

# VICTOR®

## NEW PRODUCTS CATALOG

<http://www.china-victor.com>

[www.victor-multimeter.com](http://www.victor-multimeter.com)



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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 ( 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.

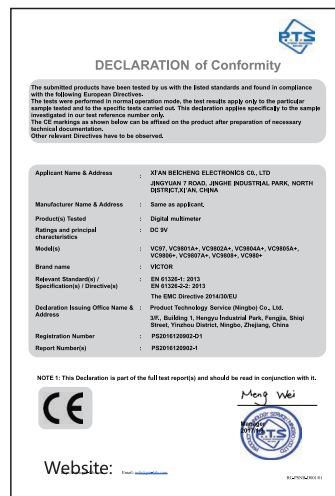
Most of the products comply with international quality standards (CE, RoHS, UKCA) and are greatly appreciated in a variety of different markets throughout the world.

We have a strong R & D team for design of different 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, Korea, etc. we strive to provide the best products and most considerate services to all customers.



TUV ISO9001



CE CERTIFICATE

8045-II



8155



### Technical data

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

4 1/2



**Accuracy:  $\pm 0.05\%$   
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

### 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, $\pm$ (% of reading + least significant digit)	
DCV	Uncertainty	0.015% + 3
	Measurement range	1uV-1000V
	Maximum resolution	1uV
ACV	Uncertainty	0.2% + 100
	Measurement range	1uV-750V
	Maximum resolution	1uV
DCA	Frequency range	40Hz ~ 100kHz
	Uncertainty	0.05% + 10
	Measurement range	0.001uA - 10A
ACA	Maximum resolution	0.001uA
	Measurement range	0.001uA - 10A
	Maximum resolution	0.001uA
Resistance	Frequency range	40Hz ~ 5kHz
	Uncertainty	0.02% + 6
	Measurement range	0.001Ω - 20MΩ
Frequency/cycle	Maximum resolution	0.001Ω
	Measurement range	0.1% + 3
	Maximum resolution	200Hz ~ 20MHz
Capacitance	Uncertainty	0.001Hz
	Measurement range	2% + 5
	Maximum resolution	2nF ~ 10mF
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	Frequency range	3Hz-10kHz
	Uncertainty	0.01+0.001
	Measurement range	0Ω-1GΩ
Frequency/period	Maximum resolution	10uΩ
	Uncertainty	0.007
	Measurement range	3Hz-300kHz
Capacitance	Maximum resolution	1uHz
	Uncertainty	1+0.3
	Measurement range	0nF-100mF
On-off/Diode	Maximum resolution	1pF
	Reference terminal range	Yes
Proportion (DC: DC)	Input terminal range	100mV-10V
	Type	Platinum resistance, thermistor and user-defined sensor
Temperature	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	± (0.8%+5)
	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)



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

85D





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)
DCA	200uA	±(1.0%+10)	±(1.0%+10)	±(1.0%+10)
	200mA	±(1.2%+8)	±(1.2%+8)	±(1.2%+8)
	10A	±(2.0%+5)	±(2.0%+5)	±(2.0%+5)
	200Q	±(0.8%+5)	±(0.8%+5)	±(0.8%+5)
Resistance	2kQ/20kQ/200kQ	±(0.8%+3)	±(0.8%+3)	±(0.8%+3)
	2MΩ	±(1.0%+5)	±(1.0%+5)	±(1.0%+5)
	20MΩ	±(1.0%+5)	±(1.0%+5)	±(1.0%+5)
Capacitance	200uF	±(5.0%+30)	±(5.0%+30)	±(5.0%+30)
	20kHz	±(5.0%+10)	±(5.0%+10)	±(5.0%+10)
Frequency	20kHz	±(1.0%+10)	±(1.0%+10)	±(1.0%+10)
Temperature	-20°C~1000°C	<400°C ±(1.0%+5)	>400°C ±(1.5%+15)	<400°C ±(1.0%+5)
		<752°F ±(1.0%+5)	>752°F ±(1.5%+15)	<752°F ±(1.0%+5)
	-4°F~1832°F	>752°F ±(1.5%+15)	>752°F ±(1.5%+15)	>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.	"" appears.	"" appears.
Display method		LCD display	LCD display	LCD display
Max. display		1999 (3 1/2 digits) Auto polarity display	1999 (3 1/2 digits) Auto polarity display	1999 (3 1/2 digits) Auto polarity display
Measuring method		AD conversion measurement	AD conversion measurement	AD conversion measurement
Sampling rate		About 3 times/s	About 3 times/s	About 3 times/s
Over range indication		The MSD displays "OL"	The MSD displays "OL"	The MSD displays "OL"
Dimension		146mm*72mm*50mm	146mm*72mm*50mm	146mm*72mm*50mm
Weight		About 232g (include batteries)	About 232g (include batteries)	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)
DCA	600uA/6000uA		±(1.0%+10)
	60mA		±(1.2%+8)
	600mA	±(1.2%+8)	±(1.2%+8)
	10A	±(2.0%+5)	±(2.0%+5)
ACA	600uA/6000uA		±(1.0%+10)
	60mA		±(1.5%+15)
	600mA	±(1.5%+15)	±(1.5%+15)
	10A	±(3.0%+10)	±(3.0%+10)
Resistance	600Ω	±(0.8%+5)	±(0.8%+5)
	6kΩ	±(0.8%+5)	±(0.8%+5)
	60kΩ/600kΩ/6MΩ	±(0.8%+4)	±(0.8%+4)
Capacitance	10nF	±(5.0%+40)	±(5.0%+40)
	100nF/1uF/10uF/100uF	±(3.5%+20)	±(3.5%+20)
	2mF	±(5.0%+40)	±(5.0%+40)
Frequency	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.	"" symbol appears.
Display method		LCD display	LCD display
Max. display		5999 (3 5/6 digits) Auto polarity display	5999 (3 5/6 digits) Auto polarity display
Sampling rate		About 3 times/s	About 3 times/s
Over range indication		The MSD displays "OL"	The MSD displays "OL"
Dimension		146mm*72mm*50mm	146mm*72mm*50mm
Weight		About 232g (include batteries)	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	200mA	±(2.5%+15)	10A	±(2.5%+15)
	10A	±(3.5%+15)	10A	±(3.5%+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)
Frequency	*	*	2kHz/200kHz	±(3.0%+18)
	200Q	±(0.8%±5)	200Q	±(0.8%±5)
Resistance	2kQ/20kQ/200kQ	±(0.8%±3)	2kQ/20kQ/200kQ	±(0.8%±3)
	20MΩ	±(1.0%+25)	20MΩ	±(1.0%+25)
	200MΩ	±5%(reading-10)+30	*	*
Celsius	(-20-1000)°C			±(15%+15)≥400°C
Fahrenheit	(-4-1832)°F			

9208



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

9205B



### Technical parameter

Model	9205B	9205C	Precision
Basic skills	Range		
DCV	200mV/2V/20V/200V/1000V		±(0.5%+3)
ACV	2V/20V/200V/750V		±(0.8%+5)
DC A	20mA/200mA/20A		±(1.0%+3)
ACA	20mA/200mA/20A		±(1.0%+3)
Resistance	200Q/2kQ/20kQ/200kQ/2MΩ/20MΩ		±(0.8%+2)
Capacitance	20nF/200nF/2uF/20uF/200uF	200nF/2uF/20uF/200uF	±(3.0%+3)
Frequency	/	200kHz	±(0.5%+3)
Temperature	/	-40 C ~ 1000 C	±(0.75%+4)

### VICTOR 9205D 3 1/2 Digital Multimeter

Comprehensive Characteristics

- Display mode : LCD display;
- Maximum display: 1999 (3 1/2 bits) automatic polarity display;
- Measurement method: double integral A/D conversion;
- Sampling rate: about 3 times per second;
- Over range display: the highest bit display "oL" or "-OL";
- Low voltage display: " " symbol appears;
- Working environment: (0~40)C, relative humidity <80%RH
- Storage environment: -20 C ~60 C, relative humidity <85%RH;
- Power supply: one 9v battery;
- volume (size) : (167\*81\*43) mm
- weight: Ap prox.167g(No batteries)

9205D

New Model



### Technical data

Basic Function	9205D	Accuracy
DCV	200mV/2V/20V/200V	±(0.5%+4)
	1000V	±(0.8%+15)
ACV	2V/20V/200V	±(0.8%+4)
	750V	±(1.0%+15)
DCA	200uA/2mA/20mA/200mA	±(0.8%+5)
	10A	±(1.0%+15)
ACA	200mA	±(2.0%+15)
	10A	±(3.5%+15)
Resistance	200Q	±(0.8%+5)
	2kQ/20kQ/200kQ/2MΩ/20MΩ	±(1.0%+25)
	200MΩ	±(5.0%+30)
Capacitance	20nF/2uF	±(2.5%+20)
	200uF	±(5.0%+10)
<b>Special Functions</b>		
Maximum Display	1999 (3 1/2) bit automatic polarity display	
Diode test	√	
On/Off Beep	√	
Triode	√	
True effective value	√	
Low voltage display	Battery symbol display	
Fire line judgment	√	
Automatic shutdown	No operation for 15 minutes	
Sampling rate	3 times/second	
ACV frequency response	(40-1000)Hz	
Over range prompt	Display OL at the highest position	
Work environment	(0-40)°C, relative humidity<80%	
Storage environment	(-20-60)°C, relative humidity<85%	
Power	9V battery	
Size	167*81*43mm	
Weight	About 167g	

830L



3 1/2



### 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/200uF		±(3.5%+8)
Frequency	100Hz/1000Hz/10kHz/100kHz/1MHz/10MHz		±(0.5%+4)

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)

### 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:16.4kg	

921



3 3/4



923E

New Model



VICTOR 923E Intelligent Large Screen Digital Multimeter with VA color screen 5999 bit display

### Technical data

Basic Function	923E	Accuracy
DC voltage	600mV/6V/60V/600V	±(0.5%+3)
AC voltage	6V/60V/600V	±(1.0%+3)
DC current	600mA/6A/10A	±(1.2%+3)
AC current	600mA/6A/10A	±(1.2%+3)
Resistance	600Ω/6kΩ/60kΩ/600kΩ/6MΩ	±(1.0%+5)
	60MΩ	±(2.0%+10)
Capacitance	6nF/60nF/600nF/6uF/60uF/600uF	±(4.0%+5)
	6mF	±(5.0%+5)
	60mF	±(10%+10)
Frequency	6Hz/60Hz/600Hz/6kHz/60kHz/600kHz/6MHz/10MHz	±(1.0%+3)
Temperature	(-40~1000)°C or (-40~1832)°F	±3°C or ±6°F
Essential information		
LCD display	5999 max	
Overload	OL	
Alarm signal	Audible and visual alarm	
Power	1.5V AAA*4	
Low voltage	✓	
Auto shutdown	No operation for 15 minutes	
Size	144*73*27mm	
Weight	About 235g	
Work environment	0~40°C(<75%RH)	
Storage	-20~ 60°C(<85%RH)	
Jack prompt	✓	
NCV	✓	
Flashlight	✓	
Data retentio	✓	
Diode	✓	
On off buzzer	✓	



925



17



### Technical data

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

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

### Technical data

Model	17	
Basic Function	Range	Accuracy
DC Voltage	400mV	$\pm(1.0\%+10)$
	4V/40V/400V/1000V	$\pm(0.5\%+3)$
DCmV	400mV	$\pm(1.0\%+10)$
ACmV	400mV	$\pm(3.0\%+3)$
AC Voltage	4V/40V/400V/750V	$\pm(1.0\%+3)$
DC Current	400uA/4000uA/40mA/400mA/10A	$\pm(1.5\%+3)$
AC Current	400uA/4000uA/40mA/400mA/10A	$\pm(1.5\%+3)$
Resistance	400Ω	$\pm(0.5\%+3)$
	4kΩ/40kΩ/400kΩ/4MΩ	$\pm(0.5\%+2)$
	40MΩ	$\pm(1.5\%+3)$
Capacitance	10nF	$\pm(0.5\%+20)$
	100nF/1uF/10uF/100uF	$\pm(2.0\%+5)$
	1000uF	$\pm(5.0\%+5)$
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 multimeter 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)
Environmental temperature	60MΩ	±(2.5%±3)	60MΩ	±(2.5%±3)
	(-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* 15V AAA
Display size	30x11.5mm
Color	Black + Orange

6012D



86B



Model	86B	86C	86D	Accuracy
DC Voltage	Resolution 400mV/4V/40V/400V 1000V	400mV/4V/40V/400V 1000V	600mV/6V/60V/600V 1000V	±(0.5%+4) ±(1.0%+6)
	DC millivolts	40mV/400mV	/	±(0.5%+5)
AC millivolts	40mV/400mV	/	/	±(1.0%+6)
	AC voltage	4V/40V/400V 750V	4V/40V/400V 750V	6V/60V/600V 750V
DC current	400µA/4000µA/ 40mA/400mA	400µA/4000µA/ 40mA/400mA	600µA/6000µA/ 60mA/600mA	±(1.0%+10) ±(1.2%+10)
	AC current	400µA/4000µA/ 40mA/400mA	400µA/4000µA/ 40mA/400mA	600µA/6000µA/ 60mA/600mA
Resistance	4A/10A	4A/10A	6A/10A	±(1.2%+10)
	400Ω	400Ω	600Ω	±(0.8%+5)
Capacitance	4kΩ/40kΩ/400kΩ/4MΩ 40MΩ	4kΩ/40kΩ/400kΩ/4MΩ 40MΩ	6kΩ/60kΩ/600kΩ/6MΩ 60MΩ	±(0.8%+4) ±(1.2%+10)
	40nF	40nF	60nF	±(5.0%+30)
Frequency	400nF/4µF/40µF 400µF/4mF/40mF	400nF/4µF/40µF 400µF/4mF/40mF	600nF/6µF/60µF 600µF/6mF/60mF	±(3.5%+10) ±(5.0%+10)
	10Hz/100Hz/1kHz/ 10kHz/100kHz/ 1MHz/30MHz	10Hz/100Hz/1kHz/ 10kHz/100kHz/ 1MHz/30MHz	10Hz/100Hz/1kHz/ 10kHz/100kHz/ 1MHz/30MHz	±(0.5%+4)
Temperature	-20°C~400°C 400°C~1000°C	-20°C~400°C 400°C~1000°C	-20°C~400°C 400°C~1000°C	±(1.0%+5°C) ±(1.5%+15°C)

General specifications			
Max Display	3999 (3 3/4)	3999 (3 3/4)	5999 (3 5/6)
Simulator bar	/	/	61 segment simulation bar
Transistor	/	/	✓
Diode	/	/	✓
On/off buzzing	/	/	✓
USB	/	/	✓
Relative value	/	/	✓
Max/min	/	/	✓
Data retention	/	/	✓
LIVE	/	/	✓
NCV	/	/	✓
Backlight	Display battery symbols		
Low voltage	Display "OL"		
Over range	Shutdown after about 15 minutes of inactivity		
Auto shutdown	3 times/second		
Sampling rate	0~40 C, relative humidity<80%		
Work environment	-10~50 °C, relative humidity<80%		
Storage environment	Four AAA batteries		
Source	189*88*56mm		
Size	Approximately 423g		
Weight	Instruction manual, color box, certificate of conformity, pen, crocodile clip,		
Parts	cloth bag, USB data cable, K-type thermocouple, adapter (only 86D)		

86C



86D



TRUE RMS

Model	86E	
	Resolution	Accuracy
DC Voltage	220mV/2.2V/22V/220V	±(0.5%+10)
	1000V	±(0.1%+10)
AC voltage	220mV	±(1.0%+25)
	2.2V/22V/220V	±(0.8%+25)
	750V	±(1.0%+25)
DC current	220uA/2200uA/22mA	±(0.5%+10)
	220mA	±(0.8%+10)
AC current	220uA/2200uA/22mA	±(1.2%+25)
	220mA	±(1.5%+25)
Resistance	10A	±(2.5%+35)
	200Ω	±(0.5%+30)
	2.2kΩ/22kΩ/220kΩ/2.2MΩ	±(0.4%+5)
	22MΩ	±(0.5%+25)
Capacitance	220MΩ	±(5.0%+10)
	22nF/220uF/2.2uF/22uF/220uF	±(2.5%+15)
	2.2mF	±(4.0%+10)
Frequency	22mF/220mF	
	22Hz/220Hz/2.2kHz/22kHz/2.2MHz/22MHz	±(1.0%+4)
	50MHz	±(0.2%+4)
Temperature	>50MHz	
	-20°C~400°C	±(1.0%+5°C)
	400°C~1000°C	±(1.5%+15°C)

86E *New Model*



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)
	2mA/20mA/200mA/20A	±(1.0%+5)	±(1.0%+5)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/200MΩ	±(0.8%+3)	
	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/200MΩ		±(0.8%+3)
Capacitance	20nF/200nF/2uF/20uF/200uF/2000uF	±(2.5%+20)	
	20nF/200nF/2uF/20uF/200uF		±(2.5%+20)
Frequency	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz	±(3.0%+15)	
	2kHz/20kHz/200kHz/2000kHz/10MHz		±(0.5%+4)
Inductance	2mH/20mH/200mH/2H/20H		±(2.5%+20)
Celsius	(-20~1000)°C	±(1.0%+3)	±(1.0%+4)
	Fahrenheit	(0~1832)°F	±(1.5%+15)

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)

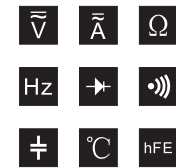
General Characters

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

88B



3 1/2



88C



3 1/2



88D



3 3/4



### 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)

88E



4 1/2



### 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

### Technical data

Basic Function	Range	Basic accuracy	
		89A	89B
DC Voltage	200mV/2V/20V/200V/1000V	±(0.5%+3)	±(0.5%+3)
	400mV/4V/40V/400V/1000V		±(0.5%+4)
AC Voltage	2V/20V/200V/750V	±(0.8%+5)	±(0.8%+5)
	4V/40V/400V/750V		±(0.8%+6)
DC Current	2mA/20mA/200mA/20A	±(1.2%+8)	
	400uA/4mA/40mA/400mA/20A		±(1.2%+8)
AC Current	20mA/200mA/20A	±(1.5%+15)	
	400uA/4mA/40mA/400mA/20A		±(1.5%+15)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/200MΩ	±(0.8%+3)	±(0.8%+3)
	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ		±(1.0%+25)
Capacitance	20nF/200nF/2uF/20uF/200uF/2000uF	±(2.5%+20)	
	40nF/400nF/4uF/40uF/200uF		±(0.8%+4)
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



89A



89B



## VC890C+

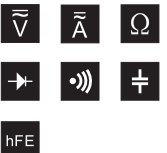
New Model



3 1/2

## VC890D

New Model



3 1/2

### 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	±(2.0%+5)	±(1.0%+15)
	200mA	±(2.0%+5)	±(2.0%+5)
	20A	±(3.0%+10)	±(3.0%+10)
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)
Capacitance	6nF	±(5.0%+40)	±(5.0%+40)
	60nF/600nF/6uF/60uF	±(3.5%+20)	±(3.5%+20)
	800uF/6mF/20mF	±(5.0%+10)	±(5.0%+10)
Celsius	(-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 . 335g (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



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	600uA/6000uA/60mA/600mA/10A	±(1.2%+3)	
DCA	60uA/60mA/600mA/10A		±(1.2%+3)
ACA	600uA/6000uA/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/10uF/100uF/1000uF	±(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)
Special function		890H+	890G+
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

## VC97 old model



## 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



## 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

## VC97



VC97

New Model



## VICTOR VC97 3 5/6 Auto Range Digital Multimeter

Comprehensive Characteristics

- 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.
- Working environment: (0-40) °C, relative humidity<75% RH;
- Storage environment: -20 °C ~60 °C, relative humidity<85% RH;
- True RMS
- NCV

### Technical data

Basic Function	VC97	Accuracy
DC Voltage	60mV/600mV	±(0.5%+5)
	6V/60V/600V	±(0.5%+4)
	1000V	±(1.0%+6)
AC Voltage (True RMS)	60mV/600mV	±(1.0%+6)
	6V/60V/600V	±(0.8%+10)
	750V	±(1.2%+10)
DC Current	600uA/6000uA/60mA/600mA/6A/10A	±(1.2%+8)
AC Current	600uA/6000uA/60mA/600mA	±(1.5%+10)
	6A/10A	±(2.0%+5)
Resistance	600Ω/6kΩ/60kΩ/600kΩ/6MΩ/60MΩ	±(0.8%+4)
Capacitance	10nF	±(5.0%+40)
	100nF/1uF/10uF/100uF/1mF	±(3.5%+20)
	10mF	±(5.0%+10)
	100mF	±(10%+0D)
Frequency/Duty cycle measurement	10Hz~30MHz	±(0.5%+10)
Celsius	-20~1000°C(-4~1830)°F	±(2%+10)
<b>Special Functions</b>		
Diode	✓	
Transistor	✓	
Continuity buzzer	✓	
Low battery indication	✓	
Data Hold	✓	
Auto power off	✓	
Sampling rate	3 times/s	
Shockproof protection	Auto range	
Function protection	5999	
Volume (size)	(189 x 88 x 56) mm	
Weight	Approximately 385g (including battery)	
Power supply	Four 1.5V AAA batteries	

### Technical data

Basic Function	Range	Basic accuracy	
		81B	81D
DC Voltage	200mV/2V/20V/200V/600V	±(0.5%+4)	
	400mV/4V/40V/400V/600V		±(0.5%+4)
AC Voltage	200mV/2V/20V/200V/600V	±(0.8%+6)	
	4V/40V/400V/600V		±(0.8%+6)
DC Current	200uA/2000uA/20mA/200mA/10A	±(1.0%+10)	
	400uA/4000uA/40mA/400mA/10A		±(1.0%+10)
AC Current	200uA/2000uA/20mA/200mA/10A	±(1.5%+10)	
	400uA/4000uA/40mA/400mA/10A		±(1.5%+10)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ	±(0.8%+4)	
	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ		±(0.8%+4)
Capacitance	4nF/40nF/400nF/4uF/40uF/100uF/1000uF		±(3.5%+8)
Frequency	1Hz/10Hz/100Hz/1kHz/10kHz/30MHz		±(0.5%+10)
Celsius	(-20~1000)°C	±(1.0%+5)	±(1.0%+5)
Fahrenheit	(0~1832)°F	±(1.0%+5)	±(1.0%+5)

Special Function	81B	81D
Diode test&Continuity buzzer	✓	✓
Low battery indication	✓	✓
Data hold	✓	✓
Auto power off	✓	✓
Function protection	✓	✓
10A fuse	✓	✓
Shock proof protection	✓	✓
Self-resume fuse protection for mA	✓	✓
Unit symbol display	✓	✓
Max. Value measurement	✓	✓
Relative value measurement		✓
Duty cycle measurement		0.1%~99.9%
Input impedance	10MΩ	10MΩ
Sampling rate	3 time/s	3 time/s
AC Frequency response	(50-200)Hz	(50-200)Hz
Operation way	Auto/Manual range	Auto range
Max. Display	3 1/2 (1999)	3 1/2 (3999)
LCD size	57×33mm	57×33mm
Battery	3V(1.5×2)	3V(1.5×2)

### General Characters

Product color	Case: black ; Holster color: orange
Product Net Weight	Approx:200g(including battery)
Product dimension	145×80×30mm
Standard Accessories	Test leads; battery; instruction manual ; TP01 K style temperature probe
Standard inner packing	Color box
Standard Quantity Per Carton	60PCS
Carton size	470×325×35mm
Standard Gross Weight	Approx:20kg

81B



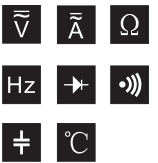
3 1/2



81D



3 3/4



## VC9801A+

New Model



## VC9804A+

New Model



## VC9805A+

New Model



## Technical data

Basic Function	Range	VC9801A+ VC9802A+	VC9804A+	VC9805A+	VC9808+
DC Voltage	200mV	±(0.5%+5)			
	2V/20V/200V	±(0.5%+3)			
	1000V	±(1.0%+10)			
AC Voltage	200mV	*	±(0.8%+5)		
	2V/20V/200V	±(0.8%+5)			
	750V	*	±(1.2%+10)		
	1000V	±(1.2%+10)	*		
DC Current	200uA/2mA/20mA/200mA	±(1.2%+8)			
	2A	±(1.5%+10)	*		
	20A	±(2.0%+5)			
AC Current	200uA/2mA/20mA	*	±(1.5%+15)		
	200mA	±(1.5%+15)			
	2A	±(2.0%+5)	*		
	20A	±(3.0%+10)			
Resistance	200Ω	±(0.8%+5)			
	2kΩ/20kΩ/200kΩ/2MΩ	±(0.8%+3)			
	20MΩ	±(1.0%+25)			
	200MΩ	±(5.0%+30)			
Capacitance	2nF	*	±(3.5%+20)	*	
	20nF/200nF/20uF/200uF	*	±(3.5%+20)		
	2mF/20mF	*	±(5.0%+10)	*	
	100mF	*	Unspecified		
	6nF	±(5.0%+40)	*		
	60nF/600nF/6uF/60uF	±(3.5%+20)	*		
Frequency	600uF/6mF	±(5.0%+10)	*		
	20mF	±(5.0%+40)	*		
	10Hz	*	±(1.0%+10)		
	100Hz	*			
	1kHz	*			
	10kHz	*			
	100kHz	*			
	10MHz	*	±(1.0%+10)	*	
20MHz	*		±(1.0%+10)		
Temperature	(-20~1000)°C	*	<400C +(1.0%+5)≥400°C +(1.5%+15)		
	(-4~1832)°F	*	<752°F +(1.0%+5)≥752°F +(1.5%+15)		
Inductance	2mH/20mH/200mH	*	±(2.5%+30)		
	2mH/20mH	*	±(5.0%+20)		

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

Basic Function	Range	Accuracy		
Model		VC980+	VC9806+	VC9807A+
DC Voltage	200mV/2V/20V/200V	±(0.5%+5)		±(0.1%+5) ±(0.2%+5)
	1000V	±(1.0%+10)		
AC Voltage	200mV	±(1.0%+25)		
	2V/20V/200V	±(0.8%+25)		
	750V	±(1.2%+50)		
	200uA/2000uA/20mA	±(0.5%+4)		
DC Current	200mA	±(0.8%+6)		
	2A	±(2.0%+15)	*	
	20A	±(2.0%+15)		
AC Current	20mA/200mA	±(1.5%+15)		
	20A	±(2.5%+35)		
Resistance	200Ω	±(0.3%+10)	±(0.4%+10)	
	2kΩ/20kΩ/200kΩ	±(0.3%+5)	±(0.4%+5)	
	2MΩ	±(1.2%+25)		
	20MΩ/200MΩ	±(5.0%+45)		
Capacitance	20nF	±(5.0%+50)		
	200nF/2uF/20uF/200uF/2mF	±(4.0%+50)		
	20mF/200mF	Unspecified		
Frequency	200Hz~2MHz	±(1.0%+3)		
	> 20.000MHz	Unspecified		
	Duty cycle	5.0% ~ 95.0%(<10KHz@3Vpp)		

AC voltage	Frequency range	Resolution	980+
200.00mV	40Hz ~ 400Hz	0.01mV	±(1.5%+25)
	401Hz ~ 20kHz		±(2.5%+60)
2.0000V	40Hz ~ 400Hz	0.0001V	±(0.8%+25)
	401Hz ~ 20kHz		±(2.5%+60)
20.000V	40Hz ~ 400Hz	0.001V	±(0.8%+25)
	401Hz ~ 20kHz		±(2.5%+60)
200.00V	40Hz ~ 400Hz	0.01V	±(0.8%+25)
	401Hz ~ 5kHz		±(1.5%+25)
750.0V	40Hz ~ 200Hz	0.1V	±(1.0%+25)
	201Hz ~ 1kHz		±(1.5%+25)

Note: The VC980+instrument extends frequency response and can accurately measure the effective values of various voltage waveforms

### Conductivity measurement(only VC9806+/9807A+)

Range	Resolution	Display Range	Open circuit voltage
(0.01 ~ 100)nS	0.01nS	±(1.0%+30)	-1.02V

### General characteristics

Max Display	19999 (4) ½ Bit	True effective value	Only 980+
On/off buzzing	√	Low voltage prompt	√
Sound and light alarm	√	Over range	Display "OL"
Data retention	√	Sampling rate	2.8 times /second
Backlight	√	Hz% mode key	Only 9806+/9807A+
Relative value	√	work	(0-40)°C<75% RH
Low pass filtering	√	storage	(-20~60)°C<85% RH
Max/min	Only 980+	source	Four AAA batteries
Automatic shutdown	about 15 minutes	size	189*88*56mm
Diode/transistor	√	weight	400g

## VC980+

New Model



## VC9806+

New Model



## VC9807A+

New Model





9820

New Model



## VICTOR 9820 HIGH-VOLTAGE MULTIMETER

The instrument has the function of measuring DCV, ACV, DCA, ACA, resistance, capacitance, frequency, diode, continuity test, temperature and automatic power off, backlight, and DCV and ACV up to 2000V. The instrument takes dual-integral A/D converter as key point, it is an excellent tool.

### 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 / (-4~1832)°F	±(1.5%+15)

Features	
Display method	LCD display
Operation	Auto Range
Max Display	5999 (3 5/6 digits)
Diode	√
Data retention	√
Overload indication	OL
Low voltage prompt	√
On/off buzzing	√
Flashlight	√
NCV	√
Relative value	√
Backlight display	√
work environment	0~40 °C < 75% RH
Sampling rate	3 times/second
Automatic shutdown	√
Unit symbol	√
Input impedance	10MΩ
source	4 AAA batteries
Product size	186*92*52mm
Product weight	395g



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, Resolution 480×320, 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
- 1 User guide.

### Optional accessories:

- BNC alligator clip line (32P01);
- 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			
<b>Amplitude</b>			
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		
<b>DC Offset</b>			
Offset Adjusting Range	Output Amplitude>0.1V	2mV<Output Amplitude≤0.1V	
	±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 between 0.01s~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)
Maximum Frequency	25MHz		<10μs (Sweep)
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



3010

New Model



3021

New Model



7244

New Model



Technical data

Model	3010	3021	7244
DC V	2.5V/10V/25V/50V/250V/1000V	±3%	
	0.1V/0.5V/2.5V/10V/50V/250V/1000V		±3%
AC V	10V/50V/250V/1000V	±4%	
	10V/50V/250V/500V		±4%
DC A	50uA/0.5mA/5mA/50mA/500mA/10A	±3%	
	50uA/2.5mA/25mA/0.25A/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	±(2.0%+5d)	1 nF	Approx:8Hz
20uF		10 nF	
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

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		
2uF	1000pF	1.999uF		
20uF	0.01uF	19.99uF	80Hz	±(2%+5)
200uF	0.1uF	199.9uF	8Hz	
2000uF	1uF	1999uF	8Hz	
20000uF	10uF	1999(×10)uF	8Hz	±(3%+10)

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/3uF/30uF/300uF	±(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 "OL"
Product Size	175×34×18.5mm
Product Weight	68.5g

6243



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6013



3 1/2



6013B



## 4080/4082

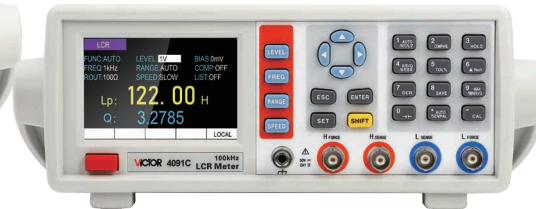


### Technical data

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	
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	600V	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 IMPEDANCE ACV	2V/20V	6V/60V	6V/60V	6V/60V	± (0.8%+ 10)
	200V	300V	300V	/	± (1.2%+25)
	300V	/	/	/	± (1.5%+ 25)
ACA	/	/	/	300V	± (1.0%+12)
	2A	6A	6A	/	± (4.0%+ 50)
	20A	60A	60A	/	± (4.0%+ 35)
DCA	200A/600A	600A	600A	/	± (4.0%+15)
	/	/	/	60A/600A	± (4.0%+10)
	/	/	/	60A/600A	± (4.0%+10)
RESISTANCE	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	60MΩ	60MΩ	60MΩ	± (2.5%+20)
CAPACITANCE	/	6nF	6nF	6nF	± (5.0%+40)
	/	60nF/600nF/6μF	60nF/600nF/6μF	60nF/600nF/6μF	± (5.0%+ 10)
	/	60μF/600μF/6mF	60μF/600μF/6mF	60μF/600μF/6mF	
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



New Model

610B+



New Model

610C+

Model	610B+	610C+
<b>DCV</b>	600mV/6V/60V/600V 1000V ±(1.0%+6)	600mV/6V/60V/600V 1000V ±(1.0%+10)
<b>ACV</b>	6V/60V 600V/750V ±(1.0%+12)	6V/60V 600V/750V ±(1.0%+12)
<b>Resistance</b>	600Ω/6kΩ/60kΩ/600kΩ/6MΩ 20MΩ ±(1.5%+15) ±(2.5%+20)	600Ω/6kΩ/60kΩ/600kΩ/6MΩ 20MΩ ±(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/1μF/10μF/100μF/1mF/10mF ±(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

Model	6050	6052	Accuracy
<b>DC voltage</b>	600mV/6V/60V 600V/1000V	600mV/6V/60V 600V/1000V	±(0.5%+7) ±(1.0%+10)
<b>AC voltage</b>	6V/60V 600V/750V	6V/60V 600V/750V	±(1.0%+10) ±(1.0%+12)
<b>Low impedance</b>	6V/60V	6V/60V	±(1.0%+10)
<b>AC voltage</b>	300V	300V	±(1.0%+12)
<b>DC current</b>	600A/2000A	600A/2000A	±(4.0%+10)
<b>AC current</b>	600A/2000A	600A/2000A	±(4.0%+10)
<b>Resistance</b>	20MΩ 60MΩ	20MΩ 60MΩ	±(1.5%+15) ±(2.5%+20)
<b>Capacitance</b>	1nF 10nF/100nF/1μF/10μF/100μF/1mF/10mF	1nF 10nF/100nF/1μF/10μF/100μF/1mF/10mF	±(5.0%+40) ±(5.0%+10)
<b>Frequency</b>	10Hz~10MHz	10Hz~10MHz	±(0.3%+3)
<b>Duty cycle</b>	10.0%~90.0%	10.0%~90.0%	±(0.3%+3)
<b>Temperature</b>	(-20~1000)°C(-4~-1832)°F		±(2.0%+5)

General functions			
<b>Display mode</b>	LCD display	<b>DC current reset</b>	6050 only
<b>Maximum display</b>	5999	<b>Relative value</b>	✓
<b>Diode/on-off</b>	✓	<b>Operating humidity</b>	(0~40)°C <75%RH
<b>NCV</b>	✓	<b>Storage temperature</b>	(-10~50)°C <80%RH
<b>Data retention</b>	✓	<b>Over range display</b>	Highest display OL
<b>Low voltage prompt</b>	✓	<b>AC frequency response</b>	40~1kHz
<b>Line of fire judgment</b>	✓	<b>Jaw opening</b>	58mm dia
<b>Flashlight lighting</b>	✓	<b>Maximum traverse</b>	52mm dia
<b>Max/Min</b>	6052 only	<b>Input impedance</b>	10MΩ
<b>Automatic shutdown</b>	✓	<b>Power Supply</b>	AAA*2 batteries
<b>V.F.C</b>	6050 only	<b>Product size</b>	273*102*47mm
<b>Surge current</b>	6050 only	<b>Product weight</b>	About 420g

## 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)
Capacitance	4nF	±(1.2%+10d)
	40nF/400nF/4μF/40μF	±(3.5%+30d)
	100μF	±(3.0%+10d)
Frequency	9.999Hz/99.999Hz/999.999Hz/9.999kHz/99.999kHz	±(0.5%+4d)

6050



New Model

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6052



New Model

3 1/2

6056A+



New Model

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6056C+



### Technical data

FUNCTION	6056C+	Accuracy
DCV	600mV/6V/60V	±(0.5%+7)
	600V	±(1.0%+20)
ACV	6V/60V	±(0.8%+10)
	600V	±(1.2%+25)
LOW INPEDANCE ACV	6V/60V	±(0.8%+10)
	300V	±(1.0%+12)
DCA	60A/600A	±(4.0%+10)
	60A/600A	±(4.0%+10)
RESISTANCE	600Ω/6kΩ/60kΩ/600kΩ/6MΩ	±(1.0%+5)
	20MΩ	±(1.5%+15)
	60MΩ	±(2.5%+20)
	6nF	±(5.0%+40)
CAPACITANCE	60nF/600nF/6uF	±(5.0%+10)
	60uF/600uF/6mF	
FREQUENCY	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz	±(0.3%+3)
TEMPERATURE	-20°C ~ 1000°C	/
TEMPERATURE	(-4-1832) °F	
Display method	LCD display	Max/Min
Maximum display	5999 count	Low Z
Diode measurement	√	Working temperature and humidity
Data retention	√	Storage temperature and humidity
NCV measurement	√	Automatic shut-down
Fire detection	√	Over-range display
Low voltage warning	√	Unit symbol
Flashlight lighting	√	Open jaws
True effective value	√	input resistance
INRUSH	√	Sampling rate
VFC	√	power supply

### Technical data

Basic Function	Range	Accuracy
Model	VICTOR 6016B+	
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)	

6016B+



### 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

### Technical data

Basic Function	Range	Accuracy
Model	610L	
DCV	10V/100V ; 600V	±(0.5%+5) ; ±(1.0%+10)
ACV	10V/100V ; 600V	±(0.8%+5) ; ±(1.2%+10)
ACA	100A ; 1000A	±(2.5%+30) ; ±(4.0%+10)
ACA-VFC	1000A	±(5.0%+10)
ACA-INR	1000A	±(10.0%+20)
Resistance	100Ω ; 1000Ω ;	±(1.3%+10) ; ±(1.3%+5) ;
	10kΩ/100kΩ ; 1MΩ/10MΩ	±(0.8%+3) ; ±(1.5%+5)
Capacitance	100nF;1000nF	±(5.0%+50) ; ±(4.0%+50)
	10uF/100uF/1000uF/10mF	±(3.5%+20)
	100mF ; 2 00mF	±(10.0%+20) ; Not specified

610L



### General functions

Display mode	LCD display	Bluetooth	√
Max display	9999	Relative value	√
Diode/On/Off	√	work environment	(0-40)°C <75%RH
NCV	√	Storage environment	(-10-50)°C <80%RH
Data retention	√	Overrange	OL
Backlight	√	AC frequency response	40~400Hz
Low pressure	√	Jaws open	φ40mm
Peak hold	√	Maximum traverse	φ39mm
Flashlight	√	Input impedance	10MΩ
Auto shutdown	√	Power Supply	AAA*2
V.F.C	√	Product size	219*75*34mm
Surge current	√	Product weight	About 240g

6056E



### 3 3/4 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

615B

DC 1500V  
AC 1000V



6015F



## Technical data

Model	615B	
Basic Function	Range	Accuracy
DC Voltage	600mV/6V/60V	±(0.5%+7)
	600V/1500V	±(1.0%+10)
AC Voltage	6V/60V	±(1.0%+10)
	600V/1000V	±(1.0%+12)
Low impedance	6V/60V	±(1.0%+10)
AC voltage	300V	±(1.0%+12)
DC current	60A/600A/1000A	±(4.0%+10)
AC current	60A/600A/1000A	±(4.0%+10)
Resistance	600Ω/6kΩ/60kΩ/600kΩ/6MΩ	±(1.0%+5)
	20MΩ	±(1.5%+15)
	60MΩ	±(2.5%+20)
Capacitance	1nF	±(5.0%+40)
	10nF/100nF/1uF/10uF/100uF/1mF/10mF	±(5.0%+10)
Frequency	10Hz~10MHz	±(0.3%+3)
Duty cycle	10.0%~90.0%	±(0.3%+3)
Temperature	(-20~1000)°C/(-4~1832)°F(Standard 250°Cprobe)	±(2.0%+5)

### General functions

Display mode	LCD	Display mode	√
Max display	5999	Max display	√
Diode/on-off	√	Diode/on-off	(0~40)°C <75%RH
NCV	√	NCV	(-10~50)°C <80%RH
Data retention	√	Data retention	Highest display OL
Backlit display	√	Backlit display	40~1kHz
Low voltage	√	Low voltage	φ40mm
Line of fire judgment	√	Line of fire judgment	φ39mm
Flashlight lighting	√	Flashlight lighting	10MΩ
Automatic shutdown	√	Automatic shutdown	Two AAA batteries
V.F.C	√	V.F.C	230*75*40mm
Surge current	√	Surge current	About 313g

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	30pcs	

## 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	200 Ω/20k Ω	±(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	30pcs/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 skills	Range	Precision
DC voltage	200mV/2V/20V/200V	±(0.5%+7)
	600V	±(1.0%+20)
AC voltage	2V/20V/200V	±(0.8%+10)
	600V	±(1.2%+25)
DC current	200uA/2000uA/20mA	±(1.2%+3)
	200mA	±(1.5%+3)
AC current	200uA/2000uA/20mA	±(1.8%+3)
	200mA	±(2.0%+3)
	2A	±(4.0%+50)
	20A	±(4.0%+35)
Resistance	200Ω/2kΩ/20kΩ/200kΩ/2MΩ	±(4.0%+15)
	20MΩ	±(1.0%+5)

New Model



3218+

3218A

Special Function	3218+	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)

3 1/2





## VICTOR 3266/3266C HIGH-PRECISION DIGITAL CLAMP METER

- LCD display:maximum display 4000, word height 15mm
- General characteristics: Maximum voltage between voltage input-terminal and ground CAT II 600V.
- Display method:LCD display, with a maximum reading of 4000
- Measurement principle: Double integral A/D conversion, automatic range
- Measurement rate:3 times/second
- Unit display : with functions and display of unit symbols for electricity consumption



3266/3266C

### Technical data

Basic Function	Range	3266	3266C
DCV	4V/40V	±(0.8% reading+2 words)	
	600V	±(1.0% reading+2 words)	
	60mV/600mV/6V/60V		±(0.8% reading+2 words) ±(1.0% reading+2 words)
ACV	4V/40V	±(1.0% reading+10 words)	
	600V	±(1.2% reading+10 words)	
	600mV/6V/60V		±(1.0% reading+10 words) ±(1.2% reading+10 words)
ACA	40A/400A/1000A	±(2.5% reading+10 words)	
	60A/400A/1000A		±(2.5% reading+10 words)
Resistance	400Ω/4kΩ/40kΩ/400kΩ/4MΩ	±(1.2% reading+2 words)	
	40MΩ	±(2.0% reading+5 words)	
	600Ω/6kΩ/60kΩ/600kΩ/6MΩ		±(1.2% reading+2 words) ±(2.0% reading+5 words)
	60MΩ		±(2.0% reading+5 words)
Diode Test	→	Display the approximate value of forward voltage drop (open circuit voltage is about 2.3V)	
Continuity test	· )	When it is about ≤ 50Ω, the buzzer will sound (open circuit voltage is about 2.1V)	
Capacitance measurement	1nF		±(5% reading+30words)
	10nF/100nF/1uF/10uF/100uF/1mF		±(3% reading+30words)
	60mF		±(5% reading+30words)
Temperature measurement	-20°C~1000°C/-4°F~1832°F		±(1.2% reading+5words)
Frequency measurement	10Hz~1KHz		±(1.2% reading+3words)
General characteristics	Maximum voltage CAT II 600V between voltage input terminal and ground		Maximum voltage CAT II 1000V between voltage input terminal and ground
Display method	LCD display, with a maximum reading of 4000		maximum display 6000,
Measurement principle	Double integral A/D conversion, automatic range		
Measurement rate	3 times/second		
Unit display	with functions and display of unit symbols for electricity consumption		
Polarity display	Negative polarity input displays a "-" symbol		
Overrange display	"OL"		
Data remains displayed	"H"		
Under voltage indication	"LO"		
Power supply	DC1.5V × 2 SIZE AAA		
External dimensions	222mm × 90mm × 35mm		
Maximum size of jaw opening	45mm		
Operating environment temperature	5°C~35°C		
Storage temperature	-10°C~50°C		
LCD display	maximum display 4000, word height 15mm	maximum display 6000, word height 15mm	
NCV	√		
Flashlight	√		

### 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	(-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 10nF/100nF/1uF/100uF/1mF/10mF/60mF	±(2.0%+8)	±(2.0%+8)
Frequency	10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz	±(0.01%+2)	±(3%+30)
ACA	60A/600A		
Temperature	6A/60A/600A	±(3%+30)	
	(-2~1300)°C (-4~1832)°F		√

Special Function			
Operation Way	Auto Range	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		
Battery	2*1.5V	2*1.5V
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)
	10nF/100nF/1000nF/ 10uF/100uF/1000uF/10mF	10nF/100nF/1000nF/ 10uF/100uF/1000uF/10mF	±(4.0%+5)
Capacitance	100mF	100mF	±(5.0%+10)
	10Hz/100Hz/1000Hz/ 10KHz/100KHz/1000KHz	10Hz/100Hz/1000Hz/ 10KHz/100KHz/1000KHz	±(1.0%+3)
Frequency/Duty Cycle	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

New Model DC 1500V



60B+

Specifications	60B+		
Measuring Voltage	250V+10%	500V+10%	1 000V+10%
Range	0.4MΩ~999 MΩ	0.6MΩ~1999 MΩ	0.8MΩ~4999 MΩ
Current of Short Circuit	1.8mA	1.8mA	1.6mA
Median Resistance	2MΩ	2MΩ	5MΩ
Jack Position	L/E		
<b>Features</b>			
Low Battery Indication	✓		
Backlight display	✓		
Alarm Function	Red indicator light is illuminated		
Over Load Indication	✓		
Unit Symbol Display	✓		
Auto Power Off	✓		
Max. Display	4999		
Using Temperature	(0~40)°C		
Relative Humidity	30%RH~85%RH		
Input Impedance	1MΩ		
Frequency Response	(50-200) Hz		
Over Range Display	"1"		
<b>General Information</b>			
Power Color	Case: black, Holster color : orange		
Power Supply	9V (8x1.5V AA); AC adapter (not included)		



60D+

Specifications	60D+		
Measuring Voltage	500V	1000V	2500V
Measurement range	0.6MΩ~4.99GΩ	1MΩ~9.99GΩ	3MΩ~49.9GΩ
Open-circuit voltage	DC 500V+20% -0%	DC 1000V+20% -0%	DC 2500V+20% -0%
Rated test current	500kΩ Load≥1.0mA	1MΩ Load≥1.0mA	2.5MΩ Load≥1.0mA
Accuracy	±(5%+5)	±(5%+5)	≥3MΩ±(5%+5)
<b>Features</b>			
Low Battery Indication	✓		
Backlight display	✓		
Alarm Function	Red indicator light is illuminated		
Over Load Indication	✓		
Unit Symbol Display	✓		
Auto Power Off	✓		
Max. Display	1999		
Using Temperature	(0~40)°C		
Relative Humidity	30%RH~85%RH		
Input Impedance	1MΩ		
Frequency Response	(50-200) Hz		
Over Range Display	"1"		
<b>General Information</b>			
Power Color	Case: black, Holster color : orange		
Power Supply	9V (8x1.5V AA); AC adapter (not included)		

New Model



4105A/B

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

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
	10.01KΩ~100.00KΩ		0.01KΩ	0.5mA
	100.1KΩ~300.0KΩ		0.1KΩ	0.05mA
	6310A	0.01mΩ~100.00mΩ	Within 18°C~28°C, Below 70%rh: ±0.1%FS±20dgt	0.01mΩ
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	0.01mΩ~30.00KΩ	0.001mΩ~300.0KΩ
Resolution	10uΩ	1uΩ
Accuracy	±0.1%FS	±0.1%FS
Data storage	500 sets	500 sets
USB Data upload function	N	Y
Charging function	Y	Y

Model of Series	
Function	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.
Detection method	Four-wire method test
Test current	≥1A
Open circuit voltage	≤4.2V
Overload protection	Y
Power	Measuring powers8W
power supply	DC 3.7V 2000mAh
Backlight	Controllable gray and white screen backlight, suitable for dim places
Display Model	LCD
LCD Size	72 mm×55mm
Instrument size	187 mm×119 mm×50mm
Test line length	About 60cm, red, black 1pcs
measure time	About 2 times/sec
USB interface	With micro USB interface
Communication line	micro USB 1pcs
Data storage	500 groups, "MEM" storage indication, display "FULL" symbol to indicate storage is full
Data review	Data review function: "MR" symbol display
Overflow display	Over-range overflow function: "OL" symbol display
Battery voltage	Real-time display of battery power, reminding timely charging when battery voltage is low
Automatic shut-down	"APO" indicates, automatic shutdown after 15 minutes
Power consumption	Standby: about 100mA (backlight off)
	Turn on backlight: about 105mA
	Measure: 2A Max(backlight off)
Weight	Instrument:480g(including battery)
	Test line: 250g
Working temperature and humidity	-10°C~50°C; below 80%rh
Storage temperature and humidity	-20°C~60°C; below 70%rh
Overload protection	AC 220V/0.0001 second between C1-C2 P1-P2 ports, after overload protection, you need to restart the meter to test normally
Insulation resistance	More than 10MΩ(Between circuit and case 500V)
Pressure resistance	AC 3700V/rms(Between circuit and case)
Electromagnetic properties	IEC61010-4-3, Wireless frequency electromagnetic field≤1V/m
Suitable for Safety Regulations	IEC61010-1, CAT III 600V, Pollution Level 2, JG724-1991 "Determination of Direct Current Digital Ohmmeter", JGJ 166-1993 "Dialact 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 ~ 500Ω	±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



**9600/9600B**

### Technical Specification

Model of Series	
Function	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)
Power Supply	Rechargeable lithium battery 5.2Ah
Rated Voltage	9600: 250V, 500V, 1KV, 2.5KV, 5KV 9600B: 250V, 500V, 1KV, 2.5KV, 5KV, 10KV
Output Voltage Accuracy	(5%~10%) ±10V
Insulation Resistance Test Range	9600: 0.50MΩ ~ 2.00TΩ 9600B: 0.50MΩ ~ 5.00TΩ
Output Short Circuit Current	>5mA
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
Current Test	Range: 0.01nA ~ 5mA; 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	4400g (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





9620/9620B/9620C

## 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

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×280mm×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

## 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



9600S

## 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)



**4105C**

## 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

## 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

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+P<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

## Intrinsic error and performance indicators under base conditions

Category	Measurement Range	Intrinsic Error	Resolution
<b>Earth Resistance</b> (R)	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</b> (ρ)	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 ~ 99.99Ωm	0.01Ω m	According to the measurement accuracy of R (ρ=2πraR; a: 1 m~100m; π=3.14)
	100.0Ω m ~ 999.9Ωm	0.1Ω m	
	1000Ω m ~ 9999Ωm	1Ω m	
	10,00kΩ m ~ 99,99kΩm	10Ω m	
	100.0kΩm ~ 999.9kΩm	100Ω m	
1000kΩm ~ 9000kΩm	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. .



6410

## Specification

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

## 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-49.9Ω	0.1Ω	± (1%+ 0.1Ω)
	50.0Ω-99.5Ω	0.5Ω	± (2%+ 0.5Ω)
	100Ω-199Ω	1Ω	± (3%+ 1Ω)
	200Ω-395Ω	5Ω	± (6%+ 5Ω)
Current Range	400-590Ω	10Ω	± (10%+ 10Ω)
	600Ω-1000Ω	20Ω	± (20%+ 20Ω)
	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)

## 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

6412<sup>+</sup>



### 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)	
Current Only for 6412	400~590Ω	10Ω	±(10%+10Ω)	
	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)	

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

140

140D



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	99group	99group	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

Accuracy (23℃±3℃, below 70%RH)	±2%rdg±5dgt(23±5℃, below 75%rh)
Display Mode	4digits LCD display
LCD Dimension	35mm×21.5mm; display area: 32mm×15mm
Sampling Rate	about 2 times/s
Frequency	AC 45Hz ~ 400Hz
Polar Indication	Automatic identification, display "-" symbol
Wire Position	The tested wire in the center of the clamp jaw
Range Shift	Automatically
Line Voltage	Line measurement below DC 600V
RS232 Interface	With RS232 interface, storage data can be uploaded to computer, software monitoring
Communication Parameter	Baud rate:9600, data bit 8, stop bit 1, check bit NONE
Data Storage	99units, display FULL symbol indicate storage full
Data Hold	Data hold function: DH symbol display
Overflow display	Exceed measure range overflow function: OL symbol display
Auto Shut Down	5 Minutes after power on, the meter shuts down automatically without any operation to reduce battery consumption
Battery Voltage	While battery voltage decreases to around 7.2V, will display low battery voltage symbol: , and remind to replace the battery
Meter Weight	210g
Working Current	20mA

### Technical Specifications 140D

CT Size	16mm×18mm
Meter Size	215mm×61mm×32mm
Function	Measurement of car dark current, leakage current and other AC/DC current, leakage current
Power Supply	Zn-Mn dry battery 6F22 9V
Test Mode	Clamp CT, Non-contact measurement
Range	0mA~60.0A AC/DC
Resolution	1mAAC/DC

Working Temperature	-10℃~50℃, below 80%rh
Limit Temperature Error	-10℃~0℃ and 40℃~50℃, the maximum increase in error is 2%rdg
Storage Temperature	-10℃~60℃, below 70%rh
Insulating Strength	AC3700V/rms (between the core and outside shell)
Suitable Safety Standard	IEC1010-1, IEC1010-2-032, pollution, etc 2, CAT III(600V)

### 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~9000Ωm 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; 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	φ68mm	
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 (Alkalinescence 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 alkalinescence 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 ShapeCT Integration
Transmission	Wireless transmissionLine transfer max. distance : Approx. 30m
Display Mode	4 digit LCD Display, Backlight Function Suitable for dusky occasions.
LCD Size	47mm×28.5mm
Product Size	76mm×255mm×31mm
Clamp Size	Φ48mm
Sampling Rate	Approx 2times/s
Measuring Range	0.1mA~1000A (50/60Hz Automatically)
Resolution	0.1mA
Gear Shift	0.1mA~1000AFull automaticgear shift
Accuracy (Below23°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 below60KV
Data Storage	99 sets of data can be stored in the process "MEM" sign indication "FULL" twinkling sign indicates memory full
PEAKHold	√
Data Hold	√
Date Scan	√
Overflow Indication	√
No Sign Indication	√
Auto Power Off	√
Low Battery Indication	√
Operation Temperature	-25°C~40°C; below80%Rh
Storage Temperature	-10°C~60°C; below70%Rh
Insulating Bar Size	Φ32mm, 1m per node (five nodes)
Insulating Strength	AC 100kV/rms(Between the fifth insulating bar andhigh 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 Surface Speed (m/min): 1.0~1999.9RPM	Contact rev: 1.0~19999RPM Surface Speed (m/min): 1.0~1999.9RPM
Resolution	Contact rev: 0.1RPM Surface Speed (m/min): 0.01m/min	Contact rev: 0.1RPM Surface Speed (m/min): 0.01m/min	Contact rev: 0.1RPM 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	
Time Base	10MHz	
Display	5 Digits LCD 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)



834BW

VICTOR 834BW Digital Sound Level Meter with Bluetooth /WiFi wall mounting type

## Technical data

Basic Function	834BW
Measuring range	30dB~130dB
Accuracy	±1.5dB
Frequency response	31.5Hz~8.5KHz
Frequency weighting	A Rights
Response time	FAST (fast), about 1 second, 2times
Sensor Type	6mm capacitor microphone sensor
Resolving power	0.1dB(< 100dB); 1dB(>100dB)
Alarm prompt	Voice+Display
Refresh rate	2 times per second
Power supply method	DC5V/2A
Work environment	0~40°C; 10%~80% RH
Storage environment	-10~60°C; 10%~70% RH
Display method	3 digit digital tube display
Display size	4-inch single word
Product size	323*173*40mm
Product weight	Approximately 1038g
Attachment	Instructions, certificate of conformity, adapter, adapter, suspension, suspension screws



1010D+



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);	
Resolution	± (6%~5Lux) other visible light sources 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)	



816



816B



816BL

Bluetooth

### Anemometer

Basic function	816	816B/816BL
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



230DW

Model	230DW	
Power supply	DC5V / 2A	
Sensor type	High precision digital sensor	
Sampling rate	One times/2s	
Ambient temperature	Temperature	-20 C ~60 C
	Accuracy	±1.0 C
	Resolution	0.1°C
Relative humidity	Range	0~100%RH
	Accuracy	±4%RH
	Resolution	0~99(0.1)%RH 100(1)%RH
Temperature alarm range	Hi	-19 C ~60 C
	Low	-20 C ~59 C
Humidity alarm range	Hi	2~99%RH
	Low	1~98%RH
WiFi	Yes	
Alarm function	Voice+display alarm, alarm value can be set	
Display	Nixie tube display; Display size: 1.8-inch single word	
Max Display	Temperature 60.0; Humidity 99% RH	
Over range	Display "Hi" or "Lo" at the highest position	
Size	323* 173*40mm	
Weight	About 700g	



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)	✓	✓	✓
Humidity Accuracy	(30%~90% RH)	✓	✓	✓
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	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			
Function	Resolution	Range	Basic accuracy
1°C	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



320B

- Multilingual
- USB transfer/charging
- Unit conversion (°C/°F/K)
- Photo/Video
- Automatic shut-down
- Temperature alarm
- 8 pseudo-colors
- Emissivity adjustable



328A/328B

### Technical indicators

Basic skills		320M	320	320B
IR thermal imaging	Resolution	120x90	120*90	256*192
	Working band	8-14um		
	Frame rate	25Hz		
	NETD	60mK@25°C		
	Field of view	38°X50°		55.6°*42°
	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	Swatches	Iron Red, White Hot, Black Hot, Rainbow, Red Hot, High Contrast, Green Hot, Lava		
	Resolution	720P		
Image display	Field of view	55°X83°		
	Image mode	Edge blending, overlay blending, picture-in-picture, single IR, single visible light		
Storage	Capacity	8G built-in memory, can store more than 20,000 pictures		
	Image storage format	JPG		
	Video format	MP4		
<b>Basic parameters</b>				
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	
<b>Universal</b>		
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	



328C

**New Model**

USB Type-c

## VICTOR 328C Mobile TELEPHOTO INFRARED THERMAL IMAGER 10mm lens focus 256\*192 resolution with GPS positioning

Widely used in fields such as underfloor heating leak detection, electrical maintenance, and more suitable for outdoor long-distance plain use (such as camping exploration, wilderness survival/rescue, night running and hiking, animal observation).

### Technical data

Basic Function	328C
Resolving power	256x192
Working wavelength	8~14μm
Frame rate	25Hz
NETD	<50mK@25°C
FOV	17.5°x 13.2°
Focal length	10mm
Focus Mode	Fixed focus
Electronic amplification	1x-4x stepless amplification (through screen gestures)
Color palette	Iron Red, Rainbow, White Heat, Black Heat, Cold Blue, Red Heat
Hotspot tracking	✓
GPS	Can be displayed in the app
Electronic compass	Can be displayed in the app
Screen rotation	✓
Photograph	✓
Videotape	✓
Language	Chinese, English
Working temperature	-20°C~60°C
Storage temperature	-40°C~85°C
Waterproof and dustproof	IP54
Source	Used in conjunction with mobile phones, plug and play
Display Size	No display screen, used in conjunction with mobile apps
Body size	36x29.5x27.5mm
Parts	Storage bag, bracket, data extension cable, manual

328D/328E



## VICTOR 328D/328E infrared thermal imager visible light digital camera with 640x480 auxiliary imaging, excellent imaging effect

- LCD display: maximum display 4000, word height 15mm
- General characteristics: Maximum voltage between voltage input terminal and ground CAT II 600V.
- Display method: LCD display, with a maximum reading of 4000
- Measurement principle: Double integral A/D conversion, automatic range
- Measurement rate: 3 times/second
- Unit display : with functions and display of unit symbols for electricity consumption

### Technical data

Basic Function	328D	328E
Resolving power	160x120	256x192
Working wavelength	8~14μm	
Frame rate	25Hz	
NETD	<50mK@25°C	
Lens	3.2mm	
Field of view angle	56°x42°	35°x27°
Range	-15°C ~ 600°C	
Accuracy	±2°C or ±2% of reading	
Visible Light		
Resolving power	640x480	
Frame rate	25Hz	
Software functions [APP]		
Temperature measurement	High and low temperature tracking, center point, point, area, and line temperature measurement, temperature range viewing	
Image display mode	Visible light mode, multiple visible light and infrared fusion modes, single infrared mode display.	
Temperature quick check	Supports one click quick access to high temperature areas.	
Interval display	✓	
Real time flipping	✓	
Image color palette	Iron Red, White Heat, Black Heat, Rainbow, Red Heat, Cold Blue	
Photograph	✓	
Videotape	✓	
Image editing	Supports image graffiti and text notes	
Set up	Parameter configuration, temperature units, language, and high temperature alarm settings.	
Software functions [APP]		
Working temperature	-10°C~ 75°C	
Storage temperature	-45°C~ 85°C	
Protect	IP54	
Body weight	22g	
Body size	51.6mmx34mmx13.2mm	



360S

### 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



303B



302B

### 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



306B/307C

Model	306B	307C
Range	(-50~700) C (-58~1292) F	(-20~800) C (-4~1472) F
Precision	(-50~0) C ±3 C (0~100) C ±1.5 C (100~700) C ±1.5%	(-20~0) C ±3 C (0~100) C ±1.5 C (100~800) C ±1.5%
Emissivity adjustable	0.10~1.00 adjustable (preset 0.95)	
LCD display resolution	0.1 C/1 F	
Dual range display	√	
max/min	√	
Difference/Average	√	
High/low temperature alarm	√	
°C/°F selection	√	
Laser can be turned off	√	
display hold	√	
Backlit display	√	
Automatic shut-down	√	
low battery indicator	√	
Spectral response	8um~14um	
Laser power	Output < 1mw, wavelength 630~670nm, class2(1)	
Power supply	9V battery (NEDA1604/6F22 or equivalent)	
Basic size	97mmx43mmx160mm	
Weight	125g (without battery)	



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	141x60x200mm	141x60x200mm
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 μm		
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

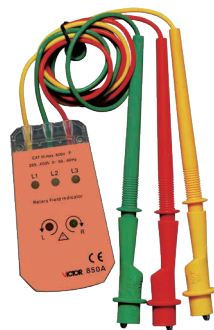
Model	63	63A	63B
<b>Characteristic</b>	Simple structure: convenient operation: integrated design. Just need to align the instrument probe with the measured object and press the measurement key to measure.	The front end of the sensor is equipped with a long probe; It is convenient to measure the equipment 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>	0~199.9um	0~1000um	0~199.9um
<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>Measurement range Vibration accelerated 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



668A

## Technical data

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

## Technical data

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

## 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-guarantee 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

## ELECTRIC STATIC CHARACTERSTIC

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

## Technical indicators

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



2GA

## Wood Moisture Tester Specification 2GA

**Sensor:** Resistance (conductivity measurement) moisture humidity sensor, temperature sensor  
**Parameter:** % humidity (wood or building material) °C/°F temperature  
**Measuring range:** See section "Instrument operation"  
**resolution:** 0.1%, 1°C. Max. error (at 25°C, ±1 digit)  
**moisture test %:** ±2%; temperature test: ±2 C  
**Measurement rate:** 0.5 seconds  
**Protection class:** IP 20  
**Ambient temperature:** (-10 - 50) C 20-50%RH  
**Storage temperature:** (-40 -70) C 20-50%RH  
**Power supply:** 1 section 6F22 9V battery  
**Weight:** About 150g (including battery and protective cover)  
**EC Directive:** 2004/108/EEC

### Adjustable material Measurement range (weight ratio)

Adjustable paper type	Characteristic curve
beech, spruce, larch, birch, cherry, walnut	8.8-54.8%
Oak, pine, maple, gray trees, Douglas fir, Eucalyptus urophylla	7.0-47.9%
Cement mortar layer, Concrete	0.9-22.1%
Anhydrous gypsum mortar layer	0.0-11.0%
Cement mortar	0.7-8.6%
Lime mortar, gypsum	0.6-8.6%
Brick	0.1-16.5%



2GB

## Paper Moisture Tester 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
<b>Display</b>	2 digits LCD Display with 15mm-high figure
<b>Resolution</b>	1%
<b>Range</b>	5%~40%; Accuracy: ±1%rdg+1d
<b>Power</b>	9V(6F22)

## 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 ±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.



NGM-10

## Technical data

Model	NGM-10	NGM-30	NGM-60	NGM-100
<b>Minimum division value</b>	0.01			
<b>Maximum operating range(N.m)</b>	10N.m/7.37lbf.ft/88.50lbf.in/101.97kgf.cm	30N.m/22.12lbf.ft/265.5lbf.in/305.91kgf.cm	60N.m/44.25lbf.ft/531.04lbf.in/611.82kgf.cm	100N.m/73.7lbf.ft/885.0lbf.in/1019.7kgf.cm
<b>Connector(inches)</b>	1/4		3/8	
<b>Setting range of buzzer(N.m)</b>	0.3~10	0.9~30	1.8~60	3~100
<b>Length (mm)</b>	230		240	
<b>Accuracy*1</b>	Clockwise: ±2% Counterclockwise: ±2.5%			
<b>Data storage capacity</b>	999			
<b>Operating mode</b>	Peak mode(P) / Real-time mode(T) / Preset mode(Pre)			
<b>Unit</b>	N.m, kgf.cm, lbf.ft, lbf.in			
<b>Form of ratchet head</b>	Bidirectional ratchet head			
<b>Number of ratchet teeth</b>	72 teeth			
<b>Number of keys</b>	5			
<b>Battery</b>	Two AAA batteries			
<b>Operating temperature</b>	-10 C to 60 C			
<b>Storage temperature</b>	-20 C to 70 C			
<b>Test falling height</b>	one meter			
<b>Vibration test condition*2</b>	10G			
<b>Service life test*3</b>	10000 times			



842A

842B

842C

842D

### Technical parameter

Mode	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

### 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

### 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

2202/2202S

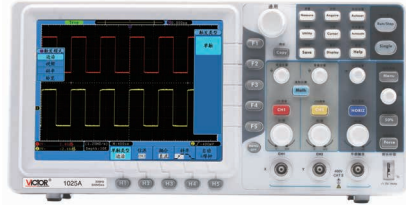
## Technical data

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>	√	

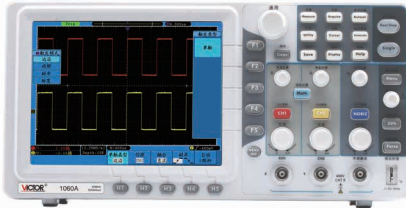
Signal generator function		240S/270S/2102S
<b>Frequency characteristics</b>	Sine wave	0.1Hz~25MHz
	Rectangular wave	0.1Hz~5MHz
	Sawtooth wave	0.1Hz~1MHz
	Pulse wave	0.1Hz~5MHz
	Arbitrary wave	0.1Hz~
<b>Sampling Rate</b>	125MSa/s	
<b>Amplitude (50Ω)</b>	0.01Vpp ~ 2.5Vpp	
<b>Aisle</b>	1	
<b>Wave length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



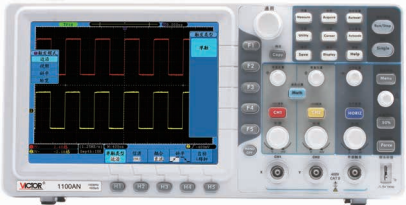
1025A

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)

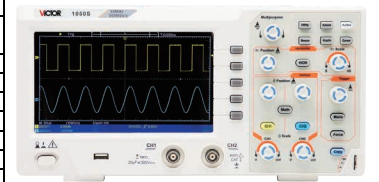


1100AN

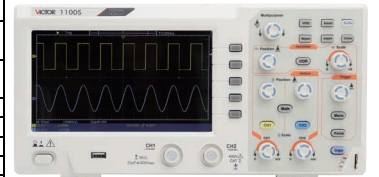
Basic function	1100AN
Bandwidth	100MHz
Real-time sampling rate	1GS/s
Rise time	≤3.5ns
Record Length	100K pts (10M is optional to update)
Channel	2 channels + external trigger
Display	8 inches TFT 65535 color LCD, 800*600 pixels
Interval time	Single: ±(1 sample interval time + 100ppm × reading + 0.6ns), +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

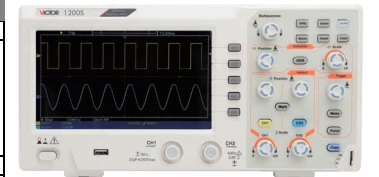
Mode	1200S	1050S	1100S
<b>Bandwidth</b>	200 MHz	50 MHz	100 MHz
<b>Sample Rate(real time)</b>	1single channel: 500MS/s; double channel: 1GS/s	500MS/s	1 GS/s
<b>Channel</b>	2		
<b>Input coupling</b>	DC, AC, Ground		
<b>Input impedance</b>	1 MΩ±2%, in parallel with 20 pF±5 pF		
<b>Input coupling</b>	1X, 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	Instruction	
<b>Trigger level range</b>	<b>Internal</b>	±5 div from the screen center
<b>Trigger level Accuracy (typical)</b>	<b>Internal</b>	±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>Edge trigger</b>	<b>slope</b>	Rising, Falling
<b>Video Trigger</b>	<b>Modulation</b>	Support standard NTSC, PAL and SECAM broadcast systems
	<b>Line number range</b>	1-525 (NTSC) and 1-625 (PAL/SECAM)

## NEW BATTERY TESTERS



3025A

3025B

3025C

### Technical indicators

Basic skills	3025A	3025B	3025C
Applicable batteries	12 volt and 24 volt lead-acid batteries		
Optional battery standards	CCA: 100-2000		
	IEC: 100-1000		
	EN: 100-1700		
	DIN: 100-1000		
	JIS: To check the table and compare with CCA		
working temperature	(-18~50)°C		
Voltage range	(DC) 9V~35V		
Language	Switching between Chinese and English		
Test method	Four line Kelvin testing method		
Battery voltage display	√		
Battery level ratio display	√		
CCA measurement	√		
Battery life display	√		
Internal resistance detection	√		
Input protection	√		
Source	(DC) 9V~35V		
Display Size	60 x 45mm		
Body color	Black		
Body weight	291g		
Body size	150*85*30mm ; Line length 750mm		
Parts	Instruction manual and certificate of conformity		

Function	Range	3012	3013
Cold Cranking Amps	CCA	100~1700	√
	IEC	100~1000	√
	EN	100~1700	√
	DIN	100~1000	√
Internal resistance	0.00mΩ~99.99mΩ	√	
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°C	-18~50°C	-18~50°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
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
Voltage output	0-30V	0-30V
Maximum current output	3A	5A
working condition	(0-40)°C/s 85%RH	
Storage condition	(-2-80)°C/<80%RH	
<b>Voltage stabilization feature</b>		
Output voltage	Continuously adjustable from 0 to rated voltage	
Source effect: CV	1 × 10 <sup>-4</sup> + 3mV	
Load effect: CV	1 × 10 <sup>-4</sup> + 3mV	
Ripple and Noise	0.5mV (RMS)	
Voltage temperature coefficient	300PPm/°C	
<b>Current stabilization feature</b>		
Output current: CC	Continuously adjustable from 0 to rated current	
Source effect: CC	2 × 10 <sup>-3</sup> + 3mA	
Load effect	5mA	
Current temperature coefficient	500PPm/°C	
<b>Display feature</b>		
Digital display accuracy	Voltage/current three-digit	Display Display accuracy: ± (0.4%+4d)
Size	249*124* 141mm	
Weight	3755g	
Power	220V AC ±10% 50Hz	
Color	Silver grey	
Dimensions	108* 59mm	





**3303**



**3305**



**3003A**



**3005A**



**3010A**

## 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	3303	3305
<b>Voltage output</b>	0-30V	0 ~ 30V
<b>Maximum current output</b>	3A	5A
<b>Output voltage channel</b>	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
<b>Voltage stabilization feature</b>		
<b>Output voltage</b>	Continuously adjustable from 0 to rated voltage	
<b>Source effect</b>	≤1×10 <sup>-4</sup> +3mV(±10% of rated source voltage)	
<b>load effect</b>	≤1×10 <sup>-4</sup> +3mV (output current≤3A) ≤3×10 <sup>-4</sup> +3mV (output current≥3A)	
<b>Ripple and Noise</b>	≤1mVrms (5Hz-1MHz)	
<b>Recovery Time</b>	≤100μS (50% load change, Minimum load 0,5A)	
<b>temperature drift</b>	≤300ppm/°C	
<b>Current stabilization feature</b>		
<b>Output current</b>	Continuously adjustable from 0 to rated current	
<b>Source effect</b>	≤2×10 <sup>-3</sup> +3mA	
<b>load effect</b>	≤2×10 <sup>-3</sup> +3mA	
<b>Ripple and Noise</b>	≤3mA <sub>rms</sub>	
<b>Tracking feature</b>		
<b>Series feature</b>	Source effect:≤1×10 <sup>-4</sup> +5mV load effect:≤300mV	
<b>Parallel feature</b>	Source effect:≤1×10 <sup>-4</sup> +3mV load effect:≤1×10 <sup>-4</sup> +3mV (output current≤3A)	
<b>Display feature</b>		
<b>Voltage</b>	Two sets 3-digit voltage LED display, the display accuracy: ± (0,5% + 2 words)	
<b>Current</b>	Two sets 3-digit current LED display, the display accuracy: ± (0,5% + 2 words)	
<b>Size</b>	300*250*145mm	
<b>Weight</b>	6900g	
<b>Power</b>	AC220V/AC110V ± 10%,50Hz/60Hz	
<b>Color</b>	Silver grey	
<b>Dimensions</b>	115*61mm	

## Technical data

Model	3003A	3005A	3010A
<b>Output voltage</b>	0~32V	0~32V	0~32V
<b>Output current</b>	0~3A	0~5A	0~10A
<b>USB charging</b>	/	/	√
<b>LED</b>	Dual 4-digit LED display		
<b>Operating Voltage</b>	AC 220V±10% 50Hz		
<b>Working conditions</b>	0~40 °C ≤85%RH		
<b>Storage conditions</b>	0~60 °C ≤85%RH		
<b>Lock function</b>	have		
<b>Weight</b>	1,45kg (3010A 2kg)		
<b>Size</b>	221*155*103mm		
<b>Cooling method</b>	Aluminum + air cooling		
<b>Voltage stabilization characteristics</b>			
<b>Load regulation rate</b>	≤0,1+5mV (3010A) 0,1%+10mV		
<b>Power regulation rate</b>	≤0,01+5mV		
<b>Voltage resolution</b>	4-digit display: 10mV		
<b>Display accuracy</b>	4-digit display: ±(0,2%+5 d)		
<b>Readback resolution</b>	4-digit display: 10mV		
<b>Readback accuracy</b>	4-digit display: ±(0,2%+5 d)		
<b>Steady flow characteristics</b>			
<b>Load regulation rate</b>	≤0,2%+5mA (3010A) 0,2%+10mA		
<b>Power regulation rate</b>	≤0,2%+3mA		
<b>Current resolution</b>	4-digit display: 1mA (3010A) 10mA		
<b>Display accuracy</b>	4-digit display: ±(0,2%+5 d)		
<b>Readback resolution</b>	4-digit display: 1mA		
<b>Readback accuracy</b>	4-digit display: ±(0,2%+5 d)		
<b>Ripple</b>	5mA		
<b>OVP</b>	0~-32±0,2%FS		
<b>Maximum voltage</b>	0~-32V±0,2%		
<b>OCP</b>	0~6A±0,2%FS		
<b>Maximum current</b>	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%		
OCV	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+**



**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

	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	



**7100/7100A**  
Clamp Leaker



**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

	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**

Large Caliber Three Phase Power Tester

	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	

	S100B
<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~300Ω Δ ≤ 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



**1601**

<b>Function</b>	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°~360.0°; Frequency: 45Hz~75Hz
<b>Resolution</b>	0.1°; 0.1Hz
<b>Accuracy</b>	Phase: $\leq 10^\circ$ ; Frequency: $\leq \pm 2\text{Hz}$ (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

Wireless H/L Voltage Phase Detector

<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: $\leq \pm 5^\circ$ ; common phase checking: $\leq \pm 10^\circ$ ; frequency: $\leq \pm 2\text{Hz}$ ;
<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

<b>Function</b>	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°~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: $\leq \pm 10^\circ$ ; frequency: $\leq \pm 2\text{Hz}$ ; current: 0~6000A, $\pm 3\% \pm 5\text{dgt}$ ; 6000A~2000A, $\pm 4\% \pm 5\text{dgt}$
<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



**1700**

Wireless H/L Voltage Phase Detector

<b>Function</b>	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: $\pm 2\% \pm 5\text{dgt}$ ; 100A~6000A: $\pm 3\% \pm 5\text{dgt}$ ; 6.00kA~20.0kA: $\pm 4\% \pm 5\text{dgt}$
<b>Frequency Precision</b>	$\pm 1\text{Hz}$
<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: 0.00V~600V AC Current: 0.0mA~20.0A Phase: 0~360°
<b>Power</b>	DC9V alkaline batteries: 1.5VAA×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>	φ7.5mm×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

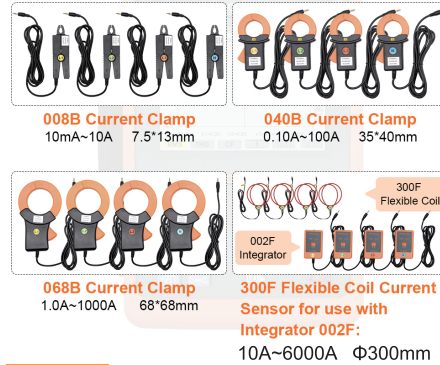


**4500**

Phase Volt Ampere Meter



### OPTIONAL CURRENT CLAMP



**5000**

### Basic function

- ★ Waveform real-time display (4 channels voltage/4 channels current).
- ★ True RMS values of voltages and currents.
- ★ The DC components of voltages.
- ★ Peak current and voltage values.
- ★ Minimum and maximum half-cycle RMS current and voltage values.
- ★ Phasor diagram display.
- ★ Measurement of each harmonic up to order 50.
- ★ Bar charts show harmonic ratios of current and voltage of each phase.
- ★ Total harmonic distortion (THD).
- ★ Active, reactive, apparent power, by phase and cumulative.
- ★ Active, reactive, apparent energy, by phase and cumulative.
- ★ Transformer K factor.
- ★ Power factors (PF) and displacement factors (DPF or COS $\Phi$ ).
- ★ Short-term voltage flicker (PST).
- ★ Three phase unbalance(current and voltage).

Basic Function	5000	Base condition	Working condition
Environment temperature	All parameters	(23 $\pm$ 2) $^{\circ}$ C	-10 $^{\circ}$ C~ 40 $^{\circ}$ C
Relative humidity	All parameters	40%~ 60%	<80%
Phase-to-neutral voltage	All parameters	(100 $\pm$ 1%)V	1.0V~ 1000V
Phase-to-phase voltage	True RMS phase-to-phase voltage	(200 $\pm$ 1%)V	1.0V~ 2000V
Current	True RMS current	(5 $\pm$ 1%)A	10mA~ 1000A
Network frequency	All parameters	50Hz $\pm$ 0.1Hz	40Hz~ 70Hz
Phase shift	Active power and active energy	Cos $\phi$ =1	Cos $\phi$ : 0.2~ 1.0
	Reactive power and reactive energy	Sin $\phi$ =1	Sin $\phi$ : 0.2~ 1.0
Harmonic	All parameters	<0.1%	0.0%~ 100%
Voltage unbalance	All parameters	<10%	0.0%~ 100%
Working voltage of device	All parameters	DC9.8V $\pm$ 0.1V	DC9.5V~ 10.5V
External electric field, magnetic field	All parameters	Should be avoided	
Test position	Measured related parameters of current	Tested wire at the center of clamp.	

General specification	5000
Power supply	Rechargeable lithium-ion battery packs 9.6V, backup charger.
Battery indicator	Battery symbol (    ) shows dump energy. When the voltage is too low, automatic shutdown after the 1 minute.
Power consumption	Current consumption of normal test 490 mA, continuous working for 8 hours.
Display mode	LCD color screen, 640dots*480dots, 5.6 inches, display domain: 116mm*88mm.
Size of clamp	008B small sharp current clamp: 7.5mm*13mm; 040Bcircle current clamp: 35mm*40mm; 068Bcircle current clamp: 68mm*68mm. 300F Flexible Coil Current Sensor (with Integrator): $\Phi$ 300mm
Instrument dimensions	L*W*H: 240mm*170mm*68 mm.
Number of channels	4U/4I.
Phase-to phase voltage	1.0V~2000V.
Phase-to-neutral voltage	1.0V~1000V.
Current	008B current clamp: 10mA~10.0A; 040B current clamp: 0.10A~100A; 068B current clamp: 1.0A~1000A; 300F Flexible Coil Current Sensor (with Integrator): 10A ~ 6000A
Frequency	40Hz~70Hz.
Parameters of electricity	W, VA, Var, PF, DPF, cos $\phi$ , tan $\phi$ .
Energy parameters	Wh, Varh, Vah.
Harmonic	Order 0~50.
Total harmonic distortion	Order 0~50, each phase.
Expert mode	Yes.
Number of Transient records	150 sets.
Voltage flicker	Yes.
Starting current mode	Yes, 100 seconds.
3 phases unbalance	Yes.
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.
Peak	Yes.
Phasor diagram display	Automatically.
Capacity of snapshots	60.
Menu language	English/Chinese.
Communication	USB.
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.
Weight	Host: 1.6kg (with battery). 008B small sharp current clamp: 170g*4; 040Bcircle current clamp: 190g*4; 068Bcircle current clamp: 510g*4; 300F Flexible Coil Current Sensor (with Integrator) : 330g*4; Test wires and power adapter: 900g; Total weight: about 9.2kg (with packaging).
Length of voltage test wire	3m.
Length of current sensor wire	2m.
Input impedance	Input impedance of test voltage:1M $\Omega$ .
Withstand voltage	Withstand 3700V/50Hz sinusoidal AC voltage for 1 minute between instrument wiring and shell.
Insulation	Between instrument wiring and shell $\geq$ 10M $\Omega$ .



**5000B**

Power Quality Analyser

## Current sensor character

Type of current senso	True RMS current	Max error of true RMS current	Max error of phase angle
<b>FR008 current clamp</b>	10mA~ 99mA	±(1%+3dgt)	±(1.5°), Arms≥20mA
	100mA~ 10.0A	±(1%+3dgt)	±(1°)
<b>FR020 current clamp</b>	0.10A~ 0.99A	±(1%+3dgt)	±(1.5°)
	1.00A~ 100A	±(1%+3dgt)	±(1°)
<b>FR050 current clamp</b>	1.0A~ 9.9A	±(2%+3dgt)	±(3°)
	10.0A~ 1000A	±(2%+3dgt)	±(2°)
<b>FR300R Flexible Coil Current Sensor (with Integrator)</b>	10A ~ 199A	±(1% + 3dgt)	±(3°)
	200A~6000A	±(1% + 3dgt)	±(2°)



**Small cusp**  
8mmx 15mm  
168gx4



**Round mouth**  
20mmx 20mm  
252gx4



**Round mouth**  
50mmx 50mm  
463gx4



**Flexible coil (with integrator)**  
Φ300mm  
280gx4

Basic Function	5000B
<b>Power supply</b>	Rechargeable lithium-ion battery packs 9.6V, backup charger.
<b>Battery indicator</b>	Battery symbol  shows dump energy. When the voltage is too low, automatic shutdown after the 1 minute.
<b>Power consumption</b>	Current consumption of normal test 490 mA, continuous working for 10 hours.
<b>Display mode</b>	LCD color screen, 640dots×480dots, 5.6 inches, display domain: 116mm×89mm.
<b>Size of clamp</b>	FR008 small sharp current clamp: 8mm×15mm; FR020circle current clamp: 20mm×20mm; FR050 circle current clamp: 50mm×50mm. FR300R Flexible Coil Current Sensor (with Integrator) : Φ300mm
<b>Instrument dimensions</b>	L×W×H: 277.2mm × 227.5mm × 153mm.
<b>Number of channels</b>	4U/4L
<b>Phase-to phase voltage</b>	1.0V~2000V.
<b>Phase-to-neutral voltage</b>	1.0V~1000V.
<b>Current</b>	FR008 current clamp: 10mA~10.0A; FR020 current clamp: 0.10A~100A; FR050 current clamp: 1.0A~1000A; FR300R Flexible Coil Current Sensor (with Integrator) : 10A ~ 6000A
<b>Frequency</b>	40Hz~70Hz.
<b>Parameters of electricity</b>	W, VA, Var, PF, DPF, cosφ, tanφ.
<b>Energy parameters</b>	Wh, Varh, Vah.
<b>Harmonic</b>	Order 0~50.
<b>Total harmonic distortion</b>	Order 0~50, each phase.
<b>Expert mode</b>	Yes.
<b>Number of Transient records</b>	150 sets.
<b>Voltage flicker</b>	Yes.
<b>Starting current mode</b>	Yes, 100 seconds.
<b>3 phases unbalance</b>	Yes.
<b>Record</b>	300 days(simultaneous recording 20 parameters, record one point every 5 seconds).
<b>Min/Max recorded value</b>	Measurement of maximum and minimum values over a period of time.
<b>Alarm</b>	40 different types of parameter selections, 12,800 sets alarm logs.
<b>Peak</b>	Yes.

<b>Phasor diagram display</b>	Automatically.
<b>Capacity of snapshots</b>	60.
<b>Menu language</b>	English/Chinese.
<b>Communication</b>	USB.
<b>Automatic switching off</b>	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.
<b>Backlight function</b>	Yes, suitable for use at night and dark place.
<b>Weight</b>	Host: 1.6kg (with battery). FR008 small sharp current clamp: 168g×4; FR020 circle current clamp: 252g×4; FR050 circle current clamp: 463g×4; FR300R Flexible Coil Current Sensor (with Integrator) : 280g×4; Test wires and power adapter: 800g; Total weight: about 10.8kg (with packaging).
<b>Length of voltage test wire</b>	3m.
<b>Length of current sensor wire</b>	2m.
<b>Working temperature and humidity</b>	-10°C~40°C; below 80%Rh.
<b>Storage temperature and humidity</b>	-10°C~60°C; below 70%Rh.
<b>Input impedance</b>	Input impedance of test voltage:1MΩ.
<b>Withstand voltage</b>	Withstand 3700V/50Hz sinusoidal AC voltage for 1 minute between instrument wiring and shell.
<b>Insulation</b>	Between instrument wiring and shell ≥10MΩ.
<b>Structure</b>	Double insulation, with insulation vibration-proof sheath.
<b>Safety rules</b>	IEC 61010 1000V Cat III / 600V CAT IV, IEC61010-031, IEC61326, Pollution degree: 2.

Measurement	Range	Display resolution	The maximum error in the range of the reference
<b>Frequency</b>	40Hz~ 70Hz	0.01Hz	±(0.03)Hz
<b>True RMS phase-to-neutral voltage</b>	1.0V~ 1000V	Min resolution 0.1V	±(0.5%+5dgt)
<b>True RMS phase-to phase voltage</b>	1.0V~ 2000V	Min resolution 0.1V	±(0.5%+5dgt)
<b>DC voltage</b>	1.0V~ 1000V	Min resolution 0.1V	±(1.0%+5dgt)
<b>True RMS current</b>	10mA~ 6000A	Min resolution 1mA	±(0.5%+5dgt)
<b>Peak of phase-to-neutral voltage</b>	1.0V~ 1414V	Min resolution 0.1V	±(1.0%+5dgt)
<b>Peak of phase-to-phase voltage</b>	1.0V~ 2828V	Min resolution 0.1V	±(1.0%+5dgt)
<b>Current peak</b>	10mA~ 8484A	Min resolution 1mA	±(1.0%+5dgt)
<b>Peak factor</b>	1.00~ 3.99	0.01	±(1%+2dgt)
	4.00~ 9.99	0.01	±(5%+2dgt)
<b>Active power</b>	0.000W~ 9999.9kW	Min resolution 0.001W	±(1%+3dgt)Cosφ≥0.8 ±(1.5%+10dgt)0.2≤Cosφ<0.8
<b>Reactive power, inductive or capacitive</b>	0.000VAR~ 9999.9kVAR	Min resolution 0.001VAR	±(1%+3dgt)Sinφ≥0.5 ±(1.5%+10dgt)0.2≤Sinφ<0.5
<b>Apparent power</b>	0.000VA~ 9999.9kVA	Min resolution 0.001VA	±(1%+3dgt)
<b>Power factor</b>	-1.000~ 1.000	0.001	±(1.5%+3dgt)Cosφ≥0.5 ±(1.5%+10dgt)0.2≤Cosφ<0.5
<b>Active energy</b>	0.000Wh~ 9999.9MWh	Min resolution 0.001Wh	±(1%+3dgt)Cosφ≥0.8 ±(1.5%+10dgt)0.2≤Cosφ<0.8
<b>Reactive energy, inductive or capacitive</b>	0.000VARh~ 9999.9MVARh	Min resolution 0.001VARh	±(1%+3dgt)Sinφ≥0.5 ±(1.5%+10dgt)0.2≤Sinφ<0.5
<b>Papparent energy</b>	0.000VAh~ 9999.9MVAh	Min resolution 0.001VAh	±(1%+3dgt)
<b>Phase angle</b>	-179°~ 180°	1°	±(2°)
<b>Tanφ(VA&gt;50VA)</b>	-32.76~ 32.76	Min resolution 0.001	φ:±(1°)
<b>Phase shift of power factor (DPF)</b>	-1.000~ 1.000	0.001	φ:±(1°)
<b>Harmonic ratio (order 1 to 50) (Vrms&gt;50V)</b>	0.0%~ 99.9%	0.1%	±(1%+5dgt)
<b>Harmonic angle (Vrms&gt;50V)</b>	-179°~ 180°	1°	±(3°) harmonics 1 to 25 ±(10°) harmonics 26 to 50
<b>Total harmonic ratio (THD or THD-F)≤50</b>	0.0%~ 99.9%	0.1%	±(1%+5dgt)
<b>Distortion factor (DF or THD-R)≤50</b>	0.0%~ 99.9%	0.1%	±(1%+10dgt)
<b>Transformer K factor</b>	1.00~ 99.99	0.01	±(5%)
<b>3 phases unbalance</b>	0.0%~ 100%	0.1%	±(1%)





**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 g: 2K Hz	d: 800 Hz e: 1K Hz f: 1.5K 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)	



**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



**5001/5003**

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

Digital Incliner

## 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



5150/5200/5300

Digital Caliper

Model	5150	5200	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		



5150S

New Model

Measurement range:0-150mm  
Resolution (mm): 0.01  
Measurement speed: ≤1.5m/s  
Power Supply: LR44 1.5V Battery  
Operating humidity :<80%  
Operating temperature :0~+40 C  
Storage temperature :-10~+60 C



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

DIGITAL FORCE GAUGE

MODEL: YITENSEN 10N/50N/100N/200N/300N/500N  
Main technical parameters

The max. Load value	10N	50N	100N	200N	300N	500N
	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					



8586B

Basic Function	8586B
Power consumption	750w (MAX)
Input voltage	AC (100V/110V/120V/220V/230V /240V/)
	50/60Hz (optional)
Display mode	LED screen display
Heating & soldering station	
Power consumption	700w (MAX)
Temperature range	100~500 C & (212°F-932°F)
Air pump type	Fan type
Noise	<52d B(A)
Air flow	120L/min (MAX)
Electrical soldering station	
Power	70w (MAX)
Temperature range	200~480°C
Temperature stability	±2 C (still air and no load)
Temperature accuracy	±15 C
Impedance of welding tip to ground	<2Ω
Voltage of welding tip to ground	<2mV
Heating core	Four-core stainless steel heating core
Working voltage of heating core	24DC
Overall dimensions of unit	167 (L)*100(W)*131(H) MM
Weight	1.86KG
USB port	5V and 2A (max)



**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



**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				
Max. Operation Range (N.m)	30N.m/22.12ft.lbf/36.5.lbf In.lbf/305.91kgf.cm	60N.m/44.25ft.lbf/53.1.lbf In.lbf/611.82kgf.cm	135N.m/99.57ft.lbf/119.lbf In.lbf/1376.61kgf.cm	200N.m/147.5ft.lbf/177.lbf In.lbf/2039.43kgf.cm	340N.m/250ft.lbf/300.lbf In.lbf/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.lbf, ft.lbf, 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				

## 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



**822M**

## 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)



**822B**



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	x	LCD
Measuring range	x	0-100%LEL
Measurement error	x	±5%
Resolution	x	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	x	√
Backlight function	x	√
Calibration function	x	√
Timer shutdown function	x	√
Data retention	x	√
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



820B



380S

## 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			820B			
	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	820B
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

## Shenzhen VICTOR 380S 25Hz Circuit Board Thermal Analyzer 3D Thermal Image pcb USB connection DC 5V Test Electric Leakage

Victor 380S 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 defectboards, which is difficult by other instruments. To help thermal design, testing, verification, optimization, componentsselection, and help extend product life cycle. Curve data is convenient for R&D engineers to record thermal experimental data.

## Technical data

Basic Function	380S
Infrared resolution	256*192
Refresh rate	25Hz
FOV	56°x42°
Measurement distance	100mm - 150mm
Interface	USB Type C
Input voltage	DC 5V
Measurement range	-15°C~600°C(5°F~+1112°F)
Storage temperature	-20°C~60°C
Working temperature	0°C~50°C
Overall weight	1200g
Product size	150mm x 150mm x 230mm



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



90A



90B

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



**862M**

## Overview

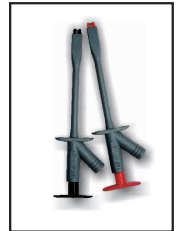
Magnetic pole identification pen is a fast, easy and safe tool, which is used to identify the polarity of magnetic field. The N / S polarity can be distinguished by the contact between the probe and the object. This instrument has the characteristics of high identification accuracy, small and light,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



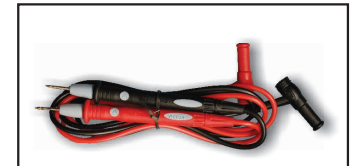
## TEST JACK

Product category: Multi-function standard adapter  
 switching test applies to resistance ,capacitance, triode and diode.



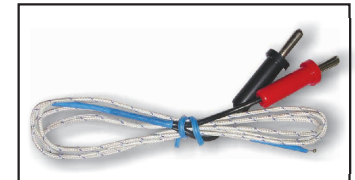
## TEST LEADS

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



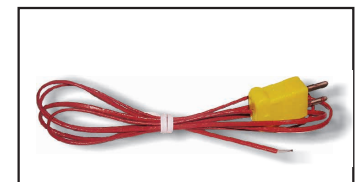
## TP01 BANANA TEMPERATURE PROBE

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 :  $\pm 0.01\%$   
 HART communication (only VICTOR 26H)  
 Two independent channels for input and output, allowing in-time input and output operation;

Project		Model	26	26H
Source	DC millivolt	Range	-10 ~ 110mV	-10 ~ 110mV
		Accuracy= $\pm$ (% 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= $\pm$ (% 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= $\pm$ (% 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= $\pm$ (% 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 ~ 4K $\Omega$	0 ~ 4K $\Omega$
		Accuracy= $\pm$ (% of the set value+% of range)	0.01%+0.01%	0.01%+0.01%
	Thermocouple	Resolution	0.01 $\Omega$ /0.1 $\Omega$	0.01 $\Omega$ /0.1 $\Omega$
		Range	R/S/K/E/J/T/B/N/L/U	R/S/K/E/J/T/B/N/L/U
		Accuracy	0.4 $^{\circ}$ C	0.4 $^{\circ}$ C
	RTD	Resolution	0.1 $^{\circ}$ C/1 $^{\circ}$ C	0.1 $^{\circ}$ C/1 $^{\circ}$ C
		Range	Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50	Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50
Accuracy		0.2 $^{\circ}$ C	0.2 $^{\circ}$ C	
Frequency (Hz)	Resolution	0.1 $^{\circ}$ C	0.1 $^{\circ}$ C	
	Range	1Hz ~ 50KHz	1Hz ~ 50KHz	
	Accuracy	$\pm 2$ words	$\pm 2$ words	
Frequency (CMP)	Resolution	0.01Hz/1Hz/0.1KHz/2KHz	0.01Hz/1Hz/0.1KHz/2KHz	
	Range	60 ~ 1200 CPM	60 ~ 1200 CPM	
	Accuracy	$\pm 2$ words	$\pm 2$ words	
Pulse	Resolution	1CPM	1CPM	
	Range	1Hz ~ 10KHz	1Hz ~ 10KHz	
	Accuracy	1 ~ 100000cyc	1 ~ 100000cyc	
Switch	Resolution	$\pm 2$ words	$\pm 2$ words	
	Range	1Hz ~ 50KHz	1Hz ~ 50KHz	
	Accuracy	$\pm 2$ words	$\pm 2$ words	
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= $\pm$ (% of the set value+% of range)	Depends on the pressure module	Depends on the pressure module	
			5 digit display	5 digit display

Measurement	Parameter	26		26H	
		Value	Accuracy	Value	Accuracy
DC millivolt	Range	-5 ~ 550mV	-5 ~ 550mV	-5 ~ 550mV	-5 ~ 550mV
	Accuracy= $\pm$ (% of Reading+% of Range)	0.01%+0.01%	0.01%+0.01%	0.01%+0.01%	0.01%+0.01%
	Resolution	1uV/10uV	1uV/10uV	1uV/10uV	1uV/10uV
DC voltage	Range	-0.5 ~ 35V	-0.5 ~ 35V	-0.5 ~ 35V	-0.5 ~ 35V
	Accuracy= $\pm$ (% of Reading+% of Range)	0.01%+0.01%	0.01%+0.01%	0.01%+0.01%	0.01%+0.01%
	Resolution	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV	0.1mV/1mV
DC current	Range	-5 ~ 55mA	-5 ~ 55mA	-5 ~ 55mA	-5 ~ 55mA
	Accuracy= $\pm$ (% of Reading+% of Range)	0.01%+0.01%	0.01%+0.01%	0.01%+0.01%	0.01%+0.01%
	Resolution	1uA	1uA	1uA	1uA
Resistance	Range	0 ~ 5.5K $\Omega$	0 ~ 5.5K $\Omega$	0 ~ 5.5K $\Omega$	0 ~ 5.5K $\Omega$
	Accuracy= $\pm$ (% of Reading+% of Range)	0.01%+0.01%	0.01%+0.01%	0.01%+0.01%	0.01%+0.01%
	Resolution	0.01 $\Omega$ /0.1 $\Omega$	0.01 $\Omega$ /0.1 $\Omega$	0.01 $\Omega$ /0.1 $\Omega$	0.01 $\Omega$ /0.1 $\Omega$
Thermocouple	Range	R/S/K/E/J/T/B/N/L/U	R/S/K/E/J/T/B/N/L/U	R/S/K/E/J/T/B/N/L/U	R/S/K/E/J/T/B/N/L/U
	Accuracy	0.5 $^{\circ}$ C	0.5 $^{\circ}$ C	0.5 $^{\circ}$ C	0.5 $^{\circ}$ C
	Resolution	0.1 $^{\circ}$ C/1 $^{\circ}$ C	0.1 $^{\circ}$ C/1 $^{\circ}$ C	0.1 $^{\circ}$ C/1 $^{\circ}$ C	0.1 $^{\circ}$ C/1 $^{\circ}$ C
RTD	Range	Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50	Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50	Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50	Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50
	Accuracy	0.3 $^{\circ}$ C	0.3 $^{\circ}$ C	0.3 $^{\circ}$ C	0.3 $^{\circ}$ C
	Resolution	0.1 $^{\circ}$ C	0.1 $^{\circ}$ C	0.1 $^{\circ}$ C	0.1 $^{\circ}$ C
Frequency (Hz)	Range	3Hz ~ 50KHz	3Hz ~ 50KHz	3Hz ~ 50KHz	3Hz ~ 50KHz
	Accuracy	$\pm 2$ words	$\pm 2$ words	$\pm 2$ words	$\pm 2$ words
	Resolution	0.01Hz	0.01Hz	0.01Hz	0.01Hz
Frequency (CMP)	Range	180 ~ 3000000 CPM	180 ~ 3000000 CPM	180 ~ 3000000 CPM	180 ~ 3000000 CPM
	Accuracy	$\pm 2$ words	$\pm 2$ words	$\pm 2$ words	$\pm 2$ words
	Resolution	1CPM	1CPM	1CPM	1CPM
Switch	Range	CLOSE/OPEN	CLOSE/OPEN	CLOSE/OPEN	CLOSE/OPEN
	Threshold	200 ~ 300 $\Omega$	200 ~ 300 $\Omega$	200 ~ 300 $\Omega$	200 ~ 300 $\Omega$
	Accuracy= $\pm$ (% of Reading+% of Range)	Depends on the pressure module	Depends on the pressure module	Depends on the pressure module	Depends on the pressure module
Pulse	Resolution	5 digit display	5 digit display	5 digit display	5 digit display
	Range	1 ~ 100000cyc	1 ~ 100000cyc	1 ~ 100000cyc	1 ~ 100000cyc
	Accuracy	$\pm 2$ words	$\pm 2$ words	$\pm 2$ words	$\pm 2$ words
Loop power supply	Resolution	1cyc	1cyc	1cyc	1cyc
	Range	24V	24V	24V	24V
	Accuracy	$\pm 10\%$	$\pm 10\%$	$\pm 10\%$	$\pm 10\%$
HART	The maximum current	22mA	22mA	22mA	22mA
	Backlight	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Auto Power-off	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other functions	Charging function	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Room temperature display	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Battery detection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	The ramp signal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	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.	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.

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







11+

14+

15+

Project		The preference model	11+	14+	15+
		Performance parameters			
Source	DC millivolt	Range	-10 ~ 1100mV	-10.000 ~ 100.000mV	-100 ~ 1100mV
		Accuracy= ±(% of the set value+ % of range)	0.02%+0.01%	0.02%+0.01%	0.02%+0.01%
		Resolution	1uV	1uV	0.01mV
	DC voltage	Range	-1 ~ 11V	-0.1 ~ 1V	-1 ~ 11V
		Accuracy= ±(% of the set value+ % of range)	0.02%+0.01%	0.02%+0.01%	0.02%+0.01%
		Resolution	0.1mV	10uV	0.1mV
	DC current	Range	0 ~ 22mA		0 ~ 22mA
		Accuracy= ±(% of the set value+ % of range)	0.02%+0.02%	N/A	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%	N/A	0.02%+0.02%
		Resolution	1uA		1uA
	External power supply	Range	5 ~ 28V		5 ~ 28V
		Resolution	0 ~ 40KΩ		0 ~ 4KΩ
		Accuracy			
	Resistance	Range	0.01Ω/0.1Ω/1Ω	0.01Ω/0.1Ω	
		Accuracy= ±(% of the set value+ % of range)	0.02%+0.02%	0.02%+0.02%	N/A
		Resolution	1Hz ~ 110KHz		
	Frequency	Range	0.01Hz/1Hz/0.1KHz/2KHz		
		Accuracy	±2words	N/A	±2words
Resolution		1Hz ~ 10KHz		0.01Hz/1Hz/0.1KHz	
Pulse	Range	1 ~ 100000cyc		1 ~ 100000cyc	
	Accuracy	±2words	N/A	±2words	
	Resolution	1cyc		1cyc	
Switch	Range	1Hz ~ 110KHz			
	Accuracy	±2words	N/A	N/A	
	Resolution	0.01Hz/1Hz/0.1KHz/2KHz			
Thermocouple	Range	10types (R/S/K/E/J/T/B/N/L/U)	10types (R/S/K/E/J/T/B/N/L/U)		
	Accuracy	0.4°C		N/A	
	Resolution	0.1°C/1°C		0.1°C/1°C	
RTD	Range	6types (Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50)	6types (Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50)		
	Accuracy	0.2°C		N/A	
	Resolution	0.1°C		0.1°C	

Measure	Range	Accuracy= ±(% of Reading+ % of Range)	Resolution	-5 ~ 550mV	-20 ~ 220mV
				DC millivolt	N/A
DC voltage	Range			1uV/10uV	-0.5 ~ 55V
	Accuracy= ±(% of Reading+ % of Range)	N/A			0.02%+0.01%
	Resolution				0.1mV/1mV
DC current	Range				-4 ~ 55mA
	Accuracy= ±(% of Reading+ % of Range)	N/A			0.02%+0.01%
	Resolution				1uA
Resistance	Range			0 ~ 5.5KΩ	
	Accuracy= ±(% of Reading+ % of Range)	N/A		0.05%+0.02%	N/A
	Resolution			0.01Ω/0.1Ω	
Frequency	Range				3 ~ 50KHz
	Accuracy	N/A			±2words
	Resolution				0.01Hz/0.1Hz/1Hz
Switch	Range				CLOSE/OPEN
	Threshold	N/A			200 ~ 300Ω
	Resolution				Depends on the pressure module
Pressure	Range				Depends on the pressure module
	Accuracy= ±(% of Reading+ % of Range)	N/A			
	Resolution				5 digit display
Loop power supply	Range				24V
	The maximum current	N/A			±10%
	Resolution				22mA
Thermocouple	Range			10types (R/S/K/E/J/T/B/N/L/U)	
	Accuracy	N/A		0.7°C	
	Resolution			0.1°C/1°C	N/A
RTD	Range			6types (Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50)	
	Accuracy	N/A		0.5°C	
	Resolution			0.1°C	N/A
Continuity beeper	Range			0 ~ 500Ω	
	Accuracy	N/A		≤500Ω Sound	
	Resolution			0.01Ω	≤250Ω Sound
Other functions	Backlight		✓	✓	✓
	Auto Power-off		✓	✓	✓
	Charging function		✓	✓	✓
	Room temperature display		✓	✓	✓
	Battery detection		✓	✓	✓
	Communication function	RS232 serial communication, can realize remote control instrument by the device driver software			
	The mathematical treatment	Data hold, zero, average	Data hold, zero, average	Data hold, zero, average	Data hold, zero, average
Characteristic					
Safety	EN61010-1: 2001	EN61010-1: 2001	EN61010-1: 2001	EN61010-1: 2001	EN61010-1: 2001
Insulation	DC500V/50MΩ	DC500V/50MΩ	DC500V/50MΩ	DC500V/50MΩ	DC500V/50MΩ
EMC	EN61326-1: 2006	EN61326-1: 2006	EN61326-1: 2006	EN61326-1: 2006	EN61326-1: 2006
Authentication	CE	CE	CE	CE	CE
Display	Double display on the LCD screen	Double display on the LCD screen	Double display on the LCD screen	Double display on the LCD screen	Double display on the LCD screen
Power supply	4×1.5V AAA alkaline battery	4×1.5V AAA Alkaline battery	4×1.5V AAA Alkaline battery	4×1.5V AAA Alkaline battery	4×1.5V AAA Alkaline battery
Size	205 × 95 × 42 mm	205 × 95 × 42 mm	205 × 95 × 42 mm	205 × 95 × 42 mm	205 × 95 × 42 mm
Weight	About 500g	About 500g	About 500g	About 500g	About 500g
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	10.4Kg	10.3Kg	10.3Kg	10.3Kg	11.5Kg

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



## 709H

Protection grade : IP65  
Accuracy :  $\pm 0.01\%$   
HART communication

Project		Reference model	709H
Source	DC current (DCmA)	Range	0.000~22.000mA
		Accuracy	$\pm 0.01\% + 0.015\%$
		Resolution	1uA
	Analog transmitter (SIMULATE)	Range	0.000~22.000mA
		Accuracy	$\pm 0.01\% + 0.015\%$
		Resolution	1uA
External power supply		5 ~ 28V	
Measurement	DC voltage (DCV)	Range	-2.000~28.000V
		Accuracy	$\pm 0.01\% + 0.01\%$
		Resolution	1mV
	DC current (DCmA)	Range	-4.000~33.000mA
		Accuracy	$\pm 0.01\% + 0.01\%$
		Resolution	1uA
	Loop power supply (LOOP)	Range	24V
		The maximum current	22mA
		Driving ability	No HART resistance of 1K $\Omega$ . HART resistance is 750 $\Omega$ .
		HART communication	
Other functions	Protection grade	IP65	
	Backlight	✓	
	Backlight brightness adjustment	✓	
	25%、100%step output	✓	
	Automatic ramp	✓	
	Automatic step	✓	
	mA、%Switch the display	✓	
	Auto Power-off	✓	
	Power Adaptation function	✓	
	Battery Low display	✓	
PC online communication	Compatible with infrared isolation USB serial communication interface. can realize remote control instrument		
Characteristic			
Electrical safety	EN61010-1 : 2001		
Insulation	DC500V /50M $\Omega$		
EMC	EN61326-1 : 2006		
Authentication	CE		
Display	3.2 inch TFT color display		
Power supply	4x1.5V AA Alkaline battery / adapter		
Size	206 x 97 x 60 mm		
Weight	About 600g		
Standard Quantity Per Carton			
Standard Carton Measurement			
Standard Carton Gross Weight			



## New Model

## 01S

NEW type holster  
Accuracy :  $\pm 0.05\%$

Output function	Range	Output range	Resolution	Accuracy
DC voltage	100mV	-10.000mV~110.00mV	0.01mV	0.05%+0.03mV
DCV	1V	-0.1000V~1.1000V	0.0001V	0.05%+0.3mV
Ohm	400 $\Omega$	0~400.0 $\Omega$	0.1 $\Omega$	0.05%+0.2 $\Omega$
OHM	4K $\Omega$	0~4.000K $\Omega$	1 $\Omega$	0.05%+2 $\Omega$
Thermocouple TC	R	0 C ~ 1767 C	1 C	0~100 C / 10~1767 C
	S	0 C ~ 1767 C	1 C	0~100 C / 100~1767 C
	K	-200.0 C ~ 1372.0 C	0.1 C	-200.0~100.0 C / 100.0~400.0 C / 400.0~1200.0 C / 1200.0~1372.0 C
	E	-200.0 C ~ 1000.0 C	0.1 C	-200.0~100.0 C / 100.0~600.0 C / 600.0~1000.0 C
	J	-200.0 C ~ 1200.0 C	0.1 C	-200.0~100.0 C / 100.0~800.0 C / 800.0~1200.0 C
	T	-250.0 C ~ 400.0 C	0.1 C	-250.0~400.0 C
	N	-200.0 C ~ 1300.0 C	0.1 C	-200.0~100.0 C / 100.0~900.0 C / 900.0~1300.0 C
	B	600 C ~ 1820 C	1 C	600~800 C / 800~1820 C
	A	0 C ~ 2500 C	1 C	0~1600 C / 1600~2000 C / 2000~2500 C
	C	0 C ~ 2310 C	1 C	0~1600 C / 1600~2000 C / 2000~2310 C
Thermal resistance RTD	D	0 C ~ 2310 C	1 C	0~100 C / 100~270 C / 270~1200 C / 1200~2310 C
	Pt100 385	-200.0 C ~ 800.0 C	0.1 C	-200.0~0.0 C / 0.0~400.0 C / 400.0~800.0 C
	Pt200 385	-200.0 C ~ 630.0 C	0.1 C	-200.0~100.0 C
	Pt500 385	-200.0 C ~ 630.0 C	0.1 C	100.0~300.0 C
	Pt1000 385	-200.0 C ~ 630.0 C	0.1 C	300.0~630.0 C
Cu50	-50.0 C ~ 150.0 C	0.1 C	0.6 C	



## 04S/05S

NEW type holster  
Accuracy :  $\pm 0.05\%$

Output function	Range	Output range	Resolution	Accuracy
04S DC voltage DCV	10V	-1.000V~11.000V	0.001V	0.05%+2mV
DC current DCI	30mA	0.000mA~30.000mA	0.001mA	0.05%+4uA
05S DC current DCI	30mA	0.000mA~30.000mA	0.001mA	0.05%+4uA
Measurement function				
DC voltage DCV	35V	-35.000V~35.000V	0.001V	0.02%+2mV
DC current DCI	30mA	-35.000mA~35.000mA	0.001mA	0.02%+2uA
05S Loop power supply LOOP	24 V			10%



**New Model**

**02S**

NEW type holster  
Accuracy :  $\pm 0.05\%$

Output function	Range	Output range	Resolution	Accuracy
DC voltage	100mV	-10.000mV~110.00mV	0.01mV	0.05%+0.03mV
DCV	1V	-0.1000V~1.1000V	0.0001V	0.05%+0.3mV
Ohm	400Ω	0~400.0Ω	0.1Ω	0.05%+0.2Ω
OHM	4KΩ	0~4.000KΩ	1Ω	0.05%+2Ω
Thermocouple TC	R	0 C ~ 1767 C	1 C	0~100 C / 10~1767 C
	S	0 C ~ 1767 C	1 C	0~100 C / 100~1767 C
	K	-200.0 C ~ 1372.0 C	0.1 C	-200.0~-100.0 C / -100.0~400.0 C / 400.0~1200.0 C / 1200.0~1372.0 C
	E	-200.0 C ~ 1000.0 C	0.1 C	-200.0~-100.0 C / -100.0~600.0 C / 600.0~1000.0 C
	J	-200.0 C ~ 1200.0 C	0.1 C	-200.0~-100.0 C / -100.0~800.0 C / 800.0~1200.0 C
	T	-250.0 C ~ 400.0 C	0.1 C	-250.0~400.0 C
	N	-200.0 C ~ 1300.0 C	0.1 C	-200.0~-100.0 C / -100.0~900.0 C / 900.0~1300.0 C
	B	600 C ~ 1820 C	1 C	600~800 C / 800~1820 C
	A	0 C ~ 2500 C	1 C	0~1600 C / 1600~2000 C / 2000~2500 C
	C	0 C ~ 2310 C	1 C	0~1600 C / 1600~2000 C / 2000~2310 C
D	0 C ~ 2310 C	1 C	0~100 C / 100~270 C / 270~1200 C / 270~2310 C	
Thermal resistance RTD	Pt100 385	-200.0 C ~ 800.0 C	0.1 C	-200.0~0.0 C / 0.0~400.0 C / 400.0~800.0 C
	Pt200 385	-200.0 C ~ 630.0 C	0.1 C	-200.0~100.0 C
	Pt500 385	-200.0 C ~ 630.0 C	0.1 C	100.0~300.0 C
	Pt1000 385	-200.0 C ~ 630.0 C	0.1 C	300.0~630.0 C
	Cu50	-50.0 C ~ 150.0 C	0.1 C	0.6 C
Measurement function	Range	Measurement range	Resolution	Accuracy
DC voltage	100mV	-110.00mV~110.00mV	0.01mV	0.05%+0.03mV
DCV	1V	-1.1000V~1.1000V	0.0001V	0.05%+0.3mV
	35V	-35.000V~35.000V	0.001V	0.02%+2mV
Resistance	500Ω	0~550.00Ω	0.01Ω	0.05%+0.2Ω
OHM	5KΩ	0~5.5000KΩ	0.0001KΩ	0.05%+2Ω
Thermocouple TC	R	0 C ~ 1767 C	1 C	0~500 C
	S	0 C ~ 1767 C	1 C	500~1767 C
	K	-100.0 C ~ 1372.0 C	0.1 C	-100.0~0.0 C / 0.0~1372.0 C
	E	-50.0 C ~ 1000.0 C	0.1 C	-50.0 C ~ 0.0 C / 0.0~1000.0 C
	J	-60.0 C ~ 1200.0 C	0.1 C	-60.0~0.0 C / 0.0~1200.0 C
	T	-100.0 C ~ 400.0 C	0.1 C	-100.0~0.0 C / 0.0~400.0 C
	N	-200.0 C ~ 1300.0 C	0.1 C	-200.0~0.0 C / 0.0~1300.0 C
	B	600 C ~ 1820 C	1 C	600~800 C / 800~1000 C / 1000~1820 C
	A	0 C ~ 2500 C	1 C	0~1600 C / 1600~2000 C / 2000~2500 C
	C	0 C ~ 2310 C	1 C	0~1600 C / 1600~2000 C / 2000~2310 C
D	0 C ~ 2310 C	1 C	0~100 C / 100~270 C / 270~1200 C / 270~2310 C	
Thermal resistance RTD (4W)	Pt100 385	-200.0 C ~ 800.0 C	0.1 C	-200.0~0.0 C / 0.0~400.0 C / 400.0~800.0 C
	Pt200 385	-200.0 C ~ 630.0 C	0.1 C	-200.0~100.0 C / 100.0~300.0 C / 300.0~630.0 C
	Pt500 385	-200.0 C ~ 630.0 C	0.1 C	-200.0~100.0 C / 100.0~300.0 C / 300.0~630.0 C
	Pt1000 385	-200.0 C ~ 630.0 C	0.1 C	-200.0~100.0 C / 100.0~300.0 C / 300.0~630.0 C
	Cu50	-50.0 C ~ 150.0 C	0.1 C	0.7 C
On/off detection	500Ω	≤50Ω sounding	0.01Ω	



**77**



**79A+**



**79+**

Project		77	78+	79+	79A+	
Measurement	DC voltage	Range	±51V	60mV-1000V	60mV-1000V	50mV-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	6V-600V	6V-800V	1000V
		The highest resolution	100mV	0.1mV	0.1mV	0.1mV
		Basic accuracy	1.5%	0.5%	0.5%	0.5%
	VFC	AC Voltage	N/A	600V	600V	500V
	Resistance	Range	5kΩ	600Ω-60MΩ	600Ω-60MΩ	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	600mA	600mA	±500mA
		The highest resolution	1uA	10uA	10uA	1uA
		Basic accuracy	0.2%	0.2%	0.2%	0.1%
	AC current	Range	N/A	600mA	600mA	500mA
		The highest resolution	N/A	10uA	10uA	1uA
		Basic accuracy	N/A	0.5%	0.5%	0.5%
	Thermocouple	Range	N/A	N/A	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		N/A	N/A	0.5%	0.5%	
RTD	Range	N/A	N/A	Cu50. Pt100. Pt1000	Cu50. Pt100. Pt1000	
	The highest resolution	N/A	N/A	1°C	1°C	
	Basic accuracy	N/A	N/A	0.5%	0.5%	
CAP	Range	N/A	N/A	N/A	1000uF	
	The highest resolution	N/A	N/A	N/A	0.01nF	
	Basic accuracy	N/A	N/A	N/A	5%	
Frequency		N/A	10Hz~10kHz	10Hz~10kHz	10Hz~10kHz	
Diode test		✓	✓	✓	✓	
Continuity beeper		✓	✓	✓	✓	
Data hold		✓	✓	✓	✓	
Relative value measurement		N/A	✓	✓	✓	
Source	DC voltage	Range	N/A	100mV-10V	100mV-10V	100mV-10V
		Resolution	N/A	0.1mV, 1mV	0.01mV, 0.1mV	0.001mV, 0.01mV, 0.1mV
		Basic accuracy	N/A	0.2%	0.2%	0.2%
	Resistance	Range	N/A	N/A	0~400.0Ω	4kΩ
		Resolution	N/A	N/A	0.1Ω	0.1Ω
		Basic accuracy	N/A	N/A	0.05%+2	0.2%
	DC current	Range	22mA	30mA	30mA	30mA
		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	24V	24V	24V
	Frequency		N/A	100Hz-10kHz	100Hz-10kHz	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. Pt1000	Cu50. Pt100. Pt1000
Loop detection	The 24V loop power supply	✓	✓	✓	✓	
	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 IV 600V Pollution degree 2	CAT IV 600V Pollution degree 2	CAT IV 600V Pollution degree 2	
Size		180×90×52	205×95×42	205×95×42	205×97×60	
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	

## 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 series digital 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*1.5 internal thread 1/4 BSP external thread	1	Options
8	Hand pump	K/P/-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

## 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.



## 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.



## 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".

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



60F/60G/60H



3123  
3125



3126

## 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

## 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	Insulation resistance: AC1200V/10S	Insulation resistance: AC1200V/10S
	Voltage range:	AC720V/10S	Voltage range: AC720V/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



4107B



4108

### 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 × 310 mm	530 × 405 × 310 mm
Standard Carton Gross Weight		21kg	19.4kg

### 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 × 330 mm	510 × 350 × 330 mm	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		✓
VFC		✓
Flashlight		✓
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		3×1.5 AA
Safety		CAT III 600V, CAT II 1000V
Electromagnetic compatibility		IEC61326-1, Group2, Class B
Size		205×95×42mm (Sheathing)
Weight		About 500g
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



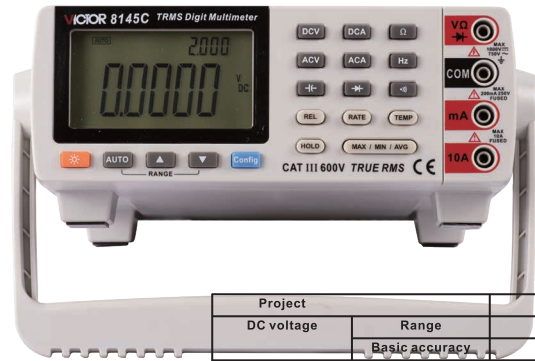
98A+



98C+

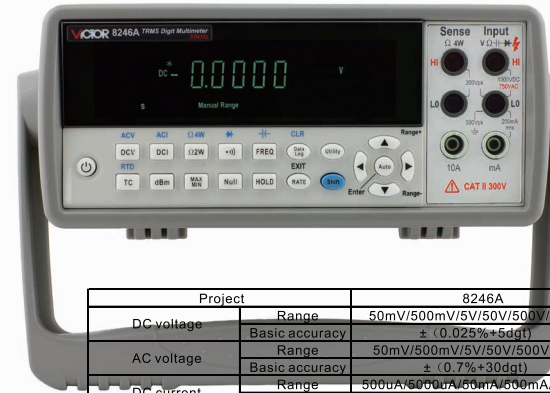


189A



## 8145C

Accuracy: 0.05%  
Display words: 22000



## 8246A/8246B

Accuracy: 0.025%  
Display words: 55000

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

Project		8246A	8246B
DC voltage	Range	50mV/500mV/5V/50V/500V/1000V	50mV/500mV/5V/50V/500V/1000V
	Basic accuracy	± ( 0.025%+5dgt)	± ( 0.025%+5dgt)
AC voltage	Range	50mV/500mV/5V/50V/500V/750V	50mV/500mV/5V/50V/500V/750V
	Basic accuracy	± ( 0.7%+30dgt)	± ( 0.7%+30dgt)
DC current	Range	500uA/5000uA/50mA/500mA/5A/10A	500uA/5000uA/50mA/500mA/5A/10A
	Basic accuracy	± ( 0.15%+10dgt)	± ( 0.15%+10dgt)
AC current	Range	500uA/5000uA/50mA/500mA/5A/10A	500uA/5000uA/50mA/500mA/5A/10A
	Basic accuracy	± ( 0.8%+30dgt)	± ( 0.8%+30dgt)
Resistance	Range	500Ω/5kΩ/50kΩ/500kΩ /5MΩ/50MΩ	500Ω/5kΩ/50kΩ/500kΩ /5MΩ/50MΩ
	Basic accuracy	± ( 0.05%+5dgt)	± ( 0.05%+5dgt)
Capacitance	Range	10nF/100nF/1000nF/10uF/100uF /1000uF/10mF/100mF	10nF/100nF/1000nF/10uF/100uF /1000uF/10mF/100mF
	Basic accuracy	± ( 5%+5dgt)	± ( 5%+5dgt)
Frequency	Range	10Hz~100kHz	10Hz~100kHz
	Basic accuracy	± ( 0.02%+4dgt)	± ( 0.02%+4dgt)
Thermocouple	Range	K: -200.0°C~1372.0°C	K: -200.0°C~1372.0°C
	Basic accuracy	± ( 0.5%+0.5°C)	± ( 0.5%+0.5°C)
RTD	Range	Pt100: -200.0°C~800.0°C	Pt100: -200.0°C~800.0°C
	Basic accuracy	± ( 0.5%+0.5°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	<b>8265</b>	
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/71C**

### Technical data

Project		71A	71B	71C	
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	External power supply	5 ~ 28V	5 ~ 28V	/	
	Range	\	8 types(R/S/K/E/J/T/B/N)	/	
	Basic accuracy		0.2%+4	/	
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)	/	
	Basic accuracy		0.2%+4	/	
	Resolution		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.



3801M

3803M

## Technical indicators

Basic function		3801M	3803M	3824M
Rated input	Power	400W	400W	Dual channel,200W*2
	Input voltage	0-150V	0-500V	0-150V
	Input current	0-40A	0-15A	0-40A(20A/channel)
Constant voltage	Range	0.1~19.999V 0.1~150.00V	0.1~19.999V 0.1~500.00V	0.1~19.999V 0.1~150.00V
	Resolving		1mV,10mV	
	Accuracy		±(0.05%+0.02%FS)	
Constant current	Range	0~3.000A 0~40.00A	0~3.000A 0~15.00A	0~3.000A 0~20.00A
	Resolving		1mA,10mA	
	Accuracy		±(0.05%+0.05%FS)	
Constant resistance	Range		0.05Ω~1 kΩ,1 kΩ~4.5kΩ	
	Resolving		10mΩ,100mΩ	
	Accuracy		±(0.1%+0.5%FS)	
Constant power	Range	0~400W		0~200W
	Resolving		10mW	
	Accuracy		±(0.1%+0.5%FS)	
Dynamic test function	Pattern		CC, CV	
Battery test function	T1&T2		50ms~60s	
	Discharge		CC, CR	
	Max discharge		9999Ah	
	Resolving		1mA,10mA,10mΩ,100mΩ	

Measuring range		3801M	3803M	3824M
Voltage read back value	Range	0~19.999V 0~150.00V	0~19.999V 0~500.00V	0~19.999V 0~150.00V
	Resolving		1mV,10mV	
	Accuracy		±(0.05%+0.1%FS)	
Current read back value	Range	0~3.000A 0~40.00A	0~3.000A 0~15.00A	0~3.000A 0~20.00A
	Resolving		1mA,10mA	
	Accuracy		±(0.05%+0.1%FS)	
Power read back value	Range	0~400W		0~200W
	Resolving		10mW	
	Accuracy		±(0.1%+0.5%FS)	
<b>Scope of protection</b>				
Overvoltage protection		Greater than 21V or 155V	Greater than 21V or 510V	Greater than 21V or 155V
Overcurrent protection		Greater than 3.1A or 42A	Greater than 3.1A or 16A	Greater than 3.1A or 22A
Overpower protection		410W		210W
Over temperature protection			85°C	
<b>Basic parameters</b>				
Power Supply		100Vac±10%~240Vac±10%,50/60Hz		
Display Size		2.8 inch TFT LCD screen, Resolving power320*240		
Body color		Pale		
Body weight		About 3.8KG		
Body size		90mm × 190mm × 300mm		
Standard accessories		Power cord, fuse * 2, manual, certificate		

## Product Basic Function

- ◆ It has key lock function to prevent misoperation;
- ◆ Provide CC, CV, CR, CP and CC+CV, CR+CV multiple basic measurement modes;Provide professional battery test;
- ◆ Provide professional LED test;
- ◆ Dynamic test mode, which can test the dynamic output performance of powersupply;
- ◆ Scanning test mode, which can test the continuity of power output within ascertain range;
- ◆ List mode, which can simulate various load state changes;
- ◆ Short circuit test, used to simulate load short circuit;
- ◆ Support external trigger input;
- ◆ Built in buzzer alarm;
- ◆ Keep data storage function in case of power failure;
- ◆ Remote operation can be carried out through USB, RS-232 (optional) or 485(optional) interfaces;
- ◆ It has overvoltage, overcurrent, overpower and over temperature protection functions, and can flexibly set overvoltage and Over current parameter, which can effectively protect the load;
- ◆ With intelligent fan speed control function, it can effectively reduce fan noise during operation;
- ◆ It has input polarity reverse connection prompt.
- ◆ Power supply voltage: 100Vac±10%~240Vac±10%, 50/60Hz
- ◆ Display: 2.8-inch TFT LCD screen with resolution of 320×240
- ◆ Operating temperature: 0°C to 40°C
- ◆ Storage temperature: -10°C to 70°C
- ◆ Relative humidity: < 80%
- ◆ Interface: standard USB, optional RS232(or 485)
- ◆ Size: 90mm×190mm×300mm (width × height × depth)



- Weather forecast
- Humidity
- Wind direction
- Moon phase
- Temperature
- Air pressure
- Rain gauge
- Alarm clock

## Technical indicators

Special function	0366 RF	0366 wifi
WiFi cloud data	NO	YES
Outdoor temperature range	-40°C to +60°C/°F	
Indoor temperature range	0°C to +60°C/°F	
Temperature accuracy	±1°C	
Humidity range and accuracy	10% to 99% (1% resolution); accuracy: ±5%	
Air pressure range and accuracy	300 to 1100hpa; ±3hpa	
Rainfall display	0 - 9999mm	
Resolution	0.3mm (< 1000mm) 1mm (> 1000mm)	
Rainfall accuracy	< 15 mm: ± 1 mm 15 mm to 9999 mm: ±7%	
Wind speed range and accuracy	0-50m/s 2 m/s ~ 10 m/s: ±3 m/s > 10 m/s: ±10%	
Wind direction accuracy	8 points	
Sampling time	60s	
Wifi standard	802.11 b/g/n	
Wireless frequency	2.4GHZ	
WIFI transmission distance	20m	
Power supply: (shipping without battery)		
Receiver	AA batteries or 5.9V/500mA power adapter	
Transmitter	AA alkaline batteries	
Product Size		
Frame size (LxHxW)	165x135x18mm	
LCD size (LxW)	130x80mm	
Product gross weight	2.0KG	

0310

## Launcher

Integrated Outdoor Transmitter  
(330\*150\*280mm)  
Mounting Pole:  
(76\*76\*25mm)  
Foot Mounting (with pole insert):  
(84\*152\*216mm)  
Mounting Bracket Back Plate:  
(76\*102\*38mm)



Fastened to the Mounting Pole Bracket

Fixed on the wall

## Technical parameter

Measurement	Range	Accuracy	Resolution
Indoor Temperature	0 to 60 °C	±1 °C	0.1 °C
Outdoor Temperature	-40 to 60 °C	±1 °C	0.1 °C
Indoor Humidity	10 to 99 %	±5% (only between 20 to 90%)	1 %
Outdoor Humidity	10 to 99%	±5% (only between 20 to 90%)	1 %
UV Index	1 to 15+	±1	±1
Sunlight	0 to 200klux	±15%	±15%
Rain	0 to 9999mm	<15mm:±1 mm ; >15mm:±7%	1mm
Wind Direction	0 - 360 °	±10°(16 point compass)	±1°
Wind Speed	0 to 50 m/s	2 m/s ~ 10 m/s: ±3m/s, 10m/s ~ 50 m/s: ±10% (whichever is greater)	0.1 m/s
Barometric Pressure	300 to 1100hpa	±3 hpa	0.1 hpa
Wireless Specifications			
• Line of sight wireless transmission (in open air): 100m.			
• Frequency: 433 MHz			
• Integrated Outdoor transmitter interval: 16seconds			
Power Consumption			
• Base station : 3 x AAA 1.5V Alkaline or Lithium batteries (not included)			
• Adaptor: 6V~ 500mA (included)			
• Integrated Outdoor Transmitter: 3xAA alkaline batteries or Lithium			
WiFi Specifications			
1. WIFI Standard: 802.11 b/g/n			
2. WiFi Console RF Frequency: 2.4 GHz			
3. Setup User Interface (UI) support setup device: Build-in WiFi with WAP mode smart device, including laptops, computers, smart phones and smart pads.			
4. Recommend web browser for setup UI: Web browser support of HTML 5			
5. Line of sight WiFi RF transmission (in open air): 20meter (80 feet)batteries (not included)			



## 9-IN-1 INTEGRATED OUTDOOR SENSOR

0345

- Weather forecast
- Temperature
- Humidity
- Air pressure
- Wind speed
- Illuminance/UV
- Rain gauge
- Moon phase
- Alarm clock



### Technical indicators

Measurement	Range	Accuracy	Resolution
Indoor Temperature	0 to 60°C (32 to 140°F)	±1°C (±2°F)	0.1°C (°F)
Outdoor Temperature	-40 to 60°C (-40 to 140°F)	±1°C (±2°F)	0.1°C (°F)
Indoor Humidity	10 to 99%	±5% (only guaranteed between 20 to 90%)	1%
Outdoor Humidity	10 to 99%	±5% (only guaranteed between 20 to 90%)	1%
Rain	0 to 9999mm	<15mm:±1mm, 15mm to 9999mm:±7%	<1000mm(0.3mm)>1000mm(1mm)
Wind Direction	0 - 360°	±10° (8 point compass)	±1° (8 point compass)
Wind Speed	0 to 50m/s	2m/s~10m/s:±0.3m/s, 10m/s~50m/s:±10% (whichever is greater)	0.1m/s
Barometric Pressure	300 to 1100 hpa	±3hpa	0.1hpa
<b>Wireless Specifications</b>			
Wireless Transmit Range(in open air):	330ft(100m)		
Frequency:	433MHz		
Integrated Outdoor Sensor Data Update Period:	16s		
<b>Power Consumption</b>			
Display Console	3×AAA 1.5V Alkaline or Lithium batteries(not included)		
Integrated	3×AA alkaline batteries or Lithium batteries(not included), the batteries provide backup power when there is limited solar energy. Note: Solar panel doesn't charge the battery and it is an auxiliary power supply		
Adapter	5.9V~500mA(included)		
Battery life	Minimum 12 months for sensors(use lithium batteries in cold weather climates less than -20°C(-4°F))		

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### PACKAGING ACCESSORIES

- 1—Display console
- 2—Integrated outdoor transmitter
- 3—Installation accessories
- 4—Power adapter
- 5—Product Manual
- 6—Screwdriver
- 7—Carton packaging



### Technical indicators

Measurement	Range	Accuracy	Resolution
Indoor Temperature	0 to 60°C (32 to 140°F)	±1°C (±2°F)	0.1°C (°F)
Outdoor Temperature	-40 to 60°C (-40 to 140°F)	±1°C (±2°F)	0.1°C (°F)
Indoor Humidity	10 to 99%	±5% (only guaranteed between 20 to 90%)	1%
Outdoor Humidity	10 to 99%	±5% (only guaranteed between 20 to 90%)	1%
Rain	0 to 9999mm	<15mm:±1mm, 15mm to 9999mm:±7%	<1000mm(0.3mm)>1000mm(1mm)
Wind Direction	0 - 360°	±10° (8 point compass)	±1° (8 point compass)
Wind Speed	0 to 50m/s	2m/s~10m/s:±0.3m/s, 10m/s~50m/s:±10% (whichever is greater)	0.1m/s
Barometric Pressure	300 to 1100 hpa	±3hpa	0.1hpa
UV Index	1 to 15+	±1	±1
Sunlight	0 to 200klux	±15%	±15%
<b>Wireless Specifications</b>			
Wireless Transmit Range(in open air):	330ft(100m)		
Frequency:	433MHz		
Integrated Outdoor Sensor Data Update Period:	16s		
<b>Power Consumption</b>			
Display Console	3×AAA 1.5V Alkaline or Lithium batteries(not included)		
Integrated	3×AA alkaline batteries or Lithium batteries(not included), the batteries provide backup power when there is limited solar energy. Note: Solar panel doesn't charge the battery and it is an auxiliary power supply		
Adapter	5.9V~500mA(included)		
Battery life	Minimum 12 months for sensors(use lithium batteries in cold weather climates less than -20°C(-4°F))		



### 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 dehiscis: 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
- 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

