

202507

# Huazheng®

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## PRODUCT BROCHURE

**Huazheng Electric Manufacturing (Baoding) Co.,Ltd**

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Huazheng Electric  
Manufacturing (Baoding) Co.,Ltd



## Company Introduction

- Huazheng Electric Manufacturing (Baoding) Co., Ltd. was established in 2008 and is located in Baoding, Hebei Province, China's famous power test equipment industry base.
- Our main business is the research and development, production, and sales of electric power equipment and testing instruments.
- We have CE and ISO certifications and are also verified by TÜV. Our products are patented and come with calibration certificates.
- Our customers include the State Grid, municipal departments, power engineering companies, transformer plants, cable plants, laboratories, power service companies, railways, ships, oil companies, and metallurgical mines. We have customers in more than 30 provinces and cities in China and over 130 countries and regions around the world.



## Huazheng Development History

In 2008, the company was officially established with a focus on instrumentation, and the Huazheng brand set sail.

In 2009, the first manufacturing plant was built, specializing in low-voltage instruments and meters. The Huazheng brand began to emerge as a significant player.

In 2011, after a rigorous selection process, the Huazheng brand was chosen as a qualified supplier for China's State Grid.

In 2012, we seized the opportunity to join Alibaba International Station, marking the beginning of Huazheng's global marketing strategy.

In 2015, the second manufacturing plant was established to develop and manufacture high-voltage test equipment. This move propelled the enterprise forward and drove significant changes within the company.

In 2016, we forged a strategic partnership with Silicon Valley Brothers Management Consulting Company. The Huazheng brand's value positioning of "300% customer satisfaction" illuminated the path ahead.

In 2017, we participated in industry exhibitions in the United States, Dubai, and South Africa, showcasing the brand's strengths and making a strong debut.

In 2018, the Southeast Asian and South American markets entered a period of growth and success. The Huazheng brand gained a solid reputation, and customers began to seek out our products by name.

In 2021, Huazheng expanded into the European and North American markets, completing the global market puzzle and infusing the brand with new vitality.

In 2023, Hangzhou Wonderful Management Consulting became our strategic partner, further solidifying the brand's marketing and management foundation.

In 2024, the third manufacturing plant was built, integrating R&D, manufacturing, marketing, and service. This development enhanced the functions of our headquarters and positioned the Huazheng brand for boundless possibilities and a bright future.

Looking ahead to the next five years and into the 2030s, the Huazheng brand will lead the industry's healthy growth with the authority and excellence of a segment leader.

General Manager



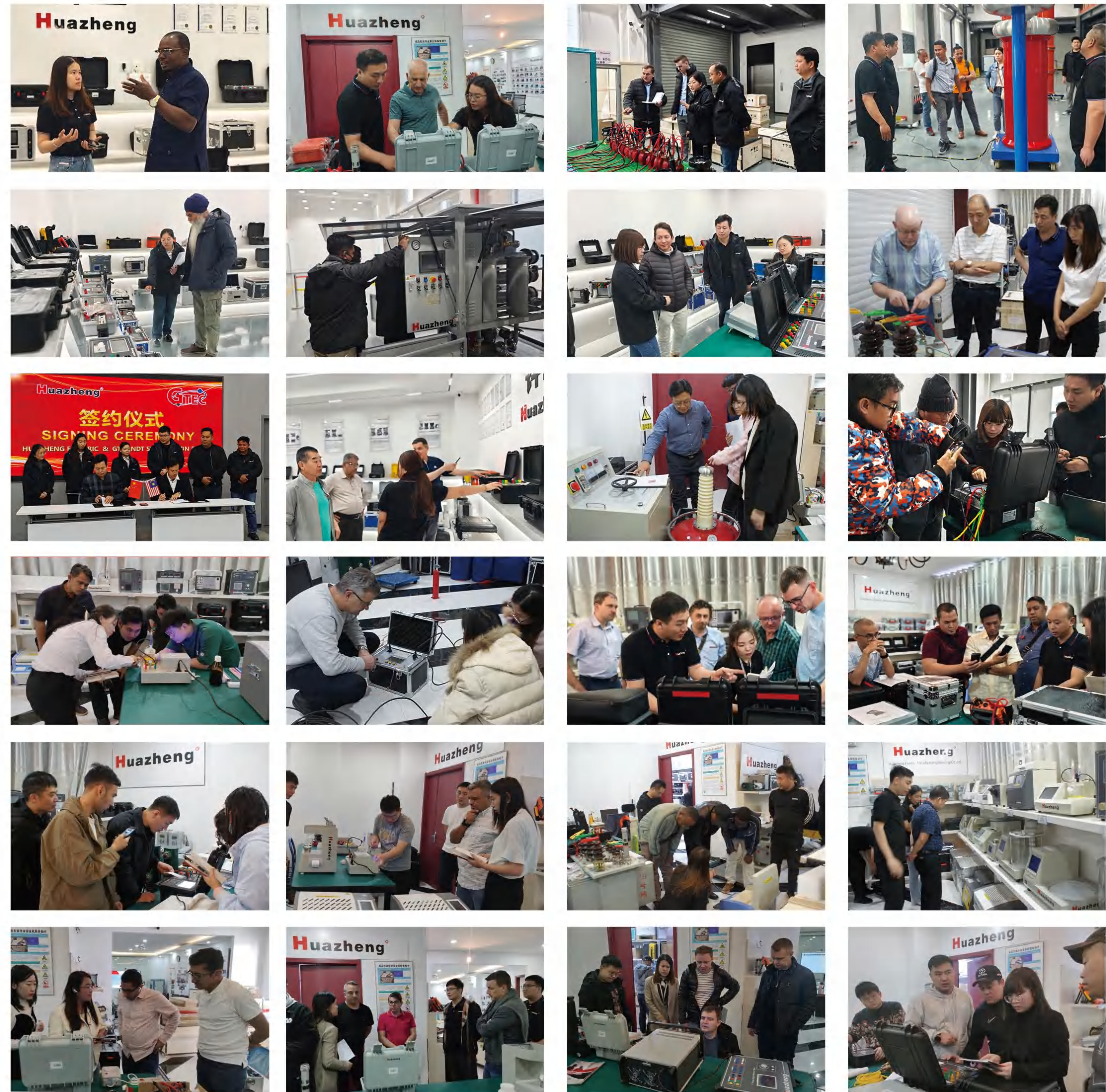
Huazheng Electric Manufacturing(Baoding)Co.,Ltd  
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蔡会学  
David



# “ CUSTOMER VISIT

While HuaZheng is going to the world, more and more customers have been interested in us and have visited us in person. They come from all over the world, such as the United States, Britain, Germany, South Korea, Brazil, Thailand, Philippines, Indonesia and so on. We showed the customer around the production workshop, the warehouse, and our professional sales team. Through the communication with customers, we have gained customers' trust and orders. We will provide the best service and product quality in return for customers.



# PARTICIPATE IN THE EXHIBITION

The exhibition has always been a good channel to show customers the company's products and strength. Our company participated in exhibitions in Dubai, the United States, Thailand, South Africa, the Philippines and other countries every year, and boss David Cai personally leads the sales team to communicate with customers face-to-face. At the exhibition, we continue to improve and upgrade our products and business models by sharing business information with customers, solving customer problems, and listening to customer suggestions. We look forward to meeting you at future exhibitions.



# SUCCESS CASE

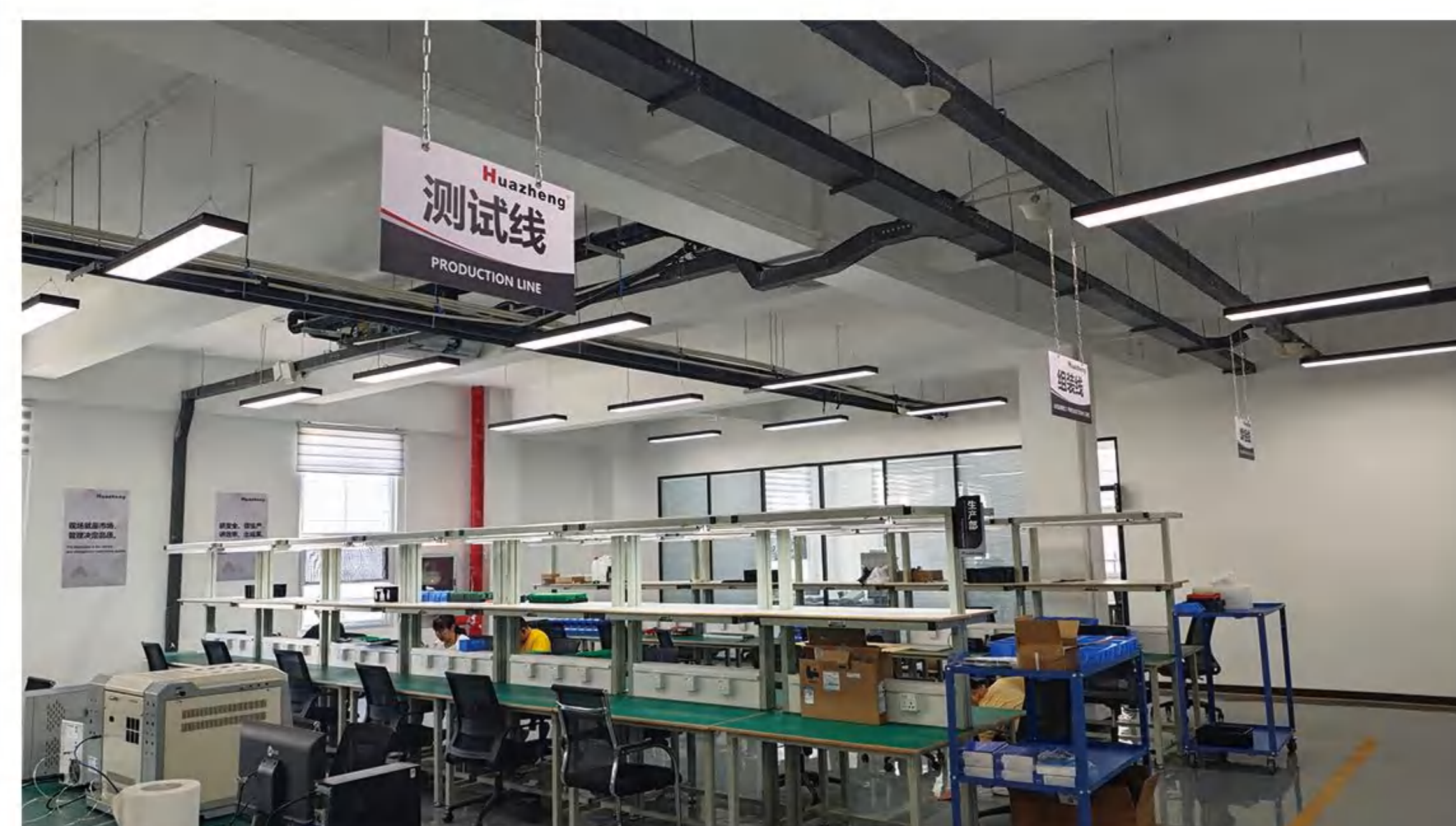
The products have been successfully used in the electric power infrastructure in America, Europe, Africa, Southeast Asia, etc., and have successively established good relationships with customers in more than 100 overseas countries such as the United States, Germany, Canada, South Korea, Japan, Britain, South Africa, etc. Good partnership





# INTRODUCTION

Huazheng Electric Manufacturing Company attaches great importance to the cultivation of talents. All employees of the company have a high level of education background, including 23 technical engineers to provide technical support and R & D for product quality. Huazheng has developed a number of high-tech power testing products with independent intellectual property rights and domestic advanced level by working with North China Electric Power University and Hebei University. Huazheng has more than 400 kinds of products in four categories, they are oil chemical experimental instruments, high-voltage detection equipment, safety protection products and power automation. All products from Huazheng have high accuracy, its obtained the certification of IS9001 or other international authority. Compared with European and American products, Huazheng's products have high cost performance, good quality, short delivery time, wide sales range, good user feedback and low repair rate. Huazheng serves large enterprises such as power system, electrified railway, ship, telecommunication, municipal administration, etc., and it has established a complete electrical testing industry chain in deep cooperation with many enterprises.



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## Oil Test Series

### HZJQ-1,HZJQ-1B,HZJQ-X1,HZJQ-3,HZJQ-6

#### Transformer Oil BDV Tester

Usage : To test the breakdown voltage of insulating oil that is used for many power systems, railway systems, large-scale petrochemical plants and enterprises

Model: HZJQ-1,HZJQ-1B,HZJQ-X1,HZJQ-3,HZJQ-6

Standard: GB/T507-2002, DL429.9-91, DL/T846.7-2004

IEC-60156 / ASTM1816 / ASTM D877

Certificate: CE, Calibration Certificate.



HZJQ-1B



HZJQ-1

- Automatically fulfill the withstand voltage test for oil circulation with a range of 0~80KV or 0~100KV
- Display by large-screen LCD
- The instrument operation is simple. Breakdown voltage value of 1 to 9 times and recurrent times will be automatically saved. After the test, the thermal printer will print each breakdown voltage value and average value.



HZJQ-X1

- Save 100 test results
- With over voltage, over current, limiting protection, in order to ensure the safety of operators.
- With a temperature measurement display function and system clock display.
- Communicate with computer with a standard RS232 interface (optional)

## Oil Test Series

### HZJQ-1,HZJQ-1B,HZJQ-X1,HZJQ-3,HZJQ-6

#### Transformer Oil BDV Tester



HZJQ-3



HZJQ-6

Item	HZJQ-X1	HZJQ-1	HZJQ-1B	HZJQ-3	HZJQ-6
Oil cup number	1	1	1	3	6
Output voltage	0~80kV	0~80kV 0~100kV	0~80kV 0~100kV	0~80kV	0~80kV
Boosting frequency	1~10	1~9	1~9	1~10	1~10
Dimension	446x228x332(mm)	480x400x425(mm)	510x440x440(mm)	590x390x405(mm)	770x680x750(mm)
weight	32.78kg	42.0kg(80kV) 47.0kg(100kV)	37.0kg(80kV) 39.6kg(100kV)	45.0kg	85.0kg
U disk data export	√	x	x	x	x
Voltage distortion rate	<3%				
Voltage raising speed	0.5~5kV/S				
Standing time	0~15min				
Boosting interval	0~5min				
Measuring accuracy	±3%				
Input power	AC220V±10% 50/60Hz				
Power	200W				
Applicable temperature	0°C~45°C				
Applicable humidity	<75%RH				

## Oil Test Series

### HZWS-X2,HZKF-2,HZWS-Z6

#### Transformer Oil Moisture Tester

The trace moisture content in the sample was determined by Karl-Fischer Coulometric titration and volumetric method. Based on the principle of Karl-Fischer Coulomb and volumetric titration, the instrument can accurately measure trace moisture in industrial oils such as electric power and petroleum.

Principle: Karl-Fischer Coulometric titration, volumetric method

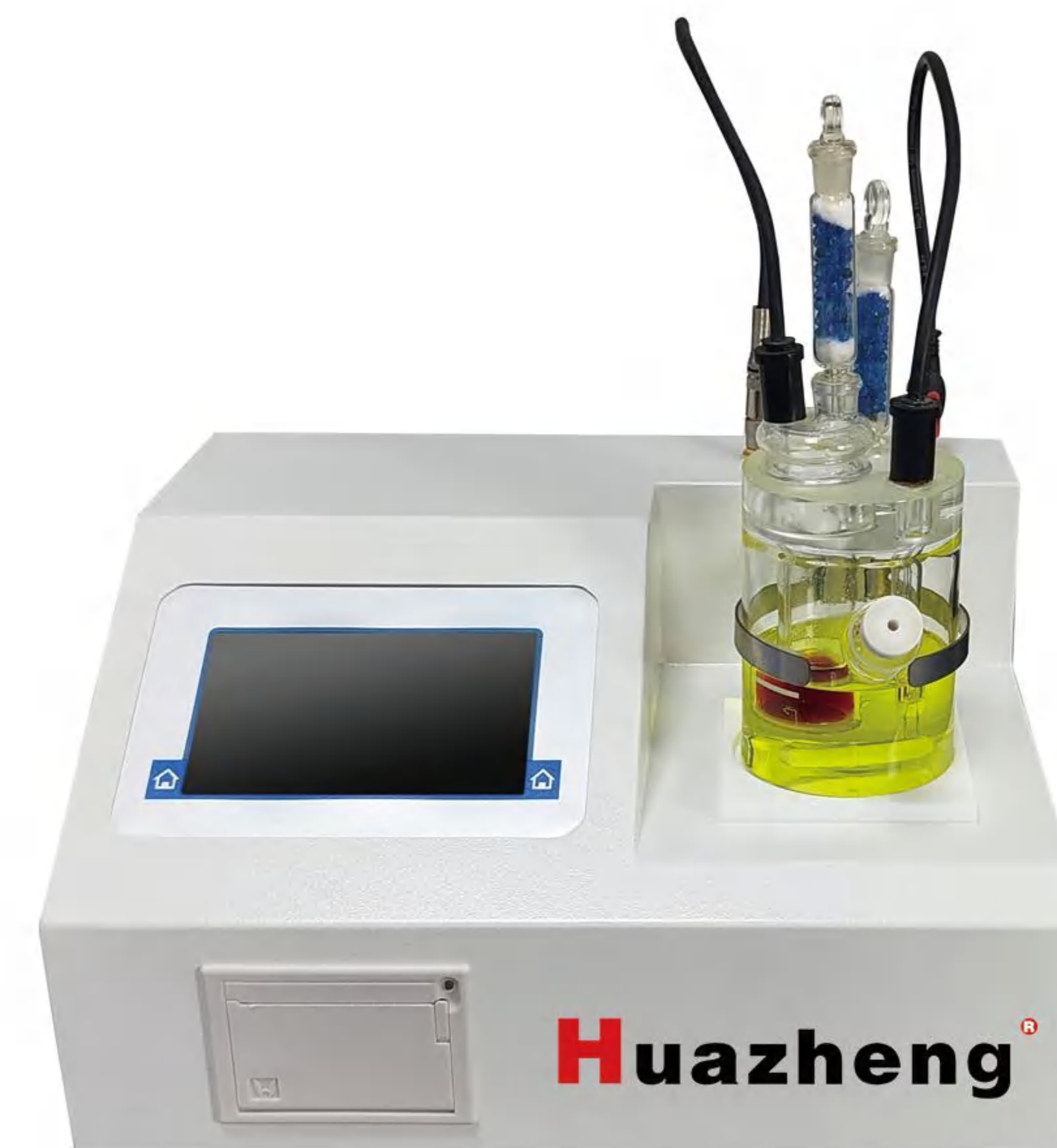
■ Standard: IEC 60814

Measuring transformer oil, diesel, motor oil, gasoline and cooking oil (Other material moisture need to be checked with our engineer)

■ Display: PPM, mg/L, % (according to different models)



HZWS-X2



HZKF-2



HZWS-Z6

Item	HZWS-X2	HZKF-2	HZWS-Z6
Test Method	Karl Fischer Coulometric Titration	Karl Fischer Coulometric Titration	Coulometric method
Determination Range	0 $\mu$ g~200mg	3 $\mu$ g~100mg	3 $\mu$ g~100mg
Resolution	0.1 $\mu$ g	0.1 $\mu$ g	0.1mg
Titration Speed Max	40 $\mu$ g/s	2.4mg/min	2.4mg/min
Instrument Precision	10 $\mu$ g~1000 $\mu$ g $\pm$ 2 $\mu$ g >1000 $\mu$ g 0.2%	3 $\mu$ g~1mg $\pm$ 3 $\mu$ g >1mg should be 0.3% (does not include sampling error)	3 $\mu$ g~1mg $\pm$ 3 $\mu$ g; 0.3% over 1mg (excluding injection error)
Input Power	AC100~240V 50/60HZ	AC220V $\pm$ 10% 50Hz $\pm$ 10%	AC220V $\pm$ 10%, 50Hz $\pm$ 10%
Maximum Power Consumption	30W	30W	30W
Ambient Temperature	10~35 $^{\circ}$ C	20~30 $^{\circ}$ C	20~30 $^{\circ}$ C
Ambient Humidity	$\leq$ 85%	<70%RH	< 70% RH (no condensation)
Dimension	320 $\times$ 240 $\times$ 150(mm)	320 $\times$ 240 $\times$ 200(mm)	265 $\times$ 290 $\times$ 150(mm)
Weight	5kg	4.7kg	3.6kg

## Oil Test Series

### HZJD-2,HZJD-2Z

#### Transformer Oil Tan Delta And Resistivity Tester

Usage: It is used for measuring dielectric dissipation factor and DC resistivity of insulating oil and other insulating liquids.



HZJD-2



HZJD-2Z

■ The instrument adopts the medium frequency induction heating, PID temperature control algorithm. This heating method has the advantages of non-contact between the test cell and the heating body, even heating, fast speed, convenient control, strict control of the temperature within error range of the preset temperature.

■ Internal standard capacitor is SF6 gas-filled three-electrode capacitance, and its capacitor dielectric loss and electrical capacity is independent of ambient temperature, humidity and other effects, so that the instrument accuracy can be ensured even after prolonged use.

■ AC test power supply using AC-DC-AC conversion, effectively avoid the fluctuations in mains voltage and frequency on dielectric loss measurement accuracy effect. Even a generator, the instrument can work properly.

Item	HZJD-2	HZJD-2Z
Method of drain	Manual operation	Auto
Total weight	22kg	
Dimension	500 $\times$ 360 $\times$ 420(mm)	
Ambient temperature	0 $^{\circ}$ C~40 $^{\circ}$ C	
Relative humidity(RH)	<75%	
Power consumption	100W	
Test Voltage AC	500~2000V Continuously adjustable, frequency 50Hz	
Test Voltage DC	300~500V Continuously adjustable	
Measured temperature range	0~120 $^{\circ}$ C	
Electric capacity	5pF~200pF	
Relative Permittivity	1.000~30.000	
Dielectric loss factor	0.00001~100	
DC Resistivity	2.5M $\Omega$ m~20T $\Omega$ m	
Measuring accuracy	Electric capacity	$\pm$ (1% of measured value+0.5pF)
	Relative Permittivity	$\pm$ 1% of measured value
	Dielectric dissipation factor	$\pm$ (1% of measured value+0.0001)
	DC Resistivity	$\pm$ 10% of measured value
Resolution	Temperature measurement error	$\pm$ 0.5 $^{\circ}$ C
	Electric capacity	0.01pF
	Relative capacitance	0.001
	Dielectric dissipation factor	0.00001

## Oil Test Series

### HZKS-3, HZBS-3, HZKS-N3

#### Oil Flash Point Tester

Used to determine the flash point of petroleum products.  
Model: HZKS-3, HZBS-3, HZKS-N3

■ Standard:

HZKS-N3: GB/T267- 88; GB/T 3536-2008, ASTM-D92

HZKS-N3: GB267-88, Europe, ASTM-D92, GB3536-2008

HZBS-3: GB261-A(B), ASTM-D93(A.B.C).

■ Difference:

HZKS-3: Test oil with high viscosity

HZBS-3: Test transformer oil, diesel, kerosene, heptane, highly volatile oil

■ The new high speed digital signal processor is adopted to work reliably and accurately.

■ Test, open cover, ignition, alarm, cooling, printing, the whole test process is completed automatically

■ Automatic measurement of atmospheric pressure and automatic correction of test results.

■ Adaptive PID control algorithm to automatically adjust the temperature according to standard curve.

■ Temperature overvalue automatically stops detection and alarm

■ Thermal - sensitive micro-printer, make printing more beautiful and faster, with offline printing function



HZKS-3



HZBS-3



HZKS-N3

Item	HZBS-3	HZKS-N3	HZKS-3
Temperature Control Range	Room temperature~250°C	Room temperature~400°C	Room temperature~350°C
Flash fire detection	K Thermocouple	optical sensitive sensor to detect the flash point in a non-contact manner	Ion detection ring
Dimension(mm)	390X300X305	380X360X360	440X280X290
Weight	15 kg	18kg	14kg
U disk data export	√	×	×
Resolution	0.1°C	0.1°C	0.1°C
Power Consumption	<500 W	750W	approx 400W
Temperature Sensor	Platinum Resistor(PT100)	Platinum Resistor(PT100)	Platinum Resistor(PT100)
Ambient Temperature	10 ~ 40°C	5~ 40°C	0 ~ 40°C
Relative Humidity	≤ 85% RH	≤ 85% RH	≤ 85% RH
Power Supply	AC 220V ± 10% 50/60Hz	AC 220V ± 10% 50/60Hz	.AC220V ± 20% ; 50HZ ± 10%

## Oil Test Series

### HZZL-3

#### Oil Interfacial Tension Tester

HZZL-3 Automatic Oil Interfacial Tension Tester meets ASTM D971 standard. and can measure surface tension (Liquid-gas phases interface) and the interfacial tension (liquid-liquid phases interface) of various kinds of liquid based on the ring method (platinum ring method).

- It uses electromagnetic force -balance-type transducer, improving the accuracy of the measurement;
- Demarcated one point and you can adjust the instrument, and it's very convenient;
- The instrument can show current weight values and tension Equivalence
- The instrument can revise the test result automatically
- The instrument can 7) store 255 records
- The instrument has a mini- printer,you can print the test result any time



Platinum wire radius: 0.30mm  
Platinum ring radius: 9.85mm

Item	HZZL-3
Measurement range	2-200mN/m
Precision	0.1% Reading ± 0.1 mN/m
Resolution	0.1mN/m
Sensitivity	0.1mN/m
Input power	AC 220V ± 20%, 50Hz/60Hz±10%
Maximum power consumption	20W
Applicable ambient temperature	10~30°C(Typical Value 25°C)
Applicable ambient humidity	≤ 85% RH
Dimension	185X260X360(mm)
Weight	6kg

## Oil Test Series HZCS-3, HZCS-6, Ti-40 Automatic Oil Acidity Tester

Usage: used to test the acid value of petroleum products such as transformer oil, steam turbine oil, diesel, gasoline, etc.



■ Because of the preparation of the standard acid for instrument calibration and calibration procedure, the clients can calibrate the instrument and the neutralizing liquid at any time so that the instrument can overcome the defect of changes in concentration of neutralizing liquid during use.

■ At the same time, during the test the instrument will automatically deduct the background value of the extract so that the instrument can ignore the influence from the change of background value on the extraction.

Item	HZCS-3	HZCS-6
Test station	1-3	1-6
Test range	0.002~1mg KOH/g	
Test error	≤±0.005mg KOH/g	
Repeatability	≤0.005mg KOH/g	
Ambient temperature	10°C~45°C	
Relative humidity(RH)	≤85%RH	
Voltage supply	AC220V ±10% 50/60Hz	
Power	50W	
Dimension	410x355x240(mm)	
Weight	12.5kg	

This instrument has a variety of titration modes, including pre-titration, preset endpoint titration, blank titration or manual titration. After the titration finish, the user can generate it as the customized titration mode directly, which expands the testing. The instrument uses different electrodes to perform different titrations, including acid-base titration, oxidation-reduction titration, precipitation titration, Los  $\Sigma$  titration, non-aqueous titration and so on, and also the pH measurement. It can be connected to a PC through a USB interface and controlled by the titration software which is specially developed. The titration curve and the first-order and second-order derivatives can be displayed on the computer in real time, which is convenient for editing and modifying the titration mode, and can carry out the statistics of the results.



Item	Ti-40	
Measuring range	pH	0.00pH~14.00pH
	mV	-1800.0mV~1800.0mV
	Temp	-5.0°C~105.0°C
Resolution	pH	0.01pH
	mV	0.1mV
	Temp	0.1°C
Relative accuracy	pH	±0.01pH±1 bit
	mV	±0.03% Full Scale
	Temp	±0.03% Full Scale
Burette volume accuracy	10ml burette	±0.025ml
	20ml burette	20ml burette
Burette filling solution speed	55±10s(When the burette is in full scale)	
Dimension	340x400x400(mm)	
Weight	10kg	

## Oil Test Series HZ-662, HZ1005B Automatic Distillation Tester

Usage: used to determine the distillation characteristics of natural gasoline, motor gasoline, aviation gasoline, jet fuel, solvents with special boiling points, naphtha, kerosene, diesel, gas oil distillate fuels and similar petroleum products

- The cooling medium is circulated inside, and antifreeze is used instead of cooling water.
- The 10.4-inch large true color touch screen makes it easy to use.
- Fully automatic distillation process, full automatic process monitoring.
- The instrument is developed according to ASTM D86



Item	HZ-662
Heating power	2KW
Refrigeration power	0.5KW
Steam temperature measurement range	0~400°C
Electric furnace temperature measurement range	0~500°C
Refrigeration temperature range	0~100°C
Refrigeration control accuracy	±1°C
Temperature measurement accuracy	±0.1°C
Volume accuracy	±0.1ml
Fire alarm system	nitrogen fire
Input power	AC 220V ±10% 50/60 HZ

The instrument is designed and manufactured according to the national standard GB/T6536 and ASTM D86, which is suitable for the distillation and determination of petroleum products such as gasoline, jet fuel, petroleum solvent, kerosene and diesel oil.

The instrument is mainly composed of distillation unit, condensing unit and receiving system.



Item	HZ1005B
Distillation heating power	0 ~ 1200W continuous adjustable
Heating furnace lifting can be adjusted	35mm
Flask support plate diameter	50mm and 37.5mm
Condensation bath temperature adjustment range	-5 ~ 80°C
Working power supply	AC220V 50Hz
Distillation range	room temperature-400°C
Condenser capacity	8.3L
Condensation method	compressor refrigeration

## Oil Test Series

### HZLY,HZKC-1000,HZAD-P

#### Oil Purifier

The main function of HZLY Series of single and double stage high-efficient vacuum oil purifier is to remove free and dissolved water, gases, and mechanical impurities from insulating oils so as to ensure its purity and improve its insulation property. It is suitable for oil filtration of transformers of various specifications. It is also suitable for the filtration of capacitor oil and freezer oil. Low noise, controlling system safe and reliable.

Model	HZLY-20	HZLY-50A	HZLY-75A	HZLY-100A	HZLY-150A	HZLY-200A
Nominal flow(L/h)	1200	3000	4500	6000	9000	12000
Net oil capacity(L/min)	20	50	75	100	150	200
Pumping rate(m³/h)	21	252	540	540	1080	1080
Power(KW)	17	36	55	67	147	150
Working temperature(°C)	40~70°C					



HZAD-P series dry air generators are also suitable for air drying and circulating drying in warehouses, packaging, electronics, medicine and other industries. It is also suitable for drying nitrogen, hydrogen from generator sets and SF6 equipment.

Model	HZAD-2P	HZAD-40P	HZAD-120P	HZAD-300P	HZAD-600P
Air supply (m³/h)	2	40	120	300	600
Work pressure	0.7~0.8MPa				
Finished gas dew point	-55°C~-70°C				
Use gas pressure	0.01~0.8MPa (Can be adjusted arbitrarily)				
Dusty particles	≤0.01µm				



HZKC-1000 series equipment is used to evacuate the gas in the transformer, so that the iron core, coil and insulating materials in the transformer are completely exposed to the high vacuum environment. In the high vacuum environment, the moisture absorbed by the iron core, coil and insulating material evaporates into the air and is discharged by the vacuum pump, so as to achieve the function of drying the transformer.

Model	HZKC-1000
Pumping capacity	1080M3/h
Ultimate vacuum	≤5Pa (0.05mbar)
Operating noise	≤75dB(A)
Interface diameter	DN50
Ambient temperature	-10~50°C
Working power supply	50Hz380V three-phase three-wire
Total power	8kw
Dimensions(mm)	1400×900×1600
Weight(kg)	850



## Oil Test Series

### HZJS-1B

#### Partical Counter

HZJS-1B Oil Particle Counter adopts Laser Extinction Technology, is designed to measure the particles' size and quantity in oil liquid. It is Suitable for tests of pollution degree of solid particles in hydraulic oil, lubricating oil, fire resistant oil, insulating oil, turbine oil, organic liquid and polymer solution, etc. So our instrument can be used in aviation, spaceflight, electric power, petroleum, chemical industry, transportation, port, metallurgy, machinery, automobile manufacturing and many other fields.



Item	HZJS-1B
Size Range	1µm-600µm
Channel	8 channel(size can be set free in the range of selected curve)
Sample Volume	≥0.2ml
Sample Speed	5ml/min~80ml/min
Resolution	<10%
RSD	<2%
Coincidence deviation limit	10000/ml
Range of Pressure	low: 0~6bar High:3~400bar
Viscosity	<350cst
Storage Space	100 set
Power Supply	AC220V±10%; 50Hz; ≤200W
Battery	5200mA; 6~8h
Data Output	RS232 and printer inside

## Oil Test Series

### HZYN-1301, HZYN-1302

#### Transformer Oil Viscosity Tester

This method is suitable to determine kinematic viscosity of liquid petroleum products ( It refers to Newtonian liquids ),it can determine the time that the liquid with the certain volume flows past the calibrated glass capillary viscometer under the gravity in the certain stable temperature and the value that the constant value of capillary in the viscometer multiplies the flowing time, that is , the determined kinematic viscosity of liquid at the temperature.

- Use imported sensors, PID digital technology to control the temperature, has the wide range to control the temperature, has the high precision to control the temperature.
- Network communication, can choose the functions by remote control and glossary.
- You can adjust the test times from once to six times, so you can be convenient to have the test.



Item	HZYN-1301	HZYN-1302
Temperature control range	indoor temperature~120°C	-40°C~60°C
Liquid bath hole	4	2
Temperature control precision	Room temperature ~120°C≤±0.1°C	≤ ± 0.03°C
	Room temperature ~40°C≤±0.2°C	
Heating power	1000W	800W
Refrigerating power	Without this feature	400W
Dimension	440x350x460	780x530x720
Weight	14kg	64kg
Input power source	AC220V±10V 50HZ	
Temperature control range	-40°C~60°C	
Relative humidity	<80%	

## Oil Test Series

### HZMD-2001,HZNQ-1101, HZSD-29

Petroleum products density tester follows national standards 1) ASTM D1298 Density Measurement of Petroleum and Liquid Petroleum Products (Density Meter Method), and is mainly used for the density determination of transparent, low viscosity liquid and viscous liquid, with the characteristics of high temperature control precision, reliable stability and easy operation.

Item	HZMD-2001 Density Tester
Range of temperature measurement	room temperature ~100°C
Temperature control precision	≤±0.1°C
Number of experimental cups	two holes
Power	≤1000W
Input power	AC220V±20% 50HZ ±10%
Ambient temperature	0°C~40°C
Relative humidity	<85%
Contour dimension	440x350x550 (mm)



HZNQ-1101 Oil pour point Tester, is used in the determination of transformer oil, lubricating oil and light oil and freezing point values of all kinds of chemical raw materials

Item	HZNQ-1101 Oil Pour Point Tester
Implement standard	ASTM D97,IEC60296
Range	room temperature ~ -45 °C
Accuracy	±0.1°C
Display	digital tube display
Test mode	automatic temperature control, manual test



The instrument applies to the determination of the color of every type of lubricating oil and other petroleum according to ASTM D1500. During the usage of the measuring instrument, the sample of petroleum is injected to the colorimetric tube. Then the chromaticity and the color number are determined after the sample is compared with the standard color sheet.



Item	HZSD-29 Colorimeter
Input power	240V,100W as well as the milk-shell bulb with dull-polished lining with the temperature as 2750±50K.
Colorimetric tube	Colorful flat-bottom glass tube with its inner diameter as Φ32.5~Φ33.4mm and its height as 120~130mm.
Standard color disk	26 light holes with the diameter asΦ14, including 25 of them containing glass sheet of which the color number ranges successively and respectively from 1 to 25. The 26th hole is blank.

# Oil Test Series

## HZGC-1212A

### Gas Chromatograph (DGA)

Gas chromatographic analysis technique is an analysis of multicomponent mixture separation and analysis technology. It mainly uses the difference in boiling point and polarity of sample and in the chromatographic column adsorption coefficient, so that the various components in chromatographic column can be separated and analyzed qualitatively and quantitatively.

Because the method has characteristics of high separation efficiency, fast speed of analysis and less consumption of sample, so it has been widely used in petroleum chemical industry, biological chemistry, medicine and health, the health and quarantine, food inspection, environmental protection, food industry, medical and clinical departments



TEMP	TEMP program	Event	Injector	Detector	Flow Rate	Method/Network
actual measurement	Set up (°C)	desired (°C)	State			
TR1	16.4	380.0	400.0	●		
COL	15.8	60.0	80.0	●		
DET1	16.7	200.0	220.0	●		
	0.0	0.0	20.0	●		
DET2	16.0	100.0	120.0	●		
	0.0	0.0	20.0	●		
DET3	16.4	200.0	220.0	●		
	0.0	0.0	20.0	●		

Item	HZGC-1212A
Test gas	7 Gases or 9 Gases(such as H <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> , CO, CO <sub>2</sub> , CH <sub>4</sub> , C <sub>2</sub> H <sub>4</sub> , C <sub>2</sub> H <sub>6</sub> , C <sub>2</sub> H <sub>2</sub> )
Temperature control area	6 ways
Temperature	Room temperature above 5 °C ~ 400 °C. Increment:1 °C. Accuracy :±0.1 °C
Temperature-programmed order	16 order
Programming	rate 0.1 ~ 39 °C /min (common type); 0.1 ~ 80 °C /min (high speed)
External events	4 ways
Injector types	packed column sampler, capillary injector
Detector number	FID, TCD, optional
Start sampling	manual, automatic optional
Communication interface	Ethernet: IEEE802.3

# Oil Test Series

## HZZD-501,GA-2009,HGZ-300

### Gas Chromatograph (DGA)

Item	HZZD-501 Multi-function Automatic Oscillator
Temperature range	Room temperature ~120°C
Temperature control precision	Room temperature ~50°C ± 0.2°C
	50°C~100°C ± 0.3°C
	100°C~120°C ± 0.5°C
Oscillation frequency	275± 3 times/minutes
Oscillation amplitude	35mm
Supply voltage	AC 220V± 10% 50/60Hz
Applicable ambient temperature	5°C~50°C
Applicable ambient humidity	≤ 85% RH
Dimension	500×350×385(mm)
Weight	35Kg



Item	GA-2009 Air Generator
Air purity	three grade purification without oil
Output flow rate	type 0-2L/min
Output pressure	A output 0-0.4Mpa
	B output 0-0.5Mpa
Noise	less than 42 DB
Supply voltage	AC 220V± 10% 50/60Hz
Applicable ambient temperature	15°C~40°C
Applicable ambient humidity	≤ 70% RH
Dimension	500 x 370 x 220(mm)
Weight	26Kg



Item	HGZ-300 Hydrogen generator
Gas production purity	99.999 % (relative oxygen content)
Output flow rate	0 -500 ml/min
Output pressure	0.4Mpa
Supply voltage	AC 220V 50/60Hz
Applicable ambient temperature	0-40°C
Applicable ambient humidity	≤ 85% RH
Environmental conditions	no large amount of dust and corrosive gases
Dimension	430×280×240(mm)
Weight	12.5Kg



## Transformer Test Series

### HZ-3110B, HZ-3120A, HZ-3140A, HZ-3150A, HZ-3110

#### Transformer DC Winding Resistance Tester

The DC resistance is the transformer's semi-finished product, finished product test, installation, commissioning test, and electric part prevention test necessary test project, the transformer coil can effectively find the device welding, connecting parts loose, missing unit, disconnection, and other manufacturing default and other hidden danger occurred after operation.

- It can measure DC resistance of transformer, motor, cable, etc
- Which model of DC resistance is chosen? How to choose the model?
  1. Transformer DC resistance: the model selection is related to the transformer capacity and voltage level.
    - HZ-3110B: 20000KVA and 30000KVA, HZ-3120A: Below 180000kva, HZ-3140A: Below 400000kva, HZ-3150A: Below 500000kva
  2. Motor DC resistance: the model selection is related to the motor capacity. Generally 10A is recommended.
    - If the motor capacity reaches hundreds of thousands, 20A is recommended.
  3. Cable DC resistance: the model selection is related to cable length, voltage grade and cross-sectional area.



HZ-3110B      HZ-3120A      HZ-3140A      HZ-3150A      HZ-3110

Item	HZ-3110B	HZ-3120A	HZ-3140A	HZ-3150A	HZ-3110
Testchannel	1	1	1	1	1
Output current	<5mA, 40mA, 200mA, 1A, 5A, 10A	<5mA, 1A, 2.5A, 5A, 10A, 20A	<5mA, 2.5A, 5A, 10A, 20A, 40A	<5mA, 2.5A, 5A, 10A, 20A, 50A	<5mA, 40mA, 200mA, 1A, 3A, 10A
Range	0.5mΩ~0.8Ω (10A) 1mΩ~2Ω (5A) 5mΩ~10Ω (1A) 100mΩ~50Ω (200mA) 1Ω~250Ω (40mA) 100Ω~100KΩ (<20mA)	100μΩ~1Ω (20A) 500μΩ~2Ω (10A) 1mΩ~4Ω (5A) 2mΩ~8Ω (2.5A) 5mΩ~20Ω (1A) 10Ω~20KΩ (<5mA)	50μΩ~500mΩ (40A) 100μΩ~1Ω (20A) 500μΩ~2Ω (10A) 1mΩ~4Ω (5A) 2mΩ~8Ω (2.5A) 10Ω~20KΩ (<5mA)	50μΩ~400mΩ (50A) 100μΩ~1Ω (20A) 500μΩ~2Ω (10A) 1mΩ~4Ω (5A) 2mΩ~8Ω (2.5A) 10Ω~20KΩ (<5mA)	0.5mΩ~0.2Ω (10A) 1mΩ~3Ω (3A) 5mΩ~6Ω (1A) 100mΩ~40Ω (200mA) 1Ω~200Ω (40mA) 100Ω~200KΩ (<5mA)
Dimension	365x285x175(mm)	410x250x380(mm)	410x250x380(mm)	410x250x380(mm)	365x285x175(mm)
Weight	5.5kg	14.6kg	15.5kg	15.5kg	6.5kg
pc software	×	×	×	×	×
U disk data export	√	√	√	√	×
Mobile phone bluetooth	√	×	×	×	×
Resolution	0.1μΩ				
Accuracy	±(0.2%+2 Readings)				
Operating temperature	0℃~40℃				
Ambient humidity	≤90%RH (non condensed)				

## Transformer Test Series

### HZ-3310B, HZ-3320D, HZ-3310D, HZ-3310E-I

#### Transformer DC Winding Resistance Tester

- Perpetual calendar, 100 groups of data storage, temperature automatic conversion etc functions,
- USB & RS 485. It can communicate with the computer.
- This instrument can complete measurement of three phases DC resistance, Also apply phase by phase testing function, carry out phase by phase testing for the transformer applying YN and D (Y) connection way, automatically calculate three phases unbalance rate after testing is complete.
- This instrument is also equipped automatic magnetic assist function.
- This machine has audible discharging alarm, discharging indication is clear and mis-operation is reduced.
- This machine has protection and alarm function to protect instrument.



HZ-3310B      HZ-3320D      HZ-3310D      HZ-3310E-I

Item	HZ-3310B	HZ-3320D	HZ-3310D	HZ-3310E-I
Testchannel	3	3	3	3
Output current	Three-phase test: 5A+5A; 1A+1A; 200mA+200mA; 20mA+20mA; Single-phase test: 10A; 5A; 1A; 200mA; 20mA;	0~20A(automatic selection)	0~10A(automatic selection)	1mA, 10mA, 100mA, 1A, 5A, 10A
Range	Three-phase test: 5A+5A: 2mΩ~1.2Ω; 1A+1A: 10mΩ~6Ω; 200mA+200mA: 100mΩ~30Ω; 20mA+20mA: 10Ω~200Ω; Single-phase test: 10A: 1mΩ~2Ω; 5A: 2mΩ~4Ω; 1A: 10mΩ~20Ω; 200mA: 100mΩ~100Ω; 20mA: 10Ω~20KΩ;	0~500Ω	0~100Ω	500μΩ~200mΩ (10A) 10mΩ~1Ω (5A) 100mΩ~20Ω (1A) 10Ω~200Ω (100mA) 50Ω~2KΩ (10mA) 500Ω~50KΩ (1mA)
Dimension	428x350x230(mm)	425x340x195(mm)	425x340x195(mm)	330x210x220(mm)
Weight	10.8kg	10.5kg	10.5kg	3.0kg
pc software	√	√	√	×
U disk data export	√	√	√	√
Mobile phone bluetooth	×	×	×	×
Resolution	0.1μΩ			
Accuracy	±(0.2%+2 Readings)			
Operating temperature	0℃~40℃			
Ambient humidity	≤90%RH (non condensed)			

## Transformer Test Series

### HZTTR80A, HZBB-10B, HZBB-10B-I, HZBB-10S

#### Transformer Turns Ratio Tester

During the processing of the semi-finished products and the finished products in transformer production, the transformer newly installation before using, or according to IEC and national standard, the turns ratio or voltage ratio should be tested in the circle rate.

- Adopt three-phase output voltage, three-phase pressure, three-phase simultaneous measurement, improve test speed, and automatically identify transformer wiring group if the transformer has the neutral point. (HZBB-10B, HZBB-10B -I).
- Test turn ratio of PT and part of CT
- After inputting the rated parameter, it can automatically measure the transformer ratio value, error value and on-load tap-changer position.
- The device can be equipped with both print output, USB port, which is convenient for paperless office



HZTTR80A



HZBB-10B-I



HZBB-10B



HZBB-10S

Item	HZTTR80A	HZBB-10B	HZBB-10B-I	HZBB-10S
Ratio measurement range	0.9 ~ 10000	0.8 ~ 20000	0.8 ~ 20000	0.9 ~ 10000
Output voltage	Selectable 5V or 80V	12V, 24V, 40V, 80V, 160V (manual selection)	24V	24V
Ratio measurement accuracy	5V Range: ±(0.1% + 2 digits)(0.9-50), ±(0.2% + 2 digits)(51-200), ±(0.5% + 2 digits)(201-600) 80V Range: ±(0.1% + 2 digits)(0.9-500), ±(0.2% + 2 digits)(501-2000), ±(0.5% + 2 digits)(2001-10000)	±0.2% (0.8-2000)	±0.2% (0.8-2000)	±(Reading×0.1%+2 words)(≤500)
Mobile phone bluetooth	✓	×	×	×
U disk data export	✓	✓	✓	✓
Dimension	360x290x170(mm)	470x410x195(mm)	455x380x190(mm)	246 ×156×62(mm)
Weight	5kg	4kg	2kg	1.7 kg
Input power	100V~240V AC, 50/60 Hz	AC 110 ~220V 50/60Hz	AC 110 ~220V 50/60Hz	AC 100-240 V 50/60 HZ
Applied temperature		-10°C~40°C		-10°C~50°C
Relative humidity		≤85%, non-condensing		≤90%, No dew

## Transformer Test Series

### HZ2162

#### Transformer Turns Ratio and Winding Resistance Tester

The HZ2162 Transformer Comprehensive Tester integrates a DC resistance tester and transformer ratio tester into one device for testing large power transformers.

- Product Design
  1. One-time wiring completes all test items, reducing the workload of on-site testers.
  2. Equipped with a 7-inch color touch LCD screen for control and display, providing a user-friendly interface.
  3. Built-in micro printer for on-site printing of test results.
  4. USB storage function for external storage of test results.
  5. One isolated RS232 communication interface with standard protocol communication.
  6. Bluetooth communication module with standard protocol wireless communication.
  7. High-reliability RS485 bus for internal communication.
  8. Isolated circuit design to eliminate interference between test functions; hardware and software filtering to improve anti-interference capability; good grounding and shielding measures to enhance overall anti-interference capability.

- DC Resistance Test

1. Three-phase simultaneous testing and automatic magnetization.
2. High and low voltage current and potential test leads can be connected to the transformer at once, eliminating the need to switch test leads during the test.
3. For star-connected windings with a neutral point, the A0, B0, and C0 phase resistances can be tested simultaneously, significantly saving test time.
4. For an internally delta-connected three-phase five-limb transformer, the automatic excitation method can be used during low-voltage side testing, which offers fast testing speed.
5. Displays and prints all test data of high, medium, and low voltage windings, automatically calculates three-phase unbalance, and prints resistance values converted to rated temperature.
6. Comprehensive back EMF protection.

- Transformer Ratio Test

1. Chinese/English menu prompts, simple and convenient operation.
2. Three-phase testing only requires inputting the high-voltage side connection method to automatically measure the group.
3. Capable of both single-phase measurement and automatic testing of three-phase windings. The connection group can be arbitrarily selected, completing the measurement of parameters such as the ratio, error, and connection group of AB, BC, and CA phases in one go.
4. Protection function for high and low voltage reverse connection.
5. Fast testing speed, completing single-phase testing in 15 seconds.
6. Protection functions for transformer short-circuit and inter-turn short-circuit.



Item	HZ2162
Three-Phase Test	10A, 5A, 1A three ranges.
Test Range	10A: 500.0μΩ~2Ω
	5A: 10mΩ~4Ω
	1A: 1Ω~20Ω
Phase-Separated Test	20A, 10A, 5A, 1A four ranges.
Test Range	20A: 100.0μΩ~1Ω
	10A: 500.0μΩ~2Ω
	5A: 10mΩ~4Ω
	1A: 1Ω~20Ω
Resolution	0.1μΩ
Measurement Accuracy	class 0.2

## Transformer Test Series

### HZ-600A, HZ-600C, HZ-600A+

## Sweep Frequency Response Analyzer

By detecting the amplitude-frequency response characteristics of various windings of transformer, and comparing the detection results longitudinally or laterally, the possible deformation of transformer windings can be judged according to the variation degree of amplitude-frequency response characteristics

- Characteristics of transformer windings are measured with frequency sweep method.
- Quick measuring, measuring of a single winding is within 3 minutes.
- Digital frequency synthesis, with higher frequency stability.
- 5000V voltage isolation fully protects safety of the testing computer.
- Able to load 9 curves at the same time and automatically calculate parameters of each curve and diagnose winding deformations to provide the reference diagnosis conclusion.
- Software management is humanized with high degree of intelligence. It is compatible to Win7 and Win10 system.



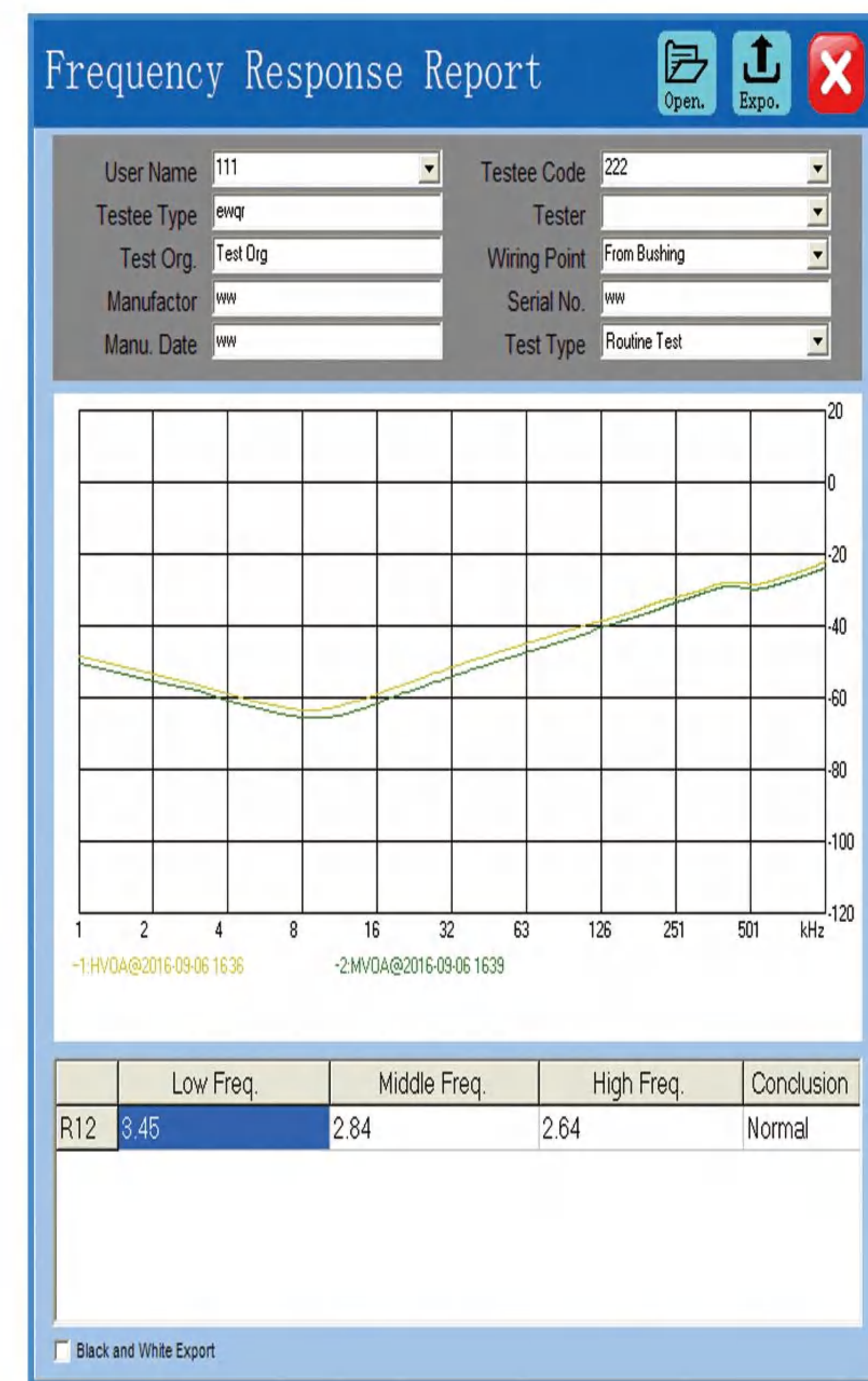
HZ-600A



HZ-600C



HZ-600A+



Item	HZ-600A	HZ-600C	HZ-600A+
Frequency sweep scope	10Hz-2MHz	10Hz-2MHz (10Hz-30MHz, optional)	10Hz-2MHz
Measuring dynamic range	-100dB~20dB	-100dB~20dB	-100dB~20dB
working voltage	AC220V±10% 50/60Hz	AC100-240V 0-400Hz	AC220V±10% 50/60Hz
Dimension	270x280x115(mm)	270x280x115(mm)	240x190x40(mm)
weight	3.6kg	3.6kg	2kg
Output voltage	Vpp-25V, adjusting automatically in test		
Output impedance	50Ω		
Input impedance	1MΩ (the response channel is built with 50Ω matching resistance)		
Frequency accuracy	0.001%		
Frequency sweep manner	linear or logarithmic, frequency sweep interval and number of sweep points are freely setttable		
Curve display	Mag-freq. curve		

## Transformer Test Series

### HZ-2000H

## Transformer Tan Delta Tester

Dielectric loss measurement is a basic method in insulation test and effectively detect damp, degradation and partial defect of insulation of electrical equipment. This method is widely used in electric manufacturing, electric equipment installation, connection and preventive test. Measurement on dielectric loss of transformer, mutual inductor, reactor, capacitor, bushing and arrester is the most basic method to test their insulation property

- Highly accurate and it is easy to realize automatic measurement.
- Strong anti-interference capacity
- Large screen LCD
- high test speed, high precision,
- automatic digitization and easy operation



HZ-2000H(digital)

Item	Parameter	HZ-2000H
Accuracy	Cx	± (reading×1%+1pF)
	tgδ	± (reading×1%+0.00040)
Anti-interference		Variable frequency anti-interference, the above accuracy can be reached under 200% interference
Capacitance range	Internal HV	3pF~60000pF/10kVM,60pF~1μF/0.5kV
	External HV	3pF~1.5μF/10kV 60pF~30μF/0.5kV
	Resolution	Maximum 0.001pF, 4 valid figures.
tgδ range		unlimited, 0.001% resolution, automatic identification for capacitance, inductance and resistance of three tested articles
	Test current range	10μA~5A
Internal HV	Set voltage range	0.5-10KV (12KV can be customized)
	Maximum output current	200mA
	Buck-bust method	continuous stepless regulation
	Test frequency	40-70Hz single frequency can be set at will 50±0.1Hz to 50±10Hz automatic dual frequency conversion optional setting. 60±0.1Hz to 60±10Hz automatic dual frequency conversion optional setting.
	Frequency accuracy	±0.01Hz
External HV		In case of UST, maximum test current is 5A, and power frequency or variable frequency is 40-70Hz
		In case of GST, maximum test current is 10KV/5A, and power frequency or variable frequency is 40-70Hz
Printer		Micro thermal printer
Measuring duration		About 40s, depending on measuring method
Input power supply		180V~270VAC, 50Hz/60Hz±1%, supplied by alternating current or generator
CVT self-exciting low voltage output		Output voltage 3~50V, output current 3~30A
Environment temperature		-10℃~50℃
Relative humidity		<90%
Dimension		490x380x340(mm)
Weight		27.0kg

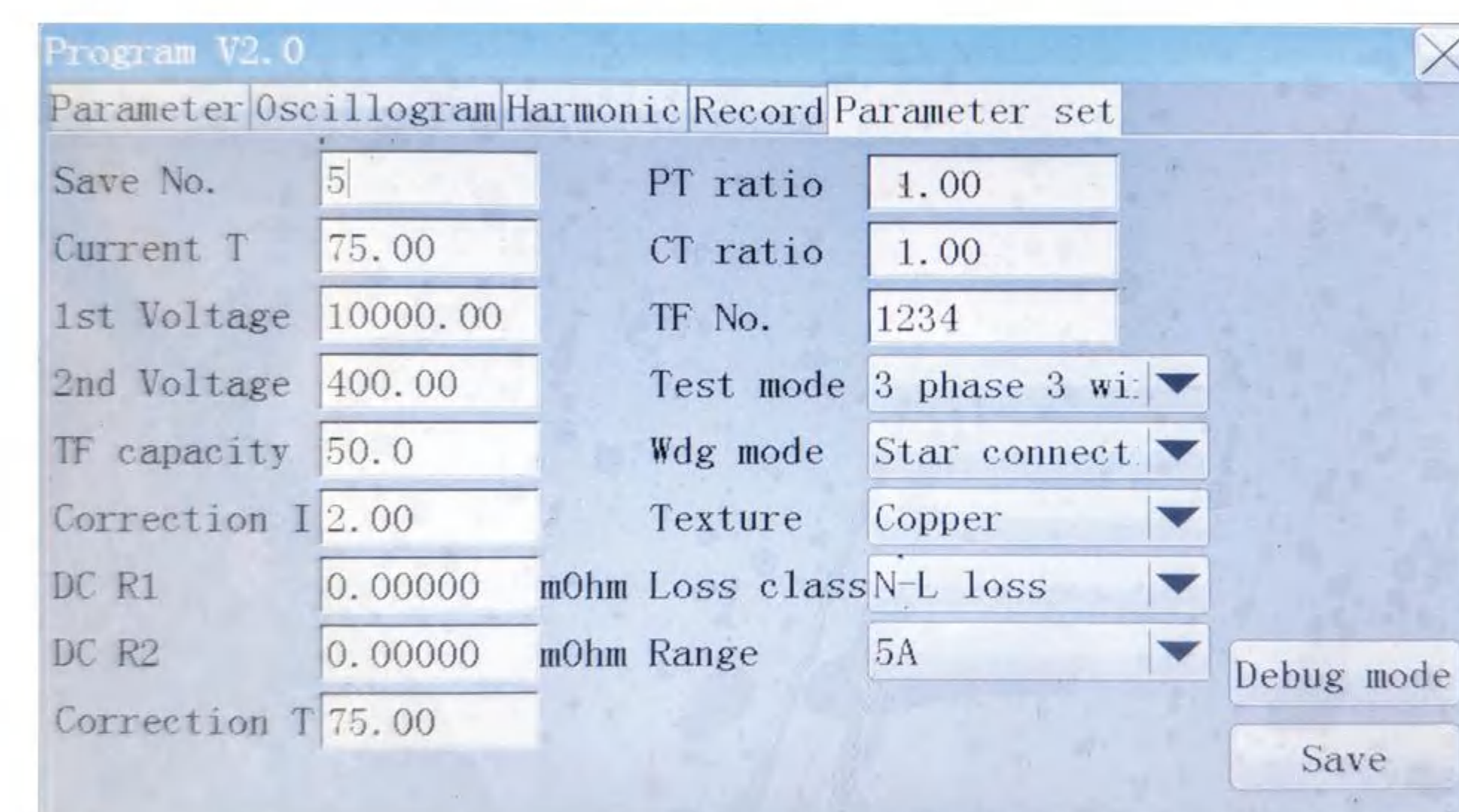
## Transformer Test Series

### HZKZ-50A

#### Transformer On-no Load Loss Tester

The instrument is widely used in power plant, motor, fan and other industries, can measure transformer no-load loss, load loss, mean value of effective voltage value, effective current value, impedance voltage, zero sequence impedance, power factor, harmonic, frequency and other parameters

- The instrument adopts 7-inch true color LED.
- The instrument has the function of harmonic analysis.
- The instrument also supports the USB disk export function.



Item	HZKZ-50A
Voltage measurement scope	AC 10~1000V
Current measurement scope	AC 0.1 ~50 A
Input power	AC 110~220V±10%, 50/60 Hz
Working temperature	-20℃~40℃
Relative humidity	≤80%RH no dewing
Dimension	360X360X200(mm)
Weight	4kg

## Transformer Test Series

### HZBZ

#### Transformer Test Bench

Usage: used for routine test, type test and special test of transformers

Test Item:

- DC winding resistance test
- Turns ratio test
- No load test
- Load test
- Power frequency withstand voltage test
- Induction withstand voltage test
- Temperature rise test

Technical parameter need to be provided first as below.

- Transformer capacity
- Primary voltage and second voltage
- What test items to be tested



## Transformer Test Series

### HZ-5100,HZ-5200,HZ-5100-I

## Contact Resistance Tester

Contact Resistance tester is not only applicable to the contact resistance of the main contact of high-low voltage switch, but it also applicable to the measurement of wire, switch contact, relay contact and other test products.

- This instrument has the function of data storage, and can store data at any time.
- Four terminal connection methods are adopted to effectively eliminate the influence of the test line resistance on the test results.
- Instrument with a calendar clock and power down memory, can store the test data at any time
- Intelligent power management technology.
- 1) The whole process of the instrument can be controlled by the special software of the mobile phone, and the test data can be stored in a fixed format on the mobile phone, so as to facilitate data query at any time.
- The instrument has bluetooth connection function.



HZ-5100-I



HZ-5100



HZ-5200

Item	HZ-5100	HZ-5200	HZ-5100-I
Current measurement	50A, 100A	50A, 100A, 150A, 200A	50A, 100A
Range	0~100mΩ (50A)	0~100mΩ (50A)	0~5mΩ (50A)
	0~50mΩ (100A)	0~50mΩ (100A)	0~2mΩ (100A)
	---	0~20mΩ (150A)	
	---	0~20mΩ (200A)	
Resolution	0.1μΩ		
Precision	± (0.5%±2 dgt)		±( Reading X 0.5%+1μΩ)
Printer	Yes		Optional
Communication	U disk		
Input power	Base on request		On Battery
RH	<90%, no dew		
Standard	IEC,DL/T845.4- 2004		
Dimension	360X290X170(mm)	360X290X170(mm)	425X335X210(mm)
Weight	5.5kg	6.5kg	8kg

## High Voltage Series

### HZ-109S,HZDL130,HZDL 5372,HZDL 5373

## Primary Current Injection Tester

It is used for thermal relay, motor protector, contactor, air switch, switch cabinet, circuit breaker and protection screen calibration Test. It can perform the test of transformation ratio, time, over-current, quick-break, and transmission on the current relays and switches.

- Display the primary and secondary current, the ratio, and the stopwatch timing function.
- Beautiful appearance, large output capacity
- Small size and light weight.



HZDL 130



HZ-109S

Item	HZ-109S	HZ-109S2	HZ-109S3	HZ-109S4	HZ-109S5
Input voltage	AC 220V 50/60Hz	AC 220V 50/60Hz	AC 380V 50/60Hz	AC 380V 50/60Hz	AC 380V 50/60Hz
output channel	single phase	single phase	single phase	single phase	single phase
Output voltage	1000A(Customizable)	2000A(Customizable)	3000A(Customizable)	4000A (Customizable)	5000A(Customizable)
Output current	5V(Customizable)	6V(Customizable)	5V(Customizable)	5V (Customizable)	5V(Customizable)
Test the ratio and polarity of CT	√	√	√	√	√
timer	√	√	√	√	√
Dimension	430x270x280(mm)	370*310*320(mm)	410x370x320(mm)	430x430x470(mm)	430x430x470(mm)
Weight	32.6Kg	41Kg	48Kg	108Kg	108Kg

Item	HZDL130	HZDL 5372	HZDL 5373	HZDL 5374	HZDL 5375
Input voltage	AC 220V 50/60Hz	AC 220V 50/60Hz	AC 380V 50/60Hz	AC 380V 50/60Hz	AC 380V 50/60Hz
output channel	single phase	single phase	single phase	single phase	single phase
Output voltage	1000A(Customizable)	2000A(Customizable)	3000A(Customizable)	4000A(Customizable)	5000A(Customizable)
Output current	12V(Customizable)	>10V(Customizable)	>10V(Customizable)	15V(Customizable)	6V(Customizable)
Test the ratio and polarity of CT	√	√	√	√	√
timer	√	√	√	√	√
Dimension	610x360x380(mm)	610x360x380(mm)	450x340x290(mm)	530*430*650(mm)	530*440*610(mm)
Weight	33Kg	49Kg	25kg+43Kg	61Kg	58Kg

## High Voltage Series

### AC Testing Transformer Hipot Tester

Application: Applicable to electric strength test of various high-voltage electrical equipment. Electrical components and insulating materials is tested under AC or DC high voltage.

Product features: The utility model has the advantages of small size, light weight, compact structure, complete functions, strong versatility and convenient use. AC and DC Current .

Gas: Excellent Arc extinguishing property

Oil: Cheap price, easy maintenance and mainstream products

Dry: small size, light weight, Can be inverted.

Suggest for control part:

≤ 10KVA choose Control Box

> 10KVA choose Control Desk



Control Desk



Control Box



Dry Type



Gas Type



Oil Type

Technical Parameter				
	Gas	Oil	Dry	Control Part
AC hipot	1.5KVA/50-100KV	1.5KVA/50KV	1.5KVA/50KV	1.5KVA
	10KVA/50-150KV	3-5KVA/50-100KV	3KVA/50KV	3-10KVA
	15KVA/50-100KV	10-20KVA/50-150KV	10-20KVA/50-100KV	10-20KVA
	20KVA/50-160KV	30KVA/50-200KV	10KVA/50-100KV	10-30KVA
	30KVA/50-150KV	50-150KVA/50-250KV	20KVA/50-120KV	20-150KVA
	50KVA/50-150KV	200KVA/150-300KV	25KVA/50-120KV	25-200KVA

## High Voltage Series

### AC DC Testing Transformer Hipot Tester



Capacity (KVA)	High Frequency Voltage Output Voltage (KV)		High Frequency Voltage Output Current (mA)		Low Frequency Voltage input		Ratio	Temperature(°C) raised/ 30 minute
	AC	DC	AC	DC	V	A		
1.5	50	70	30	15	200	7.5	500	10
3	50	70	60	15	200	15	500	10
5	50	70	100	15	200	25	500	10
10	50	70	200	100	230/400	50/26	500	10
20	50	70	400	100	380	53	500	10
30	50	70	600	100	380	79	500	10
40	50	70	800	100	380	105	500	10
50	50	70	1000	100	380	132	500	10
5	100	140	50	50	200	25	1000	10
10	100	140	100	100	200/380	50/26	1000	10
20	100	140	200	100	380	53	1000	10
30	100	140	300	100	380	79	1000	10
40	10	140	400	100	380	105	1000	10
50	100	140	500	100	380	132	1000	10

## High Voltage Test Series

### HZCJ

## Lightning Impulse Tester

Impulse voltage test system can generate a wide range of voltage and energy analog lightning impulse, lightning interception, operational shock and other waveforms. It can carry out various forms of impact test on high-voltage power equipment, with the steepening device can be on the insulator (string) Perform a steep wave test. The system can also be modified into an inrush current generator for the residual voltage test of the whole arrester. The installation is simple and fast. It is not only suitable for electrical equipment testing, but also for scientific research, teaching and other fields.

#### ■ Usage:

The impulse voltage test system can be used to test: Power transformer, cable, Arrester (impact current test), Generator, motor, insulator, casing, GIS, Transformer, Capacitor, Other insulating materials, Scientific research and teaching

#### ■ Characteristics

The overall structure loop inductance is small  
Simple and quick combination configuration for different test requirements  
Advanced computer-aided control measurement system with a friendly operator interface

Complete security system

It has the joint test capability of shock-DC, shock-work frequency.

#### ■ System composition

Test system components: The impulse voltage test system consists of a surge voltage generator body, a charging device, a weakly damped capacitor divider, a cutoff device, a steepening device, a control measuring device, a wave modulating component, and an isolation impedance.

The charging device is used to charge the surge voltage body in parallel. By triggering the ignition device, the body ball gap is synchronously triggered to form a series discharge, and the voltage enters the measurement system to display the voltage waveform through the weak resistance capacitor.



## High Voltage Test Series

### HZXB

## Series Resonance Withstand Test Set

In the series circuit composed of resistors, inductors and capacitors, when the capacitive reactance  $X_C$  is equal to the inductive reactance  $X_L$ , ie  $X_C=X_L$ , the phase of the voltage  $U$  and the current  $I$  in the circuit is the same, and the circuit exhibits pure resistance. Called series resonance. When the circuit undergoes series resonance, the impedance of the circuit is  $Z=\sqrt{R^2+(X_C-X_L)^2}=R$ . The total impedance in the circuit is the smallest and the current will reach the maximum value.

The variable frequency series resonance test device, also called series resonance. It is composed of a variable frequency power supply, an excitation transformer, a reactor and a capacitor divider. The capacitance of the test object and the reactor form a series resonant connection mode; the voltage divider is connected in parallel to the test object for measuring the resonance voltage on the test object and making an overvoltage protection signal; the frequency modulation power output is coupled via the excitation transformer A series resonant tank that provides excitation power for series resonance.



## High Voltage Series

### HZHG

#### AC And DC Voltage Divider

This series of AC and DC voltage dividers are special instrument for field measurement. It can measure DC high voltage and AC high voltage. The whole equipment consists of voltage divider and measuring instrument. The voltage divider adopts balanced equipotential shielding structure, and adopts high-quality electronic components inside the completely sealed insulating cylinder, so that the whole device has the characteristics of accurate test, good linearity, stable performance, reasonable structure, easy to carry, simple operation and intuitive display. Therefore, it is an ideal instrument for on-site measurement.



item	AC test range	AC test accuracy	DC test range	DC test accuracy	Voltage Ratio	Impedance	Capacity
HZHG-F50KV-1.0	50kV	1.0	50kV	0.5	3000:1	240MΩ	250pF
HZHG-F100KV-1.0	100KV	1.0	100KV	0.5	5000:1	400MΩ	250pF
HZHG-F150KV-1.0	150KV	1.0	150KV	0.5	7500:1	600MΩ	150pF
HZHG-F200KV-1.0	200KV	1.0	200KV	0.5	10000:1	800MΩ	250pF
HZHG-F300KV-1.0	300KV	1.0	300KV	0.5	15000:1	1200MΩ	75pF
HZHG-50KV-1.5	50KV	1.5	50KV	1.0	1000:1	200MΩ	-
HZHG-100KV-1.5	100KV	1.5	100KV	1.0	1000:1	400MΩ	-
HZHG-150KV-1.5	150KV	1.5	150KV	1.0	1000:1	600MΩ	-

## High Voltage Series

### HZZGF

#### DC Hipot Tester

DC Hipot Tester widely applied in the DC HV tests carried out for the zinc oxide lightning arrester, magnetic blow-out arrester, power cable, generator, transformer, circuit breaker, etc.

- CE Certificate
- Full-automatic MOA voltage rise measuring function;
- Automatic voltage rising function;
- Automatic timing function;
- Over-voltage, over-current and short circuit protection;
- Continuously test can not be lasted more than 30 mins;
- Current-limiting resistance must be used when testing cable;
- Microammeter should be used when testing lightning arrester.



Model	Control Box	
	Rated Voltage (kV)	Output Current (mA)
60KV/2-10mA	60KV	2-10mA
80KV/2-10mA	80KV	2-10mA
100KV/2-10mA	100KV	2-10mA
120KV/2-10mA	120KV	2-10mA
200KV/2-5mA	200KV	2-5mA
300KV/2-5mA	300KV	2-5mA
Output polarity	Negative polarity, no-voltage start, linear continuous adjustment	
Power supply	50Hz, AC220V±10% (other optional)	
Voltage error	0.5%±2 dgt, minimum solution 0.1KV	
Current error	0.5%±2 dgt, minimum solution 0.1μA	
Ripple factor	Better than 0.5%	
Voltage stability	Random fluctuation , grid change is 10% , the fluctuation <=0.5%	
Working manner	Interval working, less than 30 minutes under rated load	
Altitude	Lower than 3000m	

# High Voltage Series

## HZDPS

### VLF Hipot With Tan Delta Tester

- **Advanced technology**  
Adopting digital frequency conversion technology, microcomputer control, fully automated test process (voltage boost, voltage decrease, measurement, protection). Using the latest ARM7 microcontroller, high-speed AD acquisition circuit and 7 inch capacitive touch screen. Support 0.1Hz, 0.05Hz, 0.02Hz multi-frequency selection, expand the test range.
- **Ease of operation**  
Simple connection, support touch screen operation, interface display support Chinese and English. Built-in automatic storage and printing function, can directly generate test reports.
- **Multiple security protection**  
Overvoltage protection, high and low voltage side overcurrent protection, action time  $\leq 10\text{ms}$ . High and low voltage closed loop negative feedback control circuit, output without capacity rise effect, to ensure equipment safety. Emergency STOP button, automatic discharge after abnormal stop.
- **High efficiency and energy saving**  
Electronic high-voltage switch switches polarity, power back to the grid, energy saving and low noise. Small size, light weight, capacity is only 1/500 of the power frequency test equipment.

- **Compatibility and scalability**  
Support RS232 and USB interface, equipped with background management software (HVA Control Center). Built-in memory stores 50 groups of reports, and USB flash supports unlimited storage.
- **Voltage test standard:** in line with DL/T 849.4-2004 industry standard, suitable for power cables, generators and other large capacity equipment.



Item	HZDPS30
Power supply	100-240V; 50/60Hz; $\pm 10\%$
Input power	400VA
Output voltage	Sine wave (VLF) : 23kV effective value, 33kV peak Square wave/DC ( $\pm$ ) : $\pm 30\text{kV}$
Output current	Sine wave: 10mA effective value Square wave/DC: 14.5mA
Output frequency range	0.01Hz-0.1Hz(in 0.01Hz increments)
Frequency optimization	Have
Output load capacity	At rated voltage 0.1Hz: 0.5 $\mu\text{F}$ Low frequency or low voltage: 12 $\mu\text{F}$
Measurement accuracy	Current resolution: 1 $\mu\text{A}$ $\pm 1\%$ - Voltage resolution: 0.1kV $\pm 1\%$ Capacitance resolution: 0.1nF - 20 $\mu\text{F}$ - Resistance: 0.1M $\Omega$ -20G $\Omega$
Output task	Continuously
Test mode	Manual or Auto
Output mode (load independent, symmetrical)	VLF AC Sinewave VLF AC Squarewave DC [+ or - polarity] Vacuum Bottle Testing
Arc management mode	Fault regulation mode: arc combustion Fault trip mode: arc extinguishing trip
Record storage	Built-in memory: up to 50 groups of reports, 40 groups of test sequences USB flash drive: Unlimited memory
Computer Software (included)	HVA Control Center for Windows XP / Vista
Environmental adaptability	Operating temperature: -5°C to 45°C Storage temperature: -25°C to 70°C Humidity: 5-85%(non-condensing)
Physical specification	Size (excluding handle) : 430mm x 360mm x 250mm Weight: 19.5kg

# High Voltage Series

## HZDP

### VLF Hipot Tester

The product combines modern advanced digital variable frequency technology and micro computer control together. Therefore, it can realize the full automatic voltage boost, stepdown, measurement and protection as well as the manual intervention in the process of automatic voltage boost.

With CE Certificate  
Low Frequency 0.02Hz, 0.05Hz, 0.1Hz  
Test power cable less than 5km(It also depends on the different cables)  
over-voltage, over-current protection  
choose model based on the voltage and cable length when testing cable.



Item	HZDP-30	HZDP-40	HZDP-50	HZDP-60	HZDP-80
Rated Voltage	30kV (Peak)	40kV (Peak)	50kV (Peak)	60kV (Peak)	80kV (Peak)
Dimension (mm)	host	385x300x190	385x300x190	385x300x190	385x300x190
	booster	340x320*450	410x380*560	410x380*560	410*380x560
Weight	host	5.0kg	5.0kg	5.0kg	5.0kg
	booster	35.0kg	42.0kg	45.0kg	54.0kg
Fuse	10A		20A		
Output frequency	0.1Hz, 0.05Hz, 0.02Hz, 0.01Hz				
Carrying capacity	0.1Hz max 0.5 $\mu\text{F}$ 0.1Hz, $\leq 1.1\mu\text{F}$ 0.05Hz, $\leq 2.2\mu\text{F}$ 0.02Hz, $\leq 5.5\mu\text{F}$				

## HZAQ Safety Equipment Test Kits

Purpose: Used for insulation performance testing of safety protection appliances such as insulating boots, insulating gloves, insulating rods, electroscopes, insulating clothing, etc. It is a common safety tool for power system operation, maintenance and debugging personnel, It's also an important barrier to ensure personal safety .

- Simultaneously display 8 channels of high voltage leakage current, test voltage, current, timing time and other parameters.
- Using patented infrared communication technology to completely isolate the console from the high-voltage system to ensure the safety of test personnel.
- With over-voltage, over-current protection, high-voltage hazard warning light display function.
- The instrument can be customized according to customer needs.



Item	HZAQ
Rated output voltage	50kV AC
Rated capacity	5 kVA
Output voltage range	50.0 kV (250V)
Input current range	25.0A
Leakage current range	25.0mA
Leakage current resolution	0.1 mA
Time limit of digital display	10~990s

## Insulation Resistance Test Series HZJY-5K-I, HZJY-15K, HZJY-20K, HZJY-30K, HZ3151, HZ3251 Insulation Resistance Tester

Design and manufacture of the instrument and testing achieves IEC61010 safety standards (electronic measuring product safety requirements), this manual including the safety of the instrument use and ensure the safety of equipment state, users must follow the warnings and safety regulations Please read the following instructions before use.

- Strict accordance with the safety standards for design.
- Automatic display polarization index (PI), Induced electric absorption ratio test values (DAR), and can test the leakage current and capacitance.
- The anti-interference performance is superior.
- Rapid discharge of capacitive test products, no need for manual discharge when testing cables, automatic rapid discharge of instruments.
- Insulation resistance simulation column.
- Digital filtering functions, external influence deviation display value causing mitigation point using filter function.
- Perfect protection function, and the spare fuse prompt functions.



Item	HZJY-5K-I	HZJY-10K-I	HZJY-15K	HZJY-20K	HZJY-25K	HZJY-30K	Item	HZ3151	HZ3251
Test voltage	500V	500V	500V	500V	500V	500V	Test voltage	100V	100V
	1kV	1kV	1kV	1kV	1kV	1kV		250V	250V
	2.5kV	2.5kV	2.5kV	2.5kV	2.5kV	2.5kV		500V	500V
	5kV	5kV	5kV	5kV	5kV	5kV		1000V	1000V
	---	10kV	10kV	10kV	10kV	10kV		2500V	2500V
	---	---	15kV	15kV	15kV	15kV		5000V	5000V
	---	---	---	20kV	20kV	20kV	---	10000v	
	---	---	---	---	25kV	25kV	Relative humidity	<90%, no condensation	
---	---	---	---	---	30kV	Weight	3.9kg		
Manual boost function	x	x	√	√	√	√	Dimension	320x270x150(mm)	
testing range	0~5TΩ	0~10TΩ	0~15TΩ	0~20TΩ	0~25TΩ	0~30TΩ	Operating temperature	-10℃~50℃	
Weight	3kg	3kg	3.5kg	3.5kg	3.5kg	3.6kg	Voltage output accuracy	0%~+10%	
Dimension	260 x 200 x 160(mm)					370x270x170(mm)	short circuit current	1mA~6mA, adjustable, step 1mA	
Short circuit current	2~5mA(Up to 10mA short circuit current product can be ordered)						Measuring range	AC/DC 10V~660V, ±(2%+3 characters)	
Other functions	Automatic display polarization index (PI), Induced electric absorption ratio test values (DAR), and can test the leakage current and capacitance, Bluetooth communication can be customized						AC voltage frequency	25Hz~85Hz, resolution 0.1Hz, accuracy ±0.2Hz	
Battery	16.8V Lithium ion rechargeable battery						Precision	±(2%+3 words)	
Charging source	AC 220V±10% 50/60 Hz						Measuring range	10nF~25uF, test voltage ≥100V	
							AC power	85~264Vrms, 50/60Hz, 65VA	

## Circuit Breaker Test Series

### HZC-3980,HZ-2009,HZC-4080

## Circuit Breaker Analyzer

Circuit Breaker analyzer is used to test action time, speed, travel and other mechanical characteristic test of circuit breakers.

- With CE Certificate
- Suitable for almost all kind of Circuit Breaker, like SF6 switchgear, GIS combination of electrical, vacuum switch, oil switch mechanical properties test;
- 12 channels to test the circuit breaker ;
- Universal speed sensor, straight line linear sensor, rotary sensor



HZ-2009



HZC-3980



HZC-4080

Item	Parameter	HZC-3980	HZC-4080	HZ-2009
Time	Measuring range	25000ms	20000.0ms	2000ms
	Resolution	0.1ms	0.1ms	0.1ms
Speed	span	20.00m / s	20.00m/s	20.00m / s
	Resolution	0.01m / s	0.01m/s	0.01m / s
output	Current	10.00A	10.00A	20.00A
	voltage	DC30 ~ 250V	DC0 ~ 300V	DC 5~260V
USB		√	√	√
PC software		Optional	Optional	√ (Control instruments and generate reports)
Dimensions(mm)		360×280× 300(mm)	360×280× 300(mm)	415×320×168(mm)
Weight		9kg	9kg	8kg
Input Power		AC 220V±10% 50Hz±10%		
Temperature		-10℃~50℃		

## Circuit Breaker Series

### HZ-KG7

## Vacuum Switch Vacuum Tester

The HZ-KG7 Vacuum Switch Vacuum Tester adopts a new type of excitation coil and uses the magnetron discharge method to test the vacuum of the arc-extinguishing chamber without dismantling. It has a microcomputer for synchronous control as well as data acquisition and processing, so that the on-site vacuum test sensitivity of the arc-extinguishing chamber reaches  $10^{-5}$ Pa. This instrument has the advantages of convenient use, simple operation, non-disassembly measurement, and high test accuracy. It is a practical testing equipment widely used in electric power, steel, petrochemical, textile, coal, railway and other sectors that use vacuum switches.

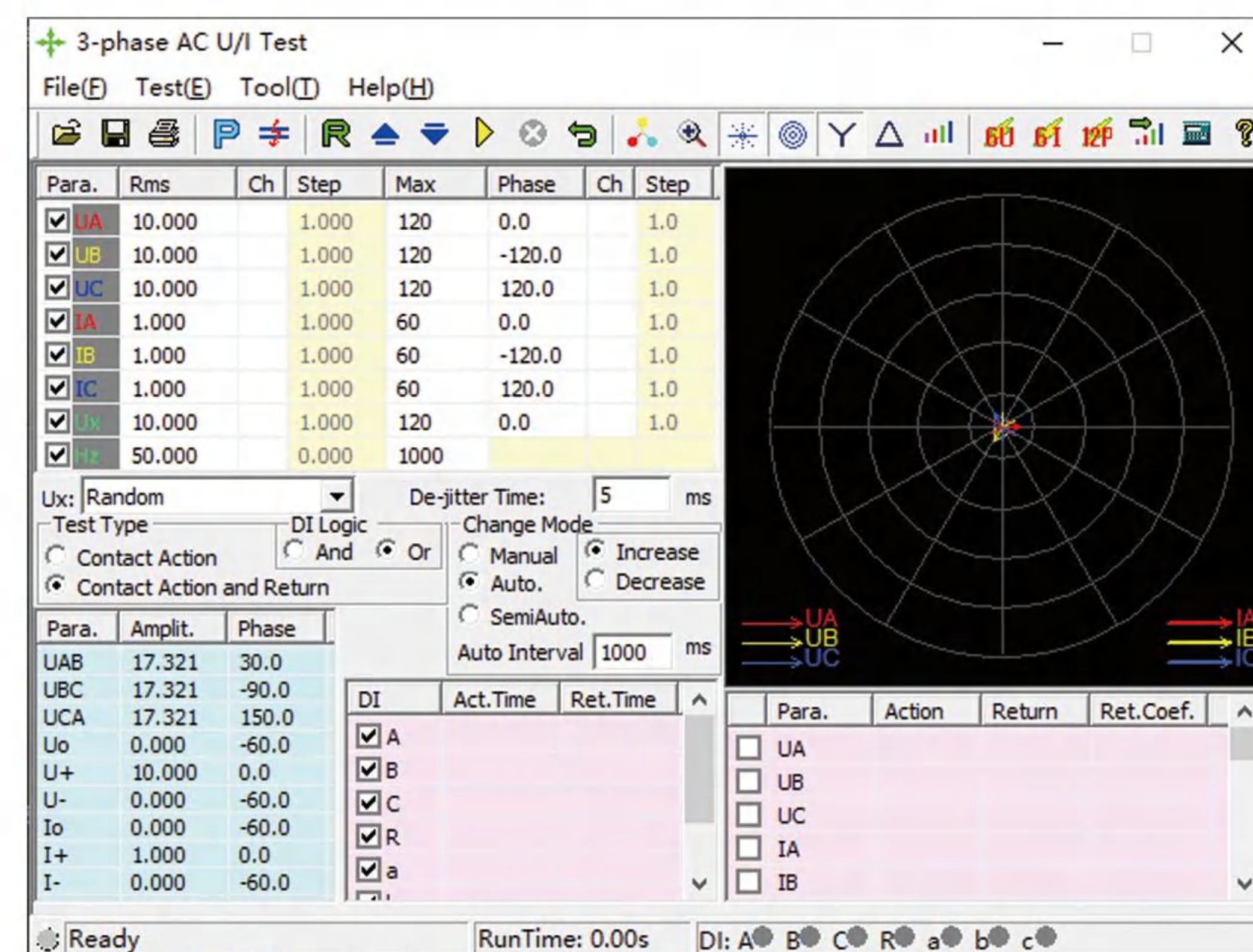
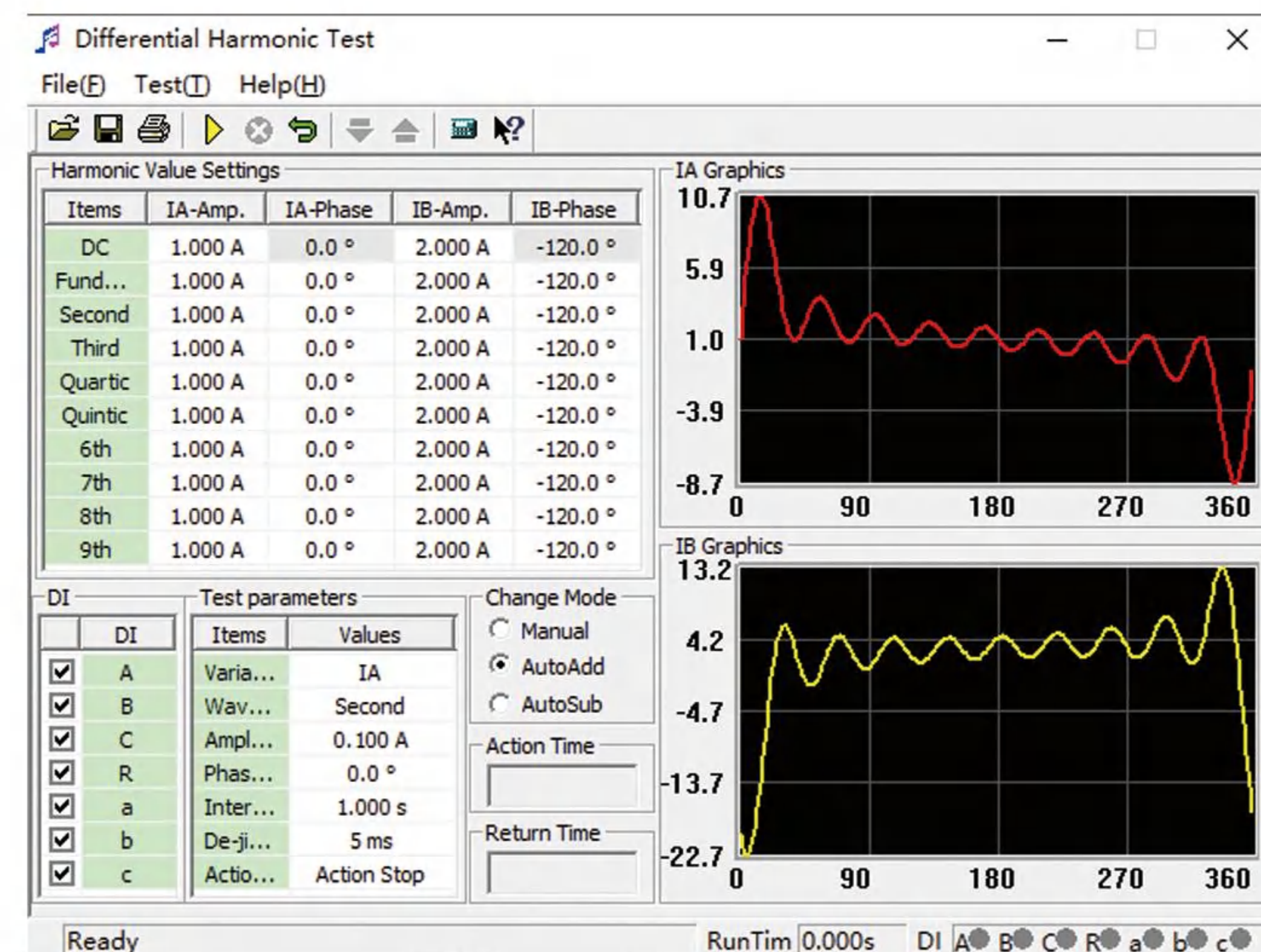


Item	HZ-KG7
Detection range	$10^{-5}$ ~ $10^{-1}$ Pa
Measurement accuracy	10%
Magnetic field voltage	1700V、888V
High-voltage of pulsed electric field	30KV、15KV
Testing environment	-20℃~ 40℃
Weight	24kg
Dimension	420×320× 280(mm)
Sampler	magnetic coil

# Microcomputer Protection Series HZJB-I, HZJB-1200, HZJB-1600 Relay Protection Tester

The relay protection microcomputer type test device is an important test tool to ensure the safe and reliable operation of the power system. It used in research, production, electrical test sites, substations of electric power, petrochemical, metallurgy, railway, aviation, military and so on.

- High-Performance Industrial Control Computer
- Digital Signal Processor Microcomputer
- D/A Conversion and Low-Pass Filtering
- Voltage and Current Amplifier
- Digital Input and output
- Auxiliary DC Power Supply Output for Special Use
- High precision (0.2/0.5 Grade)
- Can be connected to the computer(XP, win7, etc.)



HZJB-I  
3 Phase Relay Protection Tester



HZJB-1200  
6 Phase Relay Protection Tester

# Microcomputer Protection Series HZJB-I, HZJB-1200, HZJB-1600 Relay Protection Tester



HZJB-1600

Auxiliary DC Power Supply Output For Special Use GPS Function

Item		HZJB-I	HZJB-1200	HZJB-1600
Output channel		3	6	6
AC current output	Phase current output	0~40A	0~30A	0~30A
	Parallel output	0~120A(Three channels)	0~180A(six channels)	0~180A(six channels)
	Output Precision	0.2	0.2	0.1
	Harmonic order	2~20	0~20	0~24
	Frequency range	20~1000Hz	0~1000Hz	0~1200Hz
DC current output	Current output	0~±10A	0~±10A	0~±10A
	Parallel output	0~±30A(Three channels)	0~±60A(Three channels)	0~±60A(Three channels)
	output precision	0.5	0.2	0.2
AC Voltage output	Phase voltage output	0~120V	0~120V	0~120V
	Line voltage output	0~240V	0~240V	0~240V
	Output Precision	0.5	0.2	0.1
DC Voltage output	Phase voltage output range	0~±160V	0~±160V	0~±160V
	Line voltage output range	0~±320V	0~±320V	0~±320V
	Output Precision	0.5	0.2	0.2
Dimension		435x425x225(mm)	415x420x240(mm)	420x360x210(mm)
Weight		19.5kg	20.5kg	19kg
System software		XP, win7, win8, win10		

# Microcomputer Protection Series HZJB-D, HZJB-II Relay Protection Tester

Relay Protection Tester is a portable field testing equipment with excellent performance. It is suitable for field calibration and test for various relay.



HZJB-D



HZJB-II

- Output a full isolation way for adjustable DC voltage, Automatic protection for short circuit, overload and out range.
- Maximum Output Current: 0~150A.
- Equipped with LCD digital AC/DC volt-ampere meter, Display the AC and DC voltage and current values, stopwatch, potential, contact state.
- Internal electric stopwatch; Available electrical contacts, maximum potential 250V; Dual channel measurement.

Item	HZJB-II		HZJB-D	
Rated input power	AC: 220V±10%·1000VA·50Hz			
AC output	Range(A)	No-load Voltage (Minimum)V	Full-load Voltage (Minimum)V	Full-load Current (Maximum)A
	0~10	90	80	10
	0~40	25	22	40
	0~100	10	<8	150
	Range(V)	No-load Voltage (Minimum)V	Full-load Voltage (Minimum)V	Full-load Current (Maximum)A
	0~250(AC)	250	240	3
0~300(DC)	320	250	3	
DC auxiliary	Range	Voltage V	Maximum current A	
	0~110	120	0.5	
Output	110~220	220	0.5	
Dimension	370X410X260(mm)		320×260×230(mm)	
Weight	19kg		16kg	

# Microcomputer Protection Series HZCT-100B, HZCT-100C CT PT Analyzer

satisfy the test requirements of various CTs (include TP class), such as the excitation characteristics (i.e., volt-ampere characteristics), ratio, polarity, secondary winding resistance, secondary burden, ratio error and phase displacement, but can also be used for the tests of various PTs, including excitation characteristics of the electromagnetic unit, ratio, polarity, secondary winding resistance, ratio error .

- Full-featured, not only satisfy the test requirements of various CTs (include TP class), such as the excitation characteristics (i.e., volt-ampere characteristics), ratio, polarity, secondary winding resistance, secondary burden, ratio error and phase displacement, but can also be used for the tests of various PTs, including excitation characteristics of the electromagnetic unit, ratio, polarity, secondary winding resistance, ratio error and phase displacement.
- Automatically give CT, VT parameters, including knee point voltage / current, 10% error curve, the accuracy limit factor (ALF), instrument security factor (FS), the second time constant (Ts), remanence coefficient (Kr), saturated and unsaturated inductance etc.
- Test meet IEC60044 GB1208 (-1) GB16847 (IEC60044-6) became etc all kinds of transformer standards, and in accordance with the transformer types and levels of automatic choose which standard test
- Friendly interface beautiful, all English graphic interface
- Test is simple and convenient; one-click can complete tests of CT secondary resistance, excitation, ratio and polarity.



HZCT-100B



HZCT-100C

Item		HZCT-100B	HZCT-100C
CT Ratio	Range	1~40000	1~40000
	accuracy	±0.05%	±0.05%/±0.1%
PT Ratio	Range	1~40000	1~40000
	accuracy	±0.05%	±0.2%
Phase test	accuracy	±2min	±5min
	Resolution	0.5min	0.5min
DC resistance	Range	0~300Ω	0~300Ω
	accuracy	0.2%±2mΩ	2%±2mΩ
Burden	Range	0~1000VA	0~300VA
	accuracy	0.2%±0.02VA	2%±0.2VA
Power supply		AC220V±10%, 50Hz	AC220V±10%, 50Hz
Weight		<10kg	<9kg
USB		√	√
PC analysis software		√	√
Dimensions(mm)		365×290×153(mm)	340×180×330(mm)

# Partial Discharge Inspection Test Series

## HZJF-90V1

### Switch Cabinet Partial Discharge Detector

Partial discharge (PD) is the symptom and manifestation of insulation deterioration of power equipment, and also the cause of further insulation deterioration. Because the result of insulation breakdown is often serious, so the partial discharge detection of power equipment is particularly important. Partial discharges of electrical equipment are electrical discharges that do not completely short-circuit the electrodes. Such discharge amplitudes are usually small, but they can cause a continuous decline in insulation, which can lead to eventual failure. Live partial discharge detection provides a fast and easy way to identify potential insulation failures that could cause power outages or personal injury.



Item	HZJF-90V1	Testing Scenario
Non-contact Ultrasonic Sensor (AA)	Central frequency of the sensor: 40KHz ± 1KHz Measurement range: -7~68dBuV Resolution: 0.1dB Linearity error: <math>\pm 20\%</math> Sensor form: Bendable form/Focusing form	GIS、 Switch Cabinet
Contact Ultrasonic Sensor (AE)	Detection frequency band: 20KHz~80KHz (SF6 gas-insulated power equipment) 80KHz~200KHz (Oil-filled power equipment) Dynamic measurement range: 60dB Resolution: 0.1dB Linearity error: <math>\pm 20\%</math>	GIS
Transient Earth Voltage Sensor (TEV)	Detection frequency band: 3MHz~100MHz Measurement range: 0~60dBmV Resolution: 0.1dB Linearity error: <math>\pm 20\%</math>	Switch Cabinet
Ultra-High Frequency Sensor (UHF)	Detection frequency band: 300MHz~1500MHz Measurement range: -70dBm to -10dBm Effective sensor height: $\geq 10$ mm Resolution: 0.1dBm	GIS
High Frequency Sensor (HF)	Detection frequency band: 0.3MHz~30MHz Measurement range: 0~70dB Gain: -30~20dB Resolution: 0.1dB Transmission impedance: $\geq 10$ mV/mA Input impedance: 50Ω	Cable
Machine Parameters	Operating environment: Temperature -20°C~50°C, humidity 0~85% Display screen: High-definition color 5.6-inch TFT LCD display, resolution 480*640 Mainframe size: 230x170x48mm Mainframe weight: 1.35Kg Battery life: About 6 hours	

# Partial Discharge Inspection Test Series

## HZJF-9102,HZJF-9104

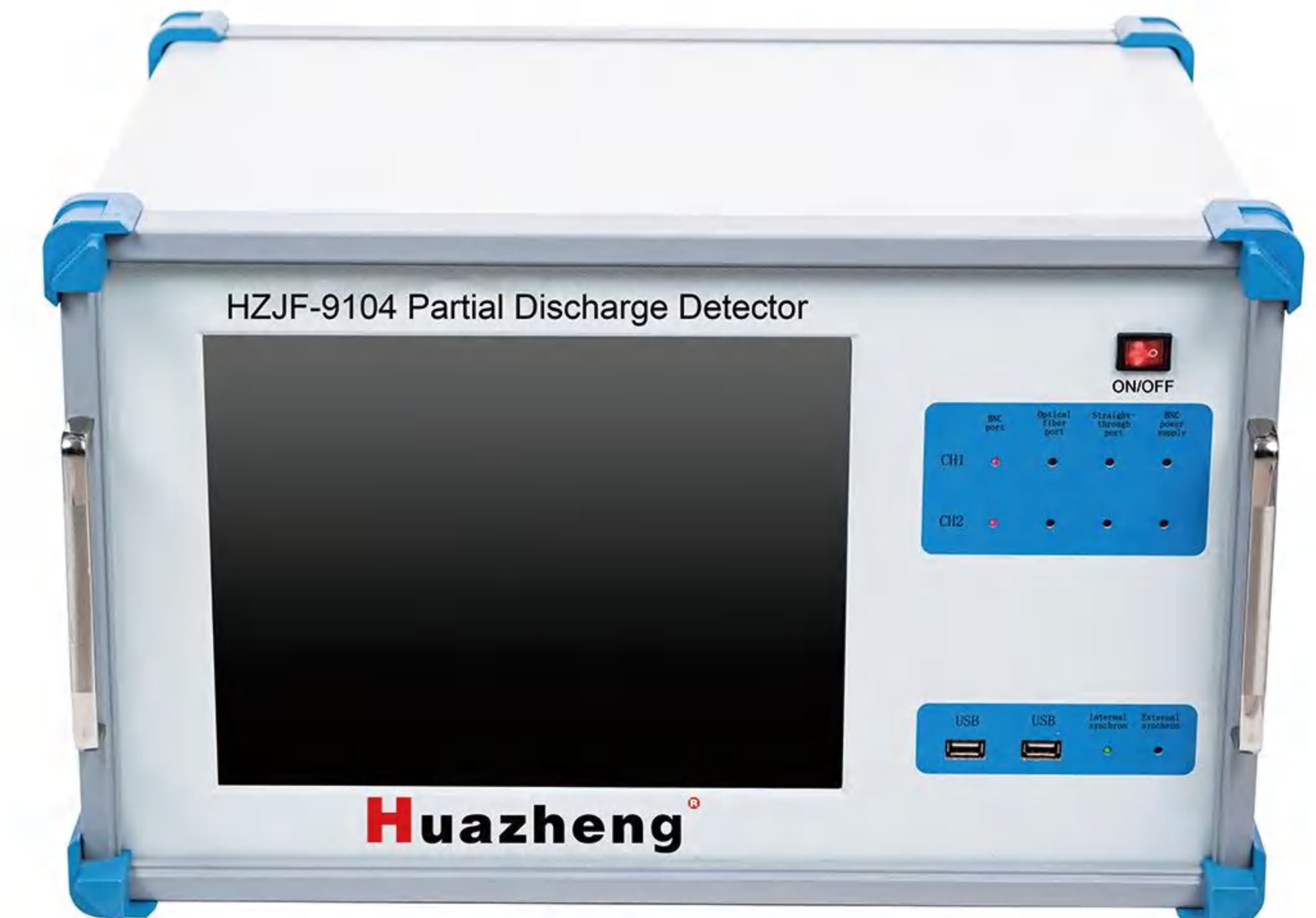
### Partial Discharge Detector

Partial discharge comprehensive analyzer, desktop, TFT LCD display, reliable system, low failure rate. In addition to the partial discharge measurement of high-voltage electrical equipment (standard), it also has the function of accurately locating the fault point of the fault equipment (optional), and can also be used for the partial discharge online continuous monitoring of high-voltage electrical equipment such as large power transformers (optional). Truly realize the local discharge measurement, positioning, on-line monitoring multi-functional integration.

The discharge instrument is a special instrument for measuring and analyzing the insulation performance of power equipment. The system adopts modern electronic and computer integrated technology to realize signal amplification (analog, electronic, digital), filtering, data acquisition, data processing, graphic display, automatic generation of test report, so as to complete the partial discharge measurement and fault diagnosis.



HZJF-9102



HZJF-9104

Item	HZJF-9102	HZJF-9104
Channels Number	Independent 2-channel	Independent 4-channel
Sampling Speed Rate	Max 10M	1M、5M、10M Optional
Sampling Accuracy	12bit	12bit
Measurement Range Switch	-40dB,-20dB,0dB,20dB,40dB,60dB 6 levels in total	-40dB, -20dB, 0dB, 20dB, 40dB, 60dB 6 levels in total
Measurement Frequency Band	3dB broadband 10kHz~1MHz	3dB broadband 10kHz~1MHz
Digital Filtering	10kHz~1MHz Arbitrary selection	10kHz~1MHz Arbitrary selection
Programmed Filter Segmentation	Lower side frequency:10kHz,20kHz,40kHz,80kHz Higher side frequency:100kHz,200kHz,300kHz,400kHz	Lower side frequency: 10kHz, 20kHz, 40kHz, 80kHz Higher side frequency: 100kHz, 200kHz, 300kHz, 400kHz
Nonlinear Error	10%	10%
Measuring Range	0.1pC~100,000pC	0.1pC~100,000pC
Sensitivity	0.1pC	0.1pC
Capacity range of the testable item	6pF~250μF	6pF~250μF
Test Power Supply Frequency Range	50~500Hz	50~500Hz
System	Windows Xp	Windows Xp
Working Environment	Ambient temperature:-10~45°C Relative humidity:≤95%	Ambient temperature:-10~45°C Relative humidity:≤95%
Dimension	474× 288× 370(mm)	474× 288× 370 (mm)
Weight	15.8kg	15.8kg

## SF6 Test Series

### HZSF-641 ,HZSF-661

## SF6 Comprehensive Analyzer

Function: Analysis to determine the quality(percentage, dew point, HS SO<sub>2</sub>) of the SF6 gas whether it complies with the standard.

- Easy and user friendly
- Readings in less than 6 minutes
- Original imported sensor guarantees high measuring accuracy
- Results of up to 200 measurements can be stored
- Battery and external power supply
- Compact design, easy handling and transportation
- With CE Certificate



HZSF-641(110V)

HZSF-641(220V)

HZSF-661

Item	HZSF-641	HZSF-661
<b>Purity</b>		
Measurement range	0%~100%	0%~100%
Accuracy	±0.5%	±0.2%
Measurement time	<2 mins	≤±0.2%
<b>Dew Point</b>		
Measurement range	-80 °C~+20 °C	-80°C~+20°C
Accuracy	±1°C	±1°C
Response time (+20°C)	1. 63% takes 5s, 90% takes 45s (-60°C~+20°C) 2. 63% takes 10s, 90% takes 240s (-80°C~-60°C)	---
<b>H<sub>2</sub>S</b>		
Measurement range	0~100ppm	0~100ppm
Mini detectable value	≤0.1ppm	≤0.1ppm
Accuracy	±0.5%	±0.5%
Stability	0~100ppm	---
Repeatability	≤2%	≤±0.2%
<b>SO<sub>2</sub></b>		
Measurement range	0~100ppm	0~100ppm
Mini detectable value	≤0.1ppm	≤0.1ppm
Accuracy	±0.5%	±0.5%
Stability	0~100ppm	---
Repeatability	≤2%	≤±0.2%
<b>Others</b>		
Ambient temperature	-40°C~+60°C	-30°C~+60°C
Working temperature	-40°C~+80°C	-40°C~+80°C
Ambient humidity	0~100% RH	0~100% RH

## SF6 Test Series

### HZSF-15-50

## SF6 Gas Recovery And Purification Device

The SF6 gas recovery and purification device can be used to vacuum the gas from various electrical equipment, and fill SF6 gas. It can also recover SF6 gas from electrical equipment in using or testing, then compress and store gas in a storage tank after purification treatment.

- To vacuum the gas from electrical equipment and measure its vacuum degree;
- the electrical equipment in the gas recovery;
- Inflate SF6 electrical appliance;
- Dry and purify SF6 gas;
- Compress and store SF6 gas.



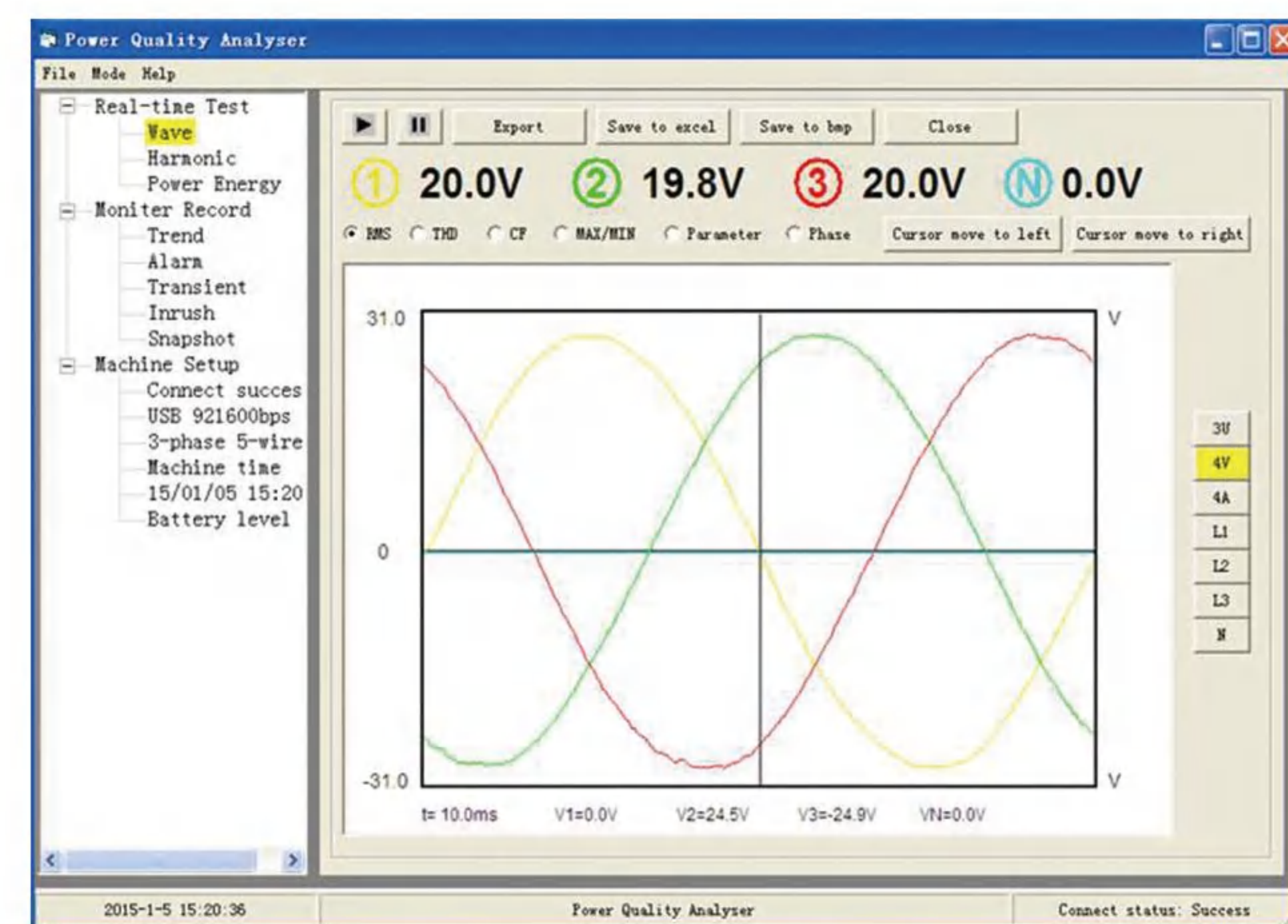
HZSF-15-50

Item	HZSF-15-50
Input power AC	380V
Rated maximum gas storage pressure (20°C)	≥4MPa
Final vacuum	≤10Pa
Vacuum maintenance of device	At 133 Pa pressure for 24 hours, the vacuum value increased <400 Pa
Compressor pumping rate	Shenyang Valley Wheel 10m <sup>3</sup> /h Compressor
Vacuum pump pumping rate	Shanghai bipolar pump 54 m <sup>3</sup> /h=15L/S
Adaptation inlet pressure of the recovery unit (20°C)	0~0.8MPa
Recovery final pressure of electrical equipment (20°C)	≤50 Kpa
Gas oil content control after recovery	Domestic oil<10μg/g
Annual leakage rate of the device	<1%
Continuous trouble-free running time of the device	≥1000h
Accumulated trouble-free running time	≥5000h
Noise level	The whole machines≤75dB(A)
Actual liquid storage capacity	50KG
Refrigerated liquefaction compressor	Domestic Compressor
Frozen storage tank	50L
Gas moisture after recovery(PPM/V)	60PPM/V
Gas oil after recovery(PPM/V)	60PPM/V
Dry filtration mode	Vacuum heating activation regeneration
Initial inflation pressure(pa)	≤133pa
Inflation final pressure(mpa)	0.8mpa
Aeration rate (m <sup>3</sup> /h)	≥5m <sup>3</sup> /h
Dimensions	1360×800×1300(mm)

# Power Quality Series HZCR-5000 Power Quality Analyzer

It's a instrument for field test of three phases. Troubleshoot of complex power system more quickly and accurate, monitoring and maintenance of power quality parameters more comprehensive and systemic. Multi-functional and intelligent, easy to use, large LCD screen display, high resolution, interface in English, shock-proof shell structure.

- True RMS values of voltages and currents.
- Measurement of each harmonic up to order 50.
- Power factors (PF) and displacement factors (DPF or  $\cos\phi$ ).
- Short-term voltage flicker (PST).
- Three phase unbalance (current and voltage).
- Transient capture function
- Communicate with computer via USB, with PC software



Item	HZCR-5000		
Phase-to-neutral voltage	All parameters	(100±1%)V	1.0V~ 1000V
Phase-to-phase voltage	True RMS phase-to-phase voltage	(200±1%)V	1.0V~ 2000V
Current	True RMS current	(5±1%)A	10mA~ 1000A
Network frequency	All parameters	50Hz±0.1Hz	40Hz~ 70Hz
Phase shift	Active power and active energy	$\cos\phi=1$	$\cos\phi: 0.2\sim 1.0$
	Reactive power and reactive energy	$\sin\phi=1$	$\sin\phi: 0.2\sim 1.0$
Harmonic	All parameters	<0.1%	0.0%~ 100%
Voltage unbalance	All parameters	<10%	0.0%~ 100%
Working voltage of device	All parameters	DC9.8V±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.	
Environment temperature	All parameters	(23±2)°C	-10°C~ 40°C
Relative humidity	All parameters	40%~ 60%	<80%
CT:10A 100A 1000A 6000A			
Dimension: 240X170X68(mm) Weight: 1.6kg			

# Power Quality Series HZ-3521 Three Phase Energy Meter Calibrator

Inspect operating errors and fault of energy meter, with power meter error check, error wiring judgment, ratio measurement, meter reading, harmonic measurement and other functions.

- With PC Software.
- Portable, Built-in Battery.
- Three phase voltage, current, power, phase, active and reactive power factor, frequency and other parameters can be in realtime measured.
- Harmonic measurement.
- Store more than 10000 groups data.



Item	HZ-3521	
Voltage range	AC 40-440V	
Current range	Terminal input	5A, 1A
	(double overload) Clamp meter input	5A, 20A, 100A, 500A, 1000A, 1500A
Grade	5A Terminal, 1A Terminal	0.05
	5A clamp (With the function of self-correction), 20A clamp	0.2
	100A, 500A and 1000A, 1500A	0.5
Power pulse constant	5A Terminal, 1A Terminal, 20A clamp, 5A clamp, 100A clamp, 500A clamp and 1000A clamp, 1500A Clamp	FL=36000P/kWh FH=3.6×10 <sup>8</sup> P/kWh
Frequency	45-65Hz	
Phase measurement range	-180~+180 degrees	
Turn ratio of Transformer	< ±0.5%	
Voltage influence	< ±0.01%	
Frequency influence	< ±0.01%(45-65Hz)	
Temperature influence	< ±5ppm/°C	
24h deviation	(0.1)< ±0.02% (0.05)< ±0.01%	
<b>Basic errors</b>	<b>U.I Harmonic measurement</b>	
Terminal input	Measuring range	2nd-51st harmonics
Active power	±0.1% ±0.05%	Accuracy of measurement ±0.01% (relative to 100% fundamental wave)
Reactive power	±0.1%	<b>Other technical indicators</b>
Power	±0.1% ±0.05%	Switching power supply AC57.7 ~ 440V(45~65Hz)
Voltage	±0.1% ±0.05%	Power consumption About 6VA
Current	±0.1% ±0.05%	Environment temperature -20°C~+40°C (Guaranteed accuracy)
Frequency	±0.05Hz	Relative humidity 40%-95% No condensation
Phase	±0.1 degree ±0.05% degree	Warm-up time < 3min
Dimension: 249x154x58(mm) Weight: 1.8kg		

## Battery Test Series

### HZNZ-100

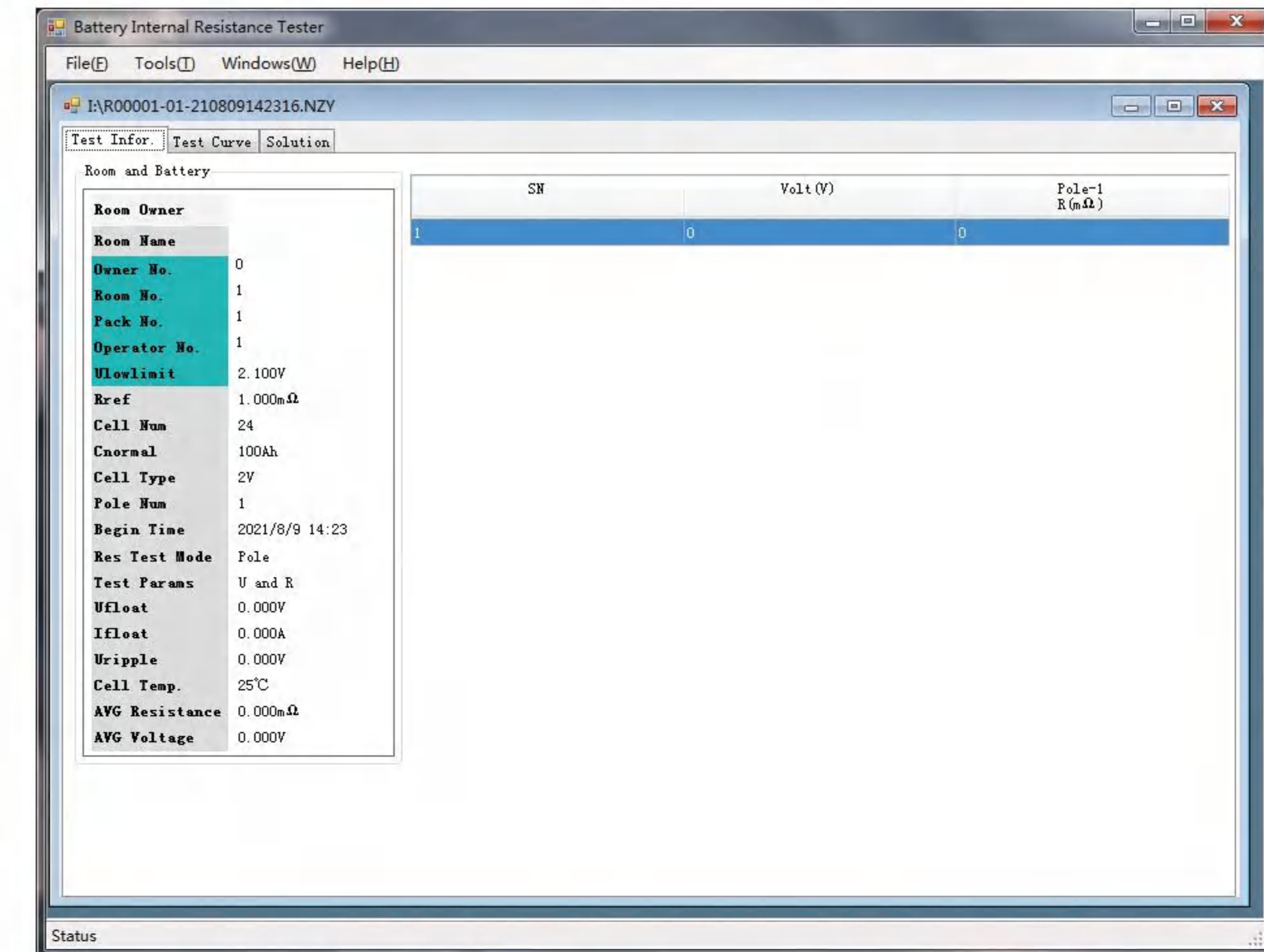
## Battery Impedance Tester

This accumulator internal resistance tester utilized colour resistance touch screen. It can be operated via finger or the touch pen with convenience and flexibility. It is portable The data can be known soon exactly. This instrument can store and process data of battery voltage and internal resistance. It will alarm for any battery failure. We can check down-load and delete data on the instrument.



- High accuracy online test, large volume data
  - a. Instrument test range is 0.000mΩ-99.999mΩ.
  - b. Store 999 units battery information permanent (Each unit including batteries up to 500 pieces) .
  - c. Each report can indicate 500 pieces batteries information permanently.
  - d. Battery volume test range: 5AH-6000AH.
- 5" colour touch LCD. Chinese information modular operation. Great conversational interface.
- Instrument can display chart and analyze column charts.
- It can analyze volume and verify the battery quality level-better, good, bad.
- It will display wave. Tell us practical battery highest, lowest and average power. Power wave (optional).
- Via SD card port all test data can be stored in PC permanently. Track and analyze the battery "medical record".
- Powerful data management. The instrument can be used separately without computer.
- Strong overload protection on power. Make it work more reliable.
- Recover overcurrent fault protection create more convenience.
- Utilized latest SOC chip simplified circuit increase the reliability.
- Large volume battery and adapter supply power together to con-

- Smart warning on low power ensure test accuracy .
- Small foot print, light weight .
- Automatic test mode convene user to measure.
  - a. Automatic analysis on battery "worse" status.
  - b. Record the history repot describe the battery quality curve.
  - c. Compare and analyze battery in same group.
  - d. Manage all batteries by different grades (Better, good, general, bad).



HZNZ-100		
Measure range	Internal resistance	0.000mΩ-99.999mΩ
	Voltage	0.000v--25v
Min. resolution	Internal resistance	0.001mΩ
	Voltage	1mV
Measure accuracy	Internal resistance	±0.5%rdg ±6dgt
	Voltage	±0.2%rdg ±6dgt
Power source	12V, chargeable Li-battery	
Consumption	8 hours standby mode	
Storage volume	64Mbit Flash + 8G SD card	
LCD	5" colour touch screen	

## Battery Test Series

### HZFD-200

## Battery Load Bank Discharge Tester

Battery Load Bank is a special instrument for the test of NiCD and Lead-acid battery group of the whole group voltage of 24V, 48V, 110V, 220V, and cell voltage of 1.2V/2V/6V/12V. It adopts current advanced testing technology theory, and has obtained a series of breakthrough in research and application of new technology, new parts, new material and new techniques, which is designed in accordance with the requests of international related testing and maintenance regulations. It is a special detection instrument for the performance detection of stationary battery.



- The product is utilized color touch screen. It can be operated via finger or the touch pen with convenience and flexibility.
- Data save mode: Internal save and external save(SD Card )
- Enhanced over voltage protecting function ,
- Automatically recovery the over current protecting function
- Overheating protection .
- On line Monitoring Function: When the battery string is under the conditions of on-line discharge, uniform charge, and floating charge, the instrument could perform real-time monitoring for the battery string and cell; the monitoring includes the whole string voltage, cell voltage, the whole string charge/discharge current, the whole string charge capacity, the whole string discharge capacity, monitoring time and etc

HZFD-200					
Optional items	48V	100A	150A	300A	/
	110V	30A	50A	110A	200A
	220V	30A	50A	80A	100A
		150A	200A	250A	300A
	380V	30A	50A	100A	/
Discharging control precision	0.1A				
Current test precision	1%				
Input power	AC 220V±10% AC				
Radiation	Air cooling				
Display	7" colorful LCD touch screen				
Communication	RS485				

## Cable Fault Test Series

**HZ-501B,HZ-535-4C,HZ-504,HZ-503**

### Cable Fault Location System

Cable Fault Location System is designed to provide quick, effective, accurate and safe cable fault location, thereby reducing system outages and minutes lost.

- All in one type, easy to connect and operate.
- The complete set of equipment consists of cable fault locator, pinpoint tester, generator, cable route tracer.
- DC-testing up to 32 kV, Discharge power 2450J



HZ-503



HZ-504



HZ-535-4C



HZ-501B

## Cable Fault Test Series

**HZ-501B,HZ-535-4C,HZ-504,HZ-503**

### Cable Fault Location System



Cable Fault Location System (All-In-One Type)

1. HZ-501B TDR Cable Fault Locator		2. HZ-535-4C DC high voltage impulse generator	
Sample frequency	100mHz	Impulse voltage	0 ~ 8/16/32kV
Minimum resolution	0.5m (100m/us)	Discharge power	2450J
Test method	Flashover sampling, low-pressure pulse sampling	Accuracy of divider	Class 1.5
Pulse amplitude	100Vpp	Built-in capacitor	64/16/4μF
Pulse width	0.1uS and 2uS	Impulse time	5s by Manual control time;
Measuring distance	Smax: 60km; Smin: 15m	Impulse power	2kVA
Measuring error	Absolute error: ±10m	Ambient temperature	-20°C ~ +50°C
	Relative error: ±1%	Power supply	AC 220V ± 10%, 50Hz ± 2Hz
3. HZ-504 Cable route tracer		4. HZ-503 Pinpointer	
Output frequency	Audio frequency	Enlargement factor	0.5 Million times
Output current	0~2A	Working voltage	± 9V ± 20%
Output power	100W	Quiescent current	<10mA
Input power	220V (1±10%), 50Hz (1±5%)	Received signal	Vibration and magnetic field signal
		Output impedance	350Ω
		Location accuracy	0.2m

# Cable Fault Test Series

## HZ-A10,HZ-G35A,HZ-B,HZ-R10

### Cable Fault Location System

Cable Fault Location System is designed to provide quick, effective, accurate and safe cable fault location, thereby reducing system outages and minutes lost.

- Separated type, easy to carry and move.
- Including cable fault locator, Pin Pointing tester, Offer Full solution for cable location.
- DC-testing up to 35 kV



Cable Fault Location System (Split type)			
1.HZ-A10 Cable Fault Location Unit		2. HZ-G35A HV Generator	
Display mode	12.1-inch industrial-grade LCD screen	Output mode	Pulse output
Storage space	Fixed 4G	Output voltage	DC negative voltage ≤32kV
Testing methods	TDR, ICE	Operating current	≤10A
Operation mode	Optoelectronic knob operation (touch screen function optional)	Working modes	Single pulse, continuous pulse
Pulse width/pulse amplitude	100ns ~ 10μs, 120V	Built-in capacitor	3μF/32kV
Gain adjustment	-20 ~ +40dB	Discharge energy	≤1536J
Output impedance matching	120Ω	Pulse cycle	4s~8s adaptive
Testing distance	5m ~ 100km (v/2=80m/μs)	Automatic discharge	Automatic discharge upon shutdown
Minimum testing distance	5 meters	Power supply	50Hz 220V±10%
Precise positioning error	±0.2m	Display screen	800×480 resolution touch LCD screen
Working temperature	-10°C to +45°C	Operating temperature	Operating temperature: -10°C~40°C
Relative humidity	≤90% (non-condensing)	Operating humidity	Operating humidity: ≤80%
3. HZ-B HZ-R10 Pin-Point Locator+Cable RouteTracer			
Detection Range	5km		
Detection Depth	3m		
Routing Error	5cm		
Transmitter Basic Parameters	Output Frequency: 9.6kHz; Output Power: 5W		
Input Frequency	9.6kHz		
Routing Error	±2cm		
Depth Measurement Error	±5cm		
LCD Display	High-brightness true-color screen with a resolution of 320 x 240, suitable for outdoor use.		

# Cable Fault Test Series

## HZ-4000A,HZ-4000B,HZ-4000C,HZ-4000D,HZ-4000E

### Cable Fault Location System

The HZ-4000 underground cable fault detector can accurately locate and measure the buried depth of underground pipelines, cables, and optical cables without excavation, and accurately find the location of the damaged point of the outer anti-corrosion layer of the underground pipeline and the fault point of the buried cable. and is suitable for various underground The detection and inspection of metal pipelines, pipeline management and maintenance, municipal planning and construction, power supply and other departments are the necessary instruments for pipeline maintenance units.

- Transmitter: three connection modes: inductive connection, direct connection and clamp connection; suitable for different occasions.
- The receiver functions: detecting the position,path, depth and tube current of underground pipes and cables.
- Left and right positioning arrows indicate the target pipeline position fast and accurately; front and rear arrows and dB value indicates the point and size of the coating damage.
- Backlight suitable for urgent use in the nighttime.
- Unique feature of HZ-4000 : locating the breakdown points (pipeline breakdowns refer to the coating damaged points while electric cable breakdowns refer to the outer layer damages.); detecting the insulation damages of underground pipeline and cable.
- Measuring the current of the pipeline and cable applied by the transmitter.
- Multimeter function: measure the output voltage, line voltage, line current, impedance and power; Test the cable continuity and insulation quality before and after cable fault finding.
- External induction clamp: suitable for testing the cable when they cannot be directly applied to the signal of the place.



Item	HZ-4000A	HZ-4000B	HZ-4000C	HZ-4000D	HZ-4000E
Location frequency	5	6	7	8	10
Frequency	512、1K、33K、83K	512、1K、33K、83K	512,1K,33K,83K	512,1K,33K,65K,83K	512,1K,2K,8K,33K,65K,83K
Passive frequency	50Hz	50Hz 100Hz	50Hz 100Hz wireless radio	50Hz 100Hz wireless radio	50Hz 100Hz wireless radio
mains filter	×	×	√	√	√
Fault frequency (s)	×	×	×	×	2
trouble shooting	×	×	×	×	√
Lithium battery	√	√	√	√	√
A font rack	×	×	×	×	√
Depth of positioning (m);	3	6	6	6	6
data storage	×	×	×	√	√