary waveforms (excluding DC)	<b>Carrier Wave</b>	Sine, square, sawtooth, pulse and arbitrary waveforms (excluding DC)
<b>Source</b>	Internal/External VCO(external is optional)	<b>Source</b>	Internal/External(external is optional)
<b>Modulation Wave</b>	Sine, square, triangle and ramp	<b>Modulation Wave</b>	Sine, square, triangle and ramp
<b>Modulation Frequency</b>	2mHz~20kHz	<b>Modulation Frequency</b>	2mHz~20kHz
<b>Modulation Depth</b>	0%~120%	<b>Frequency Offset</b>	0~Maximum carrier frequency
<b>PM Modulation</b>		<b>ASK Modulation</b>	
<b>Output Channel</b>	CH1 or CH2	<b>Output Channel</b>	CH1 or CH2
<b>Carrier Wave</b>	Sine, square, sawtooth, pulse and arbitrary waveforms (excluding DC)	<b>Carrier Wave</b>	Sine, square, sawtooth, pulse and arbitrary waveforms (excluding DC)
<b>Source</b>	Internal/External(external is optional)	<b>Source</b>	Internal/External
<b>Modulation Wave</b>	Sine, square, triangle and ramp	<b>Modulation Wave</b>	Square wave of 50% duty ratio
<b>Modulation Frequency</b>	2mHz~20kHz	<b>Keying Frequency</b>	2mHz~1MHz
<b>Phase Offset</b>	0°~360°	<b>Modulation Amplitude</b>	0~Carrier Amplitude
<b>FSK Modulation</b>		<b>PSK Modulation</b>	
<b>Output Channel</b>	CH1 or CH2	<b>Output Channel</b>	CH1 or CH2
<b>Carrier Wave</b>	Sine, square, sawtooth, pulse and arbitrary waveforms (excluding DC)	<b>Carrier Wave</b>	Sine, square, sawtooth, pulse and arbitrary waveforms (excluding DC)
<b>Source</b>	Internal/External	<b>Source</b>	Internal/External
<b>Modulation Wave</b>	Square wave of 50% duty ratio	<b>Modulation Wave</b>	Square wave of 50% duty ratio
<b>Keying Frequency</b>	2mHz~1MHz	<b>Keying Frequency</b>	2mHz~1MHz
<b>Hop Frequency</b>	Carrier frequency range	<b>Modulation Phase</b>	0°~360°

## General Technical Specifications

<b>Power Supply</b>	
<b>Supply Voltage</b>	AC 110~240V, 50~60Hz
<b>Power Consumption</b>	<15W
<b>Display</b>	
<b>Types</b>	2.4-inch TFT LCD screen
<b>Resolution</b>	320×240
<b>Color</b>	16M color
<b>Environment</b>	
<b>Temperature Range</b>	Operation: 10°C~+40°C Non-operation: -10°C~+60°C
<b>Cooling Methods</b>	Natural cooling
<b>Humidity Range</b>	Below +35°C: ≤90% relative humidity, +B14035°C~+40°C: ≤60% relative humidity
<b>Interface</b>	USB Device

3010

New Model



3021

New Model



7244

New Model



### Technical data

Model	3010	3021	7244
DCV	2.5V/10V/25V/50V/250V/1000V	±3%	
	0.1V/0.5V/2.5V/10V/50V/250V/1000V		±3%
	0.1V/0.5V/2.5V/10V/50V/250V/500V		±3%
ACV	10V/50V/250V/1000V	±4%	±4%
	10V/50V/250V/500V		
DCA	50uA/0.5mA/5mA/50mA/500mA/10A	±3%	
	50uA/2.5mA/25mA/0.25A/10A		±3%
	50uA/2.5mA/25mA/250mA/10A		±3%
Resistanc	X1/X10/X100/X1k/X10kΩ	±3%	
	X1/X10/X100/X1k/X100kΩ		±3%
<b>Special functions</b>			
Dry cell measurement		√	
Diode test		√	√
Triode test	√	√	
Audio level measurement dB	√	√	√
On off test	√	√	√
line protection	√	√	√
Input impedance	(9~20)kΩ	(9~20)kΩ	(9~20)kΩ
<b>Basic parameters</b>			
Power Supply	AAA- 9V	AAA	AAA- 9V
Body color	Black+orange		
Body weight	About 225g (including battery)		
Body size	160X101.5X40mm		
Standard accessories	Test probe/manual		
Standard inner packaging	Color box		

### Technical data

Inductance(L) Range	6243 Capacitance/Resistance/Inductance		
	Accuracy	Resolution	Measuring frequency
2mH	±(2.0%+5d)	1uH	Approx:200Hz
20mH		10uH	
200mH		100uH	
2H	±(5.0%+5d)	1mH	Approx:200Hz
20H		10mH	
2nF	±(1.0%+5d)	1pF	Approx:16Hz
200nF		100pF	
2uF		1 nF	
20uF	±(2.0%+5d)	10 nF	Approx:8Hz
200uF		100 nF	
1000uF	±(5.0%+25d)	1uF	

### General Characters

Product Net Weight	380g (including battery)
Product dimension	189×97×35mm
Carton size	465×317×506mm
Standard Quantity Per Carton	30PCS

### Technical data

Capacitance (C)			6013 Capacitance (C)	
Range	Resolution	Max. displaying in the ranges	Measuring frequency	Accuracy
200pF	0.1pF	199.9 pF	800Hz	±(0.5%+7)
2nF	1pF	1.999nF		
20nF	10pF	19.99nF		
200nF	100pF	199.9nF	80Hz	±(2%+5)
2uF	1000pF	1.999uF		
20uF	0.01uF	19.99uF	8Hz	±(3%+10)
200uF	0.1uF	199.9uF		
2000uF	1uF	1999uF		
20000uF	10uF	1999(×10)uF	8Hz	

### Special Function

Low battery indication	√
Function protection	√
Zero manual	√
Overload protection	√
Backlight	√
Max. display	1999 (3 1/2LCD display)
Sampling rate	(0~5) time/s
Environment/Relative Humidity	0°C~40°C/Relative Humidity<80%
Over-range display	Max display "1"
Size	189×97×35mm
Weight	320g
Power	9V (6F22)

Range	VICTOR 6013B Accuracy	Resolution
300Ω/3KΩ/30KΩ/300KΩ	±(1.0%+5d)	0.1Ω
3MΩ/30MΩ	±(2.0%+5d)	
3nF/30nF/300nF/3μF/30μF/300μF	±(3.0%+5d)	0.1nF
3mF/30mF	±(5.0%+5d)	

General Features	6013B
Low Battery Indication	√
Auto Power Off	√
Data Hold	√
Max. Display	2999
Sampling Rate	3 times/s
Operation Temperature /Humidity	0°C~40°C; Humidity <80%
Over Range Indication	LCD "0L"
Product Size	175×34×18.5mm
Product Weight	68.5g

6243



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6013



3 1/2



6013B



## 4080/4082



### Technical data

Handheld LCR meter	4080	4082
Testing frequency	100Hz, 120Hz, 1KHz, 10KHz, 40KHz, 100KHz	100Hz-100KHz adjustable, step from 1Hz
Basic accuracy	0.3%	0.2%
Electrolytic capacitor mode	√	√
DCR mode	x	√
Bias Voltage	x	0-500mV can be adjustable, step from 1mV
Electric level	0.6Vrms	0-0.7V adjustable
Screen	2.8 inches TFT LCD	
Digits display	Main parameter: 5 digits; auxiliary parameter: 5 digits	
Measuring parameters	Main parameter: L/C/R/Z	
Auxiliary parameter	X/D/Q/ESR	X/D/Q/θ/ESR
Measuring Range (L)	0-2000H	
Measuring Range (C)	0-20mF	
Measuring Range (R)	0-20MΩ	
Measuring speed	1 time/s (slow), 2 times/s (moderate), 4 times/s (fast)	
Calibration function	Open circuit calibration, short circuit calibration	
Filtering function	Limit scope 1%~50% can be set; 1%, 5%, 10%, 20% are the fix points	
errors measurement	is use for comparing the percent errors between components and nominal value, meanwhile display	
others	Backlight luminance can be adjustable; USB device and auto power off can be set	
Standard Accessories	Mini-USB cable; power adapter; short-circuit plate; Kelvin test fixture Lithium battery with large capacity	



## 4091A/4091B/4091C



## 4090A/4090B/4090C

### Technical data

LCR meter	4090A	4090B	4090C	4091A	4091B	4091C
Testing frequency	10 points (100, 120, 200, 400, 800, 1K, 2K, 4K, 8K, 10K)	12 points (100, 120, 200, 400, 800, 1K, 2K, 4K, 8K, 10K, 15K, 20K)	16 points (100, 120, 200, 400, 800, 1K, 2K, 4K, 8K, 10K, 15K, 20K, 40K, 50K, 80K, 100K)	10~10KHz continuous adjust, stepping: 1Hz	10~20KHz continuous adjust, stepping: 1Hz	10~100KHz continuous adjust, stepping: 1Hz
Screen	3.5 inches TFT LCD					
Digits display	Main parameter: 5 digits; auxiliary parameter: 5 digits					
Measuring parameters	Main parameter: L/C/R/Z; auxiliary parameter: X/D/Q/θ/ESR					
Measuring Range (L)	0.01 μH - 9999H					
Measuring Range (C)	0.01pF - 99.999mF					
Measuring Range (R)	0.0001Ω - 99.999MΩ					
Basic accuracy	0.2%					
Measuring speed	2 times/s (slow), 4 times/s (moderate), 8 times/s (fast)					
Bias Voltage	0-1500mV can be adjustable, stepping: 1mV					
Calibration function	Open circuit calibration, short circuit calibration					
Filtering function	Limit scope -50%~+50% can be set; 1%, 5%, 10%, 20% are the fix points					
Interface	Standard accessories RS232(or 485), USB Device, Handle, optional accessories GPIB, USB host					
Others	DCR and electrolytic capacitor measuring mode are available; Backlight luminance can be adjustable, Chinese or English mode are optional					



606+

606A+

606B+

606C+

FUNCTION	606+	606A+	606B+	606C+	Accuracy
DCV	200mV/2V/20V	600mV/6V/60V	600mV/6V/60V	600mV/6V/60V	± (0.5%+7)
	200V	600V	/	/	± (1.0%+ 20)
	600V	/	/	/	± (1.2%+ 20)
ACV	2V/20V	6V/60V	6V/60V	6V/60V	± (0.8%+ 10)
	200V	600V	600V	600V	± (1.2%+ 25)
	600V	/	/	/	± (1.5%+25)
LOW INPEDANCE ACV	2V/20V	6V/60V	6V/60V	6V/60V	± (0.8%+ 10)
	200V	300V	300V	/	± (1.2%+25)
	300V	/	/	/	± (1.5%+ 25)
ACA	2A	6A	6A	/	± (4.0%+ 50)
	20A	60A	60A	/	± (4.0%+ 35)
	200A/600A	600A	600A	/	± (4.0%+15)
DCA	/	/	/	60A/600A	± (4.0%+10)
	/	/	/	60A/600A	± (4.0%+10)
	/	/	/	60A/600A	± (4.0%+10)
RESISTENCE	200Ω/2kΩ/20kΩ	600Ω/6kΩ/60kΩ	600Ω/6kΩ/60kΩ	600Ω/6kΩ/60kΩ	± (1.0%+ 5)
	/200kΩ/2MΩ	/600kΩ/6MΩ	/600kΩ/6MΩ	/600kΩ/6MΩ	± (1.5%+15)
	20MΩ	20MΩ	20MΩ	20MΩ	± (2.5%+20)
CAPACITANC E	/	6nF	6nF	6nF	± (5.0%+40)
	/	60nF/600nF/6uF	60nF/600nF/6uF	60nF/600nF/6uF	± (5.0%+ 10)
	/	60uF/600uF/6mF	60uF/600uF/6mF	60uF/600uF/6mF	± (5.0%+ 10)
FREQUENCY	/	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz	± (0.3%+3)
TEMPERATURE	/	/	-20°C~1000°C (-4~1832)°F	-20°C~1000°C (-4~1832)°F	/

Display method	LCD display 5999 count	Max/Min	√
Maximum display	5999 count (606+ 1999count)	Low Z	√
Diode measurement	√	Working temperature and humidity	(0-40)°C <75%
Data retention	√	Storage temperature and humidity	(-10~50)°C <80%
NCV measurement	√	Automatic shut-down	About 15 minutes
Fire detection	√	Over-range display	the highest digit displays OL
Low voltage warning	√	Unit symbol	√
Flashlight lighting	√	Open jaws	35mm
True effective value	√	input resistance	10MΩ
INRUSH	606C+ only	Sampling rate	3 times/sec
VFC	606C+ only	power supply	Two AAA batteries

# Clamp Multimeter

# Clamp Multimeter



New Model

610B+



New Model

610C+

Model	610B+		610C+	
<b>DCV</b>	600mV/6V/60V/600V 1000V	±(0.5%+7) ±(1.0%+6)	600mV/6V/60V/600V 1000V	±(0.5%+7) ±(1.0%+10)
<b>ACV</b>	6V/60V 600V/750V	±(1.0%+10) ±(1.0%+12)	6V/60V 600V/750V	±(1.0%+10) ±(1.0%+12)
<b>Resistance</b>	600Ω/6kΩ/60kΩ/600kΩ/6MΩ 20MΩ 60MΩ	±(1.0%+5) ±(1.5%+15) ±(2.5%+20)	600Ω/6kΩ/60kΩ/600kΩ/6MΩ 20MΩ 60MΩ	±(1.0%+5) ±(1.5%+15) ±(2.5%+20)
<b>Low Impedance</b>	6V/60V 300V	±(1.0%+10) ±(1.0%+12)	6V/60V 300V	±(1.0%+10) ±(1.0%+12)
<b>DCA</b>	60A/600A/1000A	±(4.0%+10)	/	/
<b>ACA</b>	60A/600A/1000A	±(4.0%+10)	6A/60A/600A/1000A	±(4.0%+10)
<b>Frequency</b>	10Hz~10MHz	±(0.3%+3)	/	/
<b>Capacitance</b>	1nF 10nF/100nF/1uF/10uF/100uF/1mF/10mF	±(5.0%+40) ±(5.0%+10)	/	/
<b>Temperature</b>	-20°C-1000°C (-4-1832)°F	±(2.0%+5)	/	/
<b>Continuity alarm</b>	✓		✓	
<b>Data hold</b>	✓		✓	
<b>Low voltage display</b>	✓		✓	
<b>Auto power off</b>	✓		✓	
<b>Max/Min</b>		✓		✓
<b>Flashlight</b>	✓		✓	
<b>Overload Protection</b>	✓		✓	
<b>Living Wire Detecting</b>	✓		✓	
<b>INRUSH</b>	✓			
<b>VFC</b>	✓			
<b>NCV</b>	✓		✓	
<b>True RMS</b>	✓		✓	
<b>Auto power off</b>	about 15 minutes		about 15 minutes	
<b>Display</b>	LCD Display, Max. display 5999 update 3 times/s		LCD Display, Max. display 5999 update 3 times/s	
<b>Jaw opening</b>	40mm		40mm	
<b>Polarity indicate</b>	Cathode auto display		Cathode auto display	
<b>Overload indicate</b>	OL indicating on the LCD		OL indicating on the LCD	
<b>Low battery display</b>	⚡ indicating on the LCD		⚡ indicating on the LCD	
<b>Operation temperature</b>	0°C~40°C, less than 80%RH		0°C~40°C, less than 80%RH	
<b>Storage temperature</b>	-10°C~50°C, less than 80%RH		-10°C~50°C, less than 80%RH	
<b>Battery type</b>	(Size AAA) 1.5V×2		(Size AAA) 1.5V×2	
<b>Size</b>	230*75*40mm		230*75*40mm	
<b>Weight</b>	About 313g		About 313g	

## Technical data

Basic Function	Range	Accuracy	
		6052	6050
DC voltage	400mV/4V/40V/400V		±(0.5%+4d)
	4V/40V/400V	±(0.5%+4d)	
	1000V	±(1.0%+6d)	
DC Current	400A		±(2.5%+20d)
	2000A		±(3.0%+20d)
AC voltage	400mV		±(1.6%+8d)
	4V/40V/400V	±(0.8%+10d)	
	750V	±(1.0%+10d)	
AC Current	400A		±(2.5%+20d)
	2000A		±(3%+10d)
Resistance	400Ω		±(0.8%+5d)
	4kΩ/40kΩ/400kΩ/4MΩ	±(0.8%+4d)	
	40MΩ	±(1.2%+10d)	
Capacitance	40nF		±(5.0%+30d)
	400nF/4uF/40uF	±(3.5%+8d)	
	100uF	±(5.0%+10d)	
Frequency	5.120Hz/51.20Hz/512.0Hz/5.120kHz/51.20kHz/512.0kHz/100.0kHz		±(0.5%+4d)

6050



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6052



3 1/2

Special function	6052	6050
Diode test	✓	✓
Continuity buzzer	✓	✓
Low battery indication	✓	✓
Auto power off	✓	✓
Hold	Data hold	Data hold
Relative value measurement	✓	✓
Duty cycle measurement	0.1%~99.9%	0.1%~99.9%
AC Frequency response	40~400Hz	40~400Hz
Sampling rate	3 times/s	3 times/s
Operation way	Manual range	Manual range
Max. Display	3999	3999
Clamp size	55mm	55mm
Power	1.5V×2	9V/6F22

## Technical data

Basic function	Range	Accuracy
DC Voltage	400mV/4V/40V/400V	±(0.5%+4d)
	1000V	±(1.0%+6d)
DC Current	40A	±(3%+8d)
	400A	±(2.5%+8d)
	1000A	±(3%+10d)
AC Voltage	400mV	±(1.6%+8d)
	4V/40V/400V	±(0.8%+10d)
	750V	±(1.0%+10d)
AC Current	40A	±(3.0%+10d)
	400A	±(2.5%+8d)
	1000A	±(3%+10d)
Resistance	400Ω	±(0.8%+5d)
	4kΩ/40kΩ/400kΩ/4MΩ	±(0.8%+4d)
	40MΩ	±(1.2%+10d)
Capacitance	4nF	±(3.5%+30d)
	40nF/400nF/4uF/40uF	±(3.0%+10d)
	100uF	±(5.0%+10d)
Frequency	9.999Hz/99.99Hz/999.9Hz/9.999kHz/99.99kHz	±(0.5%+4d)

6056A+



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6056C<sup>+</sup>



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## Technical data

Basic function	Range	Accuracy
DC Voltage	400mV/4V/40V/400V/600V	±(1.0%+6d)
AC Voltage	4V/40V/400V/600V	±(1.0%+10d)
AC Current	40A/600A	±(3%+10d)
DC Current	40A/600A	±(3%+8d)
Resistance	400Ω/4KΩ/40KΩ/400KΩ/4MΩ/40MΩ	±(1.2%+10d)
Frequency	9.999Hz/99.99Hz/999.9Hz/9.999KHz/99.99KHz	±(0.5%+4d)
Capacitance	4nF/40nF/400nF/4uF/40uF 100uF	±(3.0%+10d) ±(5.0%+10d)
Celsius	(-20~400)°C (Standard temperature probe test range: -20~250°C)	±(1.0%+5°C)
	(400~1000)°C	±(1.5%+15°C)

6056E



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## Technical data

Basic functions	Range	Basic accuracy
DC voltage	200mV/2V/20V/200V/1000V	± (0.5%+4)
AC voltage	200mV/2V/20V/200V/1000V	± (0.8%+10)
AC Current	40A/400A/1000A	± (3.0%+10)
DC Current	40A/400A/1000A	± (3.0%+8)
Resistance	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ	± (0.8%+4)
Capacitor	4nF/40nF/400nF/4uF/40uF/200uF	± (3.5%+8)
Frequency	4Hz/40Hz/400Hz/4kHz/40kHz/400kHz/4MHz/30MHz	± (0.5%+10d)
<b>Special features</b>		
Diode test	✓	
On-off alarm	✓	
Low Voltage Display	✓	
Data hold	✓	
Automatic power-off	✓	
Function protection	✓	
Automatic negative polarity	✓	
Input Impedance	10MΩ	
Sampling frequency	3 times/s	
AC Current Frequency	(40-400)Hz	
Mode of operation	Auto Range	
Maximum display	3999	
Jaw open	55mm	
Power	9V (6F22)	

## General Characteristics

Colors	Case: black
Weight	Approx 388g. include 9V battery
Standard accessories	Test leads, battery, instruction manual, TP01 temperature probe (-40°C ~250°C)
Standard inner packing	Color box
Carton size	210×73×39mm



6016B+

## Technical data

Basic Function	Range	Accuracy
<b>Model</b>	<b>VICTOR 6016B+</b>	
DC Voltage	200mV/2V/20V/200V/600V	±(0.5%+4)
AC Voltage	2V/20V/200V/600V	±(0.8%+10)
AC Current	2A/20A/200A/600A	±(3.5%+5)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ	±(0.8%+5)
Diode Test	✓	
Continuity Buzzer	✓	
Low Voltage Indication	✓	
Auto Negative Indication	✓	
Data Hold	✓	
Function Protection	✓	
Input Impedance	10MΩ	
Sampling Rate	3 times/s	
AC Current Response	(50-60)Hz	
Operation Way	Manual Range	
Max. Display	1999	
Clamp Size	30mm	
Power	3V(1.5V AAA *2)	

## General Features

Product Color	Case: black; Holster: orange
Product Weight	Approx. 140g (including battery)
Standard Accessories	Test Leads, Battery, Instruction Manual
Standard Inner Packing	Color Box
Standard Size Per Carton	455×365×320mm
Standard Quantity Per Carton	40Pcs
Standard Gross Weight Per Carton	Approx. 18kg

# Clamp Multimeter

6016A<sup>+</sup>



Basic Function	Range	Accuracy
DC Voltage	200mV/2V/20V/200V/600V	±(0.5%+4d)
AC Voltage	200mV/2V/20V/200V/600V	±(0.8%+10d)
AC Current	2A/20A/200A/600A	±(3.0%+10d)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ 20MΩ	±(0.8%+4d) ±(1.2+10d)
Diode Test	√	
Continuity Buzzer	√	
Low Battery Indication	√	
Data Hold	√	
Auto Power Off	√	
Function Protection	√	
Input Impedance	10MΩ	
Sampling rate	3 times/s	
AC Frequency Response	(50-60)Hz	
Operation Way	Auto range	
Max. Display	1999	
Clamp size	32mm	
Battery	3V (2×1.5V)	
Product net weight	Approx 180g	
Standard accessories	Test leads, battery, instruction manual, TP01 temperature probe	
Standard inner packing	Color box	
Standard Quantity per carton	24 pcs	

6015F



Basic Function	Range	Accuracy
DC Voltage	2V/20V/200V/1000V	±(2.0%+5)
AC Voltage	200V/750V	±(1.2%+5)
AC Current	20A/200A/1000A	±(2.0%+5)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ	±(1.0%+2)
Frequency	2kHz/20kHz	±(3.0%+15)
Diode Test	√	
Continuity Buzzer	√	
Low Battery Indication	√	
Data Hold	√	
Input Impedance	10MΩ	
Sampling Rate	3 times/s	
AC Frequency Response	(50-60)Hz	
Operation Way	Auto range	
Max. Display	1999	
Clamp Size	55mm	
Battery	9V(6FF2)	
Product Net Weight	Approx: 270g	
Standard Accessories	Test leads, battery, instruction manual	
Standard Inner Packing	Color box	
Standard Quantity Per Carton	30 pcs	

# Clamp Multimeter

## Technical data

Basic Function	Range	6266
DC voltage	1000V	±(0.8%+2)
AC voltage	750V	±(1.2%+4)
AC Current	200A/1000A	±(3.0%+5)
Resistance	200Ω/20kΩ	±(1.0%+1)

Product color	Case: black
Product net weight	Approx: 310g
Standard accessories	Test leads, battery, instruction manual, TP01 temperature probe
Standard inner packing	Color box
Standard Quantity Per Carton	30 pcs/ctn
Carton size	465×317×506mm
Standard Gross Weight	Approx: 16.8 kg

Special Function	6266
Continuity buzzer	√
Low battery buzzer	√
Hold	Data hold
Input impedance	10MΩ
Sampling rate	3 times/s
AC Frequency response	(50-60)Hz
Operation way	Manual range
Max. Display	1999
Clamp size	50mm
Power	9V(6FF2)

6266



## Technical data

Basic Function	Range	3218 <sup>+</sup>	3218A
DC voltage	500V		±(0.8%+3)
	200mV/2V/20V/200V/600V	±(0.5%+3)	
DC current	200uA/2000uA/20mA/200mA	±(1.2%+3)	
AC voltage	2V/20V/200V/600V	±(0.8%+5)	
	500V		±(1.2%+5)
AC current	200uA/2000uA/20mA/200mA	±(1.8%+3)	
	2A/20A/200A/500A	±(2.5%+5)	
	2000mA/20A/200A/600A		±(2.5%+10)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ	±(1.0%+2)	
	200kΩ		±(1.0%+5)

Special Function	3218 <sup>+</sup>	3218A
Continuity buzzer	√	
Diode test	√	
Low battery indication	√	√
Hold	Peak value hold	Data hold
Auto power off	√	√
Lamp		√
Function protection	√	√
Input impedance	10MΩ	10MΩ
Sampling rate	3 times/s	3 times/s
AC Frequency response	50Hz-60Hz	50Hz-60Hz
Operation way	Manual range/Auto range	Manual range
Max. Display	1999	1999
Clamp size	30mm	30mm
Power	3V(1.5V×2)	3V(1.5V×2)

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3218<sup>+</sup>

3218A



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6019C



6019A

## Technical data

Basic function	Range	Basic accuracy	
		6019A	6019C
ACA	2A/20A/200A	±(2.5%+5counts)	
	6A/60A/100A		±(2.5%+5counts)
DCA	6A		±(3%+5counts)
	60A/100A		±(2.5%+5counts)
	0-200μA		±(0.8%+5counts)
DCV	200mV/2V/20V/200V/600V	±(1.0%+3counts)	
	6V/60V/600V		±(1.0%+3counts)
ACV	200mV/2V/20V/200V/600V	±(1.0%+3counts)	
	6V/60V/600V		±(1.0%+3counts)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ	±(1.0%+3counts)	
	20MΩ	±(1.2%+20counts)	
	600Ω/6KΩ/60KΩ/600KΩ/6MΩ		±(1.0%+3counts)
	60MΩ		±(1.2%+20counts)
Capacitance	600μF/6000μF		±(4%+3counts)
Frequency	60Hz/1000Hz		±(1.0%+5counts)
Temperature	-20~500°C -4~932°F	±(2%+2counts)	±(2%+2counts)
<b>Special function</b>			
Diode measurement		√	
Low impedance measurement			√
NCV Test		√	√
Live wire test			√
continuity test alarm		√	√
Low battery indication		√	√
Backlight display		√	√
Function protection		√	√
AUTO Power off		√	√
Automatic power off time		15 mins, push SEL+ to cancel the mode	20 mins, push SEL+ to cancel the mode
Input impedance		10MΩ	10MΩ
Relative humidity		≤ 75%	≤ 75%
Working height		Max. 2000m	Max. 2000m
Over range indication		"OL" displays	"OL" displays
Sampling time		About 3 times/s	About 3 times/s
Working temperature		0°C~40°C	0°C~40°C
Storage temperature		-10°C~50°C	-10°C~50°C
ACV Frequency response		45-1000Hz	45-1000Hz
Operate method		Auto range	Auto range
Weight		137g	137g
Max. display		2000 counts	6000 counts
Polar indication		Automatically indicate	
Power supply		2*1.5V AAA Battery	
Dimension		L179*W67*H36mm	

## Technical Data

Basic Function Model	Range	Accuracy	
		606D	606E
DC Voltage	400MV/4V/40V/600V	±(0.5%+5)	±(0.5%+5)
AC Voltage	4V/40V/600V	±(1.0%+5)	±(1.0%+5)
DC Current	4A/40A/600A	*	±(2.5%+5)
AC Current	4A/40A/600A	±(2.5%+5)	±(2.5%+5)
Resistance	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ	±(1.0%+3)	±(1.0%+3)
Capacitance	10nF/100nF/1uF/10uF/100uF/1mF	±(4.0%+5)	±(4.0%+5)
Frequency	10Hz-10MHz	±(0.5%+3)	±(0.5%+3)
Duty cycle	1%-99%	±(1.0%+2)	±(1.0%+2)
Temperature measurement	(-2~1300)°C (-4~1832)°F	±(2.0%+3)	±(2.0%+3)
Special Function			
Diode		√	√
Continuity Buzzer		√	√
Low battery indication		√	√
Data Hold		√	√
Auto power off		√	√
Backlight/Torch		√	√
DCAZERO Function			√
True RMS		√	√
NCV measurement		√	√
Full range protection		√	√
Operation way		Auto range	Auto range
Max. Display		3999	3999
LCD Size		32*22mm	32*22mm
Battery		1.5V*2	1.5V*2



606D



606E

## General Characters

Product Color	Case: black ; Holster color: orange
Product Net Weight	Approx:176g
Product dimension	174*66*30mm
Standard Quantity Per Carton	30Pcs
Standard inner packing	Color box





**606H**



**606G**

## Technical Data

Basic Function	Range	Accuracy	
		606G	606H
DCV	6V/60V/600V/1000V	±(0.5%+3)	±(0.5%+3)
ACV	6V/60V/600V/750V	±(0.5%+5)	±(0.5%+5)
Resistance	600Ω/6k/60k/600k/6M/40M(606G)/60M(606H)	±(0.8%+3)	±(0.8%+3)
Capacitance	60nF/600nF/6uF/600uF/6mF/30mF	±(2.0%+8)	
	10nF/100nF/1uF/100uF/1mF/10mF/60mF		±(2.0%+8)
Frequency	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz	±(0.01%+2)	
DCA	60A/600A		±(3%+30)
	6A/60A/600A	±(3%+30)	
Temperature	(-2~1300)°C (-4~1832)°F	√	

## Special Function

Operation Way	Auto Range	Auto Range
Max. Display	5999	5999
True RMS	√	√
Diode Test	√	√
Continuity Buzzer	√	√
Back Light	√	√
Square Wave Output	√	√
NCV Measurement	√	√
Flashlight Lighting	√	√

## General Characters

	2*1.5V	2*1.5V
Battery		
LCD Size	32*22mm	32*22mm
Product Color	Orange and Black	Orange and Black
Product Net Weight	176g	176g
Product Size	174*66*30mm	174*66*30mm
Clamp Size	25mm	25mm
Standard Accessories	Instruction Manual, Battery, Bag, Test Leads, Temperature Probe	
Standard Inner Packing	Color Box	Color Box
Carton Size	45*42*27cm	45*42*27cm
Standard Quantity Per Carton	60pcs	60pcs
Standard Gross Weight	23.6KG	23.6KG

## Technical parameter

Mode	Range		Precision
	610D	610E	
Basic skills	600mV/6V/60V/600V	600mV/6V/60V/600V	±(0.5%+5)
	1000V	1000V	±(0.8%+5)
DC voltage	600mV/6V/60V/600V	600mV/6V/60V/600V	±(0.8%+5)
	750V	750V	±(1.0%+5)
	VFD(750V)	VFD(750V)	±(2.0%+5)
DC current	*	60A/600A/1000A	±(2.5%+8)
AC current	60A/600A/1000A	60A/600A/1000A	VFD/INRUSH: ±(5.0%+10)
Resistance	600Ω/6kΩ/60kΩ/ 600kΩ/6MΩ/60MΩ	600Ω/6kΩ/60kΩ/ 600kΩ/6MΩ/60MΩ	±(1.0%+5)
Capacitance	10nF/100nF/1000nF/ 10uF/100uF/1000uF/10mF	10nF/100nF/1000nF/ 10uF/100uF/1000uF/10mF	±(4.0%+5)
	100mF	100mF	±(5.0%+10)
Frequency/Duty Cycle	10Hz/100Hz/1000Hz/ 10KHz/100KHz/1000KHz	10Hz/100Hz/1000Hz/ 10KHz/100KHz/1000KHz	±(1.0%+3)
	10MHz 1~99%	10MHz 1~99%	±(3.0%+3)
	-20°C~0°C	-20°C~0°C	±3°C
Temperature	0°C~400°C	0°C~400°C	±1.0% or ±2°C
	400°C~1000°C	400°C~1000°C	±2%
	-4°F~32°F	-4°F~32°F	±6°F
	32°F~752°F	32°F~752°F	±1.0% or ±4°F
	752°F~1832°F	752°F~1832°F	±2%

Features	
Display	LCD display
Max display	6000 counts
Diode	√
Data retention	√
NCV	√
Fire detection	√
Low voltage	√
Flashlight	√
True effective value	√
INRUSH	√
VFD	√
Max/Min	√
LoZ	√
Working humidity	0~40°C <80%
Storage humidity	-10~50°C <80%RH
Auto shut-down	About 15 minutes
Over-range display	The highest digit shows OL
Unit symbol	√
Open jaws	40mm
input resistance	10MΩ
Sampling rate	3 times/sec
Power supply	Three AAA batteries



**610E**



**610D**



**60B+/D+/E+**



**4105A/B**

Basic function	Range	Basic accuracy		
		60B*	60D*	60E*
Measuring voltage	1000V/2500V		±10%	
	2500V/5000V			±10%
	250V/500V/1000V	±10%		
Current of short circuit	250V(R=250kΩ) 1mA	±10%		
	500V(R=500kΩ) 1mA			
	1000V(R=1MΩ) 1mA			
Median resistance	<4mA		✓	✓
	<1.8mA	✓		
Median voltage 1000V	200MΩ : 6.0~199.9MΩ		±(5%±5bit)	
	2GΩ : 0.06~1.999GΩ		±(5%±5bit)	
	20GΩ : 0.6~19.99GΩ		±(5%±5bit)	
Voltage test 2500V	200MΩ : 5.0~199.9MΩ		±(5%±5bit)	
	2GΩ : 0.05~1.999GΩ		±(5%±5bit)	
	20GΩ : 0.5~19.99GΩ		±(5%±5bit)	
	20GΩ : 5.0~199.9GΩ		±(5%±5bit)	
Jack position 5000V	2GΩ : 0.05~1.999GΩ		±(5%±5bit)	
	20GΩ : 0.5~19.99GΩ		±(5%±5bit)	
	20GΩ : 5.0~199.9GΩ		±(5%±5bit)	
Range Insulation Resistance	250V: 0.1MΩ~20MΩ	±(4%reading ±2bit)		
	500V: 0.1MΩ~50MΩ			
	1000V: 0.1MΩ~100MΩ			
	250V: 20MΩ~500MΩ	±(1%reading ±6bit)		
	500V: 50MΩ~1000MΩ			
	1000V: 100MΩ~2000MΩ			
Measuring Voltage	AC 750V		±(1%±6bit)	±(1%±6bit)
Jack position	Insulation resistance: L, E AC750V: ACV G			

1. This digital ground resistance tester is a new generation of electrical test Instruments, beautiful and practical style.
2. Full-featured, high accuracy, convenient and reliable operation, dustproof moisture-proof structure, better suited to field use.
3. It can be used to measure a variety of power systems, electrical equipment, lightning protection equipment grounding system grounding resistance value, it Can Also measure AC voltage

### Technical data

Basic Function				
4105A	Ground resistance	20Ω	±(2%+0.1Ω)	0.01Ω
		200Ω	±(2%+3d)	0.1Ω
		2000Ω		1Ω
	Ground resistance(AC current)	200V	±(2.0%+6d)	0.1V
4105B	Ground resistance	10Ω	±(3%+0.1Ω)	0.01Ω
		100Ω	±(3%+3d)	0.1Ω
		1000Ω	±(3%+8d)	1Ω
	Ground resistance(AC current)	750V	±(1.0%+10d)	1V

General features	
Display	84.8×59.8mm LCD display, max display "1999"
Over range presentation	It will display "1" on the top number when it is over range
Power	Alkaline battery LR (1.5V)×8 (can contact with power adapter) When the battery is low, it will display a low battery sign
Power Dissipation	Electricity cost (no-load)≤800mw
Work environment	Temperature 0~40; relative humidity 30%~80%RH
Product size	175(L)×110(W)×70(D)mm
Weight	Approx: 680g (include battery)



6310A/6310B

### General Specification

Model	Range	Accuracy	Resolution	Maximum test current
6310B	0.001mΩ~10.000mΩ	Within 18°C~28°C, Below 70%rh: ±0.1%FS±20dgt	0.001mΩ	1.2A
	10.01mΩ~100.00mΩ		0.01mΩ	1.2A
	100.1mΩ~1000.0mΩ		0.1Ω	1.2A
	1.001Ω~10.000Ω		0.001Ω	1.2A
	10.01Ω~100.00Ω		0.01Ω	0.5A
	100.1Ω~1000.0Ω		0.1Ω	0.05A
	1.001KΩ~10.000KΩ		0.001KΩ	5mA
6310A	0.01mΩ~100.00mΩ	Within 18°C~28°C, Below 70%rh: ±0.1%FS±20dgt	0.01mΩ	1.2A
	100.1mΩ~1000.0mΩ		0.0001Ω	1.2A
	1.001Ω~10.000Ω		0.001Ω	1.2A
	10.01Ω~100.00Ω		0.01Ω	0.5A
	100.1Ω~1000.0Ω		0.0001KΩ	0.05A
	1.001KΩ~10.000KΩ		0.001KΩ	5mA
	10.01KΩ~30.00KΩ		0.01KΩ	0.5mA

Note: within 18°C~28°C, above 70%rh, within -10°C~50°C, below 80%rh: ±0.2%FS±20dgt.

Model of Series	Resistance Range	Resolution	Accuracy	Data storage	USB Data upload function	Charging function
	0.01mΩ~30.00KΩ	10uΩ	±0.1%FS	500 sets	N	Y
	0.001mΩ~300.0KΩ	1uΩ	±0.1%FS	500 sets	Y	Y

Model of Series	
<b>Function</b>	Mainly used to measure the wire resistance of cables, the contact resistance of switches, connectors, relays, the resistance of coils, motors, transformer winding and metal riveting resistance, the connection resistance test between metal components, the low-value resistance test, and the grounding grid Resistance test of connecting conductor, contact resistance test, etc.
<b>Detection method</b>	Four-wire method test
<b>Test current</b>	≥1A
<b>Open circuit voltage</b>	≤4.2V
<b>Overload protection</b>	Y
<b>Power</b>	Measuring power≤8W
<b>power supply</b>	DC 3.7V 2000mAh
<b>Backlight</b>	Controllable gray and white screen backlight, suitable for dim places
<b>Display Model</b>	LCD
<b>LCD Size</b>	72 mm×55mm
<b>Instrument size</b>	187 mm×119 mm×50mm
<b>Test line length</b>	About 60cm, red, black 1pcs
<b>measure time</b>	About 2 times/sec
<b>USB interface</b>	With micro USB interface
<b>Communication line</b>	micro USB 1pcs
<b>Data storage</b>	500 groups, "MEM" storage indication, display "FULL" symbol to indicate storage is full
<b>Data review</b>	Data review function: "MR" symbol display
<b>Overflow display</b>	Over-range overflow function: "OL" symbol display
<b>Battery voltage</b>	Real-time display of battery power, reminding timely charging when battery voltage is low
<b>Automatic shut-down</b>	"APO" indicates, automatic shutdown after 15 minutes
<b>Power consumption</b>	Standby: about 100mA (backlight off) Turn on backlight: about 105mA Measure: 2A Max(backlight off)
<b>Weight</b>	Instrument: 480g (including battery) Test line: 250g
<b>Working temperature and humidity</b>	-10°C ~ 50°C; below 80%rh
<b>Storage temperature and humidity</b>	-20°C ~ 60°C; below 70%rh
<b>Overload protection</b>	AC 220V/0.0001 second between C1-C2 P1-P2 ports, after overload protection, you need to restart the meter to test normally
<b>Insulation resistance</b>	More than 10MΩ (Between circuit and case 500V)
<b>Pressure resistance</b>	AC 3700V/rms (Between circuit and case)
<b>Electromagnetic properties</b>	IEC61010-4-3, Wireless frequency electromagnetic fields≤1V/m
<b>Suitable for Safety Regulations</b>	IEC61010-1, CAT III 600V, Pollution Level 2, JIG724-1991 "Determination of Direct Current Digital Ohmmeter", JIG166-1993 "Dialect Resistor Verification Regulation", "DL/T967-2005 Loop Resistance Tester and DC Resistance Fast Tester Verification Procedures

### General Specification

Model	Rated Voltage	Insulation Resistance Range	Short Circuit Current
9600	250V, 500V, 1KV, 2.5KV, 5KV	0.50MΩ~2.00TΩ	>5mA
9600B	250V, 500V, 1KV, 2.5KV, 5KV, 10KV	0.50MΩ~5.00TΩ	>5mA

### Insulation Resistance Range and Accuracy

Rated Voltage	Insulation Resistance Range	Accuracy
250V	0.50MΩ ~ 10.0GΩ	±5%±3dgt
	10.0GΩ ~ 50.0GΩ	±10%±3dgt
	50.0GΩ ~ 100GΩ	±20%±3dgt
500V	1.00MΩ ~ 20.0GΩ	±5%±3dgt
	20.0GΩ ~ 100GΩ	±10%±3dgt
	100GΩ ~ 200GΩ	±20%±3dgt
1KV	1.00MΩ ~ 50.0GΩ	±5%±3dgt
	50.0GΩ ~ 200GΩ	±10%±3dgt
	200GΩ ~ 500GΩ	±20%±3dgt
2.5KV	1.00MΩ ~ 100GΩ	±5%±3dgt
	100GΩ ~ 500GΩ	±10%±3dgt
	500GΩ ~ 1.00TΩ	±20%±3dgt
5KV	1.00MΩ ~ 200GΩ	±5%±3dgt
	200GΩ ~ 1.00TΩ	±10%±3dgt
	1.00TΩ ~ 2.00TΩ	±20%±3dgt
10KV	1.00MΩ ~ 500GΩ	±5%±3dgt
	500GΩ ~ 2.00TΩ	±10%±3dgt
	2.00TΩ ~ 5.00TΩ	±20%±3dgt

1 TΩ (Tera ohm) =1000GΩ=10<sup>12</sup>Ω  
1 GΩ (Giga ohm) =1000MΩ=10<sup>9</sup>Ω  
1 MΩ (Mega ohm) =1000KΩ=10<sup>6</sup>Ω

### Technical Specification

Model of Series	
<b>Function</b>	Insulation resistance measurement (IR); polarization index measurement (PI); absorption ratio (DAR); filtered resistance test (four time selection 10S,20S,30S,40S). Voltage measurement(V); Leakage current measurement (nA)
<b>Power Supply</b>	Rechargeable lithium battery 5.2Ah
<b>Rated Voltage</b>	9600: 250V, 500V, 1KV, 2.5KV, 5KV 9600B: 250V, 500V, 1KV, 2.5KV, 5KV, 10KV
<b>Output Voltage Accuracy</b>	(5%~10%) ±10V
<b>Insulation Resistance Test Range</b>	9600: 0.50MΩ~2.00TΩ 9600B: 0.50MΩ~5.00TΩ
<b>Output Short Circuit Current</b>	>5mA
<b>Polarization Index Test</b>	YES
<b>Dielectric Absorption Ratio Test</b>	YES
<b>Ramp Test Mode</b>	Step up to the preset voltage by testing with 10% stepped size of the preset voltage.
<b>Filtered Resistance Test Mode</b>	10S, 20S, 30S, 40S four selections
<b>Voltage Test</b>	Range: AC/DC:0V~1000V; Accuracy: ±5%rdg±3V
<b>Current Test</b>	Range: 0.01nA~5mA; Accuracy: ±5%rdg±0.5nA
<b>Voltage Monitor</b>	Monitor the voltage of the measured object, and monitor discharge status after test, forbidden to test when voltage exceed 36V, protect instrument and operator.
<b>Test Timer</b>	Automatic record test time, time range: 0s~9999s
<b>Storage Function</b>	Automatically store the test data with test date and time, total of 1000 groups
<b>Upload Function</b>	Upload the stored data to computer via USB communication cable.
<b>Battery Power Display</b>	With battery power display, when battery voltage low will remind to replace the battery
<b>Automatic Shutdown</b>	After 15 minutes start up will shut down automatically without any operation
<b>Meter Dimension</b>	280mm×260mm×160mm
<b>Meter Weight</b>	4400g (include the battery)
<b>Test Wires</b>	Red color high voltage test wire 1 pcs (with alligator clip 1PCS and hook 1PCS), green color test wire 1PCS, black color test wire 1PCS
<b>Protection Level</b>	Close the case IP65, open the case IP40
<b>Working Environment</b>	-20°C ~ 50°C; 80%rh
<b>Store Environment</b>	-25°C ~ 65°C; 80%rh
<b>Insulation Resistance</b>	50MΩ (1000v) (between the test circuit and shell)
<b>Withstand Voltage</b>	AC 3Kv 50Hz 1min (between the test circuit and shell)
<b>Suitable Safety Standard</b>	IEC61010-1, IEC61326-1



9600/9600B



**9600S**

## Insulation Resistance Range and Accuracy

Basic function	Output voltage	Range	Accuracy
Insulation Resistance	250V	0.01MΩ ~ 2.5GΩ	±3%±5dgt
		2.5GΩ ~ 250GΩ	±15%±5dgt
	500V	0.01MΩ ~ 5GΩ	±3%±5dgt
		5GΩ ~ 500GΩ	±15%±5dgt
	1KV	0.01MΩ ~ 10GΩ	±3%±5dgt
		10GΩ ~ 1TΩ	±15%±5dgt
	2.5KV	0.01MΩ ~ 25GΩ	±3%±5dgt
	25GΩ ~ 2.5TΩ	±15%±5dgt	
	5KV	0.01MΩ ~ 50GΩ	±3%±5dgt
		50GΩ ~ 5TΩ	±15%±5dgt
AC/DC voltage	ACV	0.01V~750v	±2%rdg±3dgt
	DCV	0.01V~1000v	±2%rdg±3dgt

## General Specification

General function	
Function	Insulation resistance measurement (IR); polarization index measurement (PI); absorption ratio (DAR); AC and DC voltage test; automatic discharge function; ambient temperature test;
Power Supply	DC 14.8V 2200mAh rechargeable lithium battery
Rated Voltage	250V, 500V, 1000V, 2500V, 5000V
Output Short Circuit Current	≥10mA
Connection method	L terminal: "L" is called the high-voltage output terminal, called the line terminal, and leads to the end of the measured object G terminal: "G" is called the shield terminal, which is used for the three-electrode method to measure the insulation resistance of insulating materials or cables, and it is connected to the GRE E terminal: "E" is called the ground terminal, which is connected to the ground and zero terminals of the measured object. Such as motor housing metal, transformer core, cable shielding V terminal: AC and DC voltage measurement terminal (AC and DC automatic identification)
Resolution	Insulation resistance: 0.01 MΩ AC voltage: 0.01V DC voltage: 0.01V
Measure time	1 minute to 30 minutes (related to the measurement method, can be set)
Backlight	Controllable white screen backlight, suitable for dark places
Shift	Fully automatic shifting
LCD	4-digit LCD display, white screen backlight
LCD size	128mmX75mm
LCD display field	124mmX67mm
Measurement instructions	LED flashing indication during measurement, progress bar graph indication
Size	258mmx215mmx83mm
Standard test lead	1 red high voltage test rod, 1 green and 1 black test lead.
Battery voltage	Real-time display of remaining battery power, please charge in time when the battery is low
Communication Interface	With a USB interface, the stored data can be uploaded to the computer, saved and printed
Communication line	1 USB communication cable, 1.5m long
Working current	Standby: 25mA Max (backlight off); Backlight: 25mA Max (backlight power consumption alone);
Weight	Meter: 2.19kg (including battery), Total: 3.50kg (including packaging)
Toolkit	Yellow and black two-color tool bag, easy to carry, good visual effect
Working temperature and humidity	-10°C ~ 40°C; below 80%rh
Storage temperature and humidity	-20°C ~ 60°C; below 70%rh
Pressure resistance	AC 3700V/rms (between the front and rear ends of the housing)
Insulation resistance	Above 20MΩ (500V between bottom cover screws and top cover)
Electromagnetic properties	IEC61326(EMC)

## Model Category

Model	Rated Voltage	Insulation Resistance Range	Current
9620	250V, 500V, 1KV, 2.5KV, 5KV	0.50MΩ~10.0TΩ	>7mA
9620B	250V, 500V, 1KV, 2.5KV, 5KV, 10KV	0.50MΩ~20.0TΩ	>7mA
9620C	250V, 500V, 1KV, 2.5KV, 5KV, 10KV, 15KV	0.50MΩ~30.0TΩ	

## Insulation Resistance Range and Accuracy

Rated Voltage	Insulation Resistance Range	Accuracy
250V	0.50MΩ ~ 50.0GΩ	±5%rdg±3dgt
	50.0GΩ ~ 500GΩ	±20%rdg±3dgt
500V	1.00MΩ ~ 100GΩ	±5%rdg±3dgt
	100GΩ ~ 1.00TΩ	±20%rdg±3dgt
1000V	1.00MΩ ~ 200GΩ	±5%rdg±3dgt
	200GΩ ~ 2.00TΩ	±20%rdg±3dgt
2500V	1.00MΩ ~ 500GΩ	±5%rdg±3dgt
	500GΩ ~ 3.00TΩ	±20%rdg±3dgt
5000V	1.00MΩ ~ 1.00TΩ	±5%rdg±3dgt
	1.00TΩ ~ 10.0TΩ	±20%rdg±3dgt
10KV	1.00MΩ ~ 2.00TΩ	±5%rdg±3dgt
	2.00TΩ ~ 20.0TΩ	±20%rdg±3dgt
15KV	1.00MΩ ~ 3.00TΩ	±5%rdg±3dgt
	3.00TΩ ~ 30.0TΩ	±20%rdg±3dgt

1 TΩ (Tera ohm) =1000GΩ=10<sup>12</sup>Ω  
1 GΩ (Giga ohm) =1000MΩ=10<sup>9</sup>Ω  
1 MΩ (Mega ohm) =1000KΩ=10<sup>6</sup>Ω



**9620/9620B/9620C**

## Technical Specification

Function	Insulation resistance measurement (IR); polarization index measurement (PI); absorption ratio (DAR); ramp test mode (RAMP); filtered resistance test (four time selection 10S, 20S, 30S, 40S); Voltage measurement (V); capacity measurement (uF); current measurement (nA)
Power Supply	Rechargeable lithium battery 6.2Ah
Rated Voltage	9620: 250V, 500V, 1KV, 2.5KV, 5KV 9620B: 250V, 500V, 1KV, 2.5KV, 5KV, 10KV 9620C: 250V, 500V, 1KV, 2.5KV, 5KV, 10KV, 15KV
Output Voltage Accuracy	(5% ~ 10%)±10V
Insulation Resistance Test Range	9620: 0.50MΩ ~ 10.0TΩ 9620B: 0.50MΩ ~ 20.0TΩ 9620C: 0.50MΩ ~ 30.0TΩ
Output Short Circuit Current	≥7mA
Polarization Index Test	YES
Dielectric Absorption Ratio Test	YES
Ramp Test Mode	Step up to the preset voltage by testing with 10% stepped size of the preset voltage.
Filtered Resistance Test Mode	10S, 20S, 30S, 40S four selections
Voltage Test	Range: AC/DC:0V ~ 1000V; Accuracy: ±5%rdg±3V
Capacitance Test	Range: 10nF ~ 25uF; Accuracy: ±10%rdg±10nF
Current Test	Range: 0.01nA ~ 7mA; Accuracy: ±5%rdg±0.5nA
Voltage Monitor	Monitor the voltage of the measured object, and monitor discharge status after test, forbidden to test when voltage exceed 36V, protect instrument and operator.
Test Timer	Automatic record test time, time range: 0s~9999s
Storage Function	Automatically store the test data with test date and time, total of 1000 groups
Upload Function	Upload the stored data to computer via USB communication cable.
Battery Power Display	With battery power display, when battery voltage low will remind to replace the battery
Automatic Shutdown	After 15 minutes start up will shut down automatically without any operation
Meter Dimension	280mm×260mm×160mm
Meter Weight	4900g (include the battery)
Test Wires	Red color high voltage test wire 1 pcs (with alligator clip 1PCS and hook 1PCS), green color test wire 1PCS, black color test wire 1PCS
Protection Level	Close the case IP65, open the case IP40
Working Environment	-20°C ~ 50°C; 80%rh
Store Environment	-25°C ~ 65°C; 80%rh
Insulation Resistance	50MΩ (1000v) (between the test circuit and shell)
Withstand Voltage	AC 3Kv 50Hz 1min (between the test circuit and shell)
Suitable Safety Standard	IEC61010-1, IEC61326-1



**4105C**

## Earth Resistance Soil Resistivity Tester

**Earth Resistance Soil Resistivity Tester** is specially designed and manufactured for measuring earth resistance, soil resistivity, earth voltage, AC voltage. Adopting the latest digital and micro-processing technology, precise 4-pole, 3-pole and simple 2-pole method for earth resistance measurement, importing FFT and AFC technology, with a unique function of anti-interference capability and the ability to adapt to the environment, consistency of repeat testing, to ensure high precision, high stability and reliability for prolonged measure, which is widely used in electric power, telecommunications, meteorology, oil field, construction, lightning protection, industrial electrical equipment and other earth resistance, soil resistivity, earth voltage, AC voltage measurement.

### General Specification

<b>Function</b>	fMeasurement of 2/3/4-pole earth resistance, soil resistivity, earth voltage, AC voltage
<b>Power Supply</b>	DC 9V (Zi-Mn dry battery R14S 1.5V 6 PCS, continuous standby for 300 hours )
<b>Measurement Range</b>	Earth Resistance: 0.00Ω-30.00kΩ Soil Resistivity: 0.00Ωm-9000kΩm
<b>Measuring Mode</b>	Precise 4-pole measurement, 3-pole measurement, simple 2-pole measurement
<b>Measuring Method</b>	Earth Resistance: rated current change-pole method, measurement current 20mA Max Soil Resistivity: 4-pole measurement (Wenner method) Earth Voltage: average rectification(between P(S)-ES)
<b>Test Frequency</b>	128Hz/111Hz/105Hz/94Hz(AFC)
<b>Short-circuit Test Current</b>	AC 20mA max
<b>Open-circuit Test Current</b>	AC 40V max
<b>Test Voltage Wave</b>	Sine wave
<b>Electrode Distance Range</b>	Can be set 1m-100m
<b>Shift</b>	Earth Resistance: 0.00Ω-30.00kΩ, automatic shift Soil Resistivity: 0.00Ωm-9000kΩm, automatic shift
<b>Backlight</b>	Blue screen backlight, suitable for dim places
<b>Display Mode</b>	4-digital super-large LCD display, blue screen backlight
<b>Measuring Indicator</b>	During measurement, LED flash indicator, LCD count down display, progress bar indicator
<b>LCD Frame Dimension</b>	128mm×75mm
<b>LCD Window Dimension</b>	124mm×67mm
<b>Dimension</b>	L×W×H: 215mm×190mm×95mm
<b>Standard Test Wire</b>	4 wires: each for red 20m, black 20m, yellow 10m, and green 10m
<b>Simple Test Wire</b>	2 wires: each for red 1.6m and black 1.6m
<b>Auxiliary Earthing Rod</b>	4 rods: Φ10mm×150mm
<b>Measuring Rate</b>	Earth voltage: about 3 times/second Earth resistance, soil resistivity: about 5 seconds/time

### General Specification

Function	
<b>Measuring Times</b>	Over 5000 times (Short-circuit test, interval time should be at least 30 seconds)
<b>Line Voltage</b>	below AC 600V
<b>RS232 Interface</b>	Possess RS232 interface, software supervision, storage data can be uploaded to computer, saved or printed.
<b>Communication Wire</b>	One piece of RS232 communication wire, with length 1.5m
<b>Data Storage</b>	300 sets, "MEM" icon storage indicator, flash display "FULL" icon to indicate storage is full
<b>Data Hold</b>	Data hold function: "HOLD" icon display
<b>Data Access</b>	Data read function: "READ" icon display
<b>Overflow Display</b>	Exceeding measuring range overflow function: "OL" icon display
<b>Interference Test</b>	Recognize interference signal automatically, "NOISE" icon display when interference voltage exceed 5V
<b>Auxiliary Earthing Test</b>	Can measure auxiliary earth resistance, 0.00kΩ-30kΩ(100R+rC<50kΩ, 100R+rP<50kΩ)
<b>Alarm Function</b>	When measuring value exceeds alarm setting value, there is "Toot-toot-toot" alarm hint
<b>Battery Voltage</b>	When battery voltage decreases to about 7.5V, battery voltage low icon will display, reminding to replace battery.
<b>Power Consumption</b>	Standby: about 20mA (Backlight shut off) Boot and with backlight: about 45mA (25mA without backlight) Measurement: about 100mA (Backlight shut off)
<b>Weight</b>	Total weight: 4.5kg (including package) Tester: 1443g (including battery) Testing wires: 1560g Auxiliary earthing rods: 935g (4pcs)
<b>Working Temperature &amp; Humidity</b>	-10 C-40 C , below 80%rh
<b>Storage temperature &amp; humidity</b>	-20 C-60 C , below 70%rh
<b>Overload Protection</b>	Measuring earth resistance: between each interfaces of C(H)-E.P(S)-ES, AC 280V/3 seconds
<b>Insulation Resistance</b>	Over 20MΩ (between circuit and enclosure it is 500V)
<b>Withstanding Voltage</b>	AC 3700V/rms (Between circuit and enclosure)
<b>Electromagnetic Features</b>	IEC61326(EMC)
<b>Protection Type</b>	IEC61010-1 (CAT III 300V, CAT IV 150V, Pollution 2), IEC61010-031, IEC61557-1 (Earth resistance), IEC61557-5 (Soil resistivity), JIG 366-2004

### 3. Intrinsic error and performance indicators under base conditions

Category	Measurement Range	Intrinsic Error	Resolution
<b>Earth Resistance (R)</b>	0.00Ω-30.00Ω	±2%rdg±3dgt	0.01Ω
	30.0Ω-300.0Ω	±2%rdg±3dgt	0.1Ω
	300Ω-3000Ω	±2%rdg±3dgt	1Ω
	3.00kΩ-30.00kΩ	±4%rdg±3dgt	10Ω
<b>Soil Resistivity (ρ)</b>	0.00Ωm-99.99Ωm	According to the precision of R (ρ=2πaR a:1 m-100m, π=3.14)	0.01Ωm
	100.0Ωm-999.9Ωm		0.1Ωm
	1000Ωm-9999Ωm		1Ωm
	10.00kΩm-99.99kΩm		10Ωm
	100.0kΩm-999.9kΩm		100Ωm
1000kΩm-9000kΩm	1kΩm		
<b>Earth Voltage</b>	AC 0.0-600V	±2%rdg±3dgt	0.1V



4106C



4106C

Basic Function	Range	Resolution	Accuracy
Ground resistance	0.00Ω ~ 30.00Ω	0.01Ω	±2%rdg±3dgt
	30.0Ω ~ 300.0Ω	0.1Ω	±2%rdg±3dgt
	300Ω ~ 3000Ω	1Ω	±2%rdg±3dgt
	3.00kΩ ~ 30.00kΩ	10Ω	±4%rdg±3dgt
Ground voltage	AC 0.0 ~ 600V	0.1V	±2%rdg±3dgt
Soil resistivity	0.00Ω m ~ 99.99Ω m	0.01Ω m	According to the measurement accuracy of R (ρ=2πaR; a: 1 m~100m; π=3.14)
	100.0Ω m ~ 999.9Ω m	0.1Ω m	
	1000Ω m ~ 9999Ω m	1Ω m	
	10.00kΩ m ~ 99.99kΩ m	10Ω m	
	100.0kΩ m ~ 999.9kΩ m	100Ω m	
1000kΩ m ~ 9000kΩ m	1kΩ m		
Measuring method	Grounding resistance: rated current pole changing method, measuring current 20mA Max. Soil resistivity: quadrupole method (Wenner method). Grounding voltage: average value rectification		
Test frequency	128Hz/111Hz/105Hz/94Hz(AFC)		
Test voltage waveform	Sine wave		
Short circuit test current	AC 20mA max		
Data storage	300 groups		
Data reference	"READ" symbol		
Open circuit test voltage	AC 40V max		
Data hold	"HOLD" symbol		
Overflow display	"OL" symbol		
Test line	red 20m, black 20m, yellow 10m, green 10m, red 1.6m, black 1.6m each 1 (total 6)		
Auxiliary ground rods	4 * φ 10mm×150mm		
USB interface	With USB interface, software monitoring, stored data can be uploaded to the computer, saved and printed; one 1.5m long communication line		
Alarm function	When the measured value exceeds the alarm setting value, alarm prompt "beep-beep-beep--"		
Auto power off	Auto power off after 15 minutes		
Overload protection	Measuring ground resistance: AC 280V/3 seconds between each port of C(H)-E, P(S)-ES		
Interference test	Automatically identify the interference signal, and the "NOISE" symbol indicates when the interference voltage is larger than 5V		
Auxiliary grounding test	With auxiliary grounding resistance value test function, 0.00kΩ ~ 30kΩ (100R+rC<50kΩ, 100R+rP<50kΩ)		
Protection level	IP65 (with cover closed)		
Battery voltage	When the battery voltage drops to about 7.5V and show the low battery voltage symbol "⚡", please replace the battery		
Working current	Standby: about 20mA (backlight off); turn on the backlight: about 45mA (backlight off 25mA); measurement: about 100mA (backlight off)		
Accessories	Meter: 1; Grounding probe: 4; Test lead: 4; Simple test lead: 2; USB communication cable: 1; CD: 1; Meter bag: 1; Special charger: 1		
Power	DC 7.4V 2600mAh rechargeable lithium battery		
Color	Black + Orange		
LCD size	LCD size 128mm×75mm; LCD display area 124mm×67mm		
Weight	4765kg (including packaging)		
Size	280mm×260mm×160mm		
Standard packing box gross weight	about 6KG		

## Clamp Earth Resistance Tester

6410 series of Clamp Grounding Resistance Tester, in the measurement of a grounding system with loop, does not require breaking down the grounding down lead, and no need the auxiliary electrode. It is safe, fast and simple in use.

6410 series clamp grounding resistance meter can measure ground faults which cannot be measured by traditional methods. It can be used in applications where traditional methods cannot be measured, because the 6410 series clamp grounding resistance meter measures the combined value of grounding body resistance and grounding lead resistance.

## 2. Specification

Model	Jaw Size (mm)	Range of Resistance (Ω)	Range of Current (A)	Storage Function	Alarm Function
6410	55×32	0.01~1000	--	99 Units	Yes
6410A	55×32	0.01~200	--	99 Units	Yes
6410B	55×32	0.01~1000	0.0~30.0	99 Units	Yes



6410

## 2.2. Ranges and Accuracy

Mode	Range	Resolution	Accuracy
Resistance Range	0.010Ω-0.099Ω	0.001Ω	± (1%+ 0.01Ω)
	0.10Ω-0.99Ω	0.01Ω	± (1%+ 0.01Ω)
	1.0Ω-9.9Ω	0.1Ω	± (1%+ 0.1Ω)
	50.0Ω-99.5Ω	0.5Ω	± (2%+ 0.5Ω)
	100Ω-199Ω	1Ω	± (3%+ 1Ω)
	200Ω-395Ω	5Ω	± (6%+ 5Ω)
	400-590Ω	10Ω	± (10%+ 10Ω)
Current Range	0.00mA-9.95mA	0.05mA	± (2.5%+ 1mA)
	10.0mA-99.0mA	0.1mA	± (2.5%+ 5mA)
	100mA -299mA	1mA	±(2.5%+10mA)
	0.30A-2.99A	0.01A	± (2.5%+ 0.1A)
	3.0A-9.9A	0.1 A	± (2.5%+ 0.3A)
	10.0A-19.9A	0.1 A	± (2.5%+ 0.5A)
	20.0A-30.0A	0.1 A	± (3%+ 1A)

## 2.3. Technical Specifications

Power Source: 6VDC (4pcs 5# alkaline battery)

Working Temperature: -10 ° -55 ° C

Relative Humidity: 10%-90%

LCD: 4-digital LCD, 47mm (L) × 28.5mm (W)

Meter Size: 275mm (L); 85mm (W); 56mm (H)

Meter Weight (including batteries): 1130g

Protection Level: Double insulation

Structural Feature: Clamp and jaw type

Range Shift: Automatic

External Magnetic Field: < 40A/m

External Electric Field: < 1V/m

Single Measuring Time: 1 second

Measurement Resistance Frequency: > 1KHz

Maximum Resistance Measurement Resolution: 0.001 Ω

Resistance Measurement Range: 0.01-1000 Ω

Current Measuring Range: 0.00-30.0A(C type)\*

Measured Current Frequency: 50/65Hz

Storable Measurement Data: 99 Units

Setting Range of Resistance Alarm Critical Value: 1-199 Ω

Setting Range of Current Alarm Critical Value: 1-499mA(C type)\*

Note: with "\*" item is limited to C type

6412



## Technical data

Basic Function		6412/6412 <sup>+</sup>	
Measure mode	Measuring range	Resolution	Basic accuracy
Resistance	0.010-0.099Ω	0.001Ω	±(1%+0.01Ω)
	0.10-0.99Ω	0.01Ω	±(1.5%+0.01Ω)
	1.0-49.9Ω	0.1Ω	±(1%+0.1Ω)
	50.0-99.5Ω	0.5Ω	±(2%+0.5Ω)
	100-199Ω	1Ω	±(3%+1Ω)
	200-395Ω	5Ω	±(6%+5Ω)
	400-590Ω	10Ω	±(10%+10Ω)
Current Only for 6412	600-1300Ω	20Ω	±(20%+20Ω)
	0-80mA	0.05mA	±(2.5%+1mA)
	80-650mA	0.5mA	±(2.5%+2mA)
	650mA-4A	5mA	±(2.5%+10mA)
	4-30A	10mA	±(2.5%+20mA)

6412<sup>+</sup>



Basic Function		140 Clamp leaker	
Range	30mA~300mA 30A/300A	Range	Accuracy
Sampling rate	Approx. 2times/s	0.00mA~9.99mA	±1.2%±5dgt
Resolution	0.01mA	10.0mA~300.0mA	±1.5%±5dgt
Measuring range	0.00~300.0A(50/60Hz)	0.00A~9.99A	±1.2%±5dgt
Test way	CT pincer points	10.0A~99.9A	±1.5%±5dgt
Power	DC 3V Button-type battery LR-44*2 or SR-44*2	100A~199.9A	±2%±5dgt
Rate Power	Approx. 5mW	200.0A~300.0A	±4%±5dgt

Special Function	6412	6412 <sup>+</sup>	140
Low battery indication	✓	✓	✓
Date hold/storage	✓	✓	✓
Auto power off	✓	✓	✓
Relative humidity	10%~90%	10%~90%	
Working environment	-10℃~55℃	-10℃~55℃	0~40℃
Outer magnetic field	<40A/m	<40A/m	
Outer electric field	<1V/m	<1V/m	
Unit measuring time	1s	1s	
Resistance measuring frequency	>1KHz	>1KHz	
Highest resolution of Resistance measuring	0.001Ω	0.001Ω	
Frequency of measured current	50Hz sine		
Storage measuring data	99 group	99 group	60 group
Setting range of resistance critical value alarm	1~199Ω	1~199Ω	
Setting range of current critical value alarm	1~499mA	1~499mA	
Protection scale	Double insulated	Double insulated	
Operation way	Auto range	Auto range	Auto range
Clamp size	32mm	32mm	40mm
Power	6V(4×1.5V)	6V(4×1.5V)	DC 3V

140



## Technical data

Model	6415	6415A
Features	Bench top	Box top
Function	Grounding resistance, soil resistivity, DC resistance, grounding voltage, AC current, leakage current measurement	
Range	Two-three-four-wire grounding resistance measurement: 0.00Ω~30.00kΩ	
	Grounding resistance measurement by selection method: 0.00Ω~3000Ω	
	Double-clamp method grounding resistance measurement: 0.01~100Ω	
	Grounding voltage: AC0.0V~100.0V	
	Soil resistivity: 0.00Ωm~9000kΩm	
	AC current: AC 0.00mA~600.0A	
Measurement mode	Precision four-wire, three-wire method, simple two-wire, selection method, double-clamp method to measure grounding resistance	
Measurement method	Two-three-four-wire method measurement: pole-changing method, test current 20mA Max	
	Selection method measurement: pole changing method, test current 20mA Max	
	Double clamp method: non-contact mutual inductance measurement method, test current 1mA Max	
	Soil resistivity: quadrupole method (Wenner method)	
	DC resistance: pole changing method	
	AC current: average value rectification (clamp)	
	Grounding voltage average value rectification (between P(S)-ES interface)	
Backlight	Controllable white screen backlight, suitable for use in dark places	
Display	4-digit large LCD display with backlight	
Measurement indication	LED flashing indication during measurement, LCD countdown display	
Measurement time	AC current: about 2 times/second; grounding voltage: about 2 times/second; grounding resistance: about 7 seconds/time	
Measurement frequency	more than 5000 times (short circuit test, test once, stop for 30 seconds and test again)	
Line voltage	measurement below AC 600V	
Communication interface	With RS232 interface, the stored data can be uploaded to the computer through the software	
Data storage	2000 groups	
Overload protection	Measuring ground resistance: AC 280V/3 seconds between each port of C(H)-E, P(S)-ES	
Insulation resistance	above 20MΩ (500V between circuit and case)	
Withstand voltage	AC 3700V/rms (between circuit and case)	
Power supply	DC 9V (6 pcs R14S 1.5V zinc-manganese dry battery, continuous standby for 300 hours)	DC 8.4V (rechargeable battery, continuous standby for 300 hours)
Accessories	Meter: 1; Grounding probe: 4; Test lead: 4; Simple test lead: 2; USB communication cable: 1; CD: 1; Meter bag: 1; Special charger: 1	
Standard test lines	red 20m, black 20m, yellow 10m, green 10m each	
Auxiliary ground rods	4φ 10mm×150mm	
Simple test lines	red 1.6m, black 1.6m each	
Communication line	RS232 communication line 1, length 1.5m	
Current clamp	blue and black plugs, red and black plugs each	
Current clamp size	185mm×115mm×43mm	
Current clamp diameter	φ 68mm	
Power	DC 7.4V 2600mAh rechargeable lithium battery	
Current clamp lead length	2m	
Color	Black + Orange	
LCD size	128mm×75mm; display area: 124mm×67mm	
Weight	1232g	2560g
Size	215mm×190mm×95mm	280mm×260mm×160mm
Standard inner packing	Neutral kraft carton	



6415



6415A

4000



### Technical data

Basic error and function under basic condition			
Target	Measure range	Resolving power	Basic error
Voltage	20V	0.01V	±(1.2%rdg+2dgt)
	200V	0.1V	
	500V	1V	
Current	200mA	0.1mA	±(1.0%rdg+2dgt)
	2A	1mA	
	10A	10mA	
Phase	0~360°	1°	±3°

Basic Condition and Work condition			
Target	Basic condition	Work condition	Remark
Environment Temperature	23°C ±1°C	-10°C~40°C	
Environment Humidity	40%~60%	<85%	
Function wave	Sine wave	Sine wave	β=0.05
Function frequency	50Hz±1Hz	45Hz~65Hz	
Work Voltage	9V±0.1V	9V±1V	
External electric field, magnetic field	Must avoid		
Place of measured lead	At the approximate geomtric center of the jam		

Standard accessories	
Instrument box	1
Current clamp	2
Test leads	4 (2 red and 2 black)
Battery	6 (Alkalence dry battery: 1.5V AA)
Instruction	1

Basic Function		
Function	Range	Accuracy
AC voltage	0.1mA~299mA	±1%+3dgt
	0.30A~49.9A	±1.5%+5dgt
	50.0A~199.9A	±2%+5dgt
	200A~600A	±3%+5dgt
	601A~1000A	±4%+5dgt

Special Function	
Function	High and low voltage AC current test, creepage test, AC current monitoring online
Power	DC6V alkalence dry battery (1.5V AAA×4) Auto power off
Display mode	4 bit LCD display, backlight function, suit for dark place
Product size	76mm×255mm×31mm
Clamp size	Φ 48mm
Sampling rate	About 2 times/s
Shift	0.1mA~1000A auto shift (test rate 50/60Hz)
Data hold	99 Data hold
Circuit voltage	Under 23KV can test circuit voltage (use insulating rod)
Weight	Resting benc:about 335g(include battery),total weight:about 2.5Kg(include insulating rod and battery)
Working temperature and humidity	-10°C~40°C ; under 80%RH
Store temperature and humidity	-10°C~60°C ; under 70%RH
Insulating rod size	Φ 32mm, 1m/each batter (5battery)
Insulating strength	AC 40kV/rms (between insulating rod and the clamp)

9000



385+



### Surface Resistance Tester

Specifications	385+
Resistance range	103~1010Ω
Resistance error	± one order of magnitude
temperature range	0~50°C (32~122°F)
Temperature accuracy	±2°C/±3.6°F
Working temperature	0~40°C (32~104°F)
Storage temperature	0~60°C (32~140°F)
Relative humidity	0~70% RH (non condensing)
Backlight	√
Power Supply	9V 6F22 battery
Automatic shutdown	About 5 minutes
Size	131*65*35mm
Weight	About 180g

Special Function	
Function	High Voltage ACA Test Low Voltage ACA Test Leakage Current Test Online ACA Monitoring
Power	6V Battery (1.5V AAA×4)
Ways of Measuring	Clamp Shape CT Integration
Transmission	Wireless transmission Line transfer max. distance : Approx. 30m
Display Mode	4 digits LCD Display. Backlight Function Suitable for dusky occasions.
LCD Size	47mm×28.5mm
Product Size	76mm×255mm×31mm
Clamp Size	Φ48mm
Sampling Rate	Approx. 2 times/s
Measuring Range	0.1mA~1000A (50/60Hz Automatically)
Resolution	0.1mA
Gear Shift	0.1mA~1000A Full automatic gear shift
Accuracy (Below 23°C±5, 80%RH)	0.1mA~299mA: ±1%±3dgt
	0.30A~9.99A: ±1.5%±5dgt
	10.0A~199.9A: ±2%±5dgt
	200A~399A: ±2.5%±5dgt
	400A~600A: ±3%±5dgt
601A~1000A: ±4%±5dgt	
Line Voltage	Line test below 60KV
Data Storage	99 sets of data can be stored in the process "MEM" sign indication "FULL" twinkling sign indicates memory full
PEAK Hold	√
Data Hold	√
Data Scan	√
Overflow Indication	√
No Sign Indication	√
Auto Power Off	√
Low Battery Indication	√
Operation Temperature	-25°C~40°C; below 80%Rh
Storage Temperature	-10°C~60°C; below 70%Rh
Insulating Bar Size	Φ32mm, 1m per node ( five nodes)
Insulating Strength	AC 100kV/rms (Between the fifth insulating bar and high voltage current clamp chip)
Structure	Leak-Proof II

9000B







**6234P**



**6235P**



**6236P**



**824**



**824C**



**6237P**  
**6238P**

### Technical data

Model	6234P	6235P	6236P
Size	5 digits large LCD display	5 digits large LCD display	5 digits large LCD display
Measuring range	/	Contact rev:1.0~19999RPM	Contact rev:1.0~19999RPM
	Contact rev:2.5~99999RPM	Surface Speed (m/min):1.0~1999.9RPM	Surface Speed (m/min):1.0~1999.9RPM
Resolution	Contact rev:0.1RPM	Contact rev:0.1RPM	Contact rev:0.1RPM
	Surface Speed (m/min):0.01m/min	Surface Speed (m/min):0.01m/min	Surface Speed (m/min):0.01m/min
Accuracy	±0.05%+1	±0.05%+1	±0.05%+1
Max. Display	40000	40000	40000
Time Base	4MHz quartz crystal	4MHz quartz crystal	4MHz quartz crystal
Power	4×1.5VAA(UM-3)	4×1.5VAA(UM-3)	4×1.5VAA(UM-3)
Dimension	Approx: 157×64×31mm	Approx: 174×64×31mm	Approx: 195×64×31mm
Weight	Approx: 125g	Approx: 110g	Approx: 200g

Model	6237P	6238P
Measuring Range	60~19999RPM/FPM	60~39999RPM/FPM
RPM: Round Per Minute	FPM: Flash Per Minute	
Coarse/Fine Adjust Knob Range	<1000RPM hours Coarse Adjust Knob:10RPM/FPM Fine Adjust Knob:0.1RPM/FPM	<1000RPM hours Coarse Adjust Knob: 100RPM/FPM Fine Adjust Knob:1RPM/FPM
	≥1000RPM hours Coarse Adjust Knob:100RPM/FPM Fine Adjust Knob:1RPM/FPM	
Accuracy	0.05%	
Resolution	<1000RPM : 0.1RPM/FPM	
	≥1000RPM:1RPM/FPM	
TimeBase	10MHz	
Display	5 DigitsLCD Backlight	
Max. Display	19999	
Power Supply	4×1.5V AA(UM-3) battery	
Product Size	195×73×38mm	
Weight	Approx. 200g	

### Sound level meter

Basic function	824	824C
Measuring range	30~130dBA; 35~130dBC	30~130dBA
Accuracy	±1.5dB	±1.5dB
Digit&Resolution	5 digits & 0.1dB	4 digits & 0.1dB
Frequency response	31.5Hz~8.5kHz	31.5Hz~8.5kHz
Measuring level	30-130, 40-90, 50-100, 60-110, 80-130	
Frequency weighting characteristic	A & C	
Time weighting	FAST/ SLOW	
Sampling rate	2 times/second	2 times/second
Microphone	1/2 inch polarization capacitance microphone	1/2 inch polarization capacitance microphone
AC/DC output	✓	
Max reading	✓	✓
Barcode indicate the value	✓	
Overload indication	OVER/UNDER	
Low battery indication	✓	
Power	1.5V AA 4pcs or DC 6V 100mA adapter	9V battery 1pcs or DC 6V 100mA adapter
Dimension	256×70×35mm	52.5×133.5×35.5mm
Weight	308g (including battery)	144g (including battery)



New Model

1010D+



New Model

1010DL

### Technical data

Model	1010D+ (General)	1010DL (Bluetooth)
Lcd	4-bit LCD	
Illumination range	0~199999LUX; 0~19999FC	
Illumination accuracy	± 4% (corrected by standard flat lamp with color temperature of 2856K); ± (6%~5Lux) other visible light sources	
Resolution	Lux: <200,0.1Lux; ≥200,1Lux; FC: <20,0.01FC; <200,0.1FC; >200,1FC	
Cosine angle	30°, ±2%; 60°, ±6%; 80°, ±25%	
Deviation characteristics		
Max/Min	√	
Automatic shutdown	10 minutes (cancelable)	
Relative value	√	
Data retention	√	
Work environment	0~40 °C (<90% RH non condensing)	
Storage environment	-20~60 °C (<75%RH)	
Power Supply	9V battery	
Sampling rate	2 times/second	
Spectral range	320~730nm	
Sensor type	silicon photocell	
Size	154*60*31mm	
Weight	About 185g (including battery)	



1010F

### Digital Light Meter

A professional digital illuminance meter for measuring the brightness of visible light. It can record the maximum and minimum values. It is widely used for brightness measurement in various occasions such as warehouses, factories, hospitals, schools, airports, and homes.

Range	LUX: 1000-10000-100000 FC: 100-1000-10000
Accuracy	± (3%+5LUX) ordinary incandescent lamp at 28540 ± (6%+5LUX) other visible light sources Cosine angle deviation feature 30° ± 2% 60° ± 6% 80° ± 25%
Resolution	LUX: <1000: 0.1LUX ≥1000: 1LUX FC: <100: 0.01FC <1000: 0.1FC ≥1000: 1FC
Sensor	Silicon photovoltaic cells and filters
Storage conditions	Temperature: 10°C~50°C Humidity: <80%RH
Sampling rate	Approx. 2 times per second
Operating conditions	Temperature: 0~40°C, Humidity: <80%RH Altitude: <2000m
Spectral range	320~730nm
Automatic shut-down	10min
Power supply	3 x 1.5VAAA(LR03) batteries



**816**



**816B**

### Anemometer

Basic function	816	816B
Measurement items	Air velocity, Air temperature	Air velocity, Air temperature
Range of air velocity	0~30m/s, 0~90km/h, 0~5860ft/min, 0~55knots, 0~65mph	0~45m/s, 0~140km/hr, 0~8800ft/min, 0~88knots, 0~100mph
Accuracy of air velocity	±5%	±3%
Range of air temperature	-10~45°C, 14~113°F	0~45°C, 32~113°F
Accuracy of air temperature	±2°C	±2°C
Resolution	0.2°C; 0.2m/s	0.2°C; 0.2m/s
Max/Average/Current air velocity reading	✓	✓
°C/°F Selection	✓	✓
Wind chill indication	✓	✓
Beauford Scale	✓	✓
Auto/Manual power off	14 minutes without any operation	✓
Low battery indication	✓	✓
LCD Backlight	12 seconds active by press any key	LCD Backlight ON/OFF selection
Power	CR2032 3.0V	9V battery
Dimension	105×40×18.5mm	Main unit:145×72×35mm; Vance:172×65×29mm
Net weight	52g (including battery)	Main unit:164g(including battery); Vance:112g



**230**



**230A**



**330**



**6801**

Basic Function		230	230A	330
Function	Sensor Inside	✓	✓	✓
	External Temperature Probe		✓	
Temperature Measuring Range	(0~50) °C / (32~120) °F	✓	✓	✓
Temperature Range of External Probe	(-2~70) °C / (-4~158) °F		✓	
Humidity Range	(20%~90% RH	✓	✓	✓
	(30%~90% RH			
Temperature Accuracy	±1.0°C (1.8°F)	✓	✓	✓
Humidity Accuracy	±5% (40%~80% Others ±8%)	✓	✓	✓
Temperature Resolution Display	0.1°C (0.1°F)	✓	✓	✓
Special Function				
Temperature/Humidity Display		✓	✓	✓
Temperature °C/°F switch		✓	✓	✓
Alarm Clock		✓	✓	✓
12/24 hours system clock		✓	✓	✓
Alarm On Schedule		✓	✓	✓
Calendar Display		✓	✓	✓
Maximum / Minimum Temperature And Humidity Memory		✓	✓	✓
Battery		AAA 1.5V	AAA 1.5V	AAA 1.5V
Product Size		95x105x17mm	95x105x17mm	110x59x16mm

Note: 230 and 230A can't be tested for industry use. The test results are just for reference.

6801			
Basic function	Resolution	Range	Basic accuracy
Function	1°C	-50-1000°C	±(0.3%+2°C)
1°C	1°C	1000-1300°C	±(0.5%+2°C)
1°F	1°F	-238-1000°F	±(0.3%+2°F)
1°F	1°F	1000-2372°F	±(0.5%+3°F)
Special function			
Unit symbol display	✓		
Max. display	10000 (3 1/2 digital LCD with max. reading of 1999)		
Sample rate	2.5 times/s		
Storage environment / relative humidity	Temperature 0°C-50°C (32°F -122°F), relative humidity < 80%		
Over range indication	The MSD "1" or "-1" displays		
Measuring method	TP01 K-type temperature probe		
Measuring range	-50-1300°C / -58-1999°F		
Dimension	149*71*35mm		
Weight	200g		
Power	2*1.5V AAA		

**231/231A**



Model	231 (Normal model)	231A (Bluetooth model)
LCD	4-digit LCD display	
Temperature range	-25°C~75°C(-13°F~167°F)	
Humidity range	0~99.9%RH	
Temperature accuracy	±0.3°C(15~40°C)Other ±1°C	
Humidity Accuracy	±3%RH(30~80%RH)Other ±4%RH	
Temperature resolution	0.1°C	
Humidity resolution	0.1%RH	
Temperature max/Min/Alarm	✓	
Humidity max/Min/Alarm	✓	
Data retention	✓	
Working environment	0~40°C(<90%RH non-condensing)	
Storage environment	-20~60°C(<75%RH)	
Power supply	3 1.5V batteries (7#) or USB Type-C power supply	
Sampling rate	1 time/second	
Shell material	ABS	
Size	169*56*32mm	
Weight	About 150g (including battery)	



**320**



Multilingual



USB transfer/  
charging



Unit  
conversion



Photo/Video



Automatic  
shut-down



Temperature  
alarm



8 pseudo-  
colors



Emissivity  
adjustable



**328A/328B**

## Technical indicators

Basic skills		
IR thermal imaging	Resolution	120x90
	Working band	8~14um
	Frame rate	25Hz
	NETD	70mK@25°C
	Field of view	38°X50°
	Lens	2.3mm F1.1
	Scope	-20~400°C
	Precision	±3°C or ±3% of reading
	Emissivity	0.01 to 1.00 adjustable
	Support point	Full screen maximum/minimum/center/area temperature measurement
Visible light	Resolution	720P
	Field of view	55°X83°
Image display	Image mode	Edge blending, overlay blending, picture-in-picture, single IR, single visible light
	Capacity	8G built-in memory, can store more than 20,000 pictures
Storage	Image storage format	JPG
	Video format	MP4
Basic parameters		
Language	Chinese (Simplified), Chinese (Traditional), English, French, German, Spanish, Dutch, Japanese, Korean, Arabic	
Power supply	Built-in 2600mAh large capacity rechargeable battery	
Display size	2.8 inches	
Body color	Black	
Body weight	About 310g	
Dimensions	70*80*200mm	
Standard accessories	USB Type-C data cable, GB charging head, lanyard, manual	
Standard inner packaging	Color box	
Package size	50*45*34cm	

## Mobile thermal image camera

Parameter	328A	328B
Resolution	160*120	256*192
Working wavelength	8~14um	
Frame rate	25Hz	
NETD	< 50mK @26°C	
Field of view	35°*27°	56°*42°
Lens	3.2mm	
Measuring range	-15°C~600°C	
Precision	±2°C or ±2%	
Temperature measurement	The highest point, the lowest point, the center point temperature measurement and the regional temperature measurement	
Swatches	6	
Universal		
Language	Chinese /English	
Operating temperature	-10°C~ 75°C	
Storage temperature	-45°C~ 85°C	
Water proof	IP54	
Product Size	34mm X 26.5mm X 15mm	
Product weight	19g	



**360S**



**303B**



**302B**

**Technical indicators**

Basic skills		
Infrared Thermal Imaging	Resolution	320x240
	Frequency band	8~14um
	Frame rate	9Hz
	NETD	70mK@25°C (77°F)
	Field of view	Horizontal 34.4°, vertical 25.8
	Lens	6.5mm
	Temperature range	-10°C ~ 450°C (14°F ~ 842°F)
	Temperature measurement accuracy	±2°C or ±2%
	Temperature measurement	Hottest, coldest, central point, zone area temperature measurement
	Color palette	Tyrian, white hot, black hot, iron, rainbow, glory, Hottest, coldest.
Visible	Resolution	640x480
	Frame rate	25Hz
	LED light	Support
Display	Display Resolution	320x240
	Display Size	3.5 inch
	Image mode	Outline fusion, overlay fusion, picture-in-picture, infrared thermal imaging, visible light
General	Working time	5000mah battery, >4 hours in 25°C (77°F)
	Battery Charge	Built-in battery, it is recommended to use +5V & ≥2A universal USB charger
	WiFi	Support App and PC software data transmission
	Operating temperature	-20°C~+60°C (-4°F ~ 140°F)
	Storage temperature	-40°C~+85°C (-40°F ~ 185°F)
	Waterproof and dustproof	IP54
	Camera Dimension	230mm x 100mm x 90mm
	Net weight	420g
	Package dimension	270mm x 150mm x 120mm
	Gross weight	970g
Storage	Capacity	Built-in memory, about 6.6G available, can store more than 20,000 pictures
	Picture storage mode	Simultaneous storage of infrared thermal imaging, visible light and fusion images
	File format	TIFF format, support full frame pictures temperature analysis
Image analysis	Windows platform analysis software	Provide professional analysis functions to analyze full pixels temperature analysis
	Android platform analysis software	Provide professional analysis functions to analyze full pixels temperature analysis
Interface	Data and charging interface	USB Type-C (Support battery charging and data transmission)
Secondary development	Open interface	Provide WiFi interface SDK for secondary development

**Technical data**

Main function	303B	302B
Temperature Range	--20°C ~ 550°C(-4°F ~ 1022°F)	--32°C ~ 380°C(-25.6°F ~ 716°F)
Resolution	0.1°C/0.1°F	0.1°C/0.1°F
Accuracy	±2.0°C or ±2%	±2.0°C or ±2%
Display unit	°C/°F	°C/°F
Auto power off	√	√
Back light	√	√
Data Hold	√	√
Distance Spot Ratio	12:1	12:1
Emissivity	0.1~1.0 adjustable	0.1~1.0 adjustable
Size	97*43*160 mm	93*37*143mm
Weight	130g	105g
Power	9V battery	1.5V*2 battery



**307C**

Model	307C
Temperature Range	-20 to 800°C (4 to 1472°F)
Accuracy	-0 to 800°C (32 to 1472°F): ±1.5°C/±2.7°F or ±1.5% -20 to 0°C (4 to 32°F): ±3°C/±5°F
Repetition	1% or 1°C
Response Time	1.5s, 95% Response
Response Length	8-14um
Emissivity	0.10-1.00 Adjustable
Operation Temperature	0-40°C (32-104°F)
Relative Humidity	10-95%RH Non-condensing
Storage Temperature	-20to60°C (-4to140°F)
Weight/Size	270g; 147.4*59.5*201.3mm
Power	9V Alkaline Battery
Battery Life	Laser Models: 12 hours
D:S	20:1



**304D**



**304F**



**304E**



**308D /310C**

Model	308D	310C
Temperature Range	-30°C~1150°C (-22°F~2102°F)	-20°C~1650°C
Max. Display	4 digits LCD Display	4 digits LCD Display
Resolution	0.1°C/0.1°F	0.1°C/0.1°F
Accuracy	±1.5% or ±1.5°C	±1.5% or ±1.5°C
Display Unit	°C/°F	°C/°F
Auto Power Off	✓	✓
Backlight	✓	✓
Response Time(90%)	0.5s	0.5s
D:S	50:1	50:1
Emissivity	0.1~1.00 Adjustable	0.1~1.00 Adjustable
Operation Temperature	0°C~50°C	0°C~50°C
Size	141×60×200mm	141×60×200mm
Weight	270g	270g
Standard Inner Package	Color Box	Color Box
Power	9V Battery	9V Battery

**Technical parameter**

Main Function	304D	304E	304F
Measuring temperature range	-50°C~400°C (-58°F~752°F)	-50°C~600°C (-58°F~1112°F)	-50°C~900°C (-58°F~1652°F)
Measurement accuracy	-50°C~0°C (-58°F~32°F): ±3°C (±5°F) 0°C~900°C (32°F~1652°F): ±1.5%rdg (1.5%) whichever is greater		
Repeatability	1%rdg or 1°C whichever is greater		
Reaction time	About 0.5s, 95% response		
Infrared wavelength	5-14 μ m		
Object distance ratio	12:1		
No operation shutdown time	About 7s		
Low battery prompt	<2.4V battery symbol display		
Overload indication	LCD display "Hi"/"Lo"		
Working environment upper/lower limit	LCD display "AH"/ " AL"		
Ambient working temperature	0 ~40°C (32 ~ 104°F)		
Ambient storage temperature	-10-60°C (14-140°F)		
Power supply	1.5V AAA*2 battery		



**63/63A/63B**



**65**

**65B**

**66B**

## Technical data

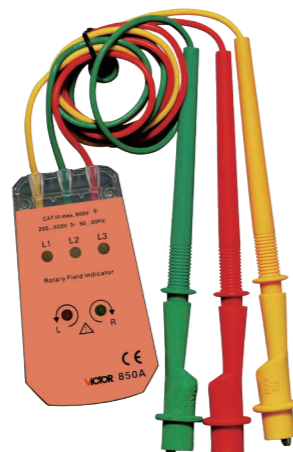
Model	63	63A	63B
<b>Characteristic</b>	Simple structure: convenient operation: integrated design. Just need to align the instrument probe with the measured object and press the measurement key to measure.	The front end of the sensor is equipped with a long probe; It is convenient to measure the equipment vibration in a narrow space. The sensor and display adopt separate structure to facilitate the measurement of different angles and spaces.	The sensor uses a high-strength magnet to adsorb on the measured object, which can collect the vibration signal more accurately. The sensor and display adopt separate structure to facilitate the measurement of different angles and spaces
<b>Measuring range</b>			
<b>Vibration displacement (P-P)</b>	0~1999um	0~1000um	0~1999um
<b>Vibration velocity (RMS)</b>	0~199.9mm/s	0~71 mm/s	0~199.9mm/s
<b>Vibration acceleration (O-P)</b>	0~199.9m/s <sup>2</sup>		0~199.9m/s <sup>2</sup>
<b>Frequency response</b>			
<b>Acceleration</b>	10Hz~1kHz		10Hz~1kHz
<b>Speed</b>	10Hz~500Hz	12Hz~500Hz	10Hz~500Hz
<b>Displacement</b>	10Hz~200Hz	12Hz~200Hz	10Hz~200Hz
<b>Basic Function</b>			
<b>Measurement Accuracy</b>	±10%		
<b>Ambient Temperature</b>	0~40°C		
<b>Relative Humidity</b>	≤80%		
<b>Atmospheric Pressure</b>	75~106Kpa		
<b>Other Function</b>			
<b>Low Voltage Indication</b>	If the battery voltage is lower than 5.5V, the low voltage prompt is displayed		
<b>Data Retention Time</b>	After releasing the measurement key, the data is held for 1 minute		
<b>Indication Fluctuation</b>	The indication fluctuation shall not be greater than one resolution		
<b>Basic parameters</b>			
<b>Power Supply</b>	9V		
<b>Display Size</b>	50*13mm		
<b>Fuselage Size</b>	185*68*30mm		
<b>Fuselage Weight</b>	160g(Including battery)		

## Technical data

Model	65	65B	66B
<b>Measuring range Vibration shift (P-P)</b>	1~1999umP-P (RMSX2.828)	1~1999umP.P (RMSX2.828)	0.01~19,99mmP.P (RMSX2828)
<b>Measurement range Vibration speed (RMS)</b>	0.1~199.9mm/s RMS	0.1~199.9 mm/s RMS	0.1~199.9mm/s RMS
<b>Measurementrange Vibrationaccelerated speed</b>	0.1~199,9m/s <sup>2</sup> Peak(RMS*1.414)	0.1~199,9m/s <sup>2</sup> Peak(RMS*1.414)	0.01~19,99m/s <sup>2</sup> Peak(RMS*1.414)
<b>Frequency response accelerated speed</b>	10Hz~1kHz(LO), 1kHz~15kHz(HI)	10Hz~1kHz(LO), 1kHz~15kHz(HI)	0.5Hz~200Hz
<b>Frequency response range speed</b>	10Hz~1kHz(LO)	10Hz~1kHz(LO)	0.5Hz~200Hz
<b>Frequency response range shift</b>	10Hz~1kHz(LO)	10Hz~1kHz(LO)	0.5Hz~100Hz
<b>Measurement accuracy</b>	5% ± 2 characters	5% ± 2 characters	5% ± 2 characters
<b>Low voltage indication</b>	battery voltage lower than 5.5V, display low voltage	battery voltage lower than 5.5V, display low voltage	battery voltage lower than 5.5V, display low voltage
<b>Dataholdtime</b>	After releasing the measurement key, the data will be held for one minute	After releasing the measurement key, the data will be held for one minute	After releasing the measurement key, the data will be held for one minute
<b>Indication value fluctuation</b>	Indication value fluctuation is not greater than one resolution	Indication value fluctuation is not greater than one resolution	Indication value fluctuation is not greater than one resolution
<b>Ambient temperature</b>	0~40°C	0~40°C	0~40°C
<b>Relative humidity</b>	≤ 80%	≤ 80%	≤ 80%
<b>Atmospheric pressure</b>	75~106Kpa	75~106Kpa	75~106Kpa
<b>Power supply</b>	9V battery		
<b>Display size</b>	50*13mm		
<b>Weight</b>	160g(Including battery)		
<b>Size</b>	185(H) X68(W) X30(D) mm		



850



850A



850C/850D

Technical data

Basic Function / Feature	850	850A
Product feature	Contact way by LED and buzzer	
Function	Check the state of open phase and phase sequence	
Voltage range	200~480V	200~600V
Measuring frequency range	20-400Hz	
Test cable length	1m	
Product dimension	98*58*23mm	
Weight	132g	
Batteries	Without the use of batteries	

Technical data

Basic function	850C	850D
Vised wire size	Outer diameter $\phi$ 1.6mm- $\phi$ 16mm	
Power supply	DC 3V (AA/LR6*2 alkaline dry batteries, continuously working for 70 hours)	
Performance-guaranteee range	AC70-1000V, 45-65Hz (sine wave continuously input)	
LED display	【Positive Phase Sequence】 The four phase-sequence lamps blink in order (clockwise)	
	【Negative Phase Sequence】 The four phase-sequence lamps blink in order (counterclockwise).	
	【Line-voltage Indication】 L1、L2、L3 lamp light up	
	【Default Phase】 L1/L2/L3 lamp is off	
	【Open Circuit】 L1/L2/L3 lamp is off	
Buzzer	【Positive Phase Sequence】 The buzzer sounds intermittently	
	【Negative Phase Sequence】 The buzzer sounds continuously	
Power indication	POWER indicator light up after turn on; LOW BATTERY lamp light up if the battery needs to be replaced	
Magnetic force	Instrument base plate is provided with four magnets, suction hanging in the electrical box, can withstand 800g quality	
Auto Power off	The power will be turned off automatically if the instrument remains idle for 5 minutes after the power is turned on	
Clamp lead wire length	0.6m	
Dimension	70W*75H*30D (mm)	
Weight	About 200g (including batteries)	
Max. rated voltage	AC 1000V	
Dielectric strength	5.4kVrms	
Max. rated power	300mVA	
Accessories	Batteries LR6: 2pcs bag: 1pc rope: 1pc	



668A

Technical data

Line search (SCAN)	Find out the desired cable from a large number of cables.
Cable proofreading (TEST)	Fast measurement of open circuit, short circuit, sequence.
Line voltage test (VOLT)	Measuring the working voltage and positive or negative of phone line.
Continuity test (OHM)	Checking the phone which is under open circuit or short circuit. ( Phone line isn't connected to any live equipment)
Torch function	Super bright and white light torch function
Adjustable sensitivity	The volume can be adjusted according to your need when using it.
Headset function	In noisy occasions, headphones can be worn to work.
Frequency conversion of line signal	You can set different frequencies to find lines.
Weak current-turn on test	Can be connected to the Phone line / Ethernet switch/ Router/ Line hunting when the PC terminal is power on. The measured voltage should not exceed 48V.

ELECTRIC STATIC CHARACTERSTIC

Current transmit current $\leq$ 45mA, receive current $\leq$ 100mA  
 Battery receiver 9V battery; transmitter AA 1.5V battery \*3  
 Transmission distance of hunting line  $\geq$ 3km  
 Safety safe to use (the probe can directly contact the exposed metal wire)

Technical indicators

Hunting line function	√
Paired function	√
Continuity test of short circuit	√
Line voltage	√
Sensitivity adjustable	√
Torch	√
Display	LED light
Distance of hunting line	3 km
Output signal level	Approx 23Vp-p (frequency adjustable)
Other function	Energy saving design, sensitivity adjustable, low voltage detection, headset function.
Packing	Color box ; tool bag





2GD

## SPECIFICATIONS

Grain Can Be Measured	rapeseed, sesame, soybean meal, cotton, soybean, peanut, barley, rice, sorghum, watermelon seed, paddy, wheat, maize, fodder
Principle of Measurement	Resistance Method
Accuracy	0.1%
Backlight Display	√
Deviation Adjustment	√
Voice-over	√
Resistance Alarm Setting	Pre-set 10% / Adjustable
Memory Function	√

### PACKING INFORMATION

Power	4*1.5V AA Battery
Product Net Weight	254g
Product Size	80*43*425mm
Packing	Gift Box
Standard Quantity Per Carton	40
Standard Carton Size	49.5*45*37cm
Standard Carton Gross Weight	18.24KG



2GB

## Moisture Meter Specification 2GB

### Products Feature

Double Injection Case, stylish and solid.

3 species of trees intelligent selection to avoid self-calculation of users.

Wide Range: 5%~40%.

Self-calibrating makes the operation simple.

LCD digital display makes the reading clear and straight.

General Characters	2GB
Display	2 digits LCD Display with 15mm-high figure
Resolution	1%
Range	5%~40%;Accuracy:±1%rdg+1d
Power	9V(6F22)

## 10/11



## Technical data

MODEL	10	11
AC voltage	12~1000V	12~1000V
Frequency	50/60Hz	50/60Hz
Display method	LCD	√
Beep prompt	√	√
Flash indicator	√	√
Adjustable sensitivity	√ (Adjustable)	√ (Adjustable)
High sensitivity range	12~1000V	12~1000V
Low sensitivity range	48~1000V	48~1000V
Zero live line distinction	√	√
Flashlight	√	√
Automatic shut-down	√	√
Low battery reminder	√	√
Working mode	automatic induction	automatic induction
Operating temperature	0~40°C	0~40°C
Storage temperature	-10~50°C	-10~50°C
Humidity	≤95%	≤95%
Altitude	≤2000m	≤2000m
Security Level	CATIII 1000V CAT.IV 600V; CE	CATIII 1000V CAT.IV 600V; CE
Power	2x1.5V AAA	2x1.5V AAA
Display size	18*8mm	
Color	black + orange	black + orange
Probe shape	Flat	Flat
Standard inner packaging	color box	color box
Package size	36*34*18cm	36*34*18cm
Standard box gross weight	8kg	8kg
Product Size	148*21* 20mm	148*21* 20mm
Product weight	45g	45g



842A



842B



842C



842D

### Technical parameter

Model	842A	842B	842C	842D
Max distance	50M	70M	100M	120M
Precision	±(1.5mm+d*Five hundred thousandths)			
Continuous measurement		√		
Area volume measurement		√		
Pythagorean measurement		√		
Addition and subtraction measurement		√		
Area volume addition and subtraction		√		
Max/min		√		
Self-calibration		√		
Backlight		√		
Laser class	II			
Laser type	level 2 635nm, <1 mW			
Storage number	99 pens			
Automatically cut off the laser	20 seconds			
Automatic shut-down	150 seconds			
Voice prompt		√		
Storage temperature	-20°C ~60°C			
Operating temperature	0°C~40°C			
Storage humidity	20%~ 80%RH			
Battery	1.5V AAA			
Size	112*50* 25mm			

### AUTOMOTIVE BRAKE FLUID TESTER

The 2GE brake oil detector is an instrument that quickly detects the brake fluid performance of the vehicle by detecting the moisture content of the automobile brake fluid. The instrument supports three types of DOT3 / DOT4 / DOT5.1, which meets the requirements of different users and provides favorable help for customers to replace the brake oil in time.

Detect three types of vehicle brake fluid: DOT3 / DOT4 / DOT5.1  
Nickel-plated metal probe, effectively prevent oil and oxidation, rapid measurement  
High precision of 240mm no-rust snakeskin probe connection tube  
6.9v laminated battery power supply, strong endurance

2GE
water content LED indicator detect
sound, light dual alarm function
Brake fluid type to select (DOT3/DOT4/DOT5.1)



2GE

### 1. Product specifications

Project	2GH	2GHS	2GY
Measuring range	0.0-55% Brix	0.0-55% Brix	0.0-28% Brix
Graduation value	0.1Brix/0.1 °C	0.5Brix/0.1 °C	0.1Brix/0.1 °C
Precision	±0.2Brix/1 °C	±0.5Brix/1 °C	±0.2Brix/1 °C
Use environment	10-80°C	10-80°C	10-80°C
Sample volume	≥0.2ml(3-5) drop	≥0.2ml(3-5) drop	≥0.2ml(3-5) drop
Measure time	≈3S	≈3S	≈3S
Power supply	2 AAA alkaline batteries	2 AAA alkaline batteries	2 AAA alkaline batteries
Battery Life	≈2000 times	≈2000 times	≈2000 times



2GH

### 2. Accessories

NO.	Product description	Quantity
1	Digital refractometer	1
2	AAA alkaline battery	2
3	Instruction manual	1
4	Glasses cloth	2
5	Waterproof rubber mat	1
6	Phillips screwdriver	1
7	dropper	2
8	Cross recessed pan head tapping screw M1.9*5	4
9	Carton Size	52.5*27.2*25cm
10	QTY/Carton	16
11	G.W/Carton	6.3kg



2GHS



2GY



**240/240S**



**270/270S**



**2102/2102S**

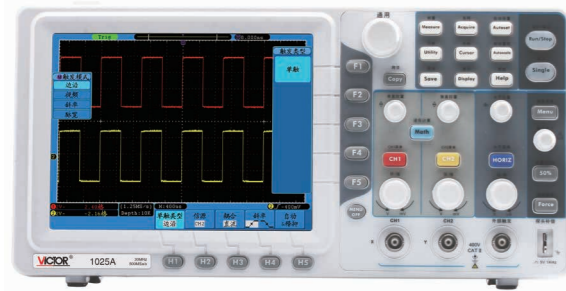
## Technical data

Basic skills	240/240S	270/270S	2102/2102S	2202/2202S
<b>Bandwidth</b>	40 MHz	70 MHz	100 MHz	200 MHz
<b>Real-time sampling rate</b>	125 MSa/s (Dual channel)	250 MSa/s (Single channel)	250 MSa/s (Dual channel) 500 MSa/s (Single channel)	1 GSa/s
<b>Aisle</b>	2			
<b>Sampling method</b>	Normal, peak sampling			
<b>Sampling Rate</b>	125 MSa/s (dual channel), 250 MSa/s (single channel)			
<b>Record length</b>	When single channel: 8K maximum, when dual channel: 4K			
<b>Wave refresh</b>	10,000 wfms/s			
<b>Input coupling</b>	DC, AC, ground			
<b>Input impedance</b>	1 MΩ±2%, in parallel with 16pF±10 pF			
<b>Probe coefficient</b>	1X、10X、100X、1000X			
<b>Max input voltage</b>	400V (DC+AC peak value)			
<b>Time base range</b>	5ns/div-1000s/div, step by 1-2-5			
<b>Vertical sensitivity</b>	10mV/div~10V/div			
<b>Vertical resolution</b>	8bit			
<b>Cursor</b>	Voltage difference (ΔV), time difference (ΔT)			
<b>Auto measurement</b>	Period, frequency, amplitude, peak-to-peak, max, min, average			
<b>Trigger type</b>	Edge trigger			
<b>Trigger method</b>	Automatic, normal, single			

Basic skills	Range	Accuracy
<b>DC voltage</b>	200.00mV	±(0.05%+5dig)
	2.0000V/20.000V/200.00V	±(0.3%+3dig)
	1000.0V	±(0.5%+2dig)
<b>AC voltage</b>	200.00mV/2.0000V/20.000V/200.00V	±(0.8%+5dig)
	750.0V	±(1%+5dig)
<b>DC current</b>	200.00mA	±(0.8%+2dig)
	10.000A	±(2.5%+2dig)
<b>AC current</b>	200.00mA	±(1%+5dig)
	10.000A	±(2.8%+5dig)
<b>Resistance</b>	200.00Ω/2.0000kΩ/20.000kΩ/200.00kΩ/2.0000MΩ	±(0.8%+3dig)
	20.000MΩ	±(1%+3dig)
	100.00MΩ	±(3%+3dig)
<b>Capacitance</b>	20.000nF/200.00nF/2.0000μF/20.000μF/200.00μF/2.0000mF	±(3.0%+10dig)
<b>Continuity test</b>	√ (<50Ω)	
<b>Diode test</b>	√ (<0-2V)	
<b>Auto range</b>	√	
<b>True effective value</b>	√	

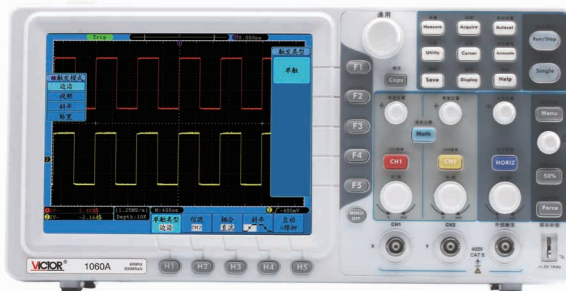
Signal generator function	240S/270S/2102S	
<b>Frequency characteristics</b>	Sine wave	0.1Hz~25MHz
	Rectangular wave	0.1Hz~5MHz
	Sawtooth wave	0.1Hz~1MHz
	Pulse wave	0.1Hz~5MHz
	Arbitrary wave	0.1Hz~
<b>Sampling Rate</b>	125MSa/s	
<b>Amplitude (50Ω)</b>	0.01Vpp ~ 2.5Vpp	
<b>Aisle</b>	1	
<b>Wave length</b>	8k	
<b>Vertical resolution</b>	14 bit	
<b>Output impedance</b>	50 Ω	

Basic parameters	
<b>Power</b>	2200mAh*2 (3.7V, 18650)
<b>Display size</b>	3.5-inch color LCD display
<b>Body color</b>	Black+orange
<b>Body weight</b>	About 0.6KG (without battery)
<b>Dimensions</b>	198 mm × 96mm ×38 mm
<b>Accessories</b>	Power adapter, USB cable, alligator clip cable (2 S type), test lead, probe calibration tool, manual



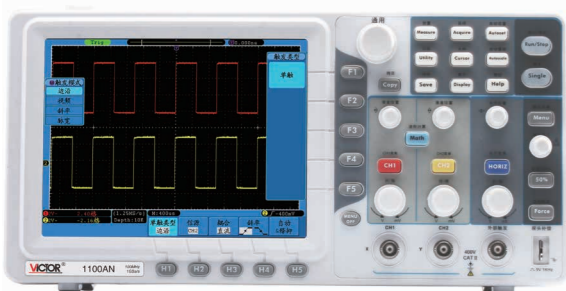
1025A

Basic function	1025A
Bandwidth	30MHz
Real-time sampling rate	500MS/s
Rise time	≤11ns
Record Length	10K pts
Channel	2 channels + external trigger
Display	8 inches TFT 65535 color LCD, 800*600 pixels
Interval time	Single: ±(1 sample interval time + 100ppm × reading + 0.6ns), > 16 average: ±(1 sample interval time + 100ppm × reading + 0.4ns)
Input coupling	DC, AC and GND
Input impedance	1 MΩ ± 2%, is in parallel with 10pF ± 5pF
Time base range	4ns/div ~ 100s/div, step from Unary numeral system to binary system and then quaternary.
Vertical sensitivity	5mV/div~10V/div (at the position which input BNC)
Vertical resolution	8 bits (simultaneous sampling of two channels)
Max. input voltage	400V (DC + AC peak value, input impedance of 1MΩ) (10:1 probe attenuation)
Power	100~240V AC RMS, CAT II
Dimension	348mm(length)*170mm(high)*78mm(Width)
Weight	1.5kg (without package)



1060A

Basic function	1060A
Bandwidth	60MHz
Real-time sampling rate	500MS/s
Rise time	≤5.8ns
Record Length	100K pts (10M is optional to update)
Channel	2 channels + external trigger
Display	8 inches TFT 65535 color LCD, 800*600 pixels
Interval time	Single: ±(1 sample interval time + 100ppm × reading + 0.6ns), > 16 average: ±(1 sample interval time + 100ppm × reading + 0.4ns)
Input coupling	DC, AC and GND
Input impedance	1 MΩ ± 2%, is in parallel with 15pF ± 5pF
Time base range	5ns/div ~ 100s/div, step from Unary numeral system to binary system and then quinary.
Vertical sensitivity	2mV/div~10V/div (at the position which input BNC)
Vertical resolution	8 bits (simultaneous sampling of two channels)
Max. input voltage	400V (DC + AC peak value, input impedance of 1MΩ) (10:1 probe attenuation)
Power	100~240V AC RMS, CAT II
Dimension	348mm(length)*170mm(high)*78mm(Width)
Weight	1.5kg (without package)

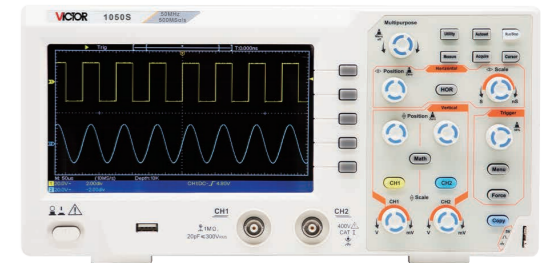


1100AN

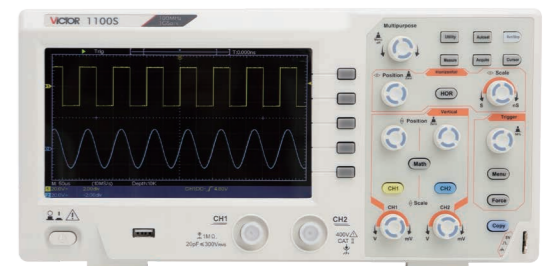
Basic function	1100AN
Bandwidth	100MHz
Real-time sampling rate	1GS/s
Rise time	≤3.5ns
Record Length	100K pts (10M is optional to update)
Channel	2 channels + external trigger
Display	8 inches TFT 65535 color LCD, 800*600 pixels
Interval time	Single: ±(1 sample interval time + 100ppm × reading + 0.6ns), > 16 average: ±(1 sample interval time + 100ppm × reading + 0.4ns)
Input coupling	DC, AC and GND
Input impedance	1 MΩ ± 2%, is in parallel with 15pF ± 5pF
Time base range	2ns/div ~ 100s/div, step from Unary numeral system to binary system and then quinary.
Vertical sensitivity	2mV/div~10V/div (at the position which input BNC)
Vertical resolution	8 bits (simultaneous sampling of two channels)
Max. input voltage	400V (DC + AC peak value, input impedance of 1MΩ) (10:1 probe attenuation)
Power	100~240V AC RMS, CAT II
Dimension	348mm(length)*170mm(high)*78mm(Width)
Weight	1.5kg (without package)

## Performance Characteristics

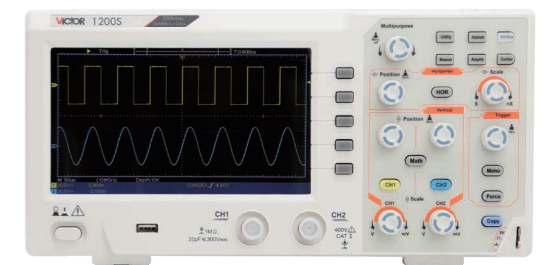
Mode	1200S	1050S	1100S
<b>Bandwidth</b>	200 MHz	50 MHz	100 MHz
<b>Sample Rate(real time)</b>	1single channel; 500MS/s; double channel: 1GS/s	500MS/s	1 GS/s
<b>Channel</b>	2		
<b>Input coupling</b>	DC, AC, Ground		
<b>Input impedance</b>	1 MΩ±2%, in parallel with 20 pF±5 pF		
<b>Input coupling</b>	1X, 10X, 100X, 1000X		
<b>Max. input voltage</b>	400V (DC+AC, PK - PK)		
<b>Channel-channel isolation</b>	50Hz: 100 : 1; 10MHz: 40 : 1		
<b>Time delay between channel(typical)</b>	150ps		
<b>Bandwidth limit</b>	Not support		20 MHz, full bandwidth
<b>Sampling rate range</b>	0.5 S/s~200 MS/s	0.5 S/s~500 MS/s	0.5 S/s~1 GS/s
<b>Interpolation</b>	(Sinx)/x		
<b>Max Record length</b>	10K		
<b>Scanning speed (S/div)</b>	5ns/div-1000s/div,step by 1-2-5≤3.5ns	2 ns/div - 1000 s/div, step by 1 - 2 - 5	
<b>Sampling rate / relay time accuracy</b>	±100 ppm		
<b>Interval(ΔT) accuracy (DC - 100MHz)</b>	Single: ±(1 interval time+100 ppm×reading+0.6 ns); Average>16: ±(1 interval time +100 ppm×reading+0.4 ns)		
<b>Vertical Resolution (A/D)</b>	8 bits (2 channels simultaneously)		
<b>Sensitivity</b>	5 mV/div ~ 5 V/div		
<b>Displacement</b>	±2 V (5 mV/div - 100 mV/div)±50 V (200 mV/div - 5 V/div)		
<b>Analog bandwidth</b>	200MHz	50 MHz	100 MHz
<b>Single bandwidth</b>	Full bandwidth		
<b>Low Frequency</b>	≥10 Hz (at input, AC coupling, -3 dB)		
<b>Rise time (at input, Typical)</b>	≤ 17.5 ns	≤ 7.0 ns	≤ 3.5 ns
<b>DC gain accuracy</b>	±3%		
<b>DC accuracy (average)</b>	Delta Volts between any two averages of ≥16 waveforms acquired with the same scope setup and ambient conditions (ΔV): ±(3% reading + 0.05 div)		
<b>Waveform inverted ON/OFF</b>			
<b>Cursor</b>	ΔV, ΔT, ΔT&ΔV between cursors,		
<b>Automatic</b>	auto cursor Period, Frequency, Mean, PK-PK, RMS, Max, Min, Top, Base, Amplitude, Overshoot, Preshoot, Rise Time, Fall Time, +Pulse Width, -Pulse Width, +Duty Cycle, -Duty Cycle, Delay A→B, Delay A←B, Cycle RMS, Cursor RMS, Screen Duty, Phase, +Pulse Count, -Pulse Count, Rise Edge Count, Fall Edge Count, Area, and Cycle Area.		
<b>Waveform Math</b>	+, -, *, /, FFT		
<b>Waveform storage</b>	16 waveforms		
<b>Lissajous figure</b>	<b>Bandwidth</b>	Full bandwidth	
	<b>Phase difference</b>	±3 degrees	
<b>Communication port</b>	USB 2.0 (USB storage)		
<b>Counter</b>	Support		



1050S



1100S



1200S

Trigger	328A	Instruction
<b>Trigger level range</b>	Internal	±5 div from the screen center
<b>Trigger level Accuracy (typical)</b>	Internal	±0.3 div
<b>Trigger displacement</b>	According to Record length and time base	
<b>Trigger Holdoff range</b>	100 ns - 10 s	
<b>50% level setting (typical)</b>	Input signal frequency ≥ 50 Hz	
	<b>slope</b>	Rising, Falling
<b>Edge trigger</b>	<b>Modulation</b>	Support standard NTSC, PAL and SECAM broadcast systems
<b>Video Trigger</b>	<b>Line number range</b>	1-525 (NTSC) and 1-625 (PAL/SECAM)



**NGM-10**

## Mini Digital Torque Wrench

The mini digital wrench is designed in a miniaturized shape and is more suitable for the operation in a narrow space. Meanwhile, it has complete operating functions including torque setting function, unit setting function, numerical value storage function, numerical value eliminating function, numerical value output function and user correction function. It is easy to operate. The mini digital torque wrench is provided with the digital display screen, so that the requirement on operators is reduced. The mini digital torque wrench is suitable for fastening and controlling bolts in automobile industry, machinery industry, etc.

### Function features

1. It has a large screen and has the backlight function.
2. The clockwise accuracy is  $\pm 2\%$ , and the counterclockwise accuracy is 2.5% (20% to 100% of the full measuring range).
3. It can be operated both in the clockwise direction and the counterclockwise direction.
4. The buzzer and the LED indicator are triggered when reaching a preset torque value (peak-limited mode).
5. It has four engineering units (N.m, kgf.cm, lbf.ft, lbf.in).
6. It has three measuring modes, i.e. real-time mode, peak mode and preset mode.
7. It has 999 sets of storable record values.
8. It can be automatically powered off in 5 minutes.

### Technical data

Model	NGM-10	NGM-30	NGM-60	NGM-100
Minimum division value	0.1	0.01		
Maximum operating range(N.m)	100N.m/7.37lbf.ft 100N.m/7.37lbf.ft /101.97kgf.cm	30N.m/22.12lbf.ft 30N.m/22.12lbf.ft /305.91kgf.cm	60N.m/44.25lbf.ft 60N.m/44.25lbf.ft /611.82kgf.cm	
Connector(inches)	1/2 1/4	3/8		
Setting range of buzzer(N.m)	3~10 0.3~10	0.9~30	1.8~60	
Length (mm)	285 230	240		
Accuracy*1	Clockwise: $\pm 2\%$ Counterclockwise: $\pm 2.5\%$			
Data storage capacity	999			
Operating mode	Peak mode (P) / Real-time mode (T) / Preset mode (Pre)			
Unit	N.m, kgf.cm, lbf.ft, lbf.in			
Form of ratchet head	Bidirectional ratchet head			
Number of ratchet teeth	72 teeth			
Number of keys	5			
Battery	Two AAA batteries			
Operating temperature	-10 C to 60 C			
Storage temperature	-20 C to 70 C			
Test falling height	one meter			
Vibration test condition*2	10G			
Service life test*3	10000 times			

Function	Range	3012	3013
Cold Cranking Amps	CCA	100~1700	✓
	IEC	100~1000	✓
	EN	100~1700	✓
	DIN	100~1000	✓
Internal resistance	0.00m $\Omega$ ~99.99 m $\Omega$	✓	
Working voltage	9V~18V	✓	
Battery status hint		✓	
12V Battery test		✓	
Starting load test		✓	
Charging system test		✓	
Overvoltage input protection		✓	
Polarity reverse Protection		✓	
LCD		✓	
LED			✓
Cable length		850mm	
Weight		320g	300g



**3012**



**3013**



**3015/3025**



**3026**

Product name	3015	3025	3026
Applicable battery	12V Storage battery	12V/24V Storage battery	12V Storage battery
Print or not	No	No	Yes
CCA range	100~1700	100~1700	100~1700
Operating temperature	-18~50 $^{\circ}$ C	-18~50 $^{\circ}$ C	-18~50 $^{\circ}$ C
Voltage range	9~18V	9~35V	9~18V
Battery range	30AH-200AH	30AH-200AH	30AH-200AH
Testing method	Kelvin four-terminal sensing		
Battery selection criteria	CCA: 100~1700 IEC: 100~1000 EN: 100~1700 DIN: 100~1000		
Main function	Battery starting test, engine system start load test, huge load system test, charging system test etc.		
Notes	This battery tester is only used for car battery testing measuring voltage range is 12V (12V~24V) Measuring CCA range is 100~1700 Battery range is 30AH-200AH Warning: the below cars of batteries are not allowed to test: electric vehicle, UPS batteries, electric tricycle		



3015A



3015B



3015C

3015A	3015B	3015C
6/12V batteries ≤ 20A discharge, 5~80AH test range	6/12V batteries ≤ 80A discharge, 40~200AH test range	6/12V batteries ≤ 80A discharge, 40~200AH test range
The internal resistance of battery will be tested synchronously	The internal resistance of battery will be tested synchronously	The internal resistance of battery will be tested synchronously
Micro-computer strictly control the discharge time, to reduce the battery damage	Micro-computer strictly control the discharge time, to reduce the battery damage	Micro-computer strictly control the discharge time, to reduce the battery damage
Over-temperature, anti-burning and reverse polarity protection	Over-temperature, anti-burning and reverse polarity protection	Over-temperature, anti-burning and reverse polarity protection
The meter will make a judgement automatically since the test finished; sound and light indicate	The meter will make a judgement automatically since the test finished; sound and light indicate	The meter will make a judgement automatically since the test finished; sound and light indicate
Tested reading hold automatically	Tested reading hold automatically	Tested reading hold automatically
Clear and direct-viewing display with four digits	Clear and direct-viewing display with four digits	Clear and direct-viewing display with four digits
Discharge time: less than 10s	Discharge time: less than 10s	Discharge time: less than 10s (for dynamic batteries measuring)
Battery amp hour rating testing range: 5-80AH	Battery amp hour rating testing range: 40~200AH	Battery amp hour rating testing range: 40~200AH
Internal resistance range of battery: 0~99mΩ	Internal resistance range of battery: 0~99mΩ	Internal resistance range of battery: 0~99mΩ
Usable scope: applicable to the dynamical type battery such as the batteries supply for electric bicycle, UPS batteries, solar storage energy batteries	Usable scope: applicable to the dynamical type battery such as the batteries supply for electric bicycle, UPS batteries, solar storage energy batteries	Usable scope: starter battery (car battery) Dynamic accumulator: applicable to the dynamical type battery such as the batteries supply for electric bicycle, UPS batteries, solar storage energy batteries
		Starter battery range: CCA: 100~1700 IEC: 100~1000 EN:100~1700 DIN: 100~1000
		This is a battery tester which contains both testing method of dynamical battery and starter battery



3005



3003

## Technical data

Model	3003	3005
<b>Voltage output</b>	0-30V	0-30V
<b>Maximum current output</b>	3A	5A
<b>working condition</b>	(0-40)°C/≤ 85%RH	
<b>Storage condition</b>	(-2-80)°C/<80%RH	
<b>Voltage stabilization feature</b>		
<b>Output voltage</b>	Continuously adjustable from 0 to rated voltage	
<b>Source effect: CV</b>	1 × 10 <sup>-4</sup> + 3mV	
<b>Load effect: CV</b>	1 × 10 <sup>-4</sup> + 3mV	
<b>Ripple and Noise</b>	0.5mV (RMS)	
<b>Voltage temperature coefficient</b>	300PPm/°C	
<b>Current stabilization feature</b>		
<b>Output current: CC</b>	Continuously adjustable from 0 to rated current	
<b>Source effect: CC</b>	2 × 10 <sup>-3</sup> + 3mA	
<b>Load effect</b>	5mA	
<b>Current temperature coefficient</b>	500PPm/°C	
<b>Display feature</b>		
<b>Digital display accuracy</b>	Voltage/current three-digit Display Display accuracy: ± (0.4%+4d)	
<b>Size</b>	249*124* 141mm	
<b>Weight</b>	3755g	
<b>Power</b>	220V AC ± 10% 50Hz	
<b>Color</b>	Silver grey	
<b>Dimensions</b>	108* 59mm	



3303



3305

**MAIN FEATURES**

- 3 Adjustable Channels Output
- 0-30V Linear Voltage and Current Output Display
- 4 LED displays for Voltage and Current Output Display
- Low Noise and Ripple ; Less than 1mV (5Hz-1MHz)
- Current Output Protection
- CV/CC Mode Automatic Changer
- Auto Tracking Output
- Auto Parallel or Series connection
- Doubling Voltage with Series connection
- Doubling Current with Parallel connection
- 16 Hours Continuous Operation with Full Loading

Wave Form Features		
Voltage output	0-30V	0 ~ 30V
Maximum current output	3A	5A
Output voltage channel	3 channels (the voltage output of the third channel is fixed at 5V, and the current output is 1A) Series: 60V/5A Parallel: 30V/10A	3 channels (the voltage output of the third channel is fixed at 5V, and the current output is 1A) Series: 60V/3A Parallel : 30V/6A
Voltage stabilization feature		
Output voltage	Continuously adjustable from 0 to rated voltage	
Source effect	≤1×10 <sup>-4</sup> +3mV(±10% of rated source voltage)	
load effect	≤1×10 <sup>-4</sup> +3mV (output currents≤3A) ≤3×10 <sup>-4</sup> +3mV (output current≥3A)	
Ripple and Noise	≤1mVrms (5Hz-1MHz)	
Recovery Time	≤100μS (50% load change , Minimum load 0.5A)	
temperature drift	≤300ppm/°C	
Current stabilization feature		
Output current	Continuously adjustable from 0 to rated current	
Source effect	≤2×10 <sup>-3</sup> +3mA	
load effect	≤2×10 <sup>-3</sup> +3mA	
Ripple and Noise	≤3mA <sub>rms</sub>	
Tracking feature		
Series feature	Source effect:≤1×10 <sup>-4</sup> +5mV load effect:≤300mV	
Parallel feature	Source effect:≤1×10 <sup>-4</sup> +3mV	
	load effect:≤1×10 <sup>-4</sup> +3mV (output currents≤3A)	
Display feature		
Voltage	Two sets 3-digit voltage LED display, the display accuracy: ± (0.5% + 2 words)	
Current	Two sets 3-digit current LED display, the display accuracy: ± (0.5% + 2 words)	
Size	300*250*145mm	
Weight	6900g	
Power	AC220V/AC110V ± 10%,50Hz/60Hz	
Color	Silver grey	
Dimensions	115*61mm	



3003A



3005A



3010A

**Technical data**

Model	3003A	3005A	30010A
Output voltage	0~32V	0~32V	0~32V
Output current	0~3A	0~5A	0~10A
USB charging	/	/	√
LED	Dual 4-digit LED display		
Operating Voltage	AC 220V±10% 50Hz		
Working conditions	0~40 °C ≤85%RH		
Storage conditions	0~60 °C ≤85%RH		
Lock function	have		
Weight	1.45kg (3010A 2kg)		
Size	221*155*103mm		
Cooling method	Aluminum + air cooling		
Voltage stabilization characteristics			
Load regulation rate	≤0.1+5mV (3010A) 0.1%+10mV		
Power regulation rate	≤0.01+5mV		
Voltage resolution	4-digit display: 10mV		
Display accuracy	4-digit display≤ ±(0.2%+5 d)		
Readback resolution	4-digit display: 10mV		
Readback accuracy	4-digit display≤ ±(0.2%+5 d)		
Steady flow characteristics			
Load regulation rate	≤0.2%+5mA (3010A) 0.2%+10mA		
Power regulation rate	≤0.2%+3mA		
Current resolution	4-digit display: 1mA (3010A) 10mA		
Display accuracy	4-digit display≤ ±(0.2%+5 d)		
Readback resolution	4-digit display: 1mA		
Readback accuracy	4-digit display≤ ±(0.2%+5 d)		
Ripple	5mA		
OVP	0--32±0.2%FS		
Maximum voltage	0--32V±0.2%		
OCP	0-6A±0.2%FS		
Maximum current	6A±0.2%		



**3005C**



**3005AC**



**3010AC**

**Technical data**

Model	3005C	3005AC	3010AC
Output voltage	0~30V	0~32V	0~32V
Output current	0~5A	0~5A	0~10A
USB charging	/	/	√
Power display	/	/	/
Power supply	AC 220V ±10% 50Hz		
Display size	84x53mm		
Working conditions	Temperature: 0~40 °C Relative humidity: ≤80%RH		
Storage conditions	Temperature: 0~60 °C Relative Humidity: ≤85%RH		
Lock function	Have		
Weight	About 5KG	About 1.45KG	About 2 KG
Size	26.5x10.3x15.6cm	22.1x15.5x10.3cm	
Cooling method	air cooling	Aluminum + air	
<b>Voltage regulation characteristics</b>			
Load Regulation	≤0.01%+2mV	≤0.1%+5mV	≤0.1%+10mV
Power Regulation	≤0.01%+3mV	≤0.01%+5mV	≤0.01%+5mV
Voltage resolution	4-digit display: 10mV		
Display accuracy	±(0.5%+20mV)	±(0.2%+5d)	
Ripple	≤2mVrms	≤10mVrms	
<b>Steady flow characteristics</b>			
Load Regulation	≤0.1%+10mA	≤0.2%+5mA	≤0.2%+10mA
Power Regulation	≤0.1%+3mA	≤0.2%+3mA	≤0.2%+3mA
Current resolution	4-digit display: 1mA		
Ripple and Noise	≤3mArms	5mArms	
<b>Other features</b>			
OVP	0-30V ±0.2%FS		
Maximum voltage	0-30V ±0.2%		
OCP	0-5A ±0.2%FS	0-10A ±0.2%FS	
Maximum current	5A ±0.2%	10A ±0.2%	

**Details :**

Measuring Range : 0-1250µm, 0-50mils  
 Accuracy : ± (3%+2µm) / ± (3%+0.1mils)  
 Resolution : 1 µm / 0.1mils  
 Three Calibration Ways: Zero point, Two point, Initialization.  
 The system errors can be modified promptly by calibration.  
 Measuring Mode : Single Measuring/Consecutive Measuring  
 Data Storage: store 99 sets of data in max.,  
 the data will be eliminated after power off.  
 Digital readout display shows at 180 degrees rotation  
 Buzzer Indication Function  
 Metric-Inch Switch Function  
 Low Battery Indication Function  
 Auto Power Off Function  
 Battery : 3V  
 Product Net Weight : 68g  
 Product Size : 100\*52\*29mm  
 Operation Temperature : 0~+50 °C (+32 ~ +120 °F)



**852A**



**852E**

**Thickness Meter**

**MODEL: VICTOR 852E**

Specification:  
 Measurement Range: 0-1250µm / 0-50mil  
 Resolution: 0.1µm / 0.1mil  
 Accuracy: ±(2%+2µm) / ±(2%+0.1mil)  
 Product Size: 166×68×30mm 6.5×2.5×1 inch  
 Product Weight: 180g/ 0.4lb (with batteries)  
 Operation Temperature: -10 to +50 °C (+12 to +122 °F)  
 Note: Only take measurement after the probe of the instrument reaches environment temperature. Please disregard the first several reading if you are not sure whether the probe is stable under current environment temperature

**Model: VICTOR 852C+**

Product Name: Ultrasonic Thickness Meter

**Details:**

Measuring Range: 1.5-200mm  
 Accuracy: 0.5%H+0.1  
 Resolution: 0.1m  
 Sound Velocity Range: 500~9000m/s  
 Operation Frequency: 5MHz.  
 Sensor: Ultrasonic 5MHzΦ10  
 Automatically memorize material code and sound velocity .  
 Low Battery Indication Function  
 Auto Power Off Function  
 Battery: 3V(2\*1.5V) AAA Battery  
 Product Net Weight: 220g  
 Product Size: 147\*72\*35mm



**852C+**



# Clamp Leaker



**6800**

	6800
<b>Range</b>	0.00mA~1200A
<b>Resolution</b>	0.01mA
<b>Accuracy ( 23°C±3°C, below 70%RH)</b>	0.00mA~59.9A: ±1.5%±5dgt
	60.00A~199A: ±2%±5dgt
	200.0A~599A: ±3%±5dgt
	600A~1200A: ±4%±5dgt
<b>Power</b>	Zn-Mn dry battery,6F22,9V
<b>Size of jaw</b>	Φ68mm
<b>Sampling Rate</b>	about 2 times/s
<b>USB Interface</b>	Data stored in the memory of the meter via USB upload to PC, or on-line monitoring
<b>Storage</b>	99units , all used when display FULL
<b>Peak Hold</b>	Push HOLD without release,the meter will show the peak value during the pushing period
<b>Reading Hold</b>	DH indicating when the reading is hold
<b>Out of Range</b>	OL indicating when the current is out of range
<b>Working Current</b>	5mA
<b>Line Voltage</b>	circuit test below AC1600V
<b>Range Shift</b>	Automatically



**690**

	690
<b>Power Source</b>	Zinc-manganese dry battery 6F22 9V
<b>Test Mode</b>	Flexible CT: the output signal is the differential of the current to the time. By integrating the output voltage signal, the input current can be truly restored.
<b>Coil Diameter</b>	200mm diameter
<b>Range</b>	AC 0.00A~9999A
<b>Resolution</b>	AC 10mA
<b>Accuracy</b>	±2%+3dgt(The wire is in the center of the flexible coil,23°C±2°C)
<b>Coil thickness</b>	7.5mm (Very suitable for narrow environments and places with dense wiring)
<b>Measured Current Frequency</b>	50Hz/60Hz (automatic identification)
<b>Data Storage</b>	99units , all used when display FULL
<b>Peak Value Hold</b>	Push HOLD without release,the meter will show the peak value during the pushing period, display
<b>Data Hold</b>	DH indicating the reading is hold
<b>Line Voltage</b>	circuit test below AC1600V

# Clamp Leaker



**7100/7100A**

Clamp Leaker

	7100	7100A
<b>Range</b>	AC 0.0mA~3200A	AC 0.0mA~4000A
<b>Resolution</b>	AC 0.1mA	AC 0.1A
<b>Measurement Accuracy (23°C±3°C, below 70%RH, measured wire at the center of the clamp)</b>	AC 0.0mA~499A ±2%±5dgt	
	AC 500A~999A ±3%±5dgt	
	AC 1000A~2999A ±4%±5dgt	
	AC 3000A~4000A ±5%±5dgt	
<b>Power</b>	6V DC(LR6×4 alkaline dry batteries, continuously working for 12 hours)	
<b>Weight of Meter</b>	1.5kg (with batteries)	
<b>Dimension</b>	Length 350mm* width 180mm * thickness 55mm	
<b>Clamp Size</b>	108mm×148mm (can clamp electric cable of 108mm diameter, or 160mm×4mm flat cable and steel earth wires)	
<b>Sample Rate</b>	About 2 times/second	
<b>Frequency</b>	50Hz ,60Hz automatic identification	
<b>Communication Wire</b>	RS232 communication wire, 1.8m	
<b>Data Storage</b>	99 sets, "FULL" symbol indicate the memory is full	
<b>Data Hold</b>	"HOLD" symbol appears	
<b>Overflow</b>	"OL" symbol appears	

	7100B
<b>Function</b>	ACA, leakage current, load current on-line test, suitable for electricity leakage patrol inspection of down hole and outdoor multi-conductor thick cable
<b>Power Source</b>	DC 3.7V chargeable lithium battery, USB charging portal, working continuously for 10h
<b>Display Mode</b>	Four digital LCD display, backlight function, suitable for dark place
<b>Tested Line Diameter</b>	Φ168mm Conductor, cable or 168mm×245mm bus bar
<b>Measurement Range</b>	Current: AC 10mA~9999A(50~60Hz automatically)
<b>Resolution</b>	10mA
<b>Current Accuracy</b>	10mA~999A, ±2%±5dgt
	1000A~2999A, ±3%±5dgt
	3000A~9999A, ±4%±5dgt
<b>Size of Insulation Rod</b>	300mm
<b>Instrument Size</b>	Length width thickness 310mm×270mm×52mm
<b>Line Voltage</b>	bare wire test 1000V below, less than 110kV with a safety insulation sheath wire. (operating with an insulation rod)
<b>Automatic Shutdown</b>	About 15mins after startup, the instrument will be automatically shut down to reduce battery consumption
<b>Instrument Mass</b>	Instrument: 496g(include battery); Total mass: 2.3kg (including insulation rod and instrument box)



**7100B**

Clamp Leaker



**7300/7300A**

	7300	7300A
<b>Current Range</b>	AC 0.00mA~1200A Resolution0.01mA	AC 0.0A~2000A Resolution0.01A
<b>Power Range</b>	AC 0.5W~720KW Resolution0.01W	AC 0.0KW~1200KW Resolution0.1KW
<b>Line Voltage</b>	Below AC 600V line measurement	
<b>Frequency Range</b>	25Hz~100Hz Resolution0.1Hz	
<b>Phase Range</b>	0.0°~360.0° Resolution0.1°	
<b>Power Factor Range</b>	0.3~1.0 (capacitive or inductive)	
<b>Electric Energy Range</b>	0.0000KWh~72000KWh Resolution0.0001KWh	
<b>Power</b>	6V DC(LR6×4 alkaline dry batteries, continuously working for 12 hours)	
<b>Working Current</b>	50mA with enabled backlight; 25mA with disabled backlight	
<b>Weight</b>	1kg(with batteries and accessories)	
<b>Meter Size</b>	Length 275mm × Width 145mm × Height 40mm	
<b>Clamp Size</b>	80mm×80mm(can clamp electric cable of 80mm diameter, or 96mm×4mm flat cable and steel earth wires)	
<b>Sample Rate</b>	About 2 times/second	
<b>Frequency</b>	50Hz ,60Hz automatic identification	
<b>Communication Wire</b>	RS232 communication. Wire: 1.8m	

Large Caliber Three Phase Power Tester

	8100B
<b>Power Source</b>	DC 9V alkaline dry batteries LR6 1.5V × 6
<b>Clamp Size</b>	80mm×80mm (can clamp electric cable of 80mm diameter, or 96mm×4mm flat cable and steel earth wires)
<b>Range</b>	Current: AC 0.00mA~1000A Frequency: 10HZ~1000HZ
<b>Resolution</b>	AC 0.01mA
<b>Accuracy</b>	±1.5%±3dgt
<b>Display Mode</b>	3.5-inch Color Touch LCD
<b>Operation Method</b>	Include intelligent touch and key control
<b>Meter Size</b>	198mm×100mm×45mm
<b>Current Clamp Size</b>	194mm×145mm×40mm
<b>Weight</b>	Mainframe: 450g(include battery); Current clamp: 780g
<b>Sample Rate</b>	2 times/s
<b>Data Storage</b>	200sets (power down or replace battery will not lose data)
<b>Date</b>	include date and time function and can setting the date and time
<b>Test number</b>	can set the test point number
<b>Automatic Shutdown</b>	About 5mins after startup, the instrument will be automatically shut down
<b>USB Interface</b>	Data stored in the memory of the meter via USB upload to PC



**8100B**

Transformer Core Grounding Current Tester



**3700B**

Equipotential Tester

	3700B
<b>Power</b>	Measured Power ≤ 35.28W; ≤ 4.2A, when the battery is full of power
<b>Range</b>	0.01Ω~300 Ω
<b>Display Rate</b>	0.0001Ω
<b>Measurement Accuracy</b>	0.01Ω~300ΩΔ ≤ 1% · Rx (Rx is the resistance which is under test) 0.01Ω~0.0999Ω, Δ ≤ 5% · Rx
<b>Tested Current</b>	0.3Ω gear: ≤ 4.2A 3Ω gear: ≤ 2.1A 30Ω gear: ≤ 210mA 300Ω gear: ≤ 21mA
<b>Power Source</b>	DC 7.4V2.6Ah chargeable lithium battery, the battery is about 8.4V with full power
<b>Test method</b>	Precision four line measurement, two A/D test at the same time
<b>Test interface</b>	C1 current positive, C2 current negative, P1 voltage positive, P2 voltage negative
<b>Data Storage</b>	400sets (power down or replace battery will not lose data)
<b>Alarm setting</b>	range: 1Ω~30Ω, 0Ω will not initiate the alarm
<b>Charging Indication</b>	The Indicator light on the charger is red when charging; it becomes green when fully charged
<b>Overflow</b>	the current is out of range; "OL" indicating
<b>Data Hold</b>	Each time automatically hold and display the measured result after finish testing
<b>Tested Line</b>	Four : 2 each red and black lines, 5m long each line

	1600
<b>Power Source</b>	Meter: DC9V 6 nodes AA alkaline battery LR6; Detector: Zinc manganese dry battery 6F22, 9V
<b>Phase Checking Method</b>	Contact phase checking: When the bare wire voltage is less than 35kV, or less than 220kV with a safety insulation sheath wire, adopt contact phase checking. (operating with an insulation rod) Noncontact phase checking: When the bare wire voltage is more than 35kV, adopt noncontact phase checking. The probe gradually approach wire phase checking
<b>Transmission Method</b>	wireless transmission, about 30 meters distance of straight transmission
<b>Phase Judge</b>	In phase: -25°~25°; out of phase: 95°~145° and 215° ~ 265°
<b>Phase Checking Voltage</b>	200V~220kV
<b>Phase Range</b>	0.0°~360.0°; accurate: ≤ ± 12°; Resolution: 0.1°
<b>Frequency Range</b>	45.0Hz~65.0Hz; accurate: ≤ ± 2Hz; Resolution: 0.1Hz
<b>Emission Frequency</b>	433MHz, 315MHz
<b>LCD</b>	3.5-inch color LCD; display domain: 71mm × 51mm
<b>Phase Indicator</b>	Phasor diagram and digital display meanwhile
<b>Working Indicator</b>	sound-light indication function, red double flashing lights and buzz like "beep - beep - beep"
<b>Display Rate</b>	2 times/s
<b>Data Storage</b>	9999sets (power down or replace battery will not lose data)
<b>Automatic Shutdown</b>	About 5mins after startup, the instrument will be automatically shut down



**1600**

Wireless H/L Voltage Phase Detector

## Wireless H/L Voltage Phase Detector

## Satellite Time Service Phase Detector Hook Ampere Meter



**1601**

Wireless H/L Voltage Phase Detector

1601	
<b>Power Source</b>	DC 3.7V chargeable lithium battery, USB charging portal, working continuously for 10h
<b>Transmission Method</b>	315MHz and 433MHz wireless transmission
<b>Phase Distance</b>	About 1600m
<b>Display Mode</b>	3.5-inch true color LCD display
<b>Measurement Range</b>	Phase checking voltage level: AC 10V~550kV; Phase: 0.0°~360.0°; Frequency: 45Hz~75Hz
<b>Resolution</b>	0.1°; 0.1Hz
<b>Accuracy</b>	Phase ≤ 10°; Frequency ≤ ±2Hz(23°C±5°C, 80%RH below)
<b>Phase Judge</b>	In phase: -30°~30°; out of phase: 90°~150° and 210°~270°
<b>Voice Function</b>	Voice such as in phase, out of phase, X signal normal, Y signal normal, etc.
<b>Size of Insulation Rod</b>	About 5m long after extended; about 1m long after drawn back (5 nodes)
<b>Electric Indicator</b>	Detector sends out buzz like "beep - beep - beep"
<b>Phase Checking Method</b>	Contact phase checking: When the bare wire voltage is less than 35kV, or less than 110kV with a safety insulation sheath wire, adopt contact phase checking. (operating with an insulation rod) Noncontact phase checking: When the bare wire voltage is more than 35kV, or more than 110kV with a safety insulation sheath wire, adopt noncontact phase checking. (operating with an insulation rod)
<b>Automatic Shutdown</b>	About 15mins after startup, the instrument will be automatically shut down to reduce battery consumption
<b>Rated Current</b>	Detector: 35mA max; Receiver: 300mA max
<b>Instrument Mass</b>	Detector: 205g (including battery) Receiver: 395g (including battery) Insulation rod: 1.45kg Total mass: 9.8kg (including box)
<b>Working Humidity And Temperature</b>	-10°C ~ 40°C; below 80%Rh
<b>Storage Humidity And Temperature</b>	-10°C ~ 60°C; below 70%Rh

YITENSEN 1800	
<b>Function</b>	frequency, phase, phase sequence and electricity verification tested
<b>Power Source</b>	DC 3.7V chargeable lithium battery, USB charging portal, working continuously for 10h
<b>Transmission Method</b>	315MHz 433MHz wireless transmission
<b>Phase Distance</b>	The distance is not limit under satellite timing phase mode, which is above 500km, and it is about 1600m at the normal mode
<b>Display Mode</b>	3.5-inch true color LCD display
<b>Measurement Range</b>	Phase: 0°~360.0°; Phase checking voltage level: AC 10V~550kV; Frequency: 45Hz~75Hz
<b>Resolution</b>	1°; 0.1Hz
<b>Accuracy</b>	Satellite timing phase: ≤ ±5°; common phase checking: ≤ ±10°; frequency: ≤ ±2Hz;
<b>Phase Judge</b>	The real time angle phase difference displayed by the XY two receiver is 0°~30° means in-phase. The real time angle phase difference displayed by the XY two receiver is 90°~120° or 210°~270° means out-phase.
<b>Voice Function</b>	Voice such as in phase, out of phase, X signal normal, Y signal normal, etc.
<b>Size of Insulation Rod</b>	About 5m long after extended; about 1m long after drawn back (5 nodes)
<b>Time Service Accuracy</b>	Less than 30ns
<b>Instrument Mass</b>	Detector: 205g; Receiver: 395g; Insulation rod: 1.45kg; Total mass: 9.8kg
<b>Rated Current</b>	Detector: 35mA max; Receiver: 300mA max



**1800**

Satellite Time Service Phase Detector



**1700**

Wireless H/L Voltage Phase Detector

1700	
<b>Function</b>	Voice phase checking of wireless high-low voltage, current, leakage current, frequency, phase, phase sequence and electricity verification tested; electricity leakage patrol of multi-conductor cable
<b>Power Supply</b>	DC 3.7V chargeable lithium battery, USB charging portal, working continuously for 10h
<b>Transmission Method</b>	315MHz 433MHz wireless transmission
<b>Phase Distance</b>	0~1600m
<b>Display Mode</b>	3.5-inch true color LCD display
<b>Tested Line Diameter</b>	Φ168mm Conductor, or 168mm×245mm bus bar
<b>Range</b>	Phase: 0.0°~360.0°; Phase checking voltage level: AC 10V~550kV; Frequency: 45Hz~75Hz; current: 0~20000A
<b>Resolution</b>	0.1°; 0.1Hz; 10mA
<b>Accuracy</b>	phase: ≤ ±10°; frequency: ≤ ±2Hz; current: 0~6000A, ±3%±5dgt; 6000A~2000A, ±4%±5dgt
<b>Phase Judge</b>	In phase: -30°~30°; out of phase: 90°~150° and 210°~270°
<b>Voice Function</b>	Voice such as in phase, out of phase, X signal normal, Y signal normal, etc.
<b>Size of Insulation Rod</b>	About 5m long after extended; about 1m long after drawn back (5 nodes)
<b>Phase Checking Method</b>	Contact phase checking: When the bare wire voltage is less than 35kV, or less than 110kV with a safety insulation sheath wire, adopt contact phase checking. (operating with an insulation rod) Noncontact phase checking: When the bare wire voltage is more than 35kV, or more than 110kV with a safety insulation sheath wire, adopt noncontact phase checking. (operating with an insulation rod)
<b>Automatic Shutdown</b>	About 15mins after startup, the instrument will be automatically shut down to reduce battery consumption
<b>Rated Current</b>	Detector: 35mA max; Receiver: 300mA max
<b>Instrument Mass</b>	Detector: 496g (including battery) Receiver: 395g (including battery) Insulation rod: 1.45kg Total mass: 13.5kg (including box)
<b>Working Humidity And Temperature</b>	-10°C ~ 40°C; below 80%Rh
<b>Storage Humidity And Temperature</b>	-10°C ~ 60°C; below 70%Rh

9000C/D	
<b>Function</b>	High-low voltage AC leakage current, current and frequency test; iron core grounding current and transformer load test; electricity leakage patrol inspection of down hole and outdoor multi-conductor thick cable
<b>Power Source</b>	DC 3.7V chargeable lithium battery, USB charging portal, working continuously for 10h
<b>Transmission Method</b>	433MHz wireless transmission
<b>Display Mode</b>	3.5-inch True Color LCD display, press upper and lower arrow button to adjust the backlight luminance
<b>Tested Line Diameter</b>	Φ168mm Conductor or cable, or 168mm×245mm bus bar
<b>Measurement Range</b>	Current: AC 0~6000A (50/60Hz automatic); Frequency: 45Hz~75Hz
<b>Resolution</b>	10mA; 0.1Hz
<b>Current Precision</b>	0.00A~99.9A: ±2%±5dgt; 100A~6000A: ±3%±5dgt; 6.00kA~20.0kA: ±4%±5dgt
<b>Frequency Precision</b>	±1Hz
<b>Size of Insulation Rod</b>	About 5m long after extended; about 1m long after drawn back (5 nodes)
<b>Line Voltage</b>	Test bare conductor under 35kV, cable with safe insulation sheath under 110kV (operate with insulation rod)
<b>Instrument Quality</b>	Hook instrument: 496g(including battery) Receiver: 395g(including battery) Insulation rod: 1.45kg Total weight: 11.5kg(including instrument box)



**9000C/D**

Hook Ampere Meter



**4300**

Digital Phase Va Meter

4300	
<b>Function</b>	Three Phase, AC current, AC voltage, AC leakage current, direct test of phase sequence; transformer groups, inductive, capacitive circuit discrimination; indirect test of power factor and power
<b>Clamp size</b>	Acuminate current clamp: 7.5mm×13mm (4300)
<b>Weight</b>	Main Unit about 550g(with battery) , acuminate current clamp about 170g×3, round current clamp about 185g×3, test line about 250g
<b>Measurement range</b>	AC Voltage: 0.00 V~600V AC Current: 0.0mA~20.0A Phase: 0~360°
<b>Power</b>	DC9V alkaline batteries( 1.5V AA×6)
<b>Meter size</b>	Length, Width, Height: 196mm×92mm×54mm
<b>Sampling Rate</b>	About 2 times/second
<b>Data storage</b>	99 sets
<b>Display Mode</b>	LCD display, 240dots×160dots
<b>Data Hold</b>	Press HOLD key to keep data, "DH" symbol appears
<b>Automatic Shutdown</b>	Automatic shutdown about 15 minutes later after launching to reduce battery consumption
<b>Backlighting</b>	Suitable for dark place and nightly use
<b>Test Line Length</b>	1.5m
<b>Working Temperature and Humidity</b>	-10℃~40℃; below 80%Rh
<b>Storage Temperature and Humidity</b>	-10℃~60℃; below 70%Rh
<b>Input impedance</b>	Testing voltage the input impedance is 2MΩ

4000M	
<b>Function</b>	On-line test the phase, voltage, current, leakage current, frequency, phase sequence etc. in the 380/220V electric system
<b>Power apply</b>	6LR61, 9V DC, working continuously for 20h
<b>Clamp size</b>	Φ 7.5mm×13mm
<b>Measurement range</b>	Phase: 0~360°, voltage: 0~600V, current: AC 0.00mA~30.0A; frequency: 0~400Hz
<b>Resolution</b>	Phase 1°; voltage: 0.01V; current: 0.01mA; frequency: 0.1Hz
<b>Accuracy</b>	Phase: ±3°; voltage: ±2%±3dgt; current: ±2%±3dgt; frequency: ±1Hz
<b>Data storage</b>	99 sets
<b>Meter size</b>	Length width thickness 220mm×45mm×30mm
<b>Line voltage</b>	to test below 600V
<b>Function conversion</b>	To convert by MODE key, will display phase, voltage, current, frequency; Booting default is phase
<b>Data hold</b>	Hold the data by HOLD key, cancel holding by HOLD key again
<b>Data check</b>	to enter the data check function by READ key, look over the storage data by up or down arrow key
<b>Automatic shutdown</b>	After startup about 15mins, the instrument will be automatically shut down to reduce battery consumption
<b>Meter mass</b>	Meter: 220g (include battery); total mass: 400g
<b>Working current</b>	Max × 100mA



**4000M**

Phase Volt Ampere Meter



**4100**

Phase Volt Ampere Meter

4100	
<b>Function</b>	Phase, ACA, ACV, AC leakage current, the judgement of the connection group, inductive and capacitive circuit of the transformer; Indirect measurable power and power factor
<b>Power supply</b>	DC 9V alkaline dry batteries
<b>Power dissipation</b>	Turn on the backlight (MAX. 35mA), the battery can continue work for 40h Turn off the backlight, the power consumption is about 5mA, battery can continue work for 300h
<b>Display mode</b>	LCD display, backlight function, suitable for dark place
<b>Clamp size</b>	Φ7.5mm ×13mm
<b>Range</b>	Phase: 0~360°; voltage: 0~20V/200V/600V; current: 0~200mA/2A/20A
<b>Resolution</b>	Phase: 1°; voltage: 0.01V; current: 0.1mA
<b>Accuracy</b>	Phase: 1° (phase error is not more than ±3° under the working condition); voltage: ±(1.2%rdg+2dgt); current: ±(1.0%rdg+2dgt)
<b>Amplitude of tested signal</b>	When measuring U1-U2 phase: 30V-600V When measuring I1-I2 phase: 10mA~20.00A When measuring U1-I2 or I1-U2 phase: 10V~600V, 10mA~20.00A
<b>Data hold</b>	Press the HOLD key to keep the data during the measurement; "DH" symbol indicates
<b>Automatic shutdown</b>	to reduce the battery consumption, the meter auto power off after startup for 15 minutes
<b>Voltage test</b>	When the battery voltage is less than 7.2V, low voltage symbol comes out, it means you need to change the battery
<b>Weight</b>	The device is about 550g (include battery), current clamp is about 170g ×2, test line is about 250g
<b>Test line length</b>	1.5m
<b>Line length of current clamp</b>	2m

4500	
<b>Function</b>	Meanwhile test the current, voltage, phase, frequency, phase sequence, active power, reactive power, apparent power, power factor in the three phase 80V/220V electric system
<b>Power supply</b>	DC 7.4V chargeable lithium battery, USB charging portal, working continuously for 10h
<b>Clamp size</b>	Φ7.5mm×13mm
<b>Range</b>	Phase: 0.0 ~360° ACV: 0.00V~600V; ACA: 0.0mA~20A; frequency: 45.00Hz~65.00Hz; current vector sum: 0mA~60.0A Active power: 0.00W~12KW; reactive power: 0.00W~12kVAR; apparent power: 0.0W~12kVA; power factor: -1~+1
<b>Resolution</b>	Phase: 0.1° voltage: AC 0.01V; current: AC 0.1mA; frequency: 0.01Hz; current vector sum: 1mA Active power: 0.1W; reactive power: 0.1VAR; apparent power: 0.1VA; power factor: 0.001
<b>Accuracy</b>	Phase: ±1° (note: phase error should be ±3° between 10mA~20A under working condition) voltage: ±(5% range); current: ±(5% range) Active power: ±(1.0% range); reactive power: ±(1.0% range); apparent power: ±(1.0% range); power factor: ±0.03
<b>Phase sequence</b>	Positive phase: Cursor U1, U2, U3 or I1, I2, I3 twinkles in order from left to right
<b>Data hold</b>	Hold the data by HOLD key; "HD" symbol appears
<b>Automatic shutdown</b>	After startup about 15mins, the instrument will be automatically shut down to reduce battery consumption
<b>Backlight function</b>	yes, suitable for using at night and dark place
<b>Meter mass</b>	The meter: 550g(include battery); current clamp: 185g ×3; test line: 250g
<b>Working temperature and Humidity</b>	-10℃~40℃; below 80%Rh
<b>Storage Temperature and Humidity</b>	-10℃~60℃; below 70%Rh
<b>Input impedance</b>	Input impedance of test voltage: 1MΩ



**4500**

Phase Volt Ampere Meter



**5000**

Power Quality Analyser



**528A/538A**

## Water Pipe Leak Detector

Water Leak Detector is a special instrument for searching and confirming the location of water pipe leak. It can also be used for other pressure pipe system. When the liquid in pipe overflows under pressure, noise can propagate along the pipe or spread to the ground through buried media, our instrument can confirm the location of leaks along the pipeline or above the ground surface.

Model	528A	538A
Frequency analysis bandwidth	100HZ~2000Hz	100HZ~3000Hz
Frequency division	a. 100 Hz b: 200 Hz c: 400 Hz	a. 100 Hz b: 200 Hz c: 400 Hz
(Center frequency)	d: 800 Hz e: 1K Hz f: 1.5K Hz	d: 800 Hz e: 1K Hz f: 1.5K Hz
	g: 2K Hz	g: 3K Hz
Max. detection depth	2m	3m
All-pass	It can pick up a wide range of sound in the surrounding environment, and it is recommended to use in a relatively quiet environment.	
Bandpass 1	The frequency range is adjustable, can effectively improve the accuracy and efficiency of use. It is recommended to use in a loud noise environment.	
Bandpass 2	Only the center frequency is adjustable, it is recommended to use in a loud noise environment.	
Real-time mode	Waveform display	
Frequency domain mode	Bar graph display.	
Gain mode	Adjustable signal magnification	
Set up	Time and date can be set as required.	
Volume adjustment	The volume can be adjusted by the keys "+" and "-"	
Vibration Pickup Assembly A	Triangle sensor, suitable for water leakage detection in most indoor and outdoor environments such as the ground	
Vibration Pickup Assembly B	Small cylindrical sensor, suitable for leak detection in small indoor spaces such as walls and under cabinets	
Battery time	Power supply working time ≥ 35 hours after the battery is fully charged	
Operation temperature	-10 C ~+50 C	
Storage temperature	-10 C ~+70 C	
Power	4800mAh rechargeable lithium battery	
Screen	7 inch color LCD screen.	
Size	(L×W×D) : 270×169×68mm.	
Weight	Host 0.77kg (including battery, excluding accessories)	

5000	
Power Supply	Rechargeable lithium-ion battery pack 9.6V, backup charger; working current is about 490mA, continuous working for 8 hours
Display Mode	LCD color screen, 640dots×480dots, 5.6 inches, display domain: 116mm×88mm
Current Test	The clamp size of current sensor: Φ8mm; Φ40mm; 68mm; Φ300mm(option)
Voltage Test	Line voltage: 1.0V~2000V; Phase voltage: 1.0V~1000V
Parameters of Electricity	W, VA, Var, PF, DPF, cosφ, tanφ; Wh, Varh, Vah
Number of Channels	4U/4I
3 phases unbalance	Yes
Frequency	40Hz~70Hz
Starting current mode	Yes, 100 seconds
Harmonic	Order 0~50
Peak Value	Yes
Total Harmonic Distortion	Order 0~50, each phase
Phasor diagram display	Automatically
Expert Mode	Yes
Capacity of snapshots	60
Number of Transient records	150 sets
Menu language	English/Chinese
Voltage Flicker	Yes
Communication	USB
Record	300 days(simultaneous recording 20 parameters, record one point every 5 seconds)
Min/Max Recorded Value	Measurement of maximum and minimum values over a period of time
Alarm	40 different types of parameter selections, 12,800 sets alarm logs
Automatic Switching Off	When an alarm campaign is initiated or a search for transients, an inrush current capture, or a trend recording is pending or in progress, the device is not automatic switching off. In other test mode, 15 minutes without keystrokes, automatic shutdown after prompt 1 minute
Backlight function	Yes, suitable for use at night and dark place
Instrument dimensions	L×W×H: 240mm×170mm×68 mm
Instrument quality	About 10.5Kg (with packaging)
Input impedance	Input impedance of test voltage: 1MΩ
Applicable Safely rules	IEC 61010 1000V Cat III / 600V CAT IV, IEC61010-031, IEC61326, Pollution degree: 2



**518**

MODEL: 518

## Specification

Maximum scanning depth  
 Ferrous metal: 110mm  
 Non-ferrous metals: 110mm  
 Copper conductors (Live): 50mm  
 Wood: 25mm  
 Working temperature: -10°C ~+50°C  
 Storage temperature: -20°C ~+70°C  
 Humidity: ≤75% Altitude: ≤2000m  
 Battery: 3\*1.5V AAA  
 Dimensions: 185\*85\*33mm  
 Weight: 180g

Mode 5001

Technical Parameters

- 1.Measuring range: 4\*90°
- 2.Resolution: 0.05°
- 3.Accuracy: ±0.2°
- 4.Repeatability: 0.1°
- 5.Battery: AAA×2 battery
- 6.Working temperature: 0°C~40°C
- 7.Convenient to be attached to the object Measuring workpiece
- 8.Absolute zero measurement based on the level surface
- 9.Dimension: 57\*57\*30.5mm; N.Weight: 200g

Mode 5003

Technical Parameters

- 1.Measuring range: 4\*90°
- 2.Resolution: 0.05°
- 3.Accuracy: ±0.2°
- 4.Repeatability: 0.1°
- 5.Battery: AAA×2 battery
- 6.Working temperature: 0°C~40°C
- 7.Convenient to be attached to the object Measuring workpiece
- 8.Absolute zero measurement based on the level surface
- 9.Dimension: 61\*59\*31mm; N.Weight: 200g



**5001/5003**

Digital Incliner



**5150/5200/5300**

Digital Caliper

Model	YITENSEN 5150	YITENSEN 5200	YITENSEN 5300
Measurement range	150mm/6"	200mm/8"	300mm/12"
Accuracy	0.01mm/0.0005"	0.01mm/0.0005"	0.01mm/0.0005"
L	235mm	287mm	390mm
A	40mm	50mm	60mm
B	21mm	24mm	27mm
C	16mm	16mm	16mm
D	3.5mm	3.5mm	4.0mm
Repeatability	0.01mm/0.0005"		
Max. measurement speed	3 m/s		
Operating temperature	0°C~40°C		
Power	SR44(silver oxide cell) 1.5V 1 battery		
Average battery life	The warranty is above 1 year under normal use		

DIGITAL PROTRACTOR

Accuracy 0 and 90° ≤ 0.10°

Other degree ≤ 0.15°

Resolution 0.05°

Range 4\* 90° (0~ 360°)

Repeatability ≤ 0.10°

Battery 3V ( 2 pieces AAA battery)

Working current ≤ 8mA

Working temperature 0~ 40 °C

Relative humidity ≤ 80%

Automatic readout flipping right side up for the convenient reading when the protractor is upside down.



**5005/5006**

Digital Protractor



**10N/50N/100N/200N/300N/500N**

DIGITAL FORCE GAUGE

MODEL: YITENSEN 10N/50N/100N/200N/300N/500N

Main technical parameters

	10N	50N	100N	200N	300N	500N
The max. Load value	1kg	5kg	10kg	20kg	30kg	50kg
	2.2Lb	11Lb	22Lb	45Lb	65Lb	110Lb
Load Value	0.01N		0.1N			
	0.001KG		0.01KG			
	0.001Lb		0.01Lb			
The sensor	Sensor inside					
Precision	±0.5%					
Power	3.7V lithium battery					
Charging time	4~6 hours					
Continuous usage time of battery	About 15 hours					
Battery life	≥ 300 times					
Charger	Input: AC220V 50Hz		Output: DC 5V			
	1000mA					
Working temperature	5°C ~35°C					
Transportation temperature	-10°C ~60°C					
Relative humidity	15%~80%RH					
Work environment	No focus ,Non-corrosive in surroundings					



**931/932**  
Handheld Metal Detector

Model	931	932
Alarm mode	Sound and light in sync with vibration alarm	Sound and light alarm, output function with earphones
Power	9 volt battery (6F22ND), external connection with charger function (optional charger)	9 volt battery box (6F22ND)
Working frequency	22KHz	93KHz
Quiescent current	Less than 7mA	Less than 26mA
Working current	Sound and light is less than 47mA	less than 50mA
Vibration	103mA	-5°C~45°C
Working temperature	-5°C~55°C	415*87*41mm
Net weight	340g	380g
Overall dimension	415*87*41mm	415*87*41mm
Packing size	50*28*45cm(25pcs/carton)	50*28*45cm(25pcs/carton)



**853A**  
Leeb Hardness Tester

No.	Type of impact device	hardness value of standard Leeb hardness block	Error of displayed value	Repeatability of displayed value
1	D	760±30HLD 530±40HLD	±6 HLD ±10 HLD	6 HLD 10 HLD
2	DC	760±30HLDC 530±40HLDC	±6 HLDC ±10 HLDC	6 HLD 10 HLD
3	DL	878±30HLDL 736±40HLDL	±12 HLDL	12 HLDL
4	D+15	766±30HLD+15 544±40HLD+15	±12 HLD+15	12 HLD+15
5	G	590±40HLG 500±40HLG	±12 HLG	12 HLG
6	E	725±30HLE 508±40HLE	±12 HLE	12 HLE
7	C	822±30HLC 590±40HLC	±12 HLC	12 HLC



**868A**

Desoldering station



**868A+**

Model	868A	Model	868A+
Type	Luminotron indication	Type	LED digital display(1°C)
Power consumption	700W	Power consumption	700W
Pump	Brushless air blower with soft wind	Blower fan	Brushless fan
Air flow volume	120L/min.	Amount of wind	120L/m(MAX)
Temperature adjusting range	100°C~450°C	Temperature range	100°C~450°C
Display form	LED	Discharge feature	LED digital display(1°C)
Noise	<45dB	Noise	<45dB
		Handle Length (with cable)	120cm



**NG-30/NG-60/NG-135/NG-200/NG-340**

Digital torque wrench

Model	NG-030	NG-060	NG-135	NG-200	NG-340
Min. Resolution	0.01				0.1
Max. Operation Range (N.m)	30N.m/22.12ft.lb/265.5in.lb/305.91kgf.cm	60N.m/44.25ft.lb/531.04in.lb/611.82kgf.cm	135N.m/99.57ft.lb/1195in.lb/1376.61kgf.cm	200N.m/147.5ft.lb/1770in.lb/2039.43kgf.cm	340N.m/250ft.lb/3009in.lb/3467.03kgf.cm
Square Drive Inches	3/8		1/2		
Measured Torque Range (N.m)	1.5~30	2~60	6.75~135	10~200	17~340
Length(mm)	420		535		655
Accuracy	Clockwise: ±2% counterclockwise ±2.5%				
Data storage capacity	100				
Operation mode	Peak hold mode (P) /Real-time mode (T)				
Unit	N.m, in.lb, ft.lb, kgf.cm				
Ratchet head type	Double-side ratchet head				
Number of ratchet gear	36				
Button	5				
Battery	AA battery × 2 1.5V (No. 5 battery)				
Operation temperature	-10°C~60°C				
Storage temperature	-20°C~70°C				
humidity	No condensation to 90%				
Drop test height	1 meter				
Vibration test condition	10G				
Life time test	10000 times				



822M

**Mini Gas Detector**

This meter is a combustible gas leakage detector, which is used to detect the leakage of combustible gas quickly and reliably.

**Technical data**

Basic Function	822M
Sensor	Gas-sensitive semi-conductor
Reaction Range	50~100PPM(methane)
Reactions Sensitivity	Approx.<50ppm(methane)
Warm-Up Time	Approx.30 sec
Reactions time	<=500PPM: Approx.5sec >500PPM: Approx.2sec
Alarm mode	Visible and audible
Operating conditions	0 to 50°C / 20 to 80%RH
Storage conditions	-10 to 60°C / 20...80% RH
Batteries	2x1.5V AAA Alkaline battery



822B

**Technical data**

Model	822B
Function	Range
Gas detection	EX
Measuring range	0~100%LEL
Resolution	1
Accuracy	±5%FS
Response time (90%)	Less than 30 seconds
Indication mode	LCD displays real-time data and system state, LED, sound, vibration indication alarm
Storage Conditions	Temperature:-10~55°C; Humidity:<85%RH
Operation Conditions	Temperature: -20~50°C; Humidity:<95%RH non-condensing
Working voltage	
Current time and date display	√
Battery level/low battery indicator	√
High alarm value setting	√
Low alarm value setting	√
Alarm switch	Light, sound and vibration alarm can be set to on or off respectively
Chinese and English language settings	√
Auto shutdown setting	√
Backlight setting	√
reset	√
Calibration method	√
Working voltage	DC 3.7V (Lithium battery capacity 1800mAh)
Battery Model	LP103450-1800mAh
Charging time	6~8h
Standby time	More than 8h on end (slightly change with working state)
Dimensions	71*153*49mm
Weight	215.4g(with battery and back button)



822



822A

**Technical data**

Function	822	822A
Gas detection	flammable gas	
Product type	Leakage type	Digital display concentration
Sensor structure	Semiconductor type	Contact combustion type
Display	×	LCD
Measuring range	×	0-100%LEL
Measurement error	×	±5%
Resolution	×	1%LEL
Sensitivity	adjustable	Not adjustable
Response time	2 seconds	About 10 seconds
Sampling method	Diffuse type	Diffuse type
Alarm method	Sound/light	Sound/light
Concentration alarm value	109% L EL methane	Adjustable alarm value
Max.Min value	×	√
Backlight function	×	√
Calibration function	×	√
Timer shutdown function	×	√
Data retention	×	√
Low battery indicator	√	√
Continuous working time	About 6-8 hours	About 6-8 hours
Ambient temperature	0-50 C	0-50 C
Battery model	3* 1.5VAAA battery	3*1.2V Ni-MH battery
Display size	39* 24mm	49*38.5mm
Weight	165.5g (without battery)	111.9g (without battery)
Dimensions	68.85*29*132.98mm	67.98*28.47*119.98mm
Package size	440*345*522mm	695*458*302mm





822C

822D

**Technical data**

Basic Function	822C	822D
The gas can be detected (Partial list)	Acetone, acetylene, alcohol, ammonia, benzene, butane, ethanol, ethylene oxide, gasoline, hexane, hydrogen, methane, naphtha, natural gas, paint thinner, propane, solvents, etc.	
Sensitivity	(Methane) about 50ppm	
Buzzer	Analog bar display and audio alarm	
Auto-zero	Automatically reset to zero during the preheating process	
Operating conditions	0°C~50°C 20~80%RH	
Battery	3x1.5 AAA alkaline batteries	
Display range		%LEL: 0~20.00% PPM: 0~9999PPM
Precision		+10%F.S.(Methane)
Product Weight	260g (including battery)	
Product Size	155*60*30mm The goose neck tube is about 432mm	
Carton Size	48x47x30cm	
Standard Packing/Carton	40pcs/Carton	
G.W	17kg	



829A

829S

**Compound Gas Monitor range**

Compound Gas Monitor adopts high-quality gas sensors, which displays safety and reliability with accurate measurement and stable performance. It has excellent sensitivity and repeatability, easy to use and maintain, and meets the requirements by safety monitoring in industrial site for high reliability of the equipment. The shell is made of high-strength engineering plastics and compound non-slip rubber, dust and explosion-proof, with high strength and smooth handfeel. Compound Gas Monitor is widely used in petroleum, chemical, environmental protection, metallurgy, refining, gas transmission and distribution, biochemical medicine, agricultural research, etc.

Gas type	829A			829S			
	Unit	Range	Resolution	Range	Low alarm point	High alarm point	Resolution
Ex	%LEL	0~100	0.1	0~100	20	50	1
O <sub>2</sub>	%VOL	0~30	0.1	0~30	19.5	23.5	0.1
H <sub>2</sub> S	PPM	0~100	0.1	0~100	10	35	1
CO	PPM	0~1000	1	0~1000	50	150	1

**Technical data**

Model	829A	829S
Accuracy	±5%FS	±5%FS
Response time (90%)	Less than 30 seconds	<30 seconds
Indication mode	LCD displays real-time data and system state, LED, sound, vibration indication alarm	Real-time data and system status display, lighting, vibration and voice (Chinese and English) prompts
Storage Conditions	Temperature: -10~55°C; Humidity: <85%RH	
Operation Conditions	Temperature: -20~50°C; Humidity: <95%RH non-condensing	Temperature -10°C~55°C; humidity <95%RH condensation
Working voltage	DC 3.7V (Lithium battery capacity 1800mAh)	DC3.7V (Lithium battery capacity 2000mAh)
Charging time	6~8h	4h~6h
Standby time	More than 8h on end (slightly change with working state)	10 hours of continuous use when fully charged
Power plug	*	Type-C DC 5V 1A
Protection	*	IP65
Sensor life	*	1 year
Sensor principle	*	Electrochemical and catalytic combustion,
Dimensions	153*71*49mm	133*65*30mm
Weight	218.7g With battery	205g



**380J**

### PCBA Infrared Thermal Imaging Analyzer

Victor 380J is a new generation of PCBA infrared thermal imaging analyzer, which is suitable for thermal simulation of circuit design, rapid maintenance of circuit board and detection of defective electronic materials.

#### Features

The user can quickly locate of the current leakage or short circuit on PCBA.

With clear images, users can even observe the chipset pins of thermal video.

In 3D mode, users can detect ultra-small current leakage. To detect very small temperature difference between good and defect boards,

which is difficult by other instruments. To help thermal design, testing, verification, optimization, components selection, and help extend product life cycle. Curve data is convenient for R&D engineers to record thermal experimental data.

### Technical data

Basic Function	380J
Thermal imaging resolution	260*200
Frames	25Hz
NETD	70mK@25 C
FOV	Horizontal angle 34.4, Vertical angle 25.8
Lens	4mm Adjustable
Temperature range	focus lens
Temperature measurement	-10~120°C (14~248°F)
accuracy	±5°C or ±5%
Power	DC 5V (USB Type-C)
Power on/off	Long press the power button for 1 second to power on, long press 3 seconds to power off.
Connection method	USB Type C Cable
Dimension	Standard: 220mm x 172mm x 241mm Assemble additional accessories:346mm x 220mm x 341mm
Net weight	Standard: 1.1kg Expansion: 0.5kg
Temperature	-10°C ~ 55°C (14°F ~ 131°F)
Humidity	<95%
System	Win10 (recommended)/ Win7
CPU & RAM	i3 & 4G
Update	Manual or automatic update via internet



**90**

**VICTOR 90** wrist high-voltage alarm provides a safe, practical and convenient new high-voltage alarm device for live operators. Using non-contact sensing technology, the alarm is accurate, power saving and durable, and the standby time is up to 12 months. The unique automatic trigger detection function of the alarm ensures the safety of live workers.

### Technical data

Model	90
Voltage level	1KV/6.6kV/10kV/35kV/66kV/110kV
Features	High pressure alarm
Alarm voltage range	1kV~ 220kV
Alarm distance error	±10cm (23 C +1 C , 80%Rh, under reference conditions)
working frequency	50Hz/60Hz
Electricity test method.	Contactless
Detection mode	auto trigger
Battery Life	Continuous work (sound and light alarm): about 24 hours Standby time: about 12 months
Alarm method.	Indicator light: 8000XL visible LED light under visible light Buzzer: 60dB (60CM apart)
Protection class	IP54
Insulation test	AC3700V/rms (between exposed metal and plastic case)
Working temperature and humidity	-10°C~40°C; below 80%rh
Storage temperature and humidity	-10°C~60°C; below 70%rh



**90A**



**90B**



**862M**

## High voltage power alarm

VICTOR 90A / 90B high voltage alarm is a new safe, practical and convenient high voltage alarm device suitable for close voltage operators. After wearing the alarm by the operator, when approaching a certain distance from the high voltage charged body, the alarm according to the corresponding safety distance of the voltage level, to remind the electrical staff to pay attention to safety and avoid the high voltage electric shock accident. High voltage alarm above 1kV, non-contact sensing technology, alarm is accurate. The alarm has a unique automatic trigger detection function to ensure the safety of live workers. VICTOR 90A is worn on the upper part of the operator's outermost overalls arm, and VICTOR 90B is mounted on the operator's helmet.

Model	90A	90B
Alarm voltage range	1kV-500kV	
Alarm distance error	+10cm (23°C +1°C, 80%RH, under reference conditions)	
working frequency	50Hz/60Hz	
Test method	Contactless	
Detection mode	Auto trigger	
Battery Life	Continuous work (sound and light alarm): about 24 hours, standby time: about 12 months	
Alarm method	Indicator light: LED light visible under 8000XL visible light Buzzer: 60dB (distance 60CM)	
Protection level	IP54	
Working temperature and humidity	-10°C~40°C; below 80%RH	
Storage temperature and humidity	-10°C~60°C; below 70%RH	
power supply	2 CR1632 button batteries	
Display size	without	
body color	Black+orange	
Body weight	About 51g (including battery), About 60g (including battery)	
Standard inner packing	Color box	
Product Color	Black and Orange	
Size	88mmX32mmX30mm	

## Overview

Magnetic pole identification pen is a fast, easy and safe tool, which is used to identify the polarity of magnetic field. The N / S polarity can be distinguished by the contact between the probe and the object. This instrument has the characteristics of high identification accuracy, small and light, simple operation and exquisite workmanship. It is a highly sensitive product.

## Technical parameter

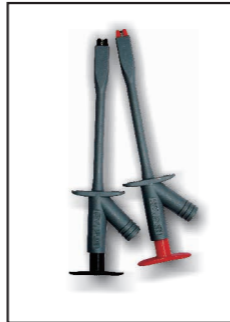
Basic Function	862M
sensitivity	±5mT(50Gs)
display	2 LED lights (red = N pole, green = S pole)
battery	2 batteries, 1.5V AAA
usage time	More than 10 hours
service temperature	-20°C~+80°C
storage temperature	-40°C~+150°C
size	About 156 × 24 × 20mm
weight	About 55g

### ELECTRONIC TESTING MULTI-FUNCTION PROBE

Product category: general accessories

A scalability probe with safety handle and pressure spring make testing more convenient .

Standard banana interface is adaptable to different test leads .  
CAT III 1000V , CAT IV 600V 10A

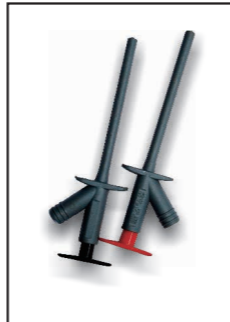


### ELECTRONIC TESTING MULTI-FUNCTION PROBE

Product category: general accessories

A scalability small probe with safety handle and pressure spring make testing more convenient .

Standard banana interface is adaptable to different test leads .  
CAT III 1000V 10A



### TEST JACK

Product category: Multi-function standard adapter

switching test applies to resistance ,capacitance, triode and diode.



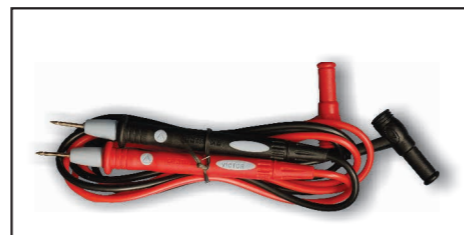
### TEST LEADS

Product category: General accessories

Flexible club , full holster and cross jack to ensure the effectiveness of the connection.

Wire length is 900mm , stick length is 105mm ,effective probe is 18mm .

Resistance to low and high temperature : 0°C-40°C  
CAT III 1000V 10A



### TP01 BANANA TEMPERATURE PROBE

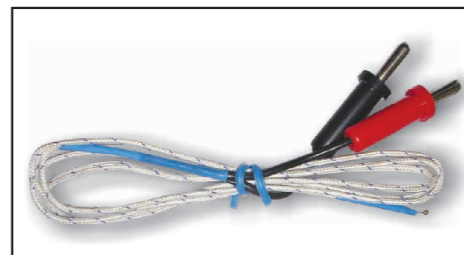
Product category: Temperature probe

Cross jack, applies to general temperature measurement .  
Teflon coating insulation .

For liquid and gel temperature measurement

Accuracy : ±0.75%

Testing range : -40°C-250°C ( -40°F-482°F )



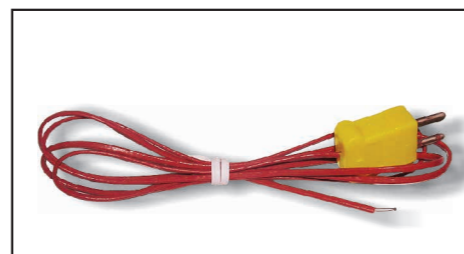
### TP01 K TYPE TEMPERATURE PROBE

Product category: Temperature probe

Flat plug input to ensure the effectiveness of the connection.  
applies to general temperature measurement.

Accuracy : ±0.75%

Testing range : -40°C-250°C ( -40°F-482°F )



**26/26H**

Protection grade : IP65

Accuracy : ±0.01%

HART communication (only VICTOR 26H)

Two independent channels for input and output, allowing in-time input and output operation;

		Model	26	26H
Source	DC millivolt	Range	-10~110mV	-10~110mV
		Accuracy= ±(% of the set value+% of range)	0.01%+0.01%	0.01%+0.01%
		Resolution	1uV	1uV
	DC voltage	Range	-0.1~11V	-0.1~11V
		Accuracy= ±(% of the set value+% of range)	0.01%+0.01%	0.01%+0.01%
		Resolution	10uV/0.1mV	10uV/0.1mV
	DC current	Range	0~33mA	0~33mA
		Accuracy= ±(% of the set value+% of range)	0.01%+0.01%	0.01%+0.01%
		Resolution	1uA	1uA
	Sink current	Range	0~33mA	0~33mA
		Accuracy= ±(% of the set value+% of range)	0.01%+0.01%	0.01%+0.01%
		Resolution	1uA	1uA
	Resistance	External power supply	5~28V	5~28V
		Range	0~4KΩ	0~4KΩ
		Accuracy= ±(% of the set value+% of range)	0.01%+0.01%	0.01%+0.01%
	Thermocouple	Resolution	0.01Ω/0.1Ω	0.01Ω/0.1Ω
		Range	R/S/K/E/J/T/B/N/L/U	R/S/K/E/J/T/B/N/L/U
		Accuracy	0.4°C	0.4°C
	RTD	Resolution	0.1°C/1°C	0.1°C/1°C
		Range	Pt100/Pt200/Pt500/ Pt1000/Cu10/Cu50	Pt100/Pt200/Pt500/ Pt1000/Cu10/Cu50
Accuracy		0.2°C	0.2°C	
Frequency (Hz)	Resolution	0.1°C	0.1°C	
	Range	1Hz~50KHz	1Hz~50KHz	
	Accuracy	±2words	±2words	
Frequency (CMP)	Resolution	0.01Hz/1Hz/0.1KHz/2KHz	0.01Hz/1Hz/0.1KHz/2KHz	
	Range	60~1200 CPM	60~1200 CPM	
	Accuracy	±2words	±2words	
Pulse	Resolution	1CPM	1CPM	
	Frequency	1Hz~10KHz	1Hz~10KHz	
	Range	1~100000cyc	1~100000cyc	
Switch	Accuracy	±2words	±2words	
	Resolution	1cyc	1cyc	
	Range	1Hz~50KHz	1Hz~50KHz	
Pressure	Accuracy	±2words	±2words	
	Resolution	0.01Hz/1Hz/0.1KHz/2KHz	0.01Hz/1Hz/0.1KHz/2KHz	
	Range	Depends on the pressure module	Depends on the pressure module	
		Accuracy= ±(% of the set value+% of range)	Depends on the pressure module	Depends on the pressure module
		Resolution	5 digit display	5 digit display

Measurement		Range	-5 ~ 550mV	-5 ~ 550mV
		DC millivolt	Accuracy= ±(% of Reading+ % of Range)	0.01%+0.01%
		Resolution	1uV/10uV	1uV/10uV
DC voltage		Range	-0.5 ~ 35V	-0.5 ~ 35V
		Accuracy= ±(% of Reading+ % of Range)	0.01%+0.01%	0.01%+0.01%
		Resolution	0.1mV/1mV	0.1mV/1mV
DC current		Range	-5 ~ 55mA	-5 ~ 55mA
		Accuracy= ±(% of Reading+ % of Range)	0.01%+0.01%	0.01%+0.01%
		Resolution	1uA	1uA
Resistance		Range	0 ~ 5.5KΩ	0 ~ 5.5KΩ
		Accuracy= ±(% of Reading+ % of Range)	0.01%+0.01%	0.01%+0.01%
		Resolution	0.01Ω/0.1Ω	0.01Ω/0.1Ω
Thermocouple		Range	R/S/K/E/J/T/B/N/L/U	R/S/K/E/J/T/B/N/L/U
		Accuracy	0.5 °C	0.5 °C
		Resolution	0.1°C/1°C	0.1°C/1°C
RTD		Range	Pt100/Pt200/Pt500/ Pt1000/Cu10/Cu50	Pt100/Pt200/Pt500/ Pt1000/Cu10/Cu50
		Accuracy	0.3 °C	0.3 °C
		Resolution	0.1°C	0.1°C
Frequency (Hz)		Range	3Hz ~ 50KHz	3Hz ~ 50KHz
		Accuracy	±2words	±2words
		Resolution	0.01Hz	0.01Hz
Frequency (CMP)		Range	180~3000000 CPM	180~3000000 CPM
		Accuracy	±2words	±2words
		Resolution	1CPM	1CPM
Switch		Range	CLOSE/OPEN	CLOSE/OPEN
		Threshold	200 ~ 300Ω	200 ~ 300Ω
Pressure		Range	Depends on the pressure module	Depends on the pressure module
		Accuracy= ±(% of Reading+ % of Range)	Depends on the pressure module	Depends on the pressure module
		Resolution	5 digit display	5 digit display
Pulse		Range	1 ~ 100000cyc	1 ~ 100000cyc
		Accuracy	±2words	±2words
		Resolution	1cyc	1cyc
Loop power supply		Range	24V	24V
		Accuracy	±10%	±10%
		The maximum current	22mA	22mA
HART			N/A	✓
Other functions		Backlight	✓	✓
		Auto Power-off	✓	✓
		Charging function	✓	✓
		Room temperature display	✓	✓
		Battery detection	✓	✓
		The ramp signal	✓	✓
	Communication function	RS232 serial communication, can realize remote control instrument by the device driver software.	RS232 serial communication, can realize remote control instrument by the device driver software.	
Characteristic				
	Safety	EN61010-1 : 2001	EN61010-1 : 2001	
	Withstand voltage	The input and output AC350V/1 minutes	The input and output AC350V/1 minutes	
	Insulation	The input and output DC500V /50MΩ.	The input and output DC500V /50MΩ.	
	EMC	EN61326-1 : 2006	EN61326-1 : 2006	
	Authentication	CE	CE	
	Display	3.2" TFT screen	3.2" TFT screen	
	Power supply	4×1.5V AA Alkaline battery	4×1.5V AA Alkaline battery	
	Size	206 × 97 × 60 mm	206 × 97 × 60 mm	
	Weight	about 633g	about 633g	
	Standard Quantity Per Carton	6pcs	6pcs	
	Standard Carton Measurement	530mm*405mm*310mm	530mm*405mm*310mm	
	Standard Carton Gross Weight	12.6kg	12.6kg	



**24/25**

Accuracy : ±0.02%

Two independent channels for input and output, allowing in-time input and output operation;

Project	Model	Performance parameters	24	25	
			DC millivolt	Range	-10 ~ 110mV
	Accuracy= ±(% of the set value+% of range)	0.02%+0.01%	0.02%+0.01%		
	Resolution	1uV	1uV		
DC voltage		Range	-0.1 ~ 11V	-0.1 ~ 11V	
		Accuracy= ±(% of the set value+% of range)	0.02%+0.01%	0.02%+0.01%	
		Resolution	10uV/0.1mV	10uV/0.1mV	
DC current		Range	0 ~ 22mA	0 ~ 22mA	
		Accuracy= ±(% of the set value+% of range)	0.02%+0.02%	0.02%+0.02%	
		Resolution	1uA	1uA	
Sink current		Range	0 ~ 22mA	0 ~ 22mA	
		Accuracy= ±(% of the set value+% of range)	0.02%+0.02%	0.02%+0.02%	
		Resolution	1uA	1uA	
External power supply		Range	5 ~ 28V	5 ~ 28V	
		Range	0 ~ 40KΩ	0 ~ 40KΩ	
		Accuracy= ±(% of the set value+% of range)	0.02%+0.02%	0.02%+0.02%	
Resistance		Resolution	0.01Ω/0.1Ω/1Ω	0.01Ω/0.1Ω/1Ω	
		Range	R/S/K/E/J/T/B/N	R/S/K/E/J/T/B/N	
		Accuracy	0.4°C	0.4°C	
Thermocouple		Resolution	0.1°C/1°C	0.1°C/1°C	
	RTD		Range	Pt100/Pt200/Pt500/ Pt1000/Cu10/Cu50	Pt100/Pt200/Pt500/ Pt1000/Cu10/Cu50
			Accuracy	0.2°C	0.2°C
		Resolution	0.1°C	0.1°C	
Frequency		Range	1Hz ~ 110KHz	1Hz ~ 110KHz	
		Accuracy	±2words	±2words	
		Resolution	0.01Hz/1Hz/0.1KHz/2KHz	0.01Hz/1Hz/0.1KHz/2KHz	
Pulse		Frequency	1Hz ~ 10KHz	1Hz ~ 10KHz	
		Range	1 ~ 100000cyc	1 ~ 100000cyc	
		Accuracy	±2words	±2words	
Switch		Resolution	1cyc	1cyc	
		Range	1Hz ~ 110KHz	1Hz ~ 110KHz	
		Accuracy	±2words	±2words	
Pressure		Resolution	0.01Hz/1Hz/0.1KHz/2KHz	0.01Hz/1Hz/0.1KHz/2KHz	
		Range	Depends on the pressure module	Depends on the pressure module	
		Accuracy= ±(% of the set value+% of range)	N/A	Depends on the pressure module	
	Resolution		5 digit display		

\* Note: table range for the maximum range, precision is the highest accuracy (reading%), the resolution is the highest resolution.



11<sup>+</sup>  
14<sup>+</sup>  
15<sup>+</sup>

Measure	Parameter	11+	14+
		DC millivolt	Range: -5 ~ 550mV Accuracy: 0.02%+0.01% Resolution: 1uV/10uV
DC voltage	Range	-0.5 ~ 55V	-0.5 ~ 55V
	Accuracy	0.02%+0.01%	0.02%+0.01%
DC current	Range	-5 ~ 55mA	-5 ~ 55mA
	Accuracy	0.02%+0.01%	0.02%+0.01%
Resistance	Range	0 ~ 5.5KΩ	0 ~ 5.5KΩ
	Accuracy	0.05%+0.02%	0.05%+0.02%
Thermocouple	Range	R/S/K/E/J/T/B/N	R/S/K/E/J/T/B/N
	Accuracy	0.7C	0.7C
RTD	Range	Pt100/Pt200/Pt500/ Pt1000/Cu10/Cu50	Pt100/Pt200/Pt500/ Pt1000/Cu10/Cu50
	Accuracy	0.3C	0.3C
Frequency	Range	3 Hz~50KHz	3 Hz~50KHz
	Accuracy	±2words	±2words
Switch	Range	N/A	200 ~ 300Ω
	Threshold	N/A	Depends on the pressure module
Pressure	Range	N/A	Depends on the pressure module
	Accuracy	N/A	Depends on the pressure module
Continuity beeper	Range	0 ~ 500Ω	0 ~ 500Ω
	Accuracy	≤50Ωsound	≤50Ωsound
Loop power supply	Range	24V	24V
	Accuracy	±10%	±10%
Other functions	The maximum current	22mA	22mA
	Backlight	✓	✓
Other functions	Auto Power-off	✓	✓
	Charging function	✓	✓
Other functions	Room temperature display	✓	✓
	Battery detection	✓	✓
Other functions	The ramp signal	✓	✓
	Communication function	RS232 serial communication, can realize remote control instrument by the device driver software.	RS232 serial communication, can realize remote control instrument by the device driver software.
Other functions	Safety	EN61010-1: 2001	EN61010-1: 2001
	Withstand voltage	The input and output AC350V/1 minutes	The input and output AC350V/1 minutes
Other functions	Insulation	The input and output DC500V /50MΩ	The input and output DC500V /50MΩ
	EMC	EN61326-1: 2006	EN61326-1: 2006
Other functions	Authentication	CE	CE
	Display	Double display on the LCD screen	Double display on the LCD screen
Other functions	Power supply	4×1.5V AAA Alkaline battery	4×1.5V AAA Alkaline battery
	Size	205 × 95 × 42 mm	205 × 95 × 42 mm
Other functions	Weight	About 500g	About 500g
	Standard Quantity Per Carton	10pcs	10pcs
Other functions	Standard Carton Measurement	395mm*385mm*260mm	395mm*385mm*260mm
	Standard Carton Gross Weight	12.4Kg	12.4Kg

\* Note: table range for the maximum range, precision is the highest accuracy (reading%), the resolution is the

Project	The preference model	Performance parameters	11+	14+	15+
			DC millivolt	Range: -10 ~ 1100mV Accuracy: 0.02%+0.01% Resolution: 1uV	Range: -10.000 ~ 100.000mV Accuracy: 0.02%+0.01% Resolution: 1uV
DC voltage	Range	-1 ~ 11V	-0.1 ~ 1V	-1 ~ 11V	
	Accuracy	0.02%+0.01%	0.02%+0.01%	0.02%+0.01%	
DC current	Range	0 ~ 22mA	N/A	0 ~ 22mA	
	Accuracy	0.02%+0.02%	N/A	0.02%+0.02%	
Sink current	Range	0 ~ 22mA	N/A	0 ~ 22mA	
	Accuracy	0.02%+0.02%	N/A	0.02%+0.02%	
Resistance	Range	0 ~ 40KΩ	0 ~ 4KΩ	N/A	
	Accuracy	0.02%+0.02%	0.02%+0.02%	N/A	
Frequency	Range	1Hz ~ 110KHz	N/A	1Hz ~ 10KHz	
	Accuracy	±2words	N/A	±2words	
Pulse	Range	1 ~ 100000cyc	N/A	1 ~ 100000cyc	
	Accuracy	±2words	N/A	±2words	
Switch	Range	1Hz ~ 110KHz	N/A	N/A	
	Accuracy	±2words	N/A	N/A	
Thermocouple	Range	10types (R/S/K/E/J/T/B/N/L/U)	10types (R/S/K/E/J/T/B/N/L/U)	N/A	
	Accuracy	0.4C	0.4C	N/A	
RTD	Range	6types (Pt100/Pt200/Pt500/ Pt1000/Cu10/Cu50)	6types (Pt100/Pt200/Pt500/ Pt1000/Cu10/Cu50)	N/A	
	Accuracy	0.2C	0.2C	N/A	
Other functions	Resolution	0.1C	0.1C	N/A	
	Resolution	0.1C	0.1C	N/A	

## 709H

Protection grade : IP65  
Accuracy : ±0.01%  
HART communication



Measure	DC millivolt	Range	N/A	-5 ~ 550mV	-20 ~ 220mV
		Accuracy= ±(% of Reading+ % of Range)		0.02%+0.01%	0.02%+0.02%
DC voltage	Range	N/A	N/A	1uV/10uV	0.01mV
	Accuracy= ±(% of Reading+ % of Range)			0.02%+0.01%	
DC current	Range	N/A	N/A	0.1mV/1mV	-0.5 ~ 55V
	Accuracy= ±(% of Reading+ % of Range)			0.02%+0.01%	
Resistance	Range	N/A	N/A	0 ~ 5.5KΩ	-4 ~ 55mA
	Accuracy= ±(% of Reading+ % of Range)			0.02%+0.01%	
Frequency	Range	N/A	N/A	0.01Ω/0.1Ω	1uA
	Accuracy			0.01%+0.02%	
Switch	Range	N/A	N/A	3 ~ 50KHz	±2words
	Resolution			0.01Hz/0.1Hz/1Hz	
Pressure	Range	N/A	N/A	CLOSE/OPEN	200 ~ 300Ω
	Accuracy= ±(% of Reading+ % of Range)			Depends on the pressure module	
Loop power supply	Range	N/A	N/A	200 ~ 300Ω	Depends on the pressure module
	Accuracy			5 digit display	
Thermocouple	Range	N/A	N/A	24V	±10%
	Resolution			22mA	
RTD	Range	N/A	N/A	10types (R/S/K/E/J/T/B/N/L/U)	0.7℃
	Accuracy			0.1℃/1℃	
Continuity beeper	Range	N/A	N/A	6types (Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50)	0.5℃
	Resolution			0.1℃	
Other functions	Range	N/A	N/A	0 ~ 500Ω	≤250Ω Sound
	Accuracy			≤50Ω Sound	
Other functions	Resolution	N/A	N/A	0.01Ω	≤250Ω Sound
	Backlight			✓	
Other functions	Auto Power-off	N/A	N/A	✓	✓
	Charging function			✓	
Other functions	Room temperature display	N/A	N/A	✓	✓
	Battery detection			✓	
Other functions	Communication function	N/A	N/A	RS232 serial communication, can realize remote control instrument by the device driver software	✓
	The mathematical treatment			Data hold zero, average	
Other functions	Characteristic	N/A	N/A	Data hold zero, average	Data hold, zero, average
	Safety			EN61010-1: 2001	
Other functions	Insulation	N/A	N/A	EN61010-1: 2001	EN61010-1: 2001
	EMC			DC500V /50MΩ	
Other functions	Authentication	N/A	N/A	DC500V /50MΩ	DC500V /50MΩ
	Display			EN61326-1: 2006	
Other functions	Power supply	N/A	N/A	EN61326-1: 2006	EN61326-1: 2006
	Size			CE	
Other functions	Weight	N/A	N/A	CE	CE
	Standard Quantity Per Carton			Double display on the LCD screen	
Other functions	Standard Carton Measurement	N/A	N/A	Double display on the LCD screen	Double display on the LCD screen
	Standard Carton Gross Weight			4x1.5V AAA alkaline battery	
Other functions	Standard Quantity Per Carton	N/A	N/A	4x1.5V AAA Alkaline battery	4x1.5V AAA Alkaline battery
	Standard Carton Measurement			205 × 95 × 42 mm	
Other functions	Standard Carton Gross Weight	N/A	N/A	205 × 95 × 42 mm	205 × 95 × 42 mm
	Standard Quantity Per Carton			About 500g	
Other functions	Standard Carton Measurement	N/A	N/A	About 500g	About 500g
	Standard Carton Gross Weight			10pcs	
Other functions	Standard Quantity Per Carton	N/A	N/A	10pcs	10pcs
	Standard Carton Measurement			395mm*385mm*260mm	
Other functions	Standard Carton Gross Weight	N/A	N/A	395mm*385mm*260mm	395mm*385mm*260mm
	Standard Quantity Per Carton			10.4Kg	
Other functions	Standard Carton Measurement	N/A	N/A	10.3Kg	11.5Kg
	Standard Carton Gross Weight			10.4Kg	

\* /te: table range for the maximum range, precision is the highest accuracy (reading%), the resolution is the highest resolution.

Project	Referencemodel	709H
Source	DC current (DCmA)	0.000~22.000mA
	Accuracy ±(% of the set value + % of range)	0.01%+0.015%
Measurement	Analog transmitter (SIMULATE)	0.000~22.000mA
	Accuracy ±(% of the set value + % of range)	0.01%+0.015%
Other functions	Resolution	1uA
	External power supply	5 ~ 28V
Measurement	DC voltage (DCV)	-2.000~28.000V
	Accuracy ±(% of Reading+ % of Range)	0.01%+0.01%
Measurement	DC current (DCmA)	-4.000 ~33.000mA
	Accuracy ±(% of Reading+ % of Range)	0.01%+0.01%
Other functions	Resolution	1uA
	Loop power supply (LOOP)	24V
Other functions	The maximum current	22mA
	Driving ability	No HART resistance of 1KΩ. HART resistance is 750 Ω.
HART communication		Support HART general instructions and general application instructions. Able to read
Other functions	Protection grade	IP65
	Backlight	✓
Other functions	Backlight brightness adjustment	✓
	25%、100%step output	✓
Other functions	Automatic ramp	✓
	Automatic step	✓
Other functions	mA、%Switch the display	✓
	Auto Power-off	✓
Other functions	Power Adaptation function	✓
	Battery Low display	✓
Other functions	PC online communication	Compatible with infrared isolation USB serial communication interface. can realize remote control instrument
	Characteristic	
Electrical safety	EN61010-1 : 2001	
Insulation	DC500V /50MΩ	
EMC	EN61326-1: 2006	
Authentication	CE	
Display	3.2 inch TFT color display	
Power supply	4x1.5V AA Alkaline battery / adapter	
Size	206 × 97 × 60 mm	
Weight	About600g	
Standard Quantity Per Carton		
Standard Carton Measurement		
Standard Carton Gross Weight		



**01+/02+/03+/04+/05+**

NEW type holster  
Accuracy : ±0.05%

Project		01+	02+	03+	04+	05+	
Measurement	DC voltage	Range	N/A	100mV	N/A	28V	
		Resolution	N/A	0.01mV	N/A	0.001V	
		Basic accuracy	N/A	0.05%+3dgt	N/A	0.02%+2dgt	
	Resistance	Range	N/A	N/A	500Ω, 5000Ω	N/A	N/A
		Resolution	N/A	N/A	0.1Ω, 1Ω	N/A	N/A
		Basic accuracy	N/A	N/A	0.05%+2	N/A	N/A
	Wire	Range	N/A	N/A	Two wire, three wire or four wire for measure resistance	N/A	N/A
		Resolution	N/A	N/A		N/A	N/A
	DC current	Range	N/A	N/A	N/A	N/A	22mA
		Resolution	N/A	N/A	N/A	N/A	0.001mA
		Basic accuracy	N/A	N/A	N/A	N/A	0.02%+4
	Thermocouple	Range	N/A	E, K, J, T, N, R, S, B,	N/A	N/A	N/A
		Resolution	N/A	0.1°C, 1°C	N/A	N/A	N/A
		Basic accuracy	N/A	0.05%	N/A	N/A	N/A
		The reference junction compensation	N/A	✓	N/A	N/A	N/A
RTD	Range	N/A	N/A	Cu10, Cu50, Pt10, Pt100, Pt200, Pt500, Pt1000	N/A	N/A	
	Resolution	N/A	N/A	0.1°C	N/A	N/A	
	Basic accuracy	N/A	N/A	0.05%	N/A	N/A	
Source	DC voltage	Range	100mV, 1000mV	100mV, 1000mV	10V	N/A	
		Resolution	0.01mV, 0.1mV	0.01mV, 0.1mV	0.001V	N/A	
		Basic accuracy	0.05%+3dgt	0.05%+3dgt	0.05%+2dgt	N/A	
	Resistance	Range	400Ω, 4000Ω	N/A	400Ω, 4000Ω	N/A	N/A
		Resolution	0.1Ω, 1Ω	N/A	0.1Ω, 1Ω	N/A	N/A
		Basic accuracy	0.05%+2dgt	N/A	0.05%+2dgt	N/A	N/A
	DC current	Range	N/A	N/A	N/A	22mA	22mA
		Resolution	N/A	N/A	N/A	0.001mA	0.001mA
		Basic accuracy	N/A	N/A	N/A	0.05%+4dgt	0.05%+4dgt
	Thermocouple	Range	E, K, J, T, N, R, S, B,	E, K, J, T, N, R, S, B,	N/A	N/A	N/A
		Resolution	0.1°C, 1°C	0.1°C, 1°C	N/A	N/A	N/A
		Basic accuracy	0.05%	0.05%	N/A	N/A	N/A
		The reference junction compensation	✓	✓	N/A	N/A	N/A
	RTD	Range	Cu10, Cu50, Pt10, Pt100, Pt200, Pt500, Pt1000	N/A	Cu10, Cu50, Pt10, Pt100, Pt200, Pt500, Pt1000	N/A	N/A
		Resolution	0.1°C	N/A	0.1°C	N/A	N/A
Basic accuracy		0.05%	N/A	0.05%	N/A	N/A	
Simulating transmitter	N/A	N/A	N/A	✓	✓		
25%, 100% step output	N/A	N/A	N/A	✓	✓		
Automatic ramp	N/A	N/A	N/A	✓	✓		
Automatic step	N/A	N/A	N/A	✓	✓		
Display current and % of span	N/A	N/A	N/A	✓	✓		
Loop power	N/A	N/A	N/A	24V	24V		
°C/°F conversion	✓	✓	✓	N/A	N/A		
Loop detection	The 24V loop power supply and measuring the	N/A	N/A	N/A	N/A	✓	
Power Supply	2×1.5V AA Alkaline battery	2×1.5V AA Alkaline battery	2×1.5V AA Alkaline battery	2×1.5V AA Alkaline battery	2×1.5V AA Alkaline battery		
Auto Power-off	✓	✓	✓	✓	✓		
Backlight	N/A	N/A	N/A	N/A	N/A		
Size	180×90×47	180×90×47	180×90×47	180×90×47	180×90×47		
Weight	About 500g	About 500g	About 500g	About 500g	About 500g		
Accessories	Test line, manual	Test line, manual	Test line, manual	Test line, manual, fuse	Test line, manual, fuse		
Standard Quantity Per Carton	10pcs	10pcs	10pcs	10pcs	10pcs		
Standard Carton Measurement	395mm*385mm*260mm	395mm*385mm*260mm	395mm*385mm*260mm	395mm*385mm*260mm	395mm*385mm*260mm		
Standard Carton Gross Weight	9.6Kg	9.6Kg	9.6Kg	9.6Kg	9.6Kg		



**77**



**79A**



**78/79**



## PCE01/02 Pressure Calibration Instrument

PCE01/02 Pressure Calibration Instrument includes process calibration device, communication cable for pressure module, pressure transformation joint, high accuracy pressure module and common thread transformation joint. Cooperate use of the Instrument with pressure manual pump suit can make Users' pressure calibration more convenient. This Instrument is widely used in measurement, petroleum, chemical, power, metallurgy, national defense and instrument manufacture industries for precise measurement and calibration of pressure measurement.

PCE01/02 pressure calibration instrument, a perfect combination of electric signal calibration and pressure signal calibration.

### 1. Features of the Pressure Calibration Instrument:

- Can make on-spot calibration of various pressure instruments or equipments, provide with 20 pressure modules of different types and ranges, the pressure calibration range is from -100KPA~60MPA with 0.05% high accuracy.
- Can measure and output electric signals of DC voltage, DC current, Ohms, frequency, thermocouples, RTD with basic accuracy as high as 0.02%(specific functions are set by the configuration selected by Users).
- Can simulate transmitter, provide 24V DC power.
- Portable suitcase, system-wide configurations, convenient to use and carry.
- Selectable pressure manual pump to make the calibration much easier.



### 2. pressure calibration device configuration table

Serial number	Part name	Model /specification	Number	Remarks
1	Multifunctional process calibrator	25	1	Only PCE02
2	V/mA/pressure calibrator	15+	1	Only PCE01
3	VPMS seriesdigital pressure module	20 kinds of optional	1	You can select multiple
4	CALCP pressure adapter	A000018	1	
5	Communication cable	A000046	1	
6	The adapter	1/4 NPT internal thread 1/4 BSP external thread	1	Options
7	The adapter	M20*1.5internal thread 1/4 BSP external thread	1	Options
8	Handpump	K/IP/-0.85~25BAR	1	Options
9	Hand pump	HTP1/0~700BAR Attached: portable box 1, hose 1, all kinds of pressure adapter 8, kettle 1, the sealing gasket several	1	Options

Project		77	78	79	79A	
Measurement	DC voltage	Range	±51V	±400V	±400V	±1000V
		The highest resolution	10mV	0.01mV	0.01mV	0.01mV
		Basic accuracy	0.5%	0.2%	0.2%	0.1%
	AC voltage	Range	510V	400V	400V	750V
		The highest resolution	100mV	0.1mV	0.1mV	0.1mV
		Basic accuracy	1.5%	0.5%	0.5%	0.5%
	Resistance	Range	5kΩ	40MΩ	40MΩ	50MΩ
		The highest resolution	1Ω	0.1Ω	0.1Ω	0.1Ω
		Basic accuracy	0.5%	0.2%	0.2%	0.1%
	DC current	Range	±22mA	±400mA	±400mA	±500mA
		The highest resolution	1uA	10uA	10uA	1uA
		Basic accuracy	0.2%	0.2%	0.2%	0.1%
	AC current	Range		400mA	400mA	500mA
		The highest resolution	N/A	10uA	10uA	1uA
		Basic accuracy		0.5%	0.5%	0.5%
	Thermocouple	Range			R, S, B, E, K, J, T, N	R, S, B, E, K, J, T, N
		The highest resolution	N/A	N/A	1°C	1°C
		Basic accuracy			0.5%	0.5%
	RTD	Range			Cu50, Pt100	Cu50, Pt100
		The highest resolution	N/A	N/A	1°C	1°C
Basic accuracy				0.5%	0.5%	
CAP	Range				100.0mF	
	The highest resolution	N/A	N/A	N/A	0.01nF	
	Basic accuracy				5%	
Frequency		N/A	10Hz~100kHz	10Hz~100kHz	10Hz~100kHz	
Diode test		✓	✓	✓	✓	
Continuity beeper		✓	✓	✓	✓	
Data hold		✓	✓	✓	✓	
Relative value measurement		N/A	✓	✓	✓	
Source	DC voltage	Range	N/A	-50.0mV~550.0mV -0.500V~5.500V	-10.00mV~110.00mV -0.5000V~5.5000V	-10.00mV~110.00mV -100.0mV~1100.0mV -1.000V~11.000V
		Resolution		0.1mV, 1mV	0.01mV, 0.1mV	0.001mV, 0.01mV, 0.1mV
		Basic accuracy		0.2%	0.2%	0.2%
	Resistance	Range	N/A	N/A	0~400.0Ω	0~400.0Ω
		Resolution			0.1Ω	0.1Ω
		Basic accuracy			0.2%	0.2%
	DC current	Range	22mA	22mA	22mA	33mA
		Resolution	0.001mA	0.01mA	0.001mA	0.001mA
		Basic accuracy	0.2%	0.2%	0.2%	0.2%
	Simulating transmitter		✓	✓	✓	✓
	25%、100%Step output		✓	✓	✓	✓
	Automatic ramp		N/A	✓	✓	✓
	Automatic step		N/A	✓	✓	✓
	Display current and % of span		✓	✓	✓	✓
	Loop power		24V	15V	15V	24V
Frequency		N/A	1.0Hz~11.0kHz	1.0Hz~11.0kHz	1.0Hz~11.0kHz	
Thermocouple		N/A	N/A	R, S, B, E, K, J, T, N	R, S, B, E, K, J, T, N	
RTD		N/A	N/A	Cu50, Pt100	Cu50, Pt100	
Loop detection		✓	✓	✓	✓	
The 24V loop power supply and Built in 250Ω		✓	✓	✓	✓	
Power Supply		2×1.5V AA Alkaline battery	4×1.5V AAA Alkaline battery	4×1.5V AAA Alkaline battery	4×1.5V AA Alkaline battery	
Auto Power-off		✓	✓	✓	✓	
Backlight		N/A	✓	✓	✓	
Safety		CAT IV 600V, Pollution degree 2	CAT III 600V, Pollution degree 2	CAT III 600V, Pollution degree 2	CAT, IV 600V, Pollution degree 2	
Size		180×90×52	205×95×42	205×95×42	206×97×60	
Weight		About 400g	About 500g	About 500g	about 1600g	
Accessories		Test line、manual、fuse	Test line、manual、fuse	Test line、manual、fuse	Test line、manual、fuse	
Standard Quantity Per Carton		12pcs	10pcs	10pcs	6pcs	
Standard Carton Measurement		395mm*385mm*260mm	395mm*385mm*260mm	395mm*385mm*260mm	395mm*385mm*260mm	
Standard Carton Gross Weight		9.2Kg	9.8Kg	10.2Kg	10.5Kg	



## PCE03/04 Pressure Calibration Equipment Introduce

PCE03/04 Pressure Calibration Equipment includes a process calibrator, pressure module communication cable, high accuracy pressure module and a usual thread adapter. used in conjunction with pressure hand pump kit, Let users pressure calibration more simple and convenient. The equipment can be used to precision pressure test and pressure calibration in metrology, petroleum, chemical, power, metallurgy, national defense and instrument manufacturing industry.

PCE03/04 Pressure Calibration Equipment is a perfect combination of electrical signal and pressure signal calibration.

### 1. Pressure Calibration Equipment characteristic

- Pressure Calibration Equipment can calibrate different types of pressure instrument or equipment, and it can equipped with 20 different types, different range pressure module, pressure calibration range from -100KPa to 60MPa, the accuracy up to 0.05%.
- Measurement and Output DC voltage, DC current, Ohm, Frequency, Thermocouple, Thermal resistance, almost all electrical signals. basic accuracy up to 0.02% (particular functions depending on the user's configuration).
- Pressure Calibration Equipment can simulate the transmitter, 24V DC power supply.
- Portable suitcase, systematism configuration, convenient use and portability.
- User can choose with pressure hand pump, so that the pressure calibration easier.

## 2. Pressure Calibration Equipment configuration table

serial number	Configuration item	Model	Number	Remark
1	Multifunction Process Calibrator	26	1	Only PCE03
2	Multifunction Process Calibrator	26H	1	Only PCE04
3	VPM-S series digital pressure module	More than 20 kinds of types	1	User can select one or more
4	Communication cable	A000046	1	
5	Thread adapter	1/4 NPT female to 1/4 BSP male	1	Options
6	Thread adapter	M20*1.5 female to 1/4 BSP male	1	Options
7	hand pump kit	K/P/0.85~25BAR	1	Options
8	hand pump kit	HTP1/0~700BAR	1	

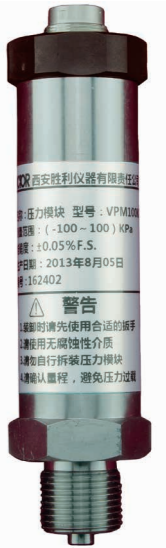
Note : 1, 2, 3, 4, items details please see the "product catalog".

## VPM-S series digit pressure module introduce

Feature :

VPM-S series digit pressure module contains more pressure type, such as gauge, compound and absolute; Self temperature compensation; Digital communication mode; the modules are compatible with YITENSEN calibrators; performance to meet almost any calibration and measurement task.

- High measure accuracy : 0.05% F. S. , temperature coefficient is  $\pm 0.001\%/^{\circ}\text{C}$
- Wide measure range :  $-0.1\sim 60\text{MPa}$ , more than a score of pressure ranges
- Wide temperature compensate range : from 0 to  $50^{\circ}\text{C}$
- More Pressure Type : gauge, absolute and compound pressure modules available
- Digit communication output : pressure resolution is 5 digits, support exchange of pressure modules without setup and calibration.
- Self contained calibration : Calibration data are stored and processed inside the VPM. Enabling calibration and traceability follows the module.
- Portable and rugged construction: Engineered for rough field use, almost unbreakable.
- The VPM-S series digit pressure modules are compatible with YITENSEN25 or YITENSEN15+ calibrators.



Pressure Module Model, Range & Acc.						
Model	Range(kPa)	Range(bar)	Range(psi)	Sensor type	Pressure	Accuracy (%) 0~50°C
VPM100KGS	0~100KPa	0~1bar	0~15psi	isolated, 316 stainless steel	gauge	0.05
VPM200KGS	0~200KPa	0~2bar	0~30psi	isolated, 316 stainless steel	gauge	0.05
VPM500KGS	0~500KPa	0~5bar	0~72psi	isolated, 316 stainless steel	gauge	0.05
VPM001MGS	0~1MPa	0~10bar	0~150psi	isolated, 316 stainless steel	gauge	0.05
VPM002MGS	0~2MPa	0~20bar	0~300psi	isolated, 316 stainless steel	gauge	0.05
VPM005MGS	0~5MPa	0~50bar	0~725psi	isolated, 316 stainless steel	gauge	0.05
VPM010MGS	0~10MPa	0~100bar	0~1500psi	isolated, 316 stainless steel	gauge	0.05
VPM020MGS	0~20MPa	0~200bar	0~3000psi	isolated, 316 stainless steel	gauge	0.05
VPM040MGS	0~40MPa	0~400bar	0~5800psi	isolated, 316 stainless steel	gauge	0.05
VPM060MGS	0~60MPa	0~600bar	0~8700psi	isolated, 316 stainless steel	gauge	0.05
VPM100KAS	0~100KPa	0~1bar	0~15psi	isolated, 316 stainless steel	vacuum	0.05
VPM200KAS	0~200KPa	0~2bar	0~30psi	isolated, 316 stainless steel	vacuum	0.05
VPM500KAS	0~500KPa	0~5bar	0~72psi	isolated, 316 stainless steel	vacuum	0.05
VPM001MAS	0~1MPa	0~10bar	0~150psi	isolated, 316 stainless steel	absolute	0.05
VPM002MAS	0~2MPa	0~20bar	0~300psi	isolated, 316 stainless steel	absolute	0.05
VPM005MAS	0~5MPa	0~50bar	0~725psi	isolated, 316 stainless steel	absolute	0.05
VPM010MAS	0~10MPa	0~100bar	0~1500psi	isolated, 316 stainless steel	absolute	0.05
VPM020MAS	0~20MPa	0~200bar	0~3000psi	isolated, 316 stainless steel	absolute	0.05
VPM100KCS	-100~100KPa	-1~1bar	-15~15psi	isolated, 316 stainless steel	Compound	0.05
VPM200KCS	-100~200KPa	-1~2bar	-15~30psi	isolated, 316 stainless steel	Compound	0.05
VPM500KCS	-100~500KPa	-1~7bar	-15~100psi	isolated, 316 stainless steel	Compound	0.05
VPM001MCS	-0.1~1MPa	-1~10bar	-15~150psi	isolated, 316 stainless steel	Compound	0.05
VPM002MCS	-0.1~2MPa	-1~20bar	-15~300psi	isolated, 316 stainless steel	Compound	0.05

## BRIEF INTRODUCTION FOR IMPORT HAND-HELD PUMP

K/P hand-held vacuum pressure pump  $-0.085\sim 2.5\text{M}$  air

The Pump provides simple pressure generation from suction pressure to inflation pressure as high as 2.5M, and shows great adaptivity. Besides, the cut-off valve is suitable for measurement of digital pressure meter and pressure transmitter.

weight: 900g measurement: 400x285x105mm





**60F/60G/60H**

**Technical data**

Function		60F	60G	60H
Insulation resistance	Resistance range	50V /200MΩ	N/A	N/A
		100V / 500MΩ	N/A	100V / 200MΩ
		250V / 2000MΩ	250V /2000M	250V / 500MΩ
		500V /5GΩ	500V /5GΩ	500V /1GΩ
		1000V /10GΩ	1000V /10GΩ	1000V /20GΩ
		1500V /20GΩ	N/A	N/A
		2000V /50GΩ	N/A	N/A
		2500V /100GΩ	2500V /50GΩ	N/A
Voltage test	DC Range	0 ~ 1000V	30 ~ 1000V	0 ~ 1000V
	AC Range	30 ~ 750V	30 ~ 750V	30 ~ 750V
PI		√	√	√
DAR		√	√	√
COMP		√	√	√
Short circuit current		About 1.3mA	About 1.3mA	About 1.3mA
TIME		√	√	√
Automatic release voltage		√	√	√
Power Supply		Alkaline battery 1.5V (LR6) ×The 8 section	Alkaline battery 1.5V (LR6) ×The 8 section	Alkaline battery 1.5V (LR6) ×The 8 section
Automatic shutdown		√	√	√
Backlight		The white LED	The white LED	The white LED
Storage		100 groups	100 groups	100 groups
adapter interface		√	√	√
Size		178(L)×110(W)×59(D)mm	178(L)×110(W)×59(D)mm	178(L)×110(W)×59(D)mm
Weight		About 600g (Does not contain a battery)	About 600g (Does not contain a battery)	About 600g (Does not contain a battery)
Standard Quantity Per Carton		12 pcs	12 pcs	12 pcs
Standard Carton Measurement		430×350×225mm	430×350×225mm	430×350×225mm
Standard Carton Gross Weight		12.4KG	12.2KG	10.8KG



**3123**

**3125**



**3126**

**Technical data**

Model		3123	3125	3126
250V	Resistance range	0 ~ 250GΩ	N/A	0 ~ 250GΩ
	Resistance accuracy	5%		5%
	Rated current	1mA		1mA
500V	Resistance range	0 ~ 500GΩ	0 ~ 500GΩ	0 ~ 500GΩ
	Resistance accuracy	5%	5%	5%
	Rated current	1mA	1mA	1mA
1000V	Resistance range	0 ~ 1000GΩ	0 ~ 1000GΩ	0 ~ 1000GΩ
	Resistance accuracy	5%	5%	5%
	Rated current	1mA	1mA	1mA
2500V	Resistance range	0 ~ 2.5TΩ	0 ~ 2.5TΩ	0 ~ 2.5TΩ
	Resistance accuracy	5%	5%	5%
	Rated current	1mA	1mA	1mA
5000V	Resistance range	N/A	0 ~ 5TΩ	0 ~ 10TΩ
	Resistance accuracy		5%	5%
	Rated current		1mA	1mA
The leakage current measurement		0 ~ 5000uA	0 ~ 5000uA	0 ~ 5000uA
Short circuit current		About 3mA	About 3mA	About 3mA
Polarization index (PI)		√	√	√
Induced absorption ratio (DAR)		√	√	√
Step voltage (SV)		√	√	√
The timing measurement (TIME)		√	√	√
Slope test (RAMP)		√	√	√
Comparison function (COMP)		√	√	√
Automatic release voltage		√	√	√
Temperature measurement		Range: 0 ~ 70.0°C	0 ~ 70.0°C	0 ~ 70.0°C
Voltage test	DC Range	0 ~ 1000V	0 ~ 1000V	0 ~ 1000V
	AC Range	30 ~ 750V	30 ~ 750V	30 ~ 750V
Storage		Manual: 500groups Homework: 1000groups	Manual: 500groups Homework: 1000groups	Manual: 500groups Homework: 1000groups
Online communication		Isolation of USB communication, SCPI command, can realize remote control instrument by the device driver software	Isolation of USB communication, SCPI command, can realize remote control instrument by the device driver software	Isolation of USB communication, SCPI command, can realize remote control instrument by the device driver software
The system time		The date +24h time (Replace the battery without re setting)	The date +24h time (Replace the battery without re setting)	The date +24h time (Replace the battery without re setting)
The power indicator		Display the remaining battery power	Display the remaining battery power	Display the remaining battery power
Automatic shutdown		√	√	√
Backlight		The white LED	The white LED	The white LED
Size and shape		210mm(L) × 155mm(W) × 95mm(D)	210mm(L) × 155mm(W) × 95mm(D)	210mm(L) × 155mm(W) × 95mm(D)
Weight		1750g (Does not contain a battery)	1750g (Does not contain a battery)	1750g (Does not contain a battery)
Power supply		Alkaline battery 1.5V(LR6) ×The 8 section The power adapter(AC100~250V)"	Alkaline battery 1.5V(LR6) ×The 8 section The power adapter(AC100~250V)"	Alkaline battery 1.5V(LR6) ×The 8 section The power adapter(AC100~250V)"
Overload		Insulation resistance: AC1200V/10S Voltage range: AC720V/10S	Insulation resistance: AC1200V/10S Voltage range: AC720V/10S	Insulation resistance: AC1200V/10S Voltage range: AC720V/10S
Withstand voltage		AC8320V(50/60Hz)/5S (Between the circuit and the outer box)	AC8320V(50/60Hz)/5S (Between the circuit and the outer box)	AC8320V(50/60Hz)/5S (Between the circuit and the outer box)
Insulation resistance		1000MΩ or greater/ DC 1000V (Between the circuit and the outer box)	1000MΩ or greater/ DC 1000V (Between the circuit and the outer box)	1000MΩ or greater/ DC 1000V (Between the circuit and the outer box)
Standard Quantity Per Carton		4pcs	4pcs	4pcs
Standard Carton Measurement		510mm*350mm*330mm	510mm*350mm*330mm	510mm*350mm*330mm
Standard Carton Gross Weight		13Kg	14Kg	14Kg



**4106A**

### Technical data

Function	4106	4106A	
Earth Resistance function	Range	20Ω, ±(2%+15)	20Ω, ±(2%+3)
	accuracy	200Ω, ±(2%+5)	200Ω, ±(2%+3)
		2000Ω, ±(3%+5)	2000Ω, ±(2%+3)
		20kΩ, ±(3%+5)	N/A
Short circuit current	About 20mA	About 3mA	
Voltage test	Range	UST 50V	UST 50V
Measurement of RE method	2pole, 3pole, 4pole	3pole, 4pole	
Comparison function (COMP)	√	√	
ρ	√	√	
Storage	100 groups	N/A	
Power supply	Alkaline battery 1.5V(LR6) × The 8 section	Alkaline battery 1.5V(LR6) × The 8 section	
adapter interface	√	√	
Automatic shutdown	√	√	
Backlight	The white LED	The white LED	
Size and shape	178(L)×110(W)×58.5(D)mm	178(L)×110(W)×58.5(D)mm	
Weight	About 500g (Does not contain a battery)	About 500g (Does not contain a battery)	
Standard Quantity Per Carton	6pcs	6pcs	
Standard Carton Measurement	530×405×310mm	530×405×310mm	
Standard Carton Gross Weight	21kg	19.4kg	



**4107B**



**4108**

### Technical data

Model	4107A	4107B	4108	
RE	Range	0.020Ω ~ 19.99kΩ	0.020Ω ~ 19.99kΩ	0.02Ω ~ 199.9kΩ
	Basic accuracy	2%+0.03Ω	2%+0.03Ω	2%+5
A single clamp	Range	N/A	0.020Ω ~ 19.99kΩ	0.02Ω ~ 19.99kΩ
	Basic accuracy		5%+0.03Ω	5%+5
Double clamp	Range	N/A	0.02Ω ~ 100Ω	0.02Ω ~ 100Ω
	Basic accuracy		10%+0.6	10%+2
Equipotential resistance	Range	N/A	N/A	0.02Ω ~ 1999Ω
	Basic accuracy			2%+2
Voltage test	DC Range	0 ~ ±999.9V	0 ~ ±999.9V	N/A
	AC Range	30.0 ~ 750.0V	30.0 ~ 750.0V	
Disturbance voltage (UST)	Range	0.0V ~ 50.0V	0.0V ~ 50.0V	0.0V ~ 50.0V
	Basic accuracy	5%+5	5%+5	5%+5
Interference frequency (FST)	Range	16 ~ 400Hz	16 ~ 400Hz	16 ~ 400Hz
	Basic accuracy	1%+5	1%+5	1%+5
Clamp current measurement (IST)	Range	N/A	1.0mA ~ 20.0A	1.0mA ~ 20.0A
	Basic accuracy		5%+5	5%+5
ρ	√	√	√	
Short circuit current	<250mA	<250mA	<250mA	
COMP	√	√	√	
Measurement method	2pole, 3pole, 4pole	2pole, 3pole, 4pole, single clamp, double clamp	2pole, 3pole, 4pole, single clamp, double clamp	
Power Supply	Alkaline battery 1.5V (LR6) × The 8 section	Alkaline battery 1.5V (LR6) × The 8 section	Alkaline battery 1.5V (LR6) × The 8 section	
Automatic shutdown	√	√	√	
Display type	240 * 128 dot matrix	LCD	LCD	
Backlight	√	√	√	
Storage	√	√	√	
Communication	USB	USB	USB	
Size	210mm(L) × 155mm (W) × 95mm(D)	210mm(L) × 155mm (W) × 95mm(D)	210mm(L) × 155mm (W) × 95mm(D)	
Weight	About 5500g (Does not contain a battery)	About 6500g (Does not contain a battery)	About 6500g (Does not contain a battery)	
Standard Quantity Per Carton	2pcs	2pcs	1pcs	
Standard Carton Measurement	510×350×330mm	510×350×330mm	395mm × 385mm × 260mm	
Standard Carton Gross Weight	11.9kg	14kg	7.9kg	

Project		98A+
DC voltage	Range	200mV/2V/20V/200V/1000V
	Basic accuracy	± ( 0.05%+10)
AC voltage	Range	200mV/2V/20V/200V/1000V
	Basic accuracy	± (0.5%+40)
DC current	Range	200uA/2000uA/20mA/200mA/2A/10A
	Basic accuracy	± (0.2%+10)
AC current	Range	200uA/2000uA/20mA/200mA/2A/10A
	Basic accuracy	± (0.8%+30)
Resistance	Range	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/60MΩ
	Basic accuracy	± (0.2%+5)
Capacitance	Range	10nF/100nF/1000nF/10uF/100uF /1000uF/10mF/100mF
	Basic accuracy	± (5%+5)
Frequency	Range	10Hz~10MHz
	Basic accuracy	± (0.02%+4)
Thermocouple	Range	K indexing: -200.0°C~1372.0°C
	Basic accuracy	± (0.5%+3°C)
RTD	Range	Pt100: -200.0°C~800.0°C
	Basic accuracy	± (0.5%+3°C)
Display words		22000
The measurement rate		3 times / sec
Analog Bar graph		20 times / sec
Automatic / manual range		✓
Measure the true effective value		✓
Bandwidth		1kHz
The duty ratio		10%~90%
Diode test		✓
Continuity beeper		✓
dBm		✓
AC+DC		✓
MAX/MIN/AVG		✓
Relative value measurement		✓
Data Hold		✓
Auto Hold		✓
Peak Hold		✓
The reference junction compensation		✓
°C/°F conversion		✓
Input impedance		10MΩ
Data recording		1000 group
Online communication		The isolation of the USB interface and PC communication. Support ASCII, can realize remote control instrument by the device driver software. The powerful function, friendly man-machine interface, the user can conveniently obtain multiple data parameters of instrument, and the data storage, processing, management, access to data is displayed in the graphical or tabular form.
Auto power-off		✓
Display type		LCD
Backlight		✓
Power Supply		4×1.5 AA Alkaline batteries
Safety		CAT III 600V, CAT II 1000V
Electromagnetic compatibility		IEC61326-1, Group2, Class B
Size		205×95×42mm(Sheathing)
Weight		About500g
Standard Quantity Per Carton		10pcs
Standard Carton Measurement		395mm*385mm*260mm
Standard Carton Gross Weight		9.8Kg

Project		189A
DC voltage	Range	50mV/500mV/5V/50V/500V/1000V
	Basic accuracy	± (0.025%+5dgt)
AC voltage	Range	50mV/500mV/5V/50V/500V/750V
	Basic accuracy	± (0.7%+30dgt)
DC current	Range	500uA/5000uA/50mA/500mA/5A/10A
	Basic accuracy	± (0.15%+10dgt)
AC current	Range	500uA/5000uA/50mA/500mA/5A/10A
	Basic accuracy	± (0.8%+30dgt)
Resistance	Range	50Ω/500Ω/5kΩ/50kΩ/500kΩ/5MΩ/50MΩ
	Basic accuracy	± (0.05%+5dgt)
Capacitance	Range	10nF/100nF/1000nF/10uF/100uF /1000uF/10mF/100mF
	Basic accuracy	± (5%+5dgt)
Frequency	Range	10Hz~100kHz
	Basic accuracy	± (0.02%+4dgt)
Thermocouple	Range	K indexing: -200.0°C~1360.0°C
	Basic accuracy	± (0.5%+3°C)
RTD	Range	Pt100: -200.0°C~850.0°C
	Basic accuracy	± (0.5%+3°C)
Display words		55000
The measurement rate		Fast: 20 times / sec Slow: 5 times / sec
Analog Bar graph		The fastest rate: 20 times / sec
Automatic / manual range		✓
Measure the true effective value		✓
Bandwidth		50kHz
Duty cycle ratio		10%~90%
Diode test		✓
Continuity beeper		✓
dBm		✓
Low pass filter		✓
MAX/MIN/AVG		✓
Relative value measurement		✓
Data Hold		✓
Data Hold		✓
Peak Hold		✓
The reference junction compensation		✓
°C/°F conversion		✓
Change rate		✓
Input impedance		10MΩ
Data recording		Manual record: 1000group Homework: 1000 groups of records
Online communication		189A can undertake wired communication with infrared serial port of the compatible USB connection.  Support ASCII can realize remote control instrument by the device driver software. The powerful function, friendly man-machine interface, the user can conveniently obtain multiple data parameters of instrument, and the data storage, processing, management, access to data is displayed in the graphical or tabular form.
Auto power-off		✓
Display type		LCD
Backlight		✓
Power Supply		4×1.5 AA Alkaline batteries
Safety		CAT IV 600V, CAT III 1000V
Electromagnetic compatibility		IEC61326-1, Group1, Class B
Size		206×97×60mm
Weight		About 500g
Standard Quantity Per Carton		10pcs
Standard Carton Measurement		395mm*385mm*260mm
Standard Carton Gross Weight		11.3Kg

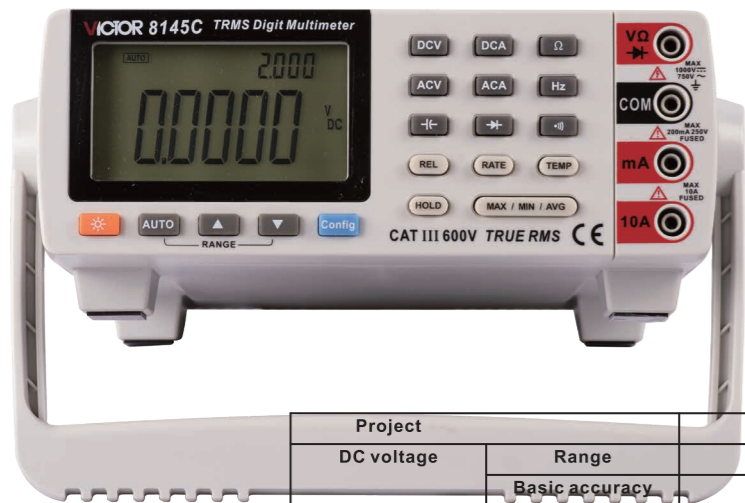


98A+



189A

# Bench-Type DMM

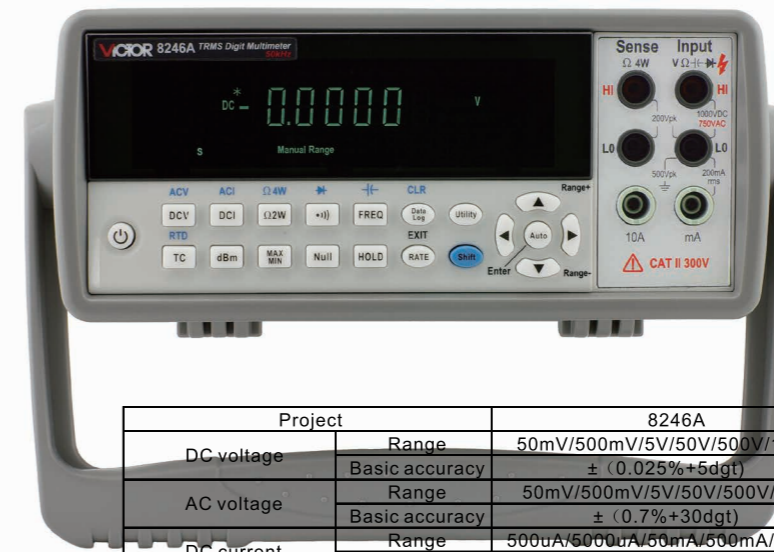


## 8145C

Accuracy:0.05%  
Display words:22000

Project	8145C
DC voltage	Range: 200mV/2V/20V/200V/1000V Basic accuracy: ± ( 0.05%+4dgt)
AC voltage	Range: 200mV/2V/20V/200V/750V Basic accuracy: ± ( 0.5%+40dgt)
DC current	Range: 0.2mA/2mA/20mA/200mA/10A Basic accuracy: ± ( 0.2%+10dgt)
AC current	Range: 0.2mA/2mA/20mA/200mA/10A Basic accuracy: ± ( 0.8%+30dgt)
Resistance	Range: 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/60MΩ Basic accuracy: ± ( 0.2%+5dgt)
Capacitance	Range: 10nF/100nF/1000nF/10uF/100uF/1000uF Basic accuracy: ± ( 5%+5dgt)
Frequency	Range: 10Hz~10MHz Basic accuracy: ± ( 0.02%+4dgt)
Thermocouple	Range: K : -200.0°C~1372.0°C Basic accuracy: ± ( 0.5%+5°C )
Display words	22000
The measurement	Quick: 20 times / sec Slow:3 time sec
Automatic /	√
True RMS	√
Bandwidth	1kHz
Diode test	√
Continuity beeper	√
MAX/MIN/AVG	√
Relative value measurement	√
Data Hold	√
The reference junction compensation	√
°C/ ° F conversion	√
Communication	The isolation of the USB interface and PC
Online communication	Support ASCII , can realize remote
Display type	LCD
Backlight	√
Power Supply	220V±10%AC or 110V±10%AC , 50Hz or 60Hz
Power	About 3W
Safety	CAT II 300V
Electromagnetic compatibility	IEC61326-1,Group1 , Class B
Size	245 × 220 × 82 ( mmdgt)
Weight	About 2kg
Standard Quantity Per Carton	6pcs
Standard Carton Measurement	585mm*505mm*323mm
Standard Carton Gross Weight	13.6Kg

# Bench-Type DMM



## 8246A/8246B

Accuracy:0.025%  
Display words:55000

Project	8246A	8246B
DC voltage	Range: 50mV/500mV/5V/50V/500V/1000V Basic accuracy: ± ( 0.025%+5dgt)	50mV/500mV/5V/50V/500V/1000V ± ( 0.025%+5dgt)
AC voltage	Range: 50mV/500mV/5V/50V/500V/750V Basic accuracy: ± ( 0.7%+30dgt)	50mV/500mV/5V/50V/500V/750V ± ( 0.7%+30dgt)
DC current	Range: 500uA/5000uA/50mA/500mA/5A/10A Basic accuracy: ± ( 0.15%+10dgt)	500uA/5000uA/50mA/500mA/5A/10A ± ( 0.15%+10dgt)
AC current	Range: 500uA/5000uA/50mA/500mA/5A/10A Basic accuracy: ± ( 0.8%+30dgt)	500uA/5000uA/50mA/500mA/5A/10A ± ( 0.8%+30dgt)
Resistance	Range: 500Ω/5kΩ/50kΩ/500kΩ /5MΩ/50MΩ Basic accuracy: ± ( 0.05%+5dgt)	500Ω/5kΩ/50kΩ/500kΩ /5MΩ/50MΩ ± ( 0.05%+5dgt)
Capacitance	Range: 10nF/100nF/1000nF/10uF/100uF /1000uF/10mF/100mF Basic accuracy: ± ( 5%+5dgt)	10nF/100nF/1000nF/10uF/100uF /1000uF/10mF/100mF ± ( 5%+5dgt)
Frequency	Range: 10Hz~100kHz Basic accuracy: ± ( 0.02%+4dgt)	10Hz~100kHz ± ( 0.02%+4dgt)
Thermocouple	Range: K: -200.0°C~1372.0°C Basic accuracy: ± ( 0.5%+0.5°C)	K: -200.0°C~1372.0°C ± ( 0.5%+0.5°C)
RTD	Range: Pt100 : -200.0°C~800.0°C Basic accuracy: ± ( 0.5%+0.5°C)	Pt100 : -200.0°C~800.0°C ± ( 0.5%+0.5°C)
Display words	55000	55000
The measurement rate	Quick: 20 times / sec Slow: 5 times / sec	Quick: 20 times / sec Slow: 5 times / sec
Automatic / manual range	√	√
True RMS	√	√
Bandwidth	50kHz	1kHz
The duty ratio	10%~90%	10%~90%
Diode test	√	√
Continuity beeper	√	√
Four wire resistance measurements	√	√
dBm	√	√
MAX/MIN/AVG	√	√
Relative value measurement	√	√
Data Hold	√	√
The reference junction compensation	√	√
°C/ ° F conversion	√	√
Change rate	√	√
Communication interface	Configurable isolation USB, isolated RS232 communication	
Online communication	Support ASCII can realize remote control instrument by the device driver software. The powerful function, friendly man-machine interface, the user can conveniently obtain multiple data parameters of instrument, and the data storage, processing, management, access to data is displayed in the graphical or tabular form.	
Auto power-off	√	√
Display type	VFD	VFD
Power Supply	220V±10%AC or 110V±10%AC . 50Hz	220V±10%AC or 110V±10%AC . 50Hz
Power	About 3W	About 3W
Safety	CAT II 300V	CAT II 300V
Electromagnetic compatibility	IEC61326-1,Group1 . Class B	IEC61326-1,Group1 . Class B
Size	315*260*110 ( mmdgt)	315*260*110 ( mmdgt)
Weight	About 5kg	About 5kg
Standard Quantity Per Carton	4pcs	4pcs
Standard Carton Measurement	650mm*390mm*370mm	650mm*390mm*370mm
Standard Carton Gross Weight	21 Kg	21 Kg



**8265**

### Technical data

Project		8265
DC voltage	Range	100mV/1V/10V/100V/1000V
	Basic accuracy	±(0.0035+0.0005%)
AC voltage	Range	100mV/1V/10V/100V/750V
	Basic accuracy	±(0.05%+0.03%)
DC current	Range	10mA/100mA/1A/10A
	Basic accuracy	±(0.015%+0.005%)
AC current	Range	10mA/100mA/1A/10A
	Basic accuracy	±(0.05%+0.05%)
Resistance	Range	100Ω/1KΩ/10KΩ/100KΩ/1MΩ/10MΩ/100MΩ
	Basic accuracy	±(0.01%+0.001%)
Capacitance	Range	10nF/100nF/1000nF/10uF/100uF/1000uF/10mF
	Basic accuracy	±(1%+0.5%)
Frequency	Range	3Hz ~ 100kHz
	Basic accuracy	±0.01%
Thermocouple	Range	8types(R/S/K/E/J/T/B/N/L/U)
	Basic accuracy	±0.7°C
RTD	Range	2types (Pt100/PT1000)
	Basic accuracy	±0.7°C
Display words		1000000
Automatic / manual range		√
True RMS		√
Bandwidth		20Hz~100kHz
Diode test		√
Continuity beeper		√
Four wire resistance measurements		√
dBm		√
MAX/MIN		√
Relative value measurement		√
Data Hold		√
The reference junction compensation		√
°C/°F conversion		√
Input impedance		100mV/1V/10V: 10MΩ or >10GΩ 100V/1000V: 10MΩ
Communication interface		Configurable isolation USB, isolated RS232 communication
Online communication		Support the SCPI command, can realize remote control instrument by the device driver software. The powerful function, friendly man-machine interface, the user can conveniently obtain multiple data parameters of instrument, and the data storage, processing, management, access to data is displayed in the graphical or tabular form.
Auto power-off		√
Display type		VFD
Power Supply		250V±10%AC, 50Hz or 60Hz
Power		About 15W
Safety		CAT. III,1000V; CAT. IV,600V
Electromagnetic compatibility		IEC61010.1-2001
Size		245 × 220 × 82(mmdgt)
Weight		About 5100g
Standard Quantity Per Carton		4pcs
Standard Carton Measurement		650mm×410mm×365mm
Standard Carton Gross Weight		21.6kg



**71A/71B**

### Technical data

Project		71A	71B	
SOURCE"	DC millivolt	Range	110mV	110mV
		Basic accuracy	0.2%+4dgt	0.2%+4dgt
		Resolution	100uV	100uV
	DC voltage	Range	10V	10V
		Basic accuracy	0.2%+4dgt	0.2%+4dgt
		Resolution	10mV	10mV
	DC current	Range	0~22mA	0~22mA
		Basic accuracy	0.2%+4	0.2%+4
		Resolution	0.01mA	0.01mA
	Sink current	Range	0~22mA	0~22mA
		Basic accuracy	0.2%+4	0.2%+4
		Resolution	0.01mA	0.01mA
Thermocouple	Range	5 ~ 28V	5 ~ 28V	
	Basic accuracy	0.2%+4	0.2%+4	
	Resolution	1°C	1°C	
MEASURE	DC millivolt	Range	-10~110mV	-10~110mV
		Basic accuracy	0.2%+4	0.2%+4
		Resolution	100uV	100uV
	DC voltage	Range	-5~30V	-5~30V
		Basic accuracy	0.2%+4	0.2%+4
		Resolution	10mV	10mV
	DC current	Range	0~22mA	0~22mA
		Basic accuracy	0.2%+4	0.2%+4
		Resolution	0.01mA	0.01mA
	Loop power	Range	24V	24V
		Basic accuracy	10%	10%
		Limit current	25mA	25mA
Thermocouple	Range	8types(R/S/K/E/J/T/B/N)	8types(R/S/K/E/J/T/B/N)	
	Basic accuracy	0.2%+4	0.2%+4	
	Resolution	1°C	1°C	
Other functions	Manual Step Output	√	√	
	Automatic Waveform Output	√	√	
	Flash Light	√	√	
	Magnetic suspension cord (Optional accessories)	√	√	
Display		LCD	LCD	
Power supply		4×1.5V AAA alkaline battery	4×1.5V AAA alkaline battery	
Size		151(L)×75(W)×42(D)mm	151(L)×75(W)×42(D)mm	
Weight		0.5KG	0.5KG	
Standard Quantity Per Carton		12pcs	12pcs	
Standard Carton Measurement		430×350×225mm	430×350×225mm	
Standard Carton Gross Weight		7.2KG	7.2KG	

\* Notice: table range for the maximum range, precision is the highest accuracy (reading%), the resolution is the highest resolution.



**CALCT temperature probe**

- Type: A000019
- applicable products : process calibrations of VC25, VC11+, VC14+ of this Company
- function : can measure environmental temperature and capture cold-end compensation temperature faster and more accurate.
- accuracy :  $\pm 0.2$ degree
- feature : MINI\_USB interface (connected with the meter)
- weight : about 17g



**CA communication convertor module**

- type: A000022
- applicable products: the calibration meters of VC25, VC11+, VC14+, VC15+ of this company
- functions: to fulfill the data communication between the meter and the PC;
- features: MINI\_USB plug in the end(connected with meter), standard USB plug in the other end (connected with PC)
- weight : about 50g



**CA pressure module convertor**

- type: A000018
- applicable products: VC25, VC15+ calibration meters of this company
- functions: to finish pressure measurement by connecting the meter and the pressure module
- features: MINI\_USB plug in the end(connected with meter), standard LEMO USB plug in the other end (connected with PC)
- weight : about 20g



**USB serial communication line**

- Standard USB interface
- A type 4P RP-SMA Male/ MINI
- USB A type 5P insert
- Type: H100000



**USB serial communication line**

- Standard USB interface
- USB A type 4P RP-SMA Male/
- USB B type 4P insert/ with shielding layer
- type : H100000



**Testing probe**

- Product catalogue: General accessories
- Standard banana-typed interface adapted to varieties of probes
- Bar length: 115mm ; length of valid needles: 18mm
- CATIII 1000V 16A
- type : H000000



**Testing probe**

- Product catalogue: General accessories
- Bar length: 145mm ; line length:1000mm ; length of valid needles: 18mm
- CATIII 1000V 20A
- type : H000003



**Testing probe**

- Product catalogue: General accessories
- Standard banana-typed interface adapted to varieties of probes
- Bar length: 145mm ; line length:1000mm ; length of valid needles: 18mm
- CATIII 1000V 10A
- type : H000005



**Testing probe**

- Product catalogue: General accessories
- Bar length: 145mm ; line length:1000mm ; length of valid needles: 18mm
- CATIII 1000V 10A
- type : H000013





**Alligator clipper test lead**

- alligator clipper in one end
- 4mm banana plug in the other end (with insulation pipe sleeve)
- highly flexible connective leads to meet different needs of tests
- comply with criterion: EN61010, IEC61010, DIN VDE0411
- type: H000010B

rated voltage	CATIII 600V
rated current	10A
standard lead	1000mm;PVC



**Alligator clipper test lead**

- alligator clipper in one end
- two 4mm banana plugs in the other end (with insulation pipe sleeve)
- highly flexible connective leads to meet different needs of tests
- comply with criterion: EN61010, IEC61010, DIN VDE0411
- type: H000011

rated voltage	CATIII 600V
rated current	10A
standard lead	1000mm;PVC



**Alligator clipper test lead**

- alligator clipper in one end
- 4mm banana plug in the other end (with insulation pipe sleeve)
- highly flexible connective leads to meet different needs of tests
- comply with criterion: EN61010, IEC61010, DIN VDE0411
- type: H000010G

rated voltage	CATIII 600V
rated current	10A
standard lead	1000mm;PVC



**Main indicator of adaptor**

type: P070000

rated voltage	15V
output range	15V±5%
current value	0A~2.0A



**Main indicator of lined adaptor**

type: P070003

input voltage/ frequency	220V/50Hz
no-load current	≤45mA
input power	5W
output DC no-load voltage	5V±5%
load current	1000mA
output DC load voltage	4.7V±0.5%



**Alligator clipper**

- Product catalogue: alligator clipper
- Insulation direct plug-in alligator clipper
- Alligator clipper: 80\*36mm
- Maximum dehisce: 20mm
- CATIII 1000V 10A
- Type: H010000



**Industrial test lead**

- Product catalogue: general accessories
- Length of probe bar: 136mm, length of probe line: 1000mm
- Valid length of probe needle :18mm
- CATIII 1000V 10A
- Type: H000001



**Industrial test lead**

- Product catalogue: general accessories
- Standard banana head to adapt to varieties of probes to make test easy
- Banana head: 56mm, length of probe line: 1000mm
- CATIII 1000V 10A
- Type: H000002



**Hooked test probe**

- Product catalogue: general accessories
- With safe handle and smart, scalable, exploratory trench with compression spring to make test easy
- Standard banana head to adapt to varieties of probes to make test easy
- CATIII 1000V 10A
- Type: H000004



**TC convertor**

- Product catalogue: TC convertor
- Adapted conversion test of all kinds of graduations
- Type: H200000



**Pressure module communication cable**

- type: A000046
- applicable products: the calibration meters of VICTOR 25, VICTOR15+ of this company this company
- functions: to fulfill the data communication between the meter and the pressure module
- features: Binder 5-pole female to LEMO 5\_pole male
- length : about 60mm