PROFESSIONAL ELECTRICAL TEST MANUFACTURER

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Rui Du Mechanical and electrical (Shanghai) Co., Ltd.

ELECTRICAL TEST MANUFACTURER

COMPANY INTRODUCTION

Rui Du Mechanical and electrical (Shanghai) Co., Ltd. is a professional manufacturer and system solution provider for the global supply of power testing equipment.

Rui Du Mechanical and electrical (Shanghai) Co., Ltd. was established in 2014, which focuses on the independent design, development and production of high-voltage power test equipment. The products cover the testing equipment for substation transformer, high voltage switch, mutual inductor, lightning arrester, storage battery, cable fault, relay protection, insulation withstand voltage, insulation grounding and transtormer oiling equipment, SF_6 related equipment, power generator, water cooling equipment instrumentation, spare parts, power quality management and so on. All products of the company have passed international IS09000 series certification, IEC certification and CE certification.

The corporate culture of "dedication, professionalism, excellence and survival by quality" enables the company to achieve its own performance growth and create more and more benefits for users.

Rui Du Mechanical and electrical (Shanghai) Co., Ltd. sincerely looks forward to your visit.

WRINDU MANAGEMENT QUALIFICATION AND PRODUCT CERTIFICATION

- ISO 14001:2015-Environment Management System
- ISO 9001:2015-Quality Management System
- ISO 45001:2018-Safety Management SystemSystem



- Wrindu transformers testing equipment are type tested and are certified by the internationally recognized laboratorie






- CE Certification- CONFORMITE EUROPEENNE Certification

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ELECTRICAL TEST MANUFACTURER

MAP OF MAJOR EXPORTING COUNTRIES

SOUTHEAST ASIA

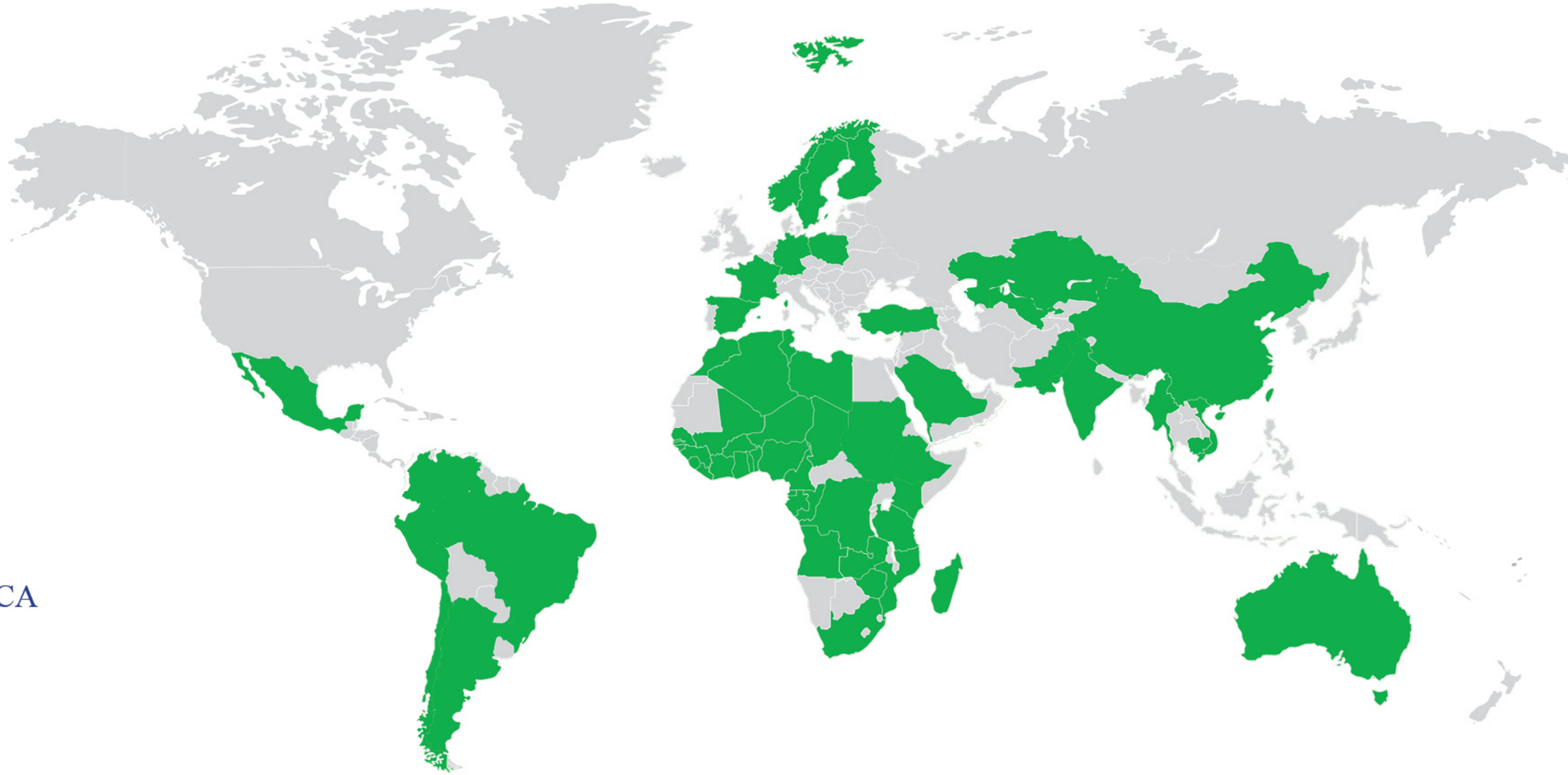
- Pakistan
- Bangladesh
- Nepal
- Burma
- Laos
- Vietnam
- Maldives
- Malaysia
- Indonesia
- Philippines

AFRICA

- Egypt
- Morocco
- Kenya
- Zambia
- Mozambique
- South Africa
- Uganda
- Rwanda
- Zimbabwe
- Angola
- Nigeria
- Cuba

SOUTH AMERICA

- Peru
- Colombia
- Brazil
- Argentina
- Chile



ELECTRICAL TEST MANUFACTURER

MAJOR PROJECTS

OUR MAIN PROJECTS-

SUPPLYING THE WHOLE SOLUTION OF ELECTRICAL TESTING EQUIPMENT

ACHIEVED PROJECTS IN PAKISTAN:

- KAROT 2*720MW Hydro Power Project
- HUBCO 2*660MW Coal Power Project
- New Lahore 500kV Substation
- Shikarpur 550kV Substation

ACHIEVED PROJECTS IN BANGLADESH:

- Patuakhali 2*660MW Coal Power Station (BCPCL)
- Assu Ganjie 2*400MW Power Station

ACHIEVED PROJECTS IN MYANMAR:

- 230KV Bhamo-Nabar Transmission
- 132KV Shweli River Transmission
- Asian Development Bank ; ADB Project

ACHIEVED PROJECTS IN UGANDA:

- Opuyo - Moroto 132 kV Electricity Transmission
- Mutundwe - Entebbe 132 kV Power Transmission Line
- GULU 132/33KV Project

ACHIEVED PROJECTS IN OTHER COUNTRIES:

- Kafr el-Sheikh 550 kV Transformer Substation - (Egypt),
- TRANSCO CLSG project (West Africa),
- Ethiopian Electric Power Corporation (EEPCO) project- (Ethiopia),
- Ethiopia 132kv ADAMA-IISubstation- (Ethiopia)

CONTENTS

SERIES RESONANCE TEST DEVICE

SERIES 1

RDXZF-100KVA/20KV
SERIES RESONANT DEVICE
WITH VARIABLE FREQUENCY

Product Characteristics

1.The required power capacity is greatly reduced, which is only 1/Q of the test capacity.

2. The weight and size of the device is greatly reduced to 1/10-1/30 of the taditional test device.

3. Obtaining a good sinusoidal waveform by reducing the waveform distortion of output voltage.

4. Efficiently finding the insulation weakness and preventing large short-circuit current from burning the fault point.

5. No recovery overvoltage.

6. Three working modes (automatic mode, manual mode, automatic tuning & manual boost mode) available for users to choose from.

7. Digital data can be stored and printed off-site.

8. Automatical frequency scanning with the result intuitively displayed on the LCD screen.

9.The DSP platform technology is adopted to make the human machine exchange interface more humanized.

Main Technical Parameters

Frequency regulation range	30-300Hz
Device output waveform	Sine wave
Waveform distortion rate	<1.0%
Allowable continuous working time	60 minutes at one time under rated conditions
Quality factor of this device	Q>50
Input power	Three-phase 380V or single-phase 220V
System measuring accuracy	Effective value of the system is 1.5
Protection functions	Over-voltage, over-current, zero start, flashover and other protection functions
Temperature rise	Temperature rise ≤65K after continuous operation under rated load for 60min
Environment temperature	-20℃-55℃
Relative humidity	≤90%

Note: Our company makes products with different specifications and special functions according to the requirements of users.

RDXZL-800KVA/50KV
POWER FREQUENCY SERIES
RESONANT TEST SYSTEM

Product Characteristics

1. The required power supply capacity is greatly reduced to 1/Q (usually Q≥10) of the traditional power capacity.

2. Smaller in size and lighter in weight with the same capacity.

3. The waveform distortion rate is less than 1%.

4. The applied series resonance is characterized by a steady voltage boost and easy operation.

5. To effectively prevent a further damage to the test product when it discharges, or is broken down.

6. Multithrottle reactors are used in series and parallel way, which makes a single piece smaller and lighter.

7. Low noise during overall use. The oil-immersed tpye and iron shell structure are adopted.

Technical Parameters

Rated capacity	800kVA
Working power supply	Three-phase 380V, power frequency 50Hz
Maximum rated AC voltage	50kV
Maximum rated AC current	16A
Output frequency	50Hz
Device output waveform	Sine wave
Waveform distortion rate	≤1.0%
Allowable continuous working time	5 minutes at one time under rated conditions
Temperature rise	Temperature rise ≤50K after continuous operation under rated load for 5 min
Quality factor of this device	Q≥20 (f=50Hz)
Protection functions	Over-voltage, over-current, flashover and other protection functions
System measuring accuracy	Effective value of the system is 1.0

Note: Our company makes products with different specifications and special functions according to the requirements of users.

RDXB(WJ)-450KW TRANSFORMER INDUCED VOLTAGE WITHSTAND AND PARTIAL DISCHARGE TEST SYSTEM

Products Composition

Name	Specification	Quantity
1. No partial discharge AC power frequency converter and control box	RDXB(WJ)-450kW	1 unit
2. No partial discharge excitation transformer	RDB(WJ) — 450kV/2*±10/35 Low voltage：2×300/350V/400V	1 unit
3. No partial discharge compensation reactor	RDBK(WJ)-35kV（6H/8A，3H/12A、25kV/1H/20A）90min	4 units
4. No partial discharge capacitive voltage divider and coupling capacitor	FRC(WJ)- 100kV/300pF	1 unit
5. Partial discharge comprehensive analyzer	RDPDD-104H	1 unit

Product Characteristics

1. Suitable for the partial discharge and induction withstand voltage test of power transformer of 400kV/350MVA and below.
2. AC power frequency converter adopts a linear amplification circuit; sine wave output with small waveform distortion.
3. Automatic and steady voltage adjustment.
4. Overvoltage, overcurrent and other protection functions make the device safe and reliable.
5. Optical fiber is used to transmit high voltage signal, which completely isolates the high-voltage and low-voltage circuits.
6. With automatic and manual control modes.
7. Synchronized voltage, current and frequency display.
8. It has the function of resonant withstand voltage test.
9. With automatic resonant frequency search function, automatic sweeping of multiple frequency segments can be set.

Technical Parameters

Rated input power supply	380V±10% (three-phase); 50Hz
Rated output power	450kW
Rated output capacity	450kVA
Rated output voltage	Single phase 0~350V
Output phase	Single phase
Adjustable frequency range	20Hz~300Hz
Output frequency resolution	0.01Hz
Output frequency instability	≤0.05%
Output voltage waveform	Sine wave; waveform distortion rate ≤ 1.0%
The amount of partial discharge	≤10pC
System working hours	90min
Insulation level	1.2 times the rated voltage withstand voltage 1min
Note: Our company makes products with different specifications and special functions according to the requirements of users.	
Quality factor	Q > 100 (f=30Hz)
AC power frequency converter	450kW (push-pull linear amplification)

PARTIAL DISCHARGE TEST EQUIPMENT

SERIES 2

RDPDD-104H
PARTIAL
DISCHARGE TESTER

Product Characteristics

1. Multi signal channel, desktop, TFT LCD display, reliable system, low failure rate and strong anti-interference ability.
2. Integrating the functions of partial discharge measurement, diagnosis and online monitoring.
3. Test report can be generated automatically according to the test process, and can be browsed and printed.
4. The re-display sampling function can restore the saved data file into a waveform and display it on the screen.
5. 4-channel electrical signal and 4-channel optical signal input ports can simultaneously measure and analyze multiple partial discharge signals.

Technical Parameters

Number of interfaces	4 separate interfaces
Sampling rate	1M/S, 5M/S, 10M/S (optional)
Sampling accuracy	12 bit
Range changing	-40dB, -20dB, 0dB, 20dB, 40dB, 60dB, 6 types in total
Measurement frequency range	3dB bandwidth 10kHz ~ 1MHz
Digital filtering	10kHz ~ 1MHz (optional)
Program controlled filter segmentation	Low frequency: 10kHz, 20kHz, 40kHz, 80kHz
	High frequency: 100kHz, 200kHz, 300kHz, 400kHz
Nonlinear error in the range	10%
Measurement range	0.1pC ~ 100,000pC
Detection sensitivity	0.1pC
Capacitance range of the measured product	6pF ~ 250μF
Frequency range of test power	50 ~ 500Hz

Display	
Display screen	12" TFT true color LCD touchscreen
Resolution	1024×768
Interface	
USB	3 ports, external mouse, keyboard or other removable storage devices can be attached
Power supply	AC 230V; 50Hz; Power 300W
Electric signal interface	4 BNC interfaces, used for signal input
Optical signal interface	4 channels, used for signal input
Network interface	1 channel
Grounding terminal	External grounding

General instruction	
CPU	Basic frequency 1.60GHz
Ram	2.0GB
Hard disk	128GB SSD
System	Windows Xp
Operating environment	Ambient temperature: -10 ~ 45℃ ; Humidity: ≤95%RH
Dimensions	Length×width×height: 474mm × 288mm × 370mm
Weight	15.8kg

RDPDZ-104H
TRANSFORMER PD
INSPECTION DEVICE

Product Characteristics

1. Small size, light weight, portability and easy operation.
2. Backlight LCD screen.
3. Built-in lithium battery.
4. Providing the functions of storing and reading two-Dimensionsal and three-Dimensionsal maps.
5. Automatic gain control adjustment is adopted, with strong anti-interference ability.
6. Signal-noise ratio has been reduced by a variety of anti-interference means.
7. RFID / WiFi / Bluetooth functions of the instrument contribute to expand the application of IOT.
8. The internal integrated discharge types database facilitates the comparative analysis and verification of discharge.
9. Multi-cycle display mode for time-domain waveforms precisely distinguishs interference from discharge.
10. Patrol inspection data can be exported to PC through SD card or U disk to complete the creation of user reports.

Technical Parameters

Host	
Number of detectable channels	4 channels: 1TEV, 1US, 1UHF (wireless, optional), 1 HFCT(wireless, optional)
Sampling accuracy	12bit
Synchronization mode	Internal synchronization, external synchronization, optical synchronization
TEV	
Measurement frequency range	3M-100MHz
Measuring range	0 ~ 60dB
Measurement error	±2dB
Resolution	1dB
Maximum pulses per cycle	720
Minimum pulse frequency	10Hz
Output interface	Standard SMA connection host
Non-contact US	
Center frequency	40kHz
Resolution	0.1uV
Accuracy	**±0.1uV**
Measuring range	0.5uV ~ 1mV
Output interface	Standard SMA connection host

Technical Parameters

Contact US	
Frequency range	20kHz ～ 300kHz
Output impedance	50Ω
Detection sensitivity	0.1mV
Measuring range	0.1mV ～ 1V
Output interface	Standard SMA connection host
HFCT (Optional)	
Measurement frequency range	1M-30MHz
Transmission impedance	>5mV/mA(10MHz)
Output impedance	50Ω
Measuring range	-20~80dB
Measurement error	±1dB
Resolution	1dB
Output interface	BNC interface-signal conditioning unit, wirelessly connected to the host
UHF (Optional)	
Measurement frequency range	300MHz ～ 1.5GHz
Detection sensitivity	< -60dBm
Receiving method	The antenna
Transfer method	Coaxial cable
Output method	BNC interface - signal conditioning unit, wireless connection to the host
Hardware	
Display screen	5.0 inch TFT true color LCD screen
Resolution	800×480
Operate	Touch/Key
Data storage	TF card
Interface	3.5mm stereo headphone jack
Power supply	DC-12V/2A DC Power Supply
Extended function	USB-type C/5 million cameras /RFID/WIFI/ Bluetooth
Power supply	
Internal power supply	Battery powered (4800mAH 7.4V)
Normal working hours	About 7 hours, and the full charge time of the battery is about 3 hours
Measure	
Length× Width× Height	235mm×133mm×48mm
Weight	0.85kg
Environment	
Operating temperature	-20℃ ～ 50℃
Storage temperature	-40℃ ～ 70℃
Humidity	10%-90% RH (non-condensing)
Altitude	≤3000m

HIGH VOLTAGE INSULATION TEST EQUIPMENT

SERIES 3

RDCJ-DY
SERIES LIGHTNING
IMPULSE VOLTAGE GENERATOR

Product Characteristics

1. Complete sets, full voltage classes.
2. Small loop inductance and the band elimination filter measures make the wave adjustment convenient.
3. Simple operation, excellent synchronization performance, reliable action.
4. Constant current charging technology, high automation, strong anti-interference performance.
5. Digital measurement and analysis system and computer on line processing system for impulse test data, greatly improve the test technology and efficiency.

Technical Parameters

Items	1.2/50μs; 250/2500μs; 2~5μs; and other waveforms	Display screen	17-inch TFT color screen
Output peak value	100~10000kV	Measurement display precision	Better than 3%
T1 wave front time	1.2μs±30%	Tested product residual voltage	<5kV
T2 wave tail time	50μs±20%	Voltage measurement	Use damped impulse divider
Reverse overshoot	<20%	Oscilloscope	TBS series, optional
Voltage polarity	Positive/negative(manual shifting)	Insulation strength	≤500V RMS (common to ground refer PE)
Waveform shift	Auto shifting	Power source	AC220V±10%, 50/60Hz
Charging time	10s~999s, set arbitrarily	Environment temperature	-10±40℃
Instability of charging voltage	<1%	Relative humidity	35%-85% RH (no condensation)
External input	50Hz/60Hz	Ground resistance	≤0.5Ω
Trigger method	Auto or manual, can single trigger	Waveform	Sine wave; waveform distortion <5%
Trigger maloperation rate	<1%	Structure type	Open structure, independent control cabinet and main body, optical fiber connection
Trigger range	100% rated charging voltage	Control console	L×H×W: 1.8m×1.2m×1m
No conductive dust, no fire and explosion hazards, no corrosive metal and insulation gas.			

RDDF-5/400
AND RDDF-10/400 MULTIPLE
FREQUENCY VOLTAGE GENERATOR

Product Characteristics

1. It has over-voltage, over-current, zero start, flashover and other protective functions.
2. Light weight, easy to use on site.
3. Two working modes (automatic and manual) available for users to choose from.
4. Digital data can be stored and printed in different places.
5. Human-computer exchange interface is humanized by the application of DSP platform technology.

Technical Parameters

Capacity	5 kVA and 10kVA (The capacity can be customized)
Input voltage	AC three-phase, 380V ± 10% (Note: single phase 220 V can also be connected to A and C terminals of power input. At this point the capacity is halved)
Power frequency	Power frequency
Output voltage	Output voltage
Output frequency	Output frequency
Waveform distortion rate	Waveform distortion rate

RDSF-15/500
TRIPLE FREQUENCY VOLTAGE GENERATOR

Product Characteristics

1. Simple operation and reliable performance.
2. It can well meet the needs of induction withstand voltage of transformer.

Technical Parameters

Input voltage	Three phase 380V, 50 Hz
Output voltage	Single phase 0 ~ 500V
Output frequency	Single phase 150Hz
Rated capacity	15kVA
Harmonic distortion	< 5% - 8%
No load operation time	≤ 5 minutes
Duration of test object under rated voltage	40s

RDSLZ-82-2000A
INTELLIGENT PRIMARY CURRENT INJECTOR

Product Characteristics

1. Small size, light weight and good performance.
2. Easy to use and maintain.
3. 7-inch true color HD digital screen.

Technical Parameters

Rated capacity	12kVA
Input voltage	AC 380V
Input current	31.5 A
Output voltage	6 V
Output current	2000 A
Current accuracy	± 0.5
Display mode	7 inch true color HD digital screen
Touch mode	more accurate resistive touch
Operation mode	automatic, manual
Data storage	60 groups
Note: Our company makes products with different specifications and special functions according to the requirements of users.	

RDVLF VERY LOW FREQUENCY HV TEST SET

Product Characteristics

1. Data of current, voltage, waveform can be directly sampled at high voltage side, so the data is real and accurate.
2. Excellent over-voltage and over-current protection, with the action time less than 20ms.
3. High-voltage output protective resistor designed in the boost leads no need of another outside protective resistor.
4. The adoption of high and low voltage closed loop negative feedback control circuit causes no capacitance effect.

Technical Parameters

Output voltage ratings	50 kV or 80 kV
Output frequency	0.1Hz; 0.05Hz; 0.02Hz
Load capacity	0.1Hz: maximum 1.1μF
	0.05Hz: maximum 2.2μF
	0.02Hz: maximum 5.5μF
Measurement accuracy	3%
Positive and negative voltage peak errors	≤ 3%
Voltage waveform distortion	≤ 5%
Power supply fuse tube	10A
Power	AC 220V ±5%, 50Hz
Use conditions	Temperature: -10℃~+40℃; Humidity: ≤ 85% RH

RDZG
DC HIGH VOLTAGE GENERATOR

Product Characteristics

1. High frequency PWM technology is adopted for closed-loop adjustment, with high voltage stability, small ripple factor and good reliabilty.
2. Smoothly linear voltage regulation over full scale, with the accuracy better than 0.1%.
3. The pulsation factor is less than 0.5%. It can be used all day at the work site.
4. The high voltage multiplier packaged with DuPont material in all solid state surpasses the air and oil filled equipment. Large base with glossy outer tube can be placed steadily and easy to maintain.
5. 75%MOA voltage conversion button facilitates the arrester testing.
6. With over-voltage, over-current, zero start and short-circuit discharge protection functions.
7. Shockproof control box in overall design together with concise panel and voice prompt during operation.

Specifications and Technical Parameters

"Voltage kV/ Current mA"	Rated voltage	Control box		DC high voltage generator	
		External Dimensions (mm)	Weight (kg)	External Dimensions (mm)	Weight (kg)
60/2-10	60kV	310*250*230	5	470*260*220	6
80/2-10	80kV	310*250*230	6	490*260*220	8
100/2-10	100kV	310*250*230	6	550*260*220	8
120/2-10	120kV	310*250*230	7	600*260*220	10
200/2-5	200kV	310*250*230	8	1000*280*270	20
250/2-5	250kV	310*250*230	8	1130*290*270	20
300/2-5	300kV	310*250*230	9	1300*290*270	22
350/2-5	350kV	310*250*230	9	1370*290*270	24
Output polarity	Negative voltage polarity, zero voltage start, linearity continuously adjustable				
Working power supply	AC220V±10% ; 50HZ ± 1%				
Voltage measurement accuracy	± 0.5% ± 2 digits; minimum resolution 0.1kv; measuring range :10%fs to 1.1fs				
Current measurement accuracy	± 0.5% ± 2 digits; minimum resolution: 0.1 μA for anti-impact ammeter, 1 μA for control box; measuring range:10%fs to full scale				
Ripple coefficient	≤0.5%				
Voltage stability	Random fluctuation, ≤ 0.5% when the grid voltage changes ± 10%				
Operation mode	Intermittent working system, less than 30 minutes under rated load				
Working conditions	Temperature: 0-40 ℃, humidity ≤90% RH				
Storage conditions	Temperature: -10℃ ～ 40℃, humidity ≤90% RH				
Altitude	Below 3000 meters				
Note: External Dimensions of DC high voltage generator = diameter of equalizing cover (R) * semidiameter of insulating cylinder (r) * total height (H)					

YDG SERIES
AC HIGH-VOLTAGE DRY-TYPE TESTING TRANSFORMER

Product Characteristics

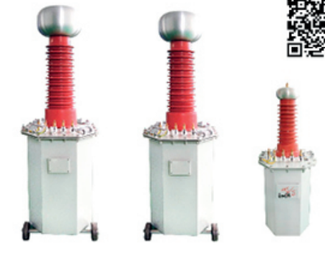
1. Small size, light weight, compact structure, no oil leakage, maintenance free and environment friendly.
2. Simple and intuitive wiring, easy to use.
3. Good safety and reliability, beautiful appearance.

Specifications and Technical Parameters

"Voltage kV/ Current mA"	Capacity (kVA)	Low voltage side		High voltage side		Weight (kg)
		voltage (V)	current (A)	voltage (kV)	current (mA)	
5/50	5	200	25	50	110	30
10/50	10	200	50	50	200	40
15/50	15	200	75	50	300	50
20/50	20	200	100	50	400	55
25/50	25	200	125	50	500	60
30/50	50	200	150	50	600	65
5/100	5	400	12.5	100	50	60
10/100	10	400	25	100	100	65
15/100	15	400	37.5	100	150	70
20/100	20	400	50	100	200	75
25/100	25	400	62.5	100	250	80
15/120	15	400	37.5	120	125	85
20/120	20	400	50	120	160	90
25/150	25	400	62.5	120	200	95
30/120	30	400	75	120	250	100

Note: Can be customized according to the users, parameters of unlisted products are not limited to the scope of the table.

YDJ SERIES
AC HIGH-VOLTAGE OILIMMERSED TESTING TRANSFORMER



Product Characteristics

1. Stable, durable, with compact structure, and at low price.
2. Small size, light weight, simple and intuitive wiring, easy to use.
3. Good insulation reliability and beautiful appearance.

Specifications and Technical Parameters

Specifications	Capacity (kVA)	low voltage side		high voltage side		Measurement ratio	"Temperature rise ℃ (30 mins)"
		voltage (V)	current (A)	voltage (kV)	current (mA)		
5/50	5	50	100	200	25	500:1	10
10/50	10	50	200	200	50	500:1	10
20/50	20	50	400	400	50	500:1	10
30/50	30	50	600	400	75	500:1	10
50/50	50	50	1000	400	125	500:1	10
5/100	5	100	50	200	25	1000:1	10
10/100	10	100	100	200	50	1000:1	10
20/100	20	100	200	400	50	1000:1	10
30/100	30	100	300	400	75	1000:1	10
50/100	50	100	500	400	125	1000:1	10
20/150	20	150	133	400	50	1500:1	10
30/150	30	150	200	400	75	1500:1	10
50/150	50	150	333	400	125	1500:1	10
50/200	50	200	250	400	125	1000:1	10
50/300	50	300	170	400	125	3000:1	10

Note: Can be customized according to the users, parameters of the unlisted products are not limited to the scope of the table.

ELECTRICAL TEST MANUFACTURER

YDQ SERIES
AC HIGH-VOLTAGE INFLATABLE TESTING TRANSFORMER

Product Characteristics

1. Small size and light weight (40%-65% lighter than the oil immersed testing transformer of the same grade).
2. Clean, no oil stain, no need for maintenance.
3. Not affected by bad weather, and there is no need to stop the test during the on site carry.
4. The insulation strength is higher than that of oil immersed testing transformer, and the corona is very small.

Specifications and Technical Parameters

Specifications	Capacity (kVA)	low voltage side		high voltage side		Measurement ratio	"Temperature rise ℃ (30 mins)"
		voltage (V)	current (A)	voltage (kV)	current (mA)		
6/50	6	200	30	50	120	500:1	50
10/50	10	200	50	50	200	500:1	50
15/50	15	400	37.5	50	300	500:1	50
20/50	20	400	50	50	400	500:1	50
30/50	30	400	75	50	600	500:1	50
50/50	50	400	125	50	1000	500:1	50
10/100	10	200	50	100	100	1000:1	50
15/100	15	400	37.5	100	150	1000:1	50
20/100	20	400	50	100	200	1000:1	50
30/100	30	400	75	100	300	1000:1	50
50/100	50	400	125	100	500	1000:1	50
10/150	10	200	50	100	66.7	1500:1	50
15/150	15	400	37.5	150	100	1500:1	50
20/150	30	400	50	150	133.3	1500:1	50
30/150	30	400	75	150	200	1500:1	50
50/200	50	400	125	200	250	2000:1	50
50/300	50	400	125	300	166	3000:1	50

Note: Can be customized according to the users, parameters of unlisted products are not limited to the scope of the table.

TRANSFORMER TESTING INSTRUMENT

SERIES 4

RD8100B
TRANSFORMER CORE GROUNDING CURRENT TESTER

Product Characteristics

1. The meter can store 200 groups of data, and the stored data can be exported into the computer through USB interface.
2. Waveform indication, alarm value setting and alarm indication.
3. Historical data reading, consulting, saving, printing and other functions.

Technical Parameters

Function	Transformer core grounding current test; AC leakage current online test
Power supply	DC 9V (alkaline dry battery LR6 1.5V×6)
Test mode	Clamp CT
Jaw size	80mm×80mm
Current range	AC 0.00mA ～ 100A
Resolution	AC 0.00mA ～ 9.99mA, resolution: 0.01mA
	AC 10.0mA ～ 99.9mA, resolution: 0.1mA
	AC 100mA ～ 999mA, resolution: 1mA
	AC 1.0A ～ 100.0A, resolution: 0.1A
	±(0.5%rdg+5dgts) (23°C±3°C, below 70% RH, the wire is in the center of the jaw)
Sampling rate	1/S
Line voltage	Circuit test under AC 600V
Suitable for safety regulation	IEC1010-1, IEC1010-2-032, pollution level 2, CAT III 600V, I EC61326 (EMC standard)

RD6000A
TRANSFORMER TAN DELTA TESTER

Product Characteristics

1.The test result has high precision and is easy to realize automatic measurement.
2. With the frequency conversion technology, reliable data can be measured.
3. With large LCD full touchscreen and super full graphics operation interface, each process is very clear.
4. Equipped with a calendar chip and a large-capacity memory.
5. Instrument data can be exported through U disk, and can be viewed and managed on any PC by special software.
6. Easy to operate and the measurement process is controlled by microprocessor.
7. Integrated model, with standard capacitor and high voltage power supply; convenient for field test and reduces field wiring.
8. It has the function of low voltage shielding for reverse wiring.

Technical Parameters

Accuracy	Cx ± (1%rdg+1pF)	
	tgδ ±(1%rdg+0.00040)	
Anti-interference index	Frequency conversion anti-interference, in 200% interference can still achieve the above accuracy	
Capacitance range	Internal high voltage	3pF~60000pF/10kV; 60pF~1μF/0.5kV
	External high voltage	3pF~1.5μF/10kV; 60pF~30μF/0.5kV
	Resolution	Maximum to 0.001pF, 4 significant digits
tgδ range	No limitation, resolution 0.001%, capacitance, inductance, resistance can be automatically identified	
Test current range	10μA~5A	
Internal high voltage	Voltage setting range	500V~10kV adjustable, resolution 1V
	Maximum output voltage	200mA
External high voltage	UST test mode	Maximum test current 5A, frequency 40~70Hz
	GST test mode	Maximum test voltage/current 10kV/5A, frequency 40~70Hz
Test frequency	Single frequency 40.0~70.0Hz, resolution 0.1Hz	
	Automatic dual variable frequency set at will (from 50±0.1Hz to 50±10Hz)	
	Automatic dual variable frequency set at will (from 60±0.1Hz to 60±10Hz)	
CVT self-exciting low voltage output	Output voltage 3-50V, output current 3-30A	
Measuring duration	About 40s, depending on measuring method	
Power Supply	220V AC, 50Hz ± 1%	
Interface	RS232, USB	
Pinter	Mini-type thermal printer	
Ambient temperature	-10℃~50℃	
Relative humidity	<90%	

RD6000
TRANSFORMER TAN DELTA TESTER

Product Characteristics

1. The advanced full touch LCD and super large full graphic operation interface makes the operation easy.
2. The calendar chip and large capacity memory can save masssive test results in chronological order.
3. Data in the device can be exported through U disk, viewed and managed on any PC through our company's special software.
4. The instrument can be tested by direct connection method, reverse connection method, CVT self-excitation method, etc..
5. Correctly measuring the dielectric loss and capacitance of CVT without removing the high voltage lead.
6. Measuring the dielectric loss and capacitance of C0 at the upper end of CVT by reverse shielding method.
7. All digital-controlled and with high speed sampling signal and the continuously adjustable output voltage.
8. Multiple protection, safe and reliable.

Technical Parameters

Service conditions	-15℃ ~ 40℃	RH < 80%	
Anti-interference principle	Frequency conversion method		
Power supply	AC 220V±10%	Generator allowed	
High voltage output	0.5KV ~ 10KV	Every 0.1kV	
	Accuracy	2%	
	Maximum current	200mA	
	Capacity	1500VA	
Auto-exciting power supply	AC 0 ~ 50V/15A, 45Hz/55Hz; 55Hz/65Hz; 47.5Hz/52.5Hz		
Resolution	tgδ	0.001%	
	Cx	0.001pF	
Accuracy	tgδ	±(rdg*1.0%+0.040%)	
	Cx	±(rdg*1.0%+1.00pF)	
Measurement range	tgδ	Unlimited	
	Cx	15pF < Cx < 300nF	
		10KV	Cx < 40 nF
		5KV	Cx < 150 nF
		1KV	Cx < 300 nF
	CVTtest		Cx < 300 nF
Memory capacity	200 groups, support U disk data storage		

RDB-IIH
PORTABLE TRANSFORMER TURN RATIO TESTER

Product Characteristics

1. Three phase precision inverter is used to eliminate the harmonic effect of the mains voltage and makes the measurement more accurate.
2. Three phase output voltage is adopted to improve the test speed. The transformer connection group (0 ~ 11) can be automatically identified.
3.It is suitable for the measurement of a wide variety of transformers with the most comprehensive measurement parameters.
4. High and low voltage reverse connection protection and other protections increase the stability of the instrument.
5. Automatically measuring the transformer ratio, error value and the exact position of the tap changer (measuring up to 99 tap positions).
6. 7-inch HD color LCD touchscreen with modular display; and each operation step has menu prompt.
7. No power down clock, data storage function and U disk storage function.
8. The multi-functional engineering plastic box with cold and temperature resistance, sealing and waterproofness, anti falling and anti shock is adopted for field test.

Technical Parameters

Test range	0.9~10000
Measurement accuracy	±0.1%+2 digits (0.9 ~ 500)
	±0.2%+2 digits (501 ~ 2000)
	±0.5%+2 digits (2001 ~ 10000)
Resolution	Minimum 0.0001
Output voltage	Automatically adjusted according to the load
Power supply	Built in rechargeable lithium battery or power adapter
Ambient temperature	-10℃ ~ 40℃
Relative humidity	≤85%RH, no condensation

RDB-II
TRANSFORMER TURN RATIO TESTER

Product Characteristics

1. Three phase precision inverter is used to eliminate the harmonic effect of the mains voltage and make the measurement more accurate.
2. Three phase output voltage is adopted to improve the test speed. The transformer connection group (0 ~ 11) can be automatically identified.
3.It is suitable for the measurement of a wide variety of transformers, such as Z-type transformer, rectifier transformer, grounding transformer, electric furnace transformer, phase-shifting transformer and balance transformer, with the most comprehensive measurement parameters.
4.High and low voltage reverse connection protection, transformer turn to turn short circuit protection, tap changer opening and closing not in place protection, output full short circuit protection, increase the stability of the instrument.
5. Automatically measuring the transformer ratio, error value and the exact position of the tap changer (measuring up to 99 tap positions).
6. It adopts 7-inch high-definition color touch-screen LCD with modular display, and each operation step has menu prompt.
7. The instrument has both printout, U disk interface and RS232 interface for paperless office.
8. The multi-functional engineering plastic box with cold and temperature resistance, sealing and waterproofness, anti falling and anti shock is adopted for field test.
9. Download the special app to control the instrument, and to store and upload the test data for easy reference.

Technical Parameters

Test range	0.9 ~ 10000
Measurement accuracy	±0.1%+2 digits (0.9 ~ 500)
	±0.1%+2 digits (0.9 ~ 500)
	±0.5%+2 digits (2001 ~ 10000)
Resolution	Minimum 0.0001
Output voltage	Automatically adjusted according to the load
Working power supply	AC 220V±10%, 50±1Hz
Ambient temperature	-10℃ ~ 40℃
Relative humidity	≤85%, no condensation
Overall Dimensions	Host 360*290*170(mm); line box 360*290*170(mm)
Weight	Main engine 5.9kg; line box 5.7kg

RDBK-IV
TRANSFORMER LOAD AND NO LOAD TESTER

Product Characteristics

1. Three phase and single phase short circuit impedance measurement.
2. Measurement of zero sequence impedance.
3. Load loss test and no load loss test.
4. Tests can be directly done within the allowable measurement range of the instrument, when beyond the measurement range, an external voltage transformer can be connected.
5. The instrument adopts large color LCD touchscreen with high resolution.
6. The instrument is equipped with 232 interface, which extends the functions.
7. Its own internal printer can print and display data.
8. Built-in non-power down memory can store 160 groups of measurement data.
9. The instrument is equipped with U disk interface for accessing test data.
10. Permanent calendar, clock and time calibration function.
11. The instrument has wide measuring range, high precision, good stability, small size, light weight and convenient measurement.

Technical parameters

Input voltage	Test range: 1 ~ 660V; 10V ~ 600V ± (0.2% rdg ± 0.05% fs)
Input current	Test range 1mA ~ 110A; 1A ~ 100A; 0.1A ~ 10A ± (0.2%rdg ±0.05% fs)
Power factor	$\cos\Phi > 0.1$: ±(0.5%rdg ±0.05%fs)
	$0.02 < \cos\Phi < 0.1$: ±(1.0%rdg ±0.05%fs)
Frequency measurement	45 ~ 65(Hz); accuracy: ±0.003Hz
Phase measurement	0.00° ~ 360°; accuracy: ±0.1°
Short-circuit impedance	0 ~ 100%; accuracy: ±0.5%
Data display	5 digits
Power supply	AC 220V±10% , 50Hz±5Hz
Operation conditions	Temperature: -10℃ ~ 45℃; humidity: ≤90%RH

RDKC-2000
TRANSFORMER ON-LOAD TAP-CHANGER ANALYZER

Product Characteristics

1. Large output current, light weight.
2. Testing YN, Y, △ type transformer and directly displaying the resistance without conversion.
3. With winding or without winding measurement.
4. Waveform display automatically adjusts the resistance according to the sampled value, the time value amplitude.
5. With perfect protection circuit, reliable and strong.
6. 7-inch large LCD, easy on-site operation.
7. Built-in high-capacity lithium battery.
8. 500 sets of data can be saved inside automatically, and can be connected with U Disk.

Technical parameters

Output current	Test range: 1 ～ 660V; 10V ～ 600V ± (0.2% rdg ± 0.05% fs)	
Measuring range	Transition resistance	0.3Ω~20Ω(1.0A); 5Ω~40Ω(0.5A); 20Ω~100Ω(0.2A)
	Transition time	0 ~ 320ms
Open circuit voltage	24V	
Measurement accuracy	Transition resistance	± (5% rdg ± 0.1Ω)
	Transition time	± (0.1% rdg ± 0.2ms)
Sampling rate	20kHz	
Ambient temperature	-10 ℃ ~ 50 ℃	
Ambient humidity	≤ 85% RH	
Power supply	AC 220V±10%,50 ± 1Hz	

RDRB-IV
FREQUENCY SWEEPING RESPONSE ANALYZER

Product Characteristics

1. Different Characteristics of transformer windings are measured with frequency sweeping method.
2. Quick measuring (the measuring of a single winding is within 2 minutes).
3. High frequency accuracy, higher than 0.001%.
4. Digital frequency synthesis, with higher frequency stability.
5. 5000V voltage isolation fully protects the safety of the testing computer.
6. 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.
7. Powerful analysis software and hardware meet the international standards DL/T911-2016 and IEC60076-18.
8. Compatible with Windows 2000/Windows XP/Windows 7/windows 8/Windows10.
9. The software is highly intelligent, and after the parameters being set, all the measurement work can be completed by pressing only one key.
10. The software interface is concise and intuitive, with clear menus facilitating the operation.

Technical Parameters

Measuring speed	1 min - 2 minds for single-phase winding
Output voltage	Vpp-25V, adjusting automatically in test
Output impedance	50Ω
Input impedance	1MΩ (the response channel is built with 50Ω matching resistance)
Frequency sweep scope	10Hz-2MHz
Frequency accuracy	0.001%
Frequency sweep manner	Linear or logarithmic, frequency sweeping interval and number of sweeping points are freely settable
Curve display	Mag-freq. curve
Measuring dynamic range	-100dB~20dB
Power source	AC100-240V 50/60Hz

RDXC-3000A
TRANSFORMER DEMAGNETIZATION TESTER

Product Characteristics

1. Applied to remove the remanence before the 35KV and above large power transformers are put into operation.
2. The advanced composite current degaussing method is adopted to reduce the current impact.
3. High degaussing efficiency, as for the three-phase transformer, only one phase needs elimilating.
4. Automatic demagnetization and manual demagnetization are both available.
5. The quantity of initial remanence and the remanence after demagnetization can be both detected and displayed before and after test.
6. The wiring is simple, and the demagnetization test can be carried out directly by using the test line of the DC resistance tester.
7. Digital current adjustment with high control accuracy.
8. 5-inch color touchscreen control makes it easy to operate.
9. The test results are automatically saved in the form of catalog, and the report can be printed directly and stored in the U disk.
10. The software is highly intelligent, and after the parameters being set, all the measurement work can be completed by pressing only one key.
11. The software interface is concise and intuitive, with clear menus facilitating the operation.
12. The embedded system is adopted to avoid the software poisoning.

Technical Parameters

Input type	Current method
Output voltage	vpp-40v, automatic adjustment during test
Output current	5A, 4A, 3A, 2A, 1A, optional
Remanence rate	0-100%
Demagnetization progress	0-100%
Minimum resolution	0.10%
Operating power	AC100V-240V ±10%
Power frequency	50±1Hz
Operating temperature	-10℃~50℃
Ambient humidity	≤85%RH

DUAL-CHANNEL
DC RESISTANCE TESTER

Product Characteristics

1. The instrument has large output current and high voltage.
2. Dual-channel measurement, measuring two resistance values at the same time.
3. It has a complete protection circuit and strong reliability.
4. The horizontal structure is convenient for on-site operation of the transformer factory.
5. With audible discharge alarm and clear discharge indication to reduce misoperation.

Technical Parameters

Product model	RDZR-5AS	RDZR-10AS
High-voltage side output current	<15mA, 40mA, 200mA, 1A, 5A	<15mA, 40mA, 200mA, 1A, 5A, 10A
Low-voltage side output current	2A, 5A, 10A, 20A	2A, 5A, 10A, 20A
Test range	High voltage side	0.5mΩ ～ 0.8Ω (5A)
		1mΩ ～ 2Ω (5A)
		5mΩ ～ 10Ω (1A)
		100mΩ ～ 50Ω (200mA)
		1Ω ～ 250Ω (40mA)
		10Ω ～ 20kΩ (<15mA)
	Low voltage side	100μΩ ～ 500mΩ (20A)
		200μΩ ～ 1Ω (10A)
		1mΩ ～ 1.6Ω (5A)
		5mΩ ～ 4Ω (2A)
Accuracy	±(0.2%+2 digits)	
Resolution	0.1μΩ	
Working temperature	0 ～ 40℃	
Environmental humidity	≤90%RH, no condensation	
Power supply	AC220V±10%, 50Hz±1Hz	
Dimension	448*463*177(mm)	
NW	17.6kg	

RDZR-10A
TRANSFORMER DC RESISTANCE TESTER

Product Characteristics

1. The maximum output voltage 24 V enables it to select larger test current when the resistance value is high.
2. Automatically selecting the current according to the load, suitable for the DC resistance measurement of small and medium-sized transformers and voltage transformers.
3. It has multiple reliable protection functions, and gives an alarm simultaneously.
4. It has the function of any temperature conversion of copper and aluminum materials.
5. Intelligent power management technology makes the instrument always operating at minimum power.
6. High brightness 7-inch color LCD touchscreen, clear display under strong light.
7. The instrument comes with perpetual calendar clock and power-down storage, which can store 1000 sets of test data.
8. Bluetooth communication, RS232 communication and USB interface for computer communication and USB data storage.
9. It is equipped with a panel type microprinter, which can print the measurement results.
10. Download the special app to control the instrument, store and upload the test data for easy reference.

Technical Parameters

Test current	AUTO、<20mA、40mA、200mA、1A、5A、10A	
Measuring range	0.5mΩ - 0.8Ω (10A)	Accuracy：±(0.2%+2 digits)
	1mΩ - 4Ω (5A)	
	5mΩ - 20Ω (1A)	
	100mΩ - 100Ω (200mA)	
	1Ω - 500Ω (40mA)	
	100Ω-100KΩ (<20mA)	Accuracy：±(0.5%+2 digits)
Minimum resolution	0.1μΩ	
Display	7 Inch color LCD touchscreen, the significant number of resistance display is 4	
Data storage	1000 groups	
Working environment	Ambient temperature:0℃ ～ 40℃	
	Relative humidity: <90%RH, no condensation	
Power supply	AC 220V±10V, 50Hz±1Hz (fuse 2A)	
Maximum power consumption	200W	
Dimensions	360*290*170 (mm)	
Weight	Host: 6.7kg; Line box: 5kg	

RDZR-20A/40A
TRANSFORMER DC RESISTANCE TESTER

Product Characteristics

1. The whole machine is controlled by high-speed single chip microcomputer, with high degree of automation and easy operation.
2. Its new power supply technology is suitable for DC resistance measurement of large and medium transformers.
3. The reliable protection functions reduce the impact of back EMF on the instrument.
4. Sound discharge alarm and clear discharge indication reduce the operation mistakes.
5. Fast response.
6. Intelligent power management technology makes the instrument always operating at minimum power.
7. 65K true color liquid crystal with 320x240 ultra small pixel.
8. With perpetual calendar clock and power-down storage; 1000 sets of test data can be stored.
9. RS232 communication and USB interface for computer communication and USB data storage.

Technical Parameters

Product model	RDZR-20A	RDZR-40A
Measuring current	<20mA、1A、2.5A、5A、10A、20A	<20mA、2.5A、5A、10A、20A、40A
Measuring range, Accuracy:±(0.2%+2 digits)	100μΩ - 1Ω (20A)	50μΩ ～ 500mΩ (40A)
	500μΩ - 2Ω (10A)	100μΩ - 1Ω (20A)
	1mΩ - 4Ω (5A)	500μΩ - 2Ω (10A)
	2mΩ - 8Ω (2.5A)	1mΩ - 4Ω (5A)
	5mΩ - 20Ω (1A)	2mΩ - 8Ω (2.5A)
Measuring range, Accuracy: ±(0.5%+2 digits)	10Ω-20KΩ (<20mA)	10Ω-20KΩ (<20mA)
Minimum resolution	0.1μΩ	
Display	LED Display; The resistance shows 4 significant digits	
Data storage	1000 list	
Working environment	Environment temperature: 0℃ ～ 40℃	
	Relative humility: <90% RH, no condensation	
Power supply	AC 220V±10V, 50Hz±1 Hz (Safety tube 10A)	
Maximum power consumption	1000W	
Dimensions	400×225×350 (mm)	
Weight	Host 15.1KG; line box: 5.75KG	

CIRCUIT BREAKER (SWITCH) TEST INSTRUMENT

SERIES 5

RDGC-8A

CIRCUIT BREAKER ANALYZER

Product Characteristics

1. It is suitable for all types of metal contact SF6 switch, GIS combined apparatus, vacuum switch, oil switch, post switch and contactor produced at home and abroad.
2. With the acceleration speed sensor, rotation speed sensor, linear stroke sensor and contact sensor, and the installation is easy and simple.
3. Trigger modes include internal trigger, external trigger, sensor trigger and manual trigger.
4. DC adjustable power supply can control the motor energy storage at any time without reversing the line after first line connection.
5. With large screen transparent wide temperature backlight LCD, electronic regulation of the contrast and perfect menu prompt operation.
6. The host can store 1000 groups of on-site opening and closing test results, and the real-time clock in the host is convenient to save the test date and time; the USB interface is used for data transfer and program upgrade.
7. Powerful data analysis function, and built-in quick micro printer to print all data and atlas.

Technical Parameters

Input power supply	220V±10%, 50Hz±10%
Atmospheric pressure	86 ～ 106kpa
Temperature	-10 ～ 45℃
Humidity	≤80%RH
Insulation resistance	＞2MΩ
Dielectric strength	1.5kV power supply chassis work frequency withstand voltage 1 minute, no flashover and arcing
Timing	Range: 64000.0ms; resolution: 0.1ms; error: ≤0.1% rdg ± 0.1ms
Speed measurement	Span: 20.00m / s; resolution: 0.01m /s; error: ≤1% rdg ±0.01m/s
Stroke measurement	Vacuum circuit breaker: span 50.0mm, resolution 0.1mm, error ≤ 1% rdg ±0.1mm
	SF6 circuit breaker: span 300.0mm, resolution 0.1mm, error ≤1% rdg±0.1mm
	Less oil circuit breaker: span 1000.0mm, resolution 0.1mm, error ≤1% rdg±0.1mm
Current measurement	40.00A，resolution range 0.01A
Output power supply	DC0 ~ 270V digital adjustable / 30A (resolution:1V)

RDHL-100A/200A

LOOP RESISTANCE TESTER

Product Characteristics

1. Multiple protection functions such as back EMF impact, disconnection and power-off during the test, overheat of power supply and so on.
2. Intelligent power management technology is addopted to effectively save energy and reduce heating.
3. High output voltage and wide measuring range.
4. The test current comes from the high-precision large constant current power supply, which makes the test fast and accurate.
5. Using four-terminal wiring method to effectively elimilate the influence of test line resistance on the test results.
6. 7-inch high brightness color LCD touchscreen, clear display under strong light, full touch screen operation.
7. With its own calendar clock and power-off storage which can store 1000 groups of test data for reference at any time.
8. The instrument has Bluetooth communication, RS232 communication and USB interface for computer communication and USB data storage.

Technical Parameters

Product model	RDHL-100A	RDHL-200A
Test current	50A, 100A	50A, 100A, 150A, 200A
Range	0 ～ 100mΩ(50A)0 ～ 50mΩ (100A)	0 ～ 100mΩ (50A) 0 ～ 50mΩ(100A)
		0 ～ 25mΩ (150A) 0 ～ 20mΩ (200A)
Resolution	Minimum 0.1μΩ	
Accuracy	± (0.5%±2 digits)	
Power	1000W	
Working mode	Continuous measurement	
Working power supply	AC 220V ± 10%, 50 HZ	
Service temperature	0 ～ 40℃	
Relative humidity	< 90%RH, no condensation	

RDHL-100H/200H
LOOP RESISTANCE TESTER

Product Characteristics

1. The continous large output current from the latest power supply can effectively breakdown or puncture the oxide layer of the switches and then get precise results.
2. Strong anti-interference ability with the last number of test data stably showed in the LCD screen only with ±1 error even in strong interference situation.
3. Long service life is realized by all the precise resistances and military connectors used in the tester.
4. Convenience: Small size, light weight.

Technical Parameters

Product model	RDHL-100H	RDHL-200H
Measurement range	1~1999 μΩ	
Resolution	1μΩ	
Test current	DC 50A, DC 100A, two fixed outputs	DC 50A, DC 100A, DC 150A, DC 200A, four fixed outputs
Work mode	Continuous	
Measurement accuracy	0.5%±1digit	
Display	Three and a half LCD	
Power supply	AC220V±10%, 50Hz	
Work environment	Temperature -10℃ ~ 40℃, humidity ≤80 %RH	

RDZK-IV
VACUUM SWITCH VACUUM TESTER

Product Characteristics

1. Able to measure the vacuum degree of various types of vacuum switch interrupter quantitatively.
2. No need to dismantle the vacuum switch in field measurement.
3. The test results are accurate and reliable.
4. LCD screen, more simple and convenient operation.
5. Able to save, print and view the test data.
6. Light in weight and easy to carry.

Technical Parameters

Test object	Various types of vacuum switch tubes
Detection method	New excitation coil is used to measure the vacuum tube without disassembly
Scope of application	The instrument is a multi-purpose machine, which can measure various types of vacuum magnetic switch
Detection range	10-5 ～ 10-1 Pa
Measurement accuracy	10-5 ～ 10-4 Pa, 15%
	10-4 ～ 10-3 Pa, 15%
	10-3 ～ 10-2 Pa, 10%
	10-2 ～ 10-1 Pa, 10%
Magnetic field voltage	1700V
High-voltage of pulsed electric field	30KV
Opening distance of switch tube during vacuum test	Normal opening distance
Operating environment	- 20 ℃ ～ 40 ℃
Weight of the host	24 kg
Overall Dimensions	420 mm × 320 mm × 280 mm

RDCZ -II DISCONNECTOR CONTACT PRESSURE TESTER

Product Characteristics

1. Small size, light weight, portable and easy to operate.
2. Backlit LCD.
3. Built-in lithium battery.
4. Equipped with micro printer, which can print test report and atlas.

Technical Parameters

Working environment	Temperature: - 10 ~ 40 ℃
	Humidity: ≤80% RH
	Atmospheric pressure: 86 ~ 106kPa
Measurement range	≤ 1000N; error: ≤ 1% rdg ± 1N
Measurement diameter (finger opening distance)	20 mm ~ 90 mm (conventional)
	Note: less than 20mm, more than 900mm (customizable) plum blossom contact fixture (customizable)
Power supply	Internal lithium battery ≤ 20W
	power supply working time ≥ 6h
Charging mode	the special charger is connected to the lithium battery charging interface of the panel for charging
Sensor signal line length	10M
Insulation resistance	> 2m Ω
Dielectric strength	The power supply can withstand voltage of 1.5kV for one minute without flashover and electric arc.

RELAY TESTER/SECONDARY CIRCUIT TESTER

SERIES 6

RDHG-E
FREQUENCY TRANSFORMER
COMPREHENSIVE TESTER

Product Characteristics

1. Full-featured, not only satisfy the test requirements of various CTs, but also for the tests of various PTs.
2. Automatically give CT, VT parameters.
3. Test meet IEC60044 GB1208 (-1) GB16847 (IEC60044-6) and other kinds of transformer standards.
4. Based on advanced principle of low-frequency test method, which can meet the CT test on knee voltage up to 30kV.
5. With friendly and beautiful graphic interface.
6. 2000 groups of test data can be stored inside and can be coped to PC by USB disk for further analysis.
7. Test is simple and convenient, one-click can complete tests of CT secondary resistance, excitation, ratio and polarity.
8. Easy to carry for the weight is less than 9kg.

Technical Parameters

Usage		CT & VT
Output		0~180Vrms, 12Arms, 18A (peak value)
CT Ratio	Range	1~40000
	Accuracy	±0.1%
PT Ratio	Range	1~40000
	Accuracy	±0.1%
Phase	Range	±5min
	Accuracy	0.5min
DC resistance	Range	0~300Ω
	Accuracy	2%±2mΩ
Burden	Range	0~300VA
	accuracy	2%±0.2VA
Power supply		AC220V±10%, 50Hz
Environmental conditions		Operating temperature: -10℃ ~50℃； humidity: ≤90%
Weight and Dimensions		Dimensions:340 mm×300 mm×150mm； weight<9kg

RDHG-P
TRANSFORMER
SECONDARY LOAD TESTER

Product Characteristics

1. Automatic measurement of secondary voltage drop and load of three-phase three wire or three-phase four wire voltage transformer.
2. Automatically calculate the ratio difference, angle difference and comprehensive error of three phases.
3. Automatic measurement of secondary circuit load of voltage transformer and current transformer.
4. Automatically detect and store the measurement error data caused by the test wire under various wiring modes, and correct it in the future test.
5. The software correction function is specially designed to achieve accuracy correction without hardware adjustment.
6. All kinds of electrical parameters are displayed on the same screen, and also can be displayed in the waveform.
7. With harmonic measurement function, it can measure the harmonic content of voltage and current below 32 times.
8. The built-in fast automatic charger can charge the built-in large capacity rechargeable battery pack quickly.

Technical Parameters

Use environment	Ambient temperature: -10℃ ～ 40℃	
	Relative humidity: ≤80% RH	
Measurement accuracy (The measuring accuracy of this instrument is grade 1)	Ratio difference	Δf =± (1%×f ＋ 1%×δ) ±0.01 (%)
	Angle difference	Δδ=±(1%×δ ＋ 1%×f) ±1'
	Conductivity	G=± (1%×G ＋ 1%×δ±0.01) mS
	Susceptance	δ=± (1%×δ ＋ 1%×G±0.01)mS
	Load	S=± (1%×S±0.1)VA
	Resistance	R=± (1%×R+1%×X±0.1)Ω
	Reactance	X=± (1%×X+1%×R±0.1)Ω
Charging power supply	AC 176V-264V, frequency 45-55Hz	
Insulation	The insulation resistance of the voltage and current input terminals to the casing shall not be less than 100MΩ	
	The test lasted for one minute when the input end of the working power supply withstood power frequency 2KV (effective value) between the shell and the input end of the working power supply.	
Working time of battery	The working time is more than 6 hours after full charge	
Measuring range and resolution of the instrument		
Test items	Range	Minimum resolution
Voltage measurement range (V)	40 ～ 120.000	0.001
Current measurement range (A)	0.005 ～ 6	0.0001
Specific difference (%)	-10.000 ～ 10.000	0.001
Angle difference (′)	-600 ～ 600.00	0.01
Error (%)	-10.000 ～ 10.000	0.001
Rounding off (%)	-10.000 ～ 10.000	0.001

RDJB-802M
MICROCOMPUTER RELAY PROTECTION TESTER

Product Characteristics

1.Four phase voltage and three phase current can be flexibly combined to perform various tests.
2. The device can run independently, or be operated by an external laptop or desktop computer.
3. A new hi-fi linear power amplifier makes the waveform smooth and accurate from large current to small current.
4. A large number of advanced technologies, precision components and materials contribute the high performance of the mainframe.
5. Powerful software functions such as automatically completing all kinds of large and complex calibration work, testing and scaning protection setting, playback of fault, real-time store test data, display vector, online print report and so on.
6. An 110V and 220V independent adjustable DC power is designed to supply output.
7. The device with USB communication port can communicate with the computer and other external devices.
8. Perfect self-protection functions such as reasonable design of the heat dissipation structure, reliable and perfect hardware protection, power soft start function, the software of the fault self-diagnosis and the output latch function.

Technical Parameters

AC current source	Phase current output (effective value)	0~30A/phase
	Output precision	0.2 grade
	Three phase parallel current output (effective value)	0~90A
	A Long-time phase current (effective value)	10A
	Maximum output power of phase current	300VA
	Maximum output power of 3 parallel current	800VA
	Maximum permitted work time of 3 parallel current	5s
	Frequency range (fundamental)	0~1000Hz
	Harmonic times	2~20
	Phase	0~360°
DC current source	Output current	0 ~ ±10A / phase
	Output precision	0.5 grade
AC voltage source	The virtual value of phase voltage output	0 ~ 120V
	Output precision	0.2 grade
	The virtual value of line voltage output	0 ~ 240V
	The output power of phase voltage/ line voltage	75VA / 100VA
	Frequency range (fundamental wave)	0 ~ 1000Hz
	Harmonic times	2 ~ 20
	Phase	0~360°
DC voltage source	The output amplitude of phase voltage	0 ~ ±160V
	Output precision	0.5 grade
	The output amplitude of line voltage	0 ~ ±320V
	The output power of phase voltage/ line voltage	90VA / 180VA
	The output power of phase voltage/ line voltage	Free contact: 1 ～ 20mA, 24V
Switching terminal	8 channels input	Electric potential contacts: "0": 0 ~ +6V; "1": +11V ~ +250V
		DC: 220V/0.2A; AC: 220V/0.5A
	4 channels output	DC: 220V/0.2A; AC: 220V/0.5A
Time measurement range	1ms ~ 9999s; Measurement accuracy: ＜ 1ms	
Power	AC220V ± 10% ; 50Hz	

RDJB-1600M
MICROCOMPUTER RELAY PROTECTION TESTER

Product Characteristics

1. Six phase voltage output and six phase current output can be flexibly combined.
2. The device can run independently, or be operated by an external laptop or desktop computer.
3. A new hi-fi linear power amplifier makes the waveform smooth and accurate from large current to small current.
4. A large number of advanced technologies, precision components and materials contribute the high performance of the mainframe, and the structure of professional design has the device small in size, light in weight.
5. Powerful software functions such as automatically completing all kinds of large and complex calibration work, testing and scaning protection setting, playback of fault, real-time store test data, display vector, online print report and so on.
6. An 110V and 220V independent adjustable DC power is designed to supply output.
7. The device with USB communication port can communicate with the computer and other external devices.
8. Perfect self-protection functions such as reasonable design of the heat dissipation structure, reliable and perfect hardware protection, power soft start function, the software of the fault self-diagnosis and the output latch function.

Technical Parameters

AC current source	Virtual value of 6 phase current output	0~30A/phase
	Output precision	0.2 grade
	Virtual value of 3 phase current output	0~60A/ phase
	Virtual value of 6 phase parallel current output	0~180A
	A Long-time phase current (effective value)	10A
	Maximum output power of phase current	450VA
	Maximum output power of 6 phase parallel current	1000VA
	Maximum permitted work time of 6 parallel current	10s
	Frequency range (fundamental wave)	0~1000Hz
	Harmonic times	2~20
	Phase	0~360°
DC current source	Output current	0 ~ ±10A / phase
	Output precision	0.5 grade
	The maximum load volatage output	20V
AC voltage source	The virtual value of phase voltage output	0 ~ 120V
	Output precision	0.2 grade
	The virtual value of line voltage output	0 ~ 240V
	The output power of phase voltage/ line voltage	80VA / 100VA
	Frequency range (fundamental wave)	0 ~ 1000Hz
	Harmonic times	2 ~ 20
	Phase	0~360°
DC voltage source	The output amplitude of phase voltage	0 ~ ±160V
	Output precision	0.5 grade
	The output amplitude of line voltage	0 ~ ±320V
	The output power of phase voltage/ line voltage	70VA / 140VA
Switching terminal	8 channels input	Free contact: 1 ～ 20mA, 24V
		Electric potential contacts:"0": 0 ~ +6V; "1": +11V ~ +250V
	4 channels output	DC: 220V/0.2A; AC: 220V/0.5A
Time measurement range	0.1ms ~ 9999s; Measurement accuracy: ＜ 0.1ms	
Power	AC220V ± 10%; 50Hz	

CABLE AND LINE TESTING INSTRUMENT

SERIES 7

RDCD-II

CABLE FAULT TESTING SYSTEM

1. RDCD-II/502 Cable Fault Pre-locator

Product characteristics

1. 12-inch industrial computer control and touch operation mode.
2. Windows operating system, a super cable management system, automatically generates test reports.
3. It has the functions of ranging and speed measurement.
4. Automatic continuous sampling, never missing any discharge waveform.
5. Low voltage pulse method, high voltage flashover method and multiple pulse method were used.
6. Massive test waveform storage function.
7. The measured fault point waveform and the full-length open circuit waveform of good phase can be displayed on the screen at the same time for the same screen comparison and superposition comparison.
8. Built-in li-polymer power supply can support continuously working for more than 4 hours after being fully charged. It can also work with external AC power supply.
9. Eight pulse transmission and fault reflection signals are automatically displayed, and the full-length waveform of cable open circuit is displayed at the same time.
10. The reflected signal sent by the pulse coupler is automatically displayed, and the full-length waveform of the cable open circuit is displayed at the same time.

Technical parameters

Sampling rate	60MHz, 120MHz, 240MHz
Pulse amplitude	400Vpp
Pulse width	0.1uS and 2uS
Measuring distance	60km
Reading resolution	0.1m
Test accuracy	< 0.5m
The length of test cable	< 1km (short distance)
	< 3km (medium distance)
	> 3 km (long distance)
Impulse coupler withstand voltage	38kV DC

2. RDCD-II/535T Cable Test HV Signal Generator

Product characteristics

1. High voltage pulse output is uniform and controllable.
2. With double 1.5-level indicator display of current and voltage, it is intuitive.
3. High voltage measurement, real-time and accurate.
4. With zero start protection function, it is safe and reliable.
5. With three-gear voltage range and capacitor capacity switching function.
6. Unique high-voltage measurement design, in the stop state, it will automatically discharge the internal capacitance of the equipment.
7. Discharge time can be selected in two modes: timing mode and manual mode.
8. With DC withstand voltage function.
9. Install the internal high-precision test cable fault sampling waveform module.
10. Humanized handcart design, easy to move.

Technical parameters

Impulse high voltage	0 ~ 32kV; 0 ~ 16kV; 0 ~ 8kV
High voltage division	Voltage accuracy: 1.5
Built-in capacitor	4μF/32kV; 16μF/16kV; 64μF/8kV
Discharge power	2048J
Impact time	Impact automatically for about 5 seconds
	Impact manually for any control time
Impact power	2kVA
Operating power supply	AC 220V±10%, 50Hz±2Hz
Environment	-20 ~ +50℃

3. RDCDII/503D Cable Fault Locator

Product characteristics

1. Acoustic-magnetic synchronous positioning technology is adopted to automatically calculate the acoustic-magnetic time difference and reduce the dependence on sound monitoring.
2. Background of noise reduction technology, effectively filter out the environmental interference noise and highlight the discharge sound at the fault location.
3. Combining the traditional acoustic measurement method with the advanced acoustic magnetic method.
4. The gain value and trigger value of acoustic and magnetic signals can be adjusted manually, which is more convenient for fixed point.
5. It has the function of route auxiliary indication, so as to avoid the offset of the route during fixed point.
6. Adjustable parameters, selecting appropriate filter parameters to suppress environmental noise.
7. 7-inch touch highlight LCD to ensure visibility in the sun.
8. Built-in large-capacity lithium-ion battery power supply, with fast charger.
9. Compact, portable and light in weight.

Technical parameters

Sound channel	Bandwidth	Full pass: 100 Hz ~ 1500 Hz
		Low pass: 100 Hz ~ 400 Hz
		High pass: 150 Hz ~ 1500 Hz
		Band pass: 200 Hz ~ 600 Hz
	Signal gain	0 -7 adjustable
	Fixed point accuracy	0.1m
Magnetic field channel	0 -7 adjustable	
Background noise reduction mode	BNR	
The bar chart of sound intensity	0 ~ 100 sound trigger threshold can be adjusted	
The bar chart of electromagnetic intensity	0 ~ 100 magnetic field trigger threshold can be adjusted (with prompt)	
Acoustic magnetic time difference positioning mode	Waveform display; acoustic magnetic time difference display	
Path auxiliary test	the path direction can be indicated by icons on the left and right sides of the cable	
Power supply		
	Built-in lithium-ion battery pack, voltage 8.4V, capacity 4.4Ah	
	Use time: continuous use time > 8 hours	
	Charger: input AC 220v±10%, 50Hz; Nominal output 8.4V, 1A	
	Charging time: < 6 hours.	
Display mode	7-inch color LCD touchscreen with 1024*600 resolution	
Size	Host: 250mm×160mm×160mm	
Weight	Host: 0.6kg; sensor: 1.4kg	
Operating environment	Temperature: -25℃-40℃; humidity: 5-90% RH; altitude: < 4500m	

4. RDCD-II/507 Pipeline Detector

Product characteristics

1. Compass and direction display: visually display pipeline position and left-right direction.
2. Tracking error prompt: Measure the current direction, and eliminate the interference of adjacent lines.
3. Real-time depth and current measurement.
4. All digital processing, stable and reliable.
5. Compact, portable and light in weight.

Technical parameters of the transmitter

Operating frequency	Low frequency, intermediate frequency, high frequency, radio frequency 50Hz
Antenna mode	Wave trough method (vertical coil) and wave crest method (horizontal coil)
Sound indication	FM tone that varies with signal strength
Current indication	The effective current value of the cable under test (unit:mA)
Operating temperature	-10℃ ~ +55℃
Battery	Rechargeable battery
Electric quantity indication	Graphic display
Signal strength	Ladder diagram, digital range 0 ~ 999
Gain control	Manual adjustment with a dynamic range of 100db.
Detection depth	The maximum detection is not less than 10m.
Maximum detection distance	The cable with good insulation can reach 15km in the direct connection method
Depth measurement	ress the depath key to display three digits, and the maximum measurable depth reach 2.5 meters
Accuracy *	low frequency: (1~5)%≤2.5m; Radio frequency:(5~12)%≤2.5m

* Depends on the site environment, the shape of the non-concentric line, the number of adjacent pipelines and the return current of the soil.

Technical parameters of the receiver

Operating frequency	Low frequency, intermediate frequency, high frequency and radio frequency
Working modes	Direct connection method, coupling method and induction method
Load	5 Ω ~ 3,000 Ω
Impedance display	5 digits
Over current	Automatic protection
Output	Low gear, middle gear and high gear
Battery	Rechargeable battery
Operating temperature	-10℃ ~ 55℃

RDF-500
HIGH VOLTAGE WIRELESS PHASE DETECTOR

Product Characteristics

1. It has the function of high voltage power test.
2. Safe and reliable operation, easy to use.
3. Wireless transmission technology overcomes many shortcomings of wired phase detector.
4. Human voice prompts measurement results and operation steps.
5. The 3.2-inch color screen displays the phase difference, frequency, vector diagram and the same or different phase results of the two lines at the same time.
6. Automatic shutdown without operation for 1 hour.
7. The transmitter and receiver host have built-in rechargeable lithium battery and 5V charger.

Technical Parameters

Accuracy of phase difference	Error ≤ 5 °
Frequency accuracy	± 0.1Hz
Measurement range of voltage	5V ~ 500kV
Sight distance between transmitter and receiving host	The maximum is about 100 meters
18650 lithium battery in the host	Capacity: 2500mAH
10440 lithium battery in the transmitter	Capacity: 450mAH
Leakage current	< 10uA
Power consumption of transmitter	< 0.1W
Power consumption of receiving host	< 0.3W
Working environment	Temperature: - 35 ℃ ~ + 45 ℃
	Humidity: ≤ 95% RH

LIGHTNING ARRESTER AND INSULATOR TESTER

SERIES 8

RDFCZ-IV
HANDHELD LIGHTNING STRIKE COUNTER TESTER

Product Characteristics

1. The charging time is short and the discharging speed is fast.
2. Easy operation: one key to complete the automatic charging and discharging process.
3. Wide application range: high voltage output 200V ~ 1600V adjustable.
4. Safe and reliable.
5. Once charged, it can be operated continuously for more than 2000 times.
6. Self-discharge within two minutes.
7. Equipped with a set of test lines and a pull rod line, it can meet the test needs of different methods.

Technical Parameters

Output voltage	200 ~ 1600V adjustable
The voltage regulation is divided into eight gears from 0 to 7	0: 200V
	1: 400V
	2: 600V
	3: 800V
	4: 1000V
	5: 1200V
	6: 1400V
	7: 1600V
Capacitance	10uF
Discharge current	>100A
Power supply mode	Rechargeable lithium battery
Dimensions	238mm×134mm×55mm

RDYZ-302
METAL OXIDE SURGE ARRESTER ANALYZER

Product Characteristics

1. Fully automatically measuring three-phase data with one wiring at the same time, or single-phase data separately.
2. Accurately analyzing the content of fundamental wave and 3rd, 5th and 7th harmonics.
3. Anti-interference function to ensure accurate and reliable data.
4. Voltage phase selection function.
5. Angle compensation function (when the voltage signal is 220V).
6. 8.0-inch color LCD touchscreen can display three-phase data and waveform at the same time.
7. AC / DC dual-purpose, built-in high-capacity lithium-ion battery, one charge can work continuously for about 6 hours.
8. Three measurment methods: wired, wireless and no Pt.
9. RS232 serial communication; USB interface.
10. Wireless data transmission eliminates the tedious work of long-distance wiring of voltage measurement lines.
11. Humanized menu design, simple operation, and the switching function of Chinese and English interface.
12. 200 groups of test data can be stored inside and the data can be exported by USB flash disk.
13. Small in size, light in weight, easy to carry, suitable for field operation.

Technical Parameters

Measuring range	0 ~ 50 mA	
Measurement accuracy	Wired mode	Fundamental: ± (2% rdg + 2 digits)
		Harmonic: ± (10% rdg+ 5 digits)
	Wireless mode	Fundamental: ± (5% rdg + 5 digits)
Resolution		Harmonic: ± (10% rdg + 10 digits)
Measurement parameters	Full current waveform and fundamental peak value of leakage current	
	The fundamental peak value and the 3rd, 5th and 7th peak value of the resistive component of leakage current	
	Capacitive current fundamental peak value, full voltage, full current phase angle difference	
	Effective value of voltage	
	Power consumption of lightning arrester	
Voltage signal input	30 ~ 250V	
Maximum wireless transmission distance	400m (sight distance)	
Ambient temperature	- 10 ℃ ~ 40 ℃	
Ambient humidity	< 90% RH	

RDYZ-IV
ARRESTER COUNTER TESTER

Product Characteristics

1. Check the number of lightning strokes as well as the leakage current (maximum value).
2. Small in size, light in weight, easy to carry.

Technical Parameters

Output voltage	DC600V ± 5%
Output current	AC 1mA - 5mA (maximum, load less than 500 Ω) ± 3%
Interval time	≥ 30s
Power supply	AC220 V ± 10%; 50 Hz ± 2%
Impulse current	≥ 100A (8/20μs)
Dimensions	260mm × 190mm × 175mm
Weight	4kg

SF6 TEST INSTRUMENT

SERIES 9

RDCD-706

SF_6 GAS PURITY TESTER

Product Characteristics

1. Long life detection components.
2. High accuracy and good repeatability.
3. Built-in pressure regulator and electronic mass flow meter.
4. Lightweight, portable and easy to use.
5. Fast response, almost no warm-up waiting.

Technical Parameters

Range	0 ~ 99.9% SF6
Accuracy and repeatability	Typical value ± 0.2% (within a certain range), regardless of flow rate
Resolution	0.1% SF6
Response time	60%, 20s
	90%, 45s
Sampling	Built-in regulating valve, filter, flow meter; 5 meter sampling tube and one pressure reducing valve connector
Working temperature	-30 ℃ to 50 ℃ (best accuracy)
Power supply	Lithium battery, AC and DC dual-use, automatic switching, overcharge and discharge protection
Sampling flow rate	0.2L/min
Weight	About 3.4 kg
Size	358 × 240 × 108 (mm)

RDFJ-708A

SF_6 DECOMPOSITION PRODUCTS TESTER

Product Characteristics

1. Long life detection components.
2. Direct measurement without colorimetric tube or sensor.
3. High accuracy and good repeatability.
4. Built-in pressure regulator and electronic mass flow meter.
5. Large color LCD.
6. Lithium battery power supply, AC and DC dual-use.
7. The instrument comes with cleaning function.

Technical Parameters

Name	Technical parameters
Measuring range	SO_2: 0 ～ 100μL/L
	H_2S: 0 ～ 100μL/L
	CO: 0 ～ 1000μL/L
Measuring accuracy	SO_2: when the measured value ≤ 10μL/L, the error±0.2μL/L
	when the measured value≥10μL/L, the error≤±3%
	H_2S: when the measured value≤10μL/L, the error±0.2μL/L
	when the measured value≥10μL/L, the error≤±3%
	CO: when the measured value≤50μL/L, the error±0.5μL/L
	when the measured value≥50μL/L, the error≤±4%
Repeatablity	SO_2：when the measured value≤10μL/L, the repeatablity≤±0.1
	when the measured value≥10μL/L,the repeatablity≤±2%
	H_2S：when the measured value≤10μL/L,the repeatablity≤±0.1
	when the measured value≥10μL/L,the repeatablity≤±2%
	CO: when the measured value≤50μL/L,the repeatablity±0.3
	when the measured value≥50μL/L,the repeatablity≤±3%
Resolution	0.1μL/L
Sampling flow rate	0.2L/min
Measuring time	≤180s
Working environment	Temperature-10℃ ～ +50℃; humidity 0 ～ 90%RH
Supply power	Lithium battery power supply, AC and DC dual-use, automatic switching, overcharge and over discharge protection function
Dimensions	330(mm)×220(mm)×150(mm)
Weight	4.6kg

RDLD-705
CHILLED MIRROR DEW POINT TESTER

Product Characteristics

1. It can automatically measure the temperature value of micro water dew point (or frost point) in SF6 and other gases;
2. Continuous measurement function.
3. It has the function of converting measurement data to standard value at 20 ℃.
4. It has the function of heating and cleaning the mirror surface.
5. It has the function of automatically saving the measurement results and exporting the USB flash disk, and can query the history.
6. Equipped with large screen touch screen, easy to operate and intuitive reading.
7. Equipped with large capacity lithium battery, the equipment can work normally and continuously without external power supply.

Technical Parameters

No.	Items	Parameters
1	Dew point range	-60℃ ～ +20℃
2	Dew point accuracy	±0.3℃
3	Resolution	Dew Point：0.1℃
4	Display Units	℃、ppm
5	Refrigeration mode	Stirling refrigerator
6	measuring principle	Chilled mirror
7	pressure measurement	0 ～ 1.0MPa
8	flow measurement	500±50ml/min
9	work environment	Temperature：-20 ～ +40℃，Humility：0 ～ 90%RH
10	Working power supply	Lithium battery power supply, AC/DC dual-use, automatic switching, overcharge and over discharge protection function

RDZH-709A
SF_6 COMPREHENSIVE TESTER

Product Characteristics

1. Large capacity storage; battery power prompt.
2. Large color LCD touchscreen, intuitive curve display.
3. Advanced probe protection function; anti-pollution and interference.
4. High sensitivity and stability; good repeatability and fast response.
5. Small and beautiful size, easy to carry.
6. Automatic conversion of micro water value to 20 ℃ standard micro water value.

Technical Parameters

1. Dew point detection module

Name	Technical parameters
Dew point range	-80℃ ～ +20℃
Measurement accuracy	±0.5℃
Micro water range	0.05 ～ 23100 μL/L
Measurement response time (+20℃)	-80℃ →20℃ 5s(63%)，45s(90%)
Resolution	20℃→-80℃ 10s(63%)，240s(90%)
	Dew point: 0.1℃
	Micro water：0.1ppm (100ppm ～ 1000ppm)
Repeatability	0.01ppm (10ppm ～ 100ppm)
	±0.2℃

2. Purity detection module

Name	Technical parameters
Measurement range	0 ～ 99.99%
Measurement accuracy	±0.2%
Repeatability	±0.1%
Resolution	0.01%

3.Decomposition product detection module

Name	Technical parameters
Measurement range	SO_2：0 ～ 100μL/L
	H_2S：0 ～ 100μL/L
	CO: 0 ～ 1000μL/L
Repeatability	SO_2: when the measured value ≤ 10μL/L, the error±0.2μL/L
	when the measured value≥10μL/L, the error≤±3%
	H_2S: when the measured value≤10μL/L, the error±0.2μL/L
	when the measured value≥10μL/L, the error≤±3%
	CO: when the measured value≤50μL/L, the error±0.5μL/L
	when the measured value≥50μL/L, the error≤±4%
	SO_2：when the measured value≤10μL/L, the repeatablity≤±0.1
	when the measured value≥10μL/L,the repeatablity≤±2%
	H_2S：when the measured value≤10μL/L,the repeatablity≤±0.1
	when the measured value≥10μL/L,the repeatablity≤±2%
	CO: when the measured value≤50μL/L,the repeatablity±0.3
Resolution	when the measured value≥50μL/L,the repeatablity≤±3%
	0.1μL/L

RDWG-710
GAS LEAK DETECTOR

Product Characteristics

1. Dual display of host handset.
2. Battery power prompt.
3. Lithium battery, AC / DC dual-purpose, automatic switching, overcharge and over discharge protection function.
4. Large color LCD touchscreen makes the operation simple and easy.
5. Good repeatability and fast response.
6. Advanced probe protection function.
7. Anti-pollution and interference.
8. High sensitivity and stability.
9. Small and beautiful size, easy to carry.

Technical Parameters

Measurement range	0-100 μL / L; accuracy ± 0.1 μL / L
Resolution	0.01ppm; repeatability ± 0.06ppm
Probe protection	Stainless steel sintered filter screen
Working voltage	110 ～ 220VAC; both AC and DC
Storage temperature grade	- 40 ～ + 70 ℃
Operating environment temperature	- 35 ～ + 60 ℃
Pressure	0 ～ 20bar
Sample gas flow rate	300-900ml/min under ventilation (generally 600ml/min)
Indication method	Indicator gauge and sound light signal

RDMJ-711
SF_6 DENSITY RELAY TESTER

Product Characteristics

1. A high-speed single-chip microcomputer is adopted to realize the high degree of automation, repeatability and reliability.
2. Relative and absolute pressure relays can be both tested.
3. 5.7-inch true color screen LCD facilitates the operation.
4. Calibrating the SF6 density relay under the automatic acquisition temperature.
5. 40 groups of data can be stored inside and with power-off data protection function.
6. The test data can be uploaded from USB to PC, and the special test data table can be generated automatically.
7. Calibrating the normal temperature pressure gauge and density gauge, and printing the test results in report form.
8. The instrument pipeline adopts quick connector, which is convenient for connection.
9. The internal clock can be corrected online.
10. The calibration function to ensure the calibration accuracy of the instrument.
11. With the high-precision pressure sensor and world advanced pressure control elements.
12. Equipped with a variety of switch filter joints, easy to operate.
13. When the contact is not electrified, DC24V power supply is provided internally to perform the test.

Technical Parameters

Measurement mode	Automatic measurement
Working power supply	AC220V ± 10%; 50Hz / built-in battery
Measurement accuracy	Level 0.2
Display mode	5.7-inch real color LCD
Measurement range	0~0.9MPa
Pressure display resolution	0.0001 MPa
Measurement pressure type	Absolute pressure and relative pressure
Measuring contact voltage	DC24V
Temperature acquisition mode	Automatic
Use temperature of the instrument	- 30-60 ℃ (Optimum temperature is 5-50 ℃)
Storage capacity	40 groups
Communication interface	USB
Inputmode	Touch
Printing mode	Needle printing
Temperature range	- 50 ℃ ~ 125 ℃; resolution: 0.1 ℃

RDWG-III
SF_6 GAS LEAK DETECTOR

Product Characteristics

1. SF_6 gas sensor is adopted to ensure the measurement accuracy.
2. Built-in gas extraction pump and pump suction sampling mode, fast response.
3. External replaceable integrated dust filter.
4. External water vapor filter can be used for occasions with high humidity;
5. Font and background color can be set for different light occasions to make the display legible.
6. The change of gas is showed in a curve.
7. 20000 records can be stored inside, and the storage capacity also can be customized.
8. With the high-capacity rechargeable polymer battery and USB charging interface.
9. Audible and visual alarm, fault alarm and other alarm functions.
10. Two display modes can be switched: large font display of gas concentration and real-time curve of gas concentration change.

Technical Parameters

Detection principle	Infrared principle
Measurement range	0 ~ 1000ppm
Resolution	1ppm
Sampling method	Pump suction, built-in air pump, flow rate is about 500ml / min
Display mode	2.31 inch HD color screen, digital display
Detection accuracy	≤± 3% fs
Linearity	≤± 1%
Repeatability	≤± 1%
Alarm mode	Sound, light and vibration alarm
Response time	5 seconds, T90 ≤ 30 seconds
Recovery time	≤ 30 seconds
Power supply	DC3.6V, 4500mA rechargeable polymer battery
Operating environment	Temperature -20~50 ℃;
	Relative humidity ≤90%RH
Data storage	20,000 data record storage capacity for viewing, deleting, or exporting data
Interface	USB
Protection level	IP65

RDWG-L33
SF_6 OPTICAL GAS IMAGING CAMERA

Product Characteristics

1. High sensitivity QWIP ensures high precision, stability and reliability of various environmental tests.
2. Passive infrared imaging technology is adopted to make the leakage point found remotely and accurately without power failure.
3. Equipped with 5 megapixel visible camera, high-power dual flash, coexistence of infrared and visible image data, and efficient identification of historical fault location.
4. With both rotatable 5.7-inch color digital LCD screen (available in sunlight) and built-in HD OLED Image Finder.
5. Small in size, light in weight, simple and easy to operate by a single person on site.
6. 2000 groups of data can be stored inside and read, consulted, saved, reported and printed through the data software.

Technical Parameters

Detector	Detector type	QWIP	Temperature measuring function	Temp range	-20℃ ~ +350℃
	Spectral range	10.1-11 μm		Accuracy	±2℃ or ±2%
	Image resolution	640*512		Measurement functions	Multiple measurement spots & Regions of Interest , hot/cold spot detection, isotherms, profiles, differences
	Detector Pitch	15μm			
	NETD	<0.015℃@25℃			
	Frame rate	50/60Hz		Emissivity	1 ~100
Infared len	Field of view/minimum focus distance	15.7 °*12.6°/1.5m		Ambient temperature	Self-adaption
	Focusing mechanism	Manual	Interface Parameter	Power interface	DC +12V±10% 3A
	Spatial resolution	0.43 mrad		data interface	USB 2.0
Vision	Resolution	5 million pixels, CMOS		Storage	MMC card, <32GB
	Focusing mechanism	Automatic		Video output interface	HDMI
	Fill light	LED fill lamp		Position system	GPS
Laser	Laser pointer	Red, laser class: 2	Power System	Battery type	44Wh Rechargeable Li-ion battery
Image	Viewfinder	0.6"color, 800*600		Battery working	> 2 hours
	LCD	5.7" sunlight visible display, 640*480		Power supply	DC +12 V/ 3A
Setup	Image enhancement	DDE	Environment	Operating temperature	-20℃~ +50℃
	Digital zoom	x1/x2/x4		Storing temperature	-40℃~ +80℃
	Color palettes	4 color palettes, image adjustment (auto/manual)		Protection class	IP54
				Humidity	10%~95%RH, no condensation
	Gas modes	High Sensitivity Mode(1-3)	Physical Characteristics	Weight	About 3kg
	Electricity detection	Real time power display		Size	329.5 mm *177.3 mm *205.8mm
	OSD	Date / time, language, temperature unit			

COROTEK-V200
ULTRAVIOLET CAMERA FOR DETECTING HIGH VOLTAGE DISCHARGE

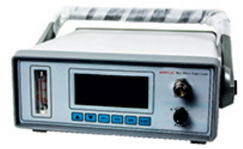
Product Characteristics

1. Light and easy to carry.
2. Simple to use.
3. The maximum corona occurrence is displayed in the detection, and the abnormal degree of electric equipment can be judged from this.
4. In case of corona, all conditions can be recorded or replayed in real time.
5. It can be used for up to five hours at a time.
6. Unique techn

Technical Parameters

FOV	
FOV	8°
FOV(HXV)@1xZoom	H:6.4°-4.8°
Camera focus and working distance	
Visible focus	Auto
UV focus type	Auto
Vorking distance	0.5m
Camera sensivity	
Vayelength range	185-260nm
Min. discharge	6.8 pc@10m
Illumination	0.4 LUX
Camera image formation	
Resolution	320x240
Image modes	VIS.UV on VIS
Camera display	
LCD	3.5"LCD
Display resolution	320x 240
Image and data storage	
Storage SD.4G (Max 32GB)	
Storage format	JPG, ASF
Recording image &Video)	YES
Image resolution	1 (single pixel)
Video resolution	736x576
GPS	N
Environmental sensor	N
Camera Physical Specs	
Size	180x125x111
Battery	Li-ion battery
Use Time	5 hs
Temperature	-15~55℃

RDWS-142
SF_6 INTELLIGENT MICRO WATER TESTER



Product Characteristics

1. Portable design: the instrument is lighter, easy to carry and use.
2. Automatically calibrating the zero point and eliminating the system error caused by zero point and drift, to ensure the accuracy of each measurement and avoid the tedious annual calibration.
3. No need to preheat after startup, and reaching dew point saturation state very quickly.
4. Fast gas saving: the gas consumption is only about 2L (101.2kpa) during the determination.
5. The self-locking connector imported from Germany is safe and reliable without air leakage.
6. Up to 50 groups of test data can be stored inside.
7. LCD screen directly and clearly displays dew point, micro water (PPM), ambient temperature, humidity, time and date, battery power, etc.
8. RS232 interface can be connected with serial printer for data printing.
9. Built-in 4 AH rechargeable lithium battery, once sufficient, working continuously for 5 hours.

Technical Parameters

Dew point	Measuring range	-50 ℃ ～ +60 ℃
	Measurement accuracy	± 2℃
	Response time (+20℃)	63% in 45 seconds; 90% in 90 seconds
Ambient temperature	-40℃ ～+ 60℃	
Ambient humidity	0 ～ 100% RH	
Power supply	AC 220V	
	Built-in rechargeable battery	
Battery performance	Charging time more than 10 hours, can be used for 5 hours	
Weight	3 kg	
Size	250 mm × 100 mm× 300mm	
Working temperature	-40℃ ～+ 80℃	

RDQC-70/150
SF_6 VACUUM CHARGING DEVICE

Product Characteristics

1. Electronic vacuum gauge.
2. Equipped with all kinds of imported and domestic SF6 Electrical equipment connection joints.
3. A variety of protection functions, effectively ensure the safe operation of the vacuum pump.
4. It is easy to maintain. All the devices are made of high performance components, which can be used for a long time without maintenance.

Technical Parameters

Product model		RDQC-70	RDQC-150
Front pump	Pumping speed	15 L/s	25 L/s
	Final vacuum	10 Pa	10Pa
	Power	1.5 kW	3.7 kW
Roots vacuum pump	Pumping speed	70 L/s	150 L/s
	Final vacuum	≤10 Pa	≤10Pa
	Power	0.75 kW	2.2 kW
Operating temperature		-10℃ ~ 40℃	-10℃□40℃
Power supply		TN-S, AC380V, 50Hz	TN-S, AC380V, 50Hz
Total power		≤3 kW	≤6.1kW
Noise		≤60 dB(A)	≤60 dB(A)

RDQH -60/200
SF_6 GAS RECOVERY AND PURIFICATION

Product Characteristics

1. The built-in filtration and absorption system can absorb impurities, water, decomposition products and oil in SF6 gas.
2. Integrated design and small size make it easy to move and use.
3. High efficiency filter maintenance free system, greatly ensuring the quality of SF6 gas recovery.
4. The built-in phase sequence protector can avoid the worry that the host will reverse due to phase sequence error at any time.
5. All electrical systems are of high quality.
6. High quality casters will greatly protect the ground paint and reduce the labor required for pushing.
7. The whole machine is air-cooled without external water source.
8. The built-in temperature protection system can work normally even at - 20°C.
9. The built-in drying and heating system can ensure that the desiccant can be activated and regenerated by equipment heating after saturation, so the desiccant does not need to be replaced.
10. All ball valves are sealed elements with automatic compensation performance.
11. It has built-in electromagnetic valve power-off protection function, to prevent vacuum pump power-off or motor seizing up oil return.

Technical Parameters

Product model	RDQH-60/200
Power AC	380V (phase sequence automatic conversion), 50Hz
Rated maximum gas storage pressure (20 ℃)	≤4 MPa
Device vacuum maintenance	When the pressure is maintained at 133 Pa for 24 hours, the vacuum value rises < 400 Pa
SF6 compressor	Maneurop
Vacuum pump	Direct coupled pump
Recovery device adapts to inlet initial pressure (20 ℃)	0~1.0 Mpa
Final recovery pressure of electrical equipment (20 ℃)	≤50 kPa
Gas oil control after recovery	Domestic oil content < 10 μg/g
Annual air leakage rate of unit	< 1 %
Continuous trouble free operation time of the device	≥1000 h
Accumulated trouble free operation time	≥5000 h
Noise level	<75 dB
Theoretical storage capacity	200 kg
Refrigeration liquefaction compressor	Maneurop
Gas moisture after recovery	60 PPM/V
Gas oil after recovery	10 PPM/V
Dry filtration method	Vacuum heating activation regeneration
Initial pressure of inflation	≤ 133 Pa
Inflation final pressure	0.8 Mpa
Gasification mode	Automatic temperature control of electric heating
Vehicle type	Hand push mobile
Cooling mode	Air cooling

RDP-6000
SF_6 LEAKAGE MONITORING ALARM

Product Characteristics

1. Automatically start the fan exhaust function when there is SF_6 overflow or O_2 leakage alarm.
2. O_2 content detection function; automatic alarm and automatic exhaust in case of oxygen deficiency.
3. Large LCD dynamic Chinese display with automatic screen protection function; friendly interface and fast refresh speed.
4. Fan starts automatically when the content of SF_6 or O_2 exceeds the critical point.
5. Low SF_6 gas detection alarm error < 1%; oxygen alarm error < 0.5%.
6. Able to start the forced exhaust function when alarming.
7. Relevant historical data storage and retrieval functions.
8. Temperature and humidity detection, alarm and display.
9. Five large-capacity alarm contact outputs; voice prompt alarm function.

Technical Parameters

Alarm point of SF_6 concentration exceeding limit	1000ppm, accuracy < ±5%
O_2 concentration detection range	0-25%, oxygen deficiency alarm point 18%, accuracy <± 0.5%
Temperature display range	-20 ~+99℃, accuracy < ±0.5%
Humidity display range	0 ~ 99% RH, accuracy < ±3%
Input power supply	AC 220V±20%
Alarm output contact power	AC 220/5A
Fan output contact	380V/15A (three-phase) or 220V/15A
Fan startup	Automatical (when O2 content is ≤19.6% or SF6 gas concentration more than 1000ppm)
	The fan also can be controlled manually or forced to start.

OIL TESTING INSTRUMENT

SERIES 10

ZYD SERIES DOUBLE-STAGE VACUUM TRANSFORMER OIL FILTRATION SYSTEM (DEHYDRATION PLANT)

Product Characteristics

1. The inside double-stage vacuum system and several stages vacuum separation system can quickly remove the water, gas, impurities and other harmful things from the oil.
2. With 3D flash evaporation, high-efficiency dehydration and degassing ability.
3. The improvement of one time filtration greatly decreases the aging dangerous existing with ordinary purifiers.
4. Oil and gas have independent channels, which ensures zero C2H2 and H2 content in oil.
5. Safe heating system and multiple heating technologies make sure no dead oil area, no overheating and no dry heating.
6. Online controlled filtration; able to fill oil in the vacuum and to dry and heat oil for the transformers.
7. Intelligent oil pump control, auto-defoaming system and pressure protection system ensure the long time and safety working.

Technical Parameters

Item		ZYD-30	ZYD-50	ZYD-100	ZYD-150	ZYD-200	ZYD-250	ZYD-300
Flow rate		30L/min	50L/min	100L/min	150L/min	200L/min	250L/min	300L/min
Vacuum range		≤50 Pa						
Ultimate vacuum		≤5 Pa						
working pressure		≤0.4 Mpa						
Temperature range		20 ～ 80 ℃						
Power supply		380V 50Hz 3 Phases (or at user's option)						
Noise		≤65 ～ 85 dB (depending on user's requirement)						
Fault -free working hours		≥4000H						
Continuous running hours		≥150H						
Heating power		30kW	30kW	72kW	96kW	144kW	168kW	192kW
Total power		35kW	35kW	80kW	105kW	155kW	185kW	210kW
Inlet(outlet) diameter		Φ25mm	Φ32mm	Φ42mm	Φ50mm	Φ50mm	Φ60mm	Φ60mm
Weight		800kg	850kg	1500kg	1700kg	2000kg	2800kg	3500kg
After filtration	Breakdown voltage	≥75kV						
	Water vapor	≤3 ppm						
	Gas content	≤0.1%						
	Filtration precision	≤1μm (or at user's option)						

RDSP-3401 TRANSFORMER OIL GAS CHROMATOGRAPHY

Product Characteristics

1. Build-in NetChromTM workstation of the instrument can support multiple chromatographic analyzers at the same time.
2. New microcomputer temperature control system, high temperature control accuracy, superior reliability and anti-interference performance.
3. The operating system of the full microcomputer keyboard is simple and convenient to operate; And it has designed the automatic identification technology of the detector.
4. The instrument is equipped with a low-noise, high-resolution 24 bit AD circuit, and has the functions of baseline storage and baseline deduction.
5. Chromatographic signal acquisition and data processing, suitable for WinXP, Win2000, Windows7 and other operating systems.
6. Chromatographic system with completely independent intellectual property rights, standard interface of MODBUS/TCP, and convenient connection with DCS.

Technical Parameters

Temperature control area	8 ways
Temperature control range	Room temperature: 5 ℃ ~ 400 ℃; increment:1 ℃; accuracy: ±0.1 ℃
Temperature-programmed order	16 order
Temperature-programmed range	0.1 ～ 60℃/min
The gas control	Precision mechanical valve flow control
External events	8 channels; Auxiliary control output (2 channels)
Chromatographic column	Special column for transformer oil
Number of detectors	up to 3, default to FID and TCD (ECD, FPD and NPD are optional)
	Start sampling
Communication interface	Ethernet IEEE802.3
Detector Technology Index	
"1)	Hydrogen flame ionization detector (FID)"
The limit of detection	≤ 5×10-12g/s (sixteen alkyl)
Baseline noise	≤7×10-14A
Baseline drift	≤2×10-13A/30min
Linear range	≥106
"2)	Thermal conductivity detector (TCD)"
Sensitivity	S ≥ 2500mV•ml/mg (sixteen alkyl) (1, 2, 3, 4 times enlarged, optional)
Baseline noise	≤ 20 μV
Baseline drift	≤ 30 μV/30min
Linear range	≥104
Minimum Detection Quantity	
Two injections, the injection volume is 1ml, and the minimum detection concentration in transformer oil	
Component name	Minimum detection concentration (μL/L)

H2	CO	CO2	CH4	C2H4	C2H6	C2H2	O2	N2
2	1	5	0.1	0.1	0.1	0.1	5	5

RDHS-27A
AUTOMATIC HEADSPACE SAMPLER

Product Characteristics

1. 10mL or 20mL headspace bottles can be used to meet a large number of analysis requirements.
2. The starting bottle position and the ending bottle position can be set freely to meet the special needs of the site.
3. The shaking function of the sample bottle accelerates the balance time to improve the efficiency and enhance the sensitivity and reproducibility.
4. 6 sample heating positions can be overlapped to save analysis time and realize Zen speed.
5. Automatic detection of missing sample bottles to reduce the confusion of sequence analysis.
6. Accurate temperature control ensures good reproducibility and avoids the risk of wrong results and sample condensation.
7. It can be controlled directly through the touch screen or through software on the computer.
8. Simple and clear operation interface greatly improves work efficiency.

Technical Parameters

Main Parameters		Sampling System	
Temperature range	15°C to 200°C above room temperature, increment:1°C	Temperature range	15°C to 200°C above room temperature, increment:1°C
Stability	±0.1°C	Accuracy	0.5% of the full range
Number of sample vials	27	Stability	±0.1°C
Preheating positions	6	Sampling valve	6-way valve (MV65/106HT, optional)
Sample vial volume	10mL or 20mL (Two of them can be optional)	Sampling loop	1mL nickel tube (3mL nickel tube is optional)
Repeatability	RSD ≤ 1.5% (ethanol: water)	Transfer Line	
Injection pressure range	0 ~ 0.4MPa (continuously adjustable)	Temperature range	15°C to 200°C above room temperature, increment:1°C
Sample Vial		Accuracy	2.0% of the full range
Number	27	Stability	±0.5°C
Material	Neutral glass	Needle	
Volume	10mL or 20mL (Two of them can be optional)	Temperature range	15°C to 200°C above room temperature, increment:1°C
Septum	Butylene rubber coated with teflon (silicon rubber with teflon, optional)	Accuracy	2.0% of the full range
Vial cap	Aluminum	Stability	±0.5°C
Equilibration Area		Electric Requirement	
Preheating positions	6	Power supply	220V(±10%), 50Hz, 600VA; (110V±10%, 60Hz, 600VA optional)
Temperature range	15°C to 200°C above room temperature, increment:1°C	Fuses	5AT, 250V(220V); (10AT,250V(115V) , optional)
Accuracy	0.5% of the full range		
Stability	±0.1°C		

RDJJH-100KV
INSULATING OIL DIELECTRIC STRENGTH TESTER

Product Characteristics

1.Built-in Microprocessor, operation of boosting, holding, stirring, static setting, calculation, printing etc..
2. Large LCD screen.
3. Simple operation and easy to control.
4. Power down protection; 100 experimental results can be stored; displaying the current ambient temperature and humidity.
5. Over-voltage, over-current, limit and other protections to ensure the safety of operators.
6. Temperature measurement and system clock display.
7. With standard RS232 interface, it can communicate with computer.

Technical Parameters

Output voltage	0 ～ 100kV (0-80KV can be optional)
Electrode spacing	2.5mm
Voltage distortion rate	< 3%
Boost speed	0.5-5kv/s (adjustable)
Standing time: 15 minutes (adjustable)	15 minutes (adjustable)
Boost interval	5 minutes (adjustable)
Boost times	1-9 times (optional)
Booster capacity	1.5kVA
Measurement accuracy	± 3%
Power	200W

RDJS-612J
INSULATING OIL DIELECTRIC LOSS TESTER

Product Characteristics

1. The instrument adopts the medium frequency induction heating, PID temperature control algorithm.
2. Internal standard capacitor is SF6 gas-filled.
3. AC test power supply using AC-DC-AC conversion.
4. Perfect protection function.

Technical Parameters

Range of DC Voltage	0 ~ 500 V
Range of AC Voltage	200 ~ 2200 V
Functions	Measures the Tan Delta, Resistivity and Relative Permittivity of insulating liquids
Test Range	Test Range of Tan Delta: 0.00001 ~ 100
	Test Range of Volume Resistivity: 2.5 MΩm~20 TΩm
	Test Range of Relative Permittivity: 1.000 ~ 30.000

RDSZ-303J
ACID VALUE TESTER

Product Characteristics

1. Color LCD touchscreen makes the operation easy.
2. Simple and easy to operate.
3. Three samples can be measured at one time, which is convenient and efficient.

Technical Parameters

Test range	0.002-1mg KOH / g
Measurement error	≤± 0.005mg KOH / g
Repeatability	≤ 0.005 mg KOH / g

RDZL-321J
INTERFACE TENSION TESTER

Product Characteristics

1. Only one calibration point needed for instrument calibration.
2. Real time display of equivalent tension value and current weight.
3. Automatic temperature compensation for test results.
4. 240 × 128 dot matrix LCD with no identification key and screen protection function.
5. Historical records with time mark, which can store up to 255 records.
6. Equipped with standard RS232 interface, it can be connected with computer to process test data easily.

Technical Parameters

Measurement range	0-200mn / M
Accuracy	0.1% rdg ± 0.1 Mn / M
Resolution	0.1mn/m
Sensitivity	0.1mn/m

RDHQ-3701
INSULATING OIL GAS CONTENT TESTER

Product Characteristics

1.Unbreakable and well sealed
2.The imported differential pressure sensor with high precision and high stability
3.making your work easier.
4.Short test time of oil sample
5.The operation of the vacuum pump controlled automatically
6.The last dozens of test data storage automatically
7.Test data printing according to your requirements.

Technical Parameters

High precision electronic differential pressure sensor	Resolution no more than 0.1
Minimum detection limit	≤ 0.2%.
Resolution	0.1mn/m
Sensitivity	0.1mn/m
The relative error of repeated measurement results shall not exceed the following values:	
Gas content in oil (volume fraction), %	relative error,%
< 0.5	10
0.5 – 1.0	8
1.0 – 3.0	5
> 3.0	3

RDBS-3001
INSULATING OIL CLOSED FLASH POINT TESTER

Product Characteristics

1. Adopted new high-speed digital signal processor with high reliability and accuracy.
2. Simple operation, detection, cover opening, ignition, alarm, cooling and printing, and fully automatical measurement process.
3. Platinum hot wire, electric ignition; forced air cooling.
4. Power-off storage function, test results storage automatically.
5. Automatic detection of air pressure and automatic correction of measurement results.
6. Large color touchscreen, simple operation, convenient man-machine dialogue.

Technical Parameters

Temperature measurement range	Room temperature ～ 400 ℃
Resolution	0.1 ℃
Measurement accuracy	0.50%
Temperature detection	Platinum resistance
Test fire source	Electric ignition
Repeatability	≥ 110 ℃± 2 ℃, ≤ 110 ℃± 1 ℃

RDKS-3000
INSULATING OIL OPEN FLASH POINT TESTER

Product Characteristics

1. High precision, good repeatability and high degree of automation.
2. Adopt air cooling device to cool down quickly.
3. Adopt high definition color touchscreen technology.
4. It has self inspection function.
5. Platinum igniter is adopted, with long service life and stable ignition.
6. Equipped with micro printer, it can print test data anytime and anywhere.

Technical Parameters

Temperature measurement range	Room temperature ～ 400 ℃
Resolution	0.1 ℃
Accuracy	± 2 ℃
Repeatability	± 3 ℃
Temperature detection	Platinum resistance
Ignition mode	Electric ignition

RDYN-3301
KINEMATIC VISCOSITY TESTER

Product Characteristics

1. Adopted advanced sensor and digital PID temperature control technology, wide temperature control range and high temperature control accuracy.
2. Test record can be saved for future reference.
3. Adopted high-definition color touchscreen technology, rich and clear interface content, quick and flexible touchscreen response.
4. It has the advantages of high measurement accuracy, fast speed, stable and reliable measurement data.
5. Equipped with micro printer, it can print test data anytime and anywhere.

Technical Parameters

Temperature control range	Room temperature ～ 105 ℃
Temperature control accuracy	± 0.02 ℃
Heating power	1500W
Input power	AC220V 50Hz
Ambient temperature	10 ～ 40 ℃
Relative humidity	< 80%

RDQN-3601
POUR POINT AND FREEZING POINT TESTER

Product Characteristics

1. Adopted high-performance microprocessor and the latest semiconductor refrigeration technology.
2. Blue LCD (240 × 128), man-machine dialogue.
3. The instrument has self-diagnosis function.
4. The analysis sample is fast, accurate, reproducible, stable and reliable.

Technical Parameters

Temperature measurement	Platinum resistance
Accuracy	± 1 ℃
Resolution	0.1 ℃
Measurement range	+10 ℃ ～ -70 ℃
Information storage	100 data
Clock display	power failure maintenance
Oil test dosage	20mL each time
Cooling water requirements	Pressure 4.9 × 101 ～ 4.9 × 105Pa
Flow	1.5L/min

DC SYSTEM AND BATTERY TEST INSTRUMENT

SERIES 11

RDBT-8601

BATTERY CELL ACTIVATOR

Product Characteristics

1. Complete functions of the daily maintenance of battery
2. Small size, easy to transfer.
3. Temperature monitoring and automatically to start the fan for cooling when it is beyond the set value.
4. Three stage charging to ensure no overcharge.
5. The optional pulse repair charging mode can obviously repair the backward battery caused by sulfuration.
6. Voltage / current limiting protection to ensure no over discharge or overcharge.
7. Intelligent polarity reversal protection.
8. Modular design, convenient maintenance.
9. Good user interface, large screen LCD, menu operation, rich man-machine interface.

Technical Parameters

Electrical characteristics	Battery activator	Resolution	Steady current / voltage accuracy
Charging current	1-100A (2V mode)	0.01A	Better than 1.0%
	1-30A (6V mode)		
	1-30A (12V mode)		
Discharge current	1-100A (2V mode)	0.01A	Better than 1.0%
	1-30A (6V mode)		
	1-30A (12V mode)		
Total charging and discharging voltage	1.5V-2.6V (2V mode)	0.001V (2V mode) 0.01V (6V、12V mode)	≤0.5%
	4.5V-9.0V (6V mode)		
	9.0-16V (12V mode)		
Temperature measurement range	-10℃ ～ 55℃	0.001℃	0.1℃
Pulse period	15 seconds		
Power supply	AC220±10%		
Use environment	0℃ ～ 50℃，5% ～ 90%RH，indoor		
Display mode	480×800 LCD		
Interface	Can be customized (RS232 communication and USB communication)		
Mode of carrying	Portable		
Heat dissipation mode	Strong wind refrigeration		

RDBT-8602

DC POWER SUPPLY COMPREHENSIVE TESTER

Product Characteristics

1. Fully automatic test, completing various test functions according to the menu mode.
2. The host system is with high reliability and excellent performance.
3. With large screen graphic LCD, 5.6-inch color screen and graphic interface, easy to operate.
4. The three-phase automatic numerical control voltage regulator has high output precision, high power and high voltage stability.
5. The new high power consumption device is used as the load, which has strong load capacity, high precision, small volume, light weight and no open fire.
6. The load resistance is arranged in 8421 code order, which can be arbitrarily combined into the load required by users.
7. In the process of discharge, the discharge current remains unchanged.
8. Three keys to complete the setting, print on site, and with RS232 and USB interface.
9. Perfect upper computer function, with the functions of analysis, data storage, comparison and fault. determination

Technical Parameters

Working power supply	AC 220 V ± 15%, 50 Hz
Power consumption	< 50W
Ambient temperature	-20℃ ～ +55℃
Rated power of three-phase voltage regulator	15kVA; rated current: 50A
Voltage measurement accuracy	≤0.2%
Current measurement accuracy	≤0.5%
Tester	Size: 500×360×420(mm); weight: 15kg
Three-phase voltage regulator	Size: 260×350×600(mm); weight: 18kg
Applicable voltage grade	110V and 220V
Data record capacity	>256M (the memory)
Interface mode	USB and RS232
Working hours	Continuous

RDBT-8603A
BATTERY DISCHARGER

Product Characteristics

1. PTC ceramic resistor is used to avoid red heat phenomenon and make the whole discharge process safer.
2. With 5.0 inch graphic LCD touchscreen, it is easy to operate.
3. Controlled by intelligent single chip microcomputer ARM and displayed in Chinese and English on LCD.
4. Test / discharge termination conditions can be set.
5. Various parameters during the test / discharge process can be recorded.
6. Real time online display, test, record and store the parameters of the whole battery.
7. Automatically complete the test of various parameters and discharge to extend the service life of the battery.
8. The detected data can be transferred to the U disk on site.
9. Continuous discharge to ensure the integrity of the discharge process.

Technical Parameters

Working power supply	AC220V or DC110V-220V (battery pack direct power supply)				
Battery pack voltage	DC48V	DC110V	DC220V	DC380V	DC480V
discharge current	0 ～ 500A	0 ～ 300A	0 ～ 200A	0 ～ 160A	0 ～ 60A
Discharge termination voltage	38-60V	88-132V	176-264V	304V-456V	420-580V
The accuracy of discharge current	1%				
Current resolution	0.1A or 1%				
The accuracy of voltage test	0.5%				
Communication Interface	USB、RS232				
Sampling interval	10s				
Working environment	Humidity : 5% ～ 90%; temperature: 0℃ ～ +50℃				
Cooling mode	Forced air cooling				

Note: All kinds of discharge meters with special specifications can be customized according to customers' requirements.

RDBT-8603B
BATTERY DISCHARGER

Product Characteristics

1. PTC ceramic resistor is used to avoid red heat phenomenon and make the whole discharge process safer.
2. With 5.0 inch graphic LCD touchscreen, it is easy to operate.
3. The communication between the wireless acquisition box and the discharge host is wireless.
4. The wireless acquisition box realizes the complete monitoring of the battery pack discharge process.
5. Controlled by intelligent single chip microcomputer ARM and displayed in Chinese and English on LCD.
6. Test / discharge termination conditions can be set.
7. Various parameters during the test / discharge process can be recorded.
8. Real time online display, test, record and store the parameters of the whole battery.
9. Automatically complete the test of various parameters and discharge to extend the service life of the battery.
10. The detected data can be transferred to the U disk on site.
11. The backward battery can be shielded to ensure the smooth discharge process.
12. Add the function of continuous discharge to ensure the integrity of the discharge process.

Technical Parameters

Working power supply	AC220V or DC110V-220V (battery pack direct power supply)				
Battery pack voltage	DC48V	DC110V	DC220V	DC380V	DC480V
Discharge current	0 ～ 500A	0 ～ 300A	0 ～ 200A	0 ～ 160A	0 ～ 60A
Discharge termination voltage	38-60V	88-132V	176-264V	304V-456V	420-580V
The accuracy of discharge current	1%				
Current resolution	0.1A or 1%				
The accuracy of voltage test	0.5%				
Communication Interface	USB、RS232				
Sampling interval	10s				
Working environment	Humidity : 5% ～ 90%; temperature: 0℃ ～ +50℃				
Cooling mode	Forced air cooling				

Note: All kinds of discharge meters with special specifications can be customized according to customers' requirements.

RDBT-8604
BATTERY INTERNAL RESISTANCE AND CAPACITY TESTER

Product Characteristics

1. The capacity of battery can be estimated.
2. It can test the internal resistance and be used as a voltmeter to test the voltage of single battery.
3. Automatic identify batteries with different voltage levels.
4. Built-in battery internal resistance base value table for customers' reference and analysis.
5. Reverse connection protection of storage battery.
6. Buzzer and screen text prompt for the judgment result or fault.
7. Support the storage of data in the form of battery pack, which is convenient for customers to browse.
8. Support English input of site name and group number.
9. Lithium battery charging status indication.
10. Automatic standby function, 10 minutes no operation, automatic shutdown.
11. Data recording and storage function.

Technical Parameters

Battery cell voltage	Range 0-15v, resolution 0.001V
Internal resistance	Range 0-100 mΩ, resolution 1 uΩ
Temperature	-20℃ ～ 80℃，resolution 0.5%±1℃
Power supply	12V 3000mAh rechargeable lithium battery
Standby time	> 32 hours (with automatic standby function)
Test time	no less than 6 hours of continuous work
Data storage	999 measurements in a single section, 110 tests in a whole group, and 18 groups can be saved
Storage capacity	512kb
Overall Dimensions	238×134×45mm
Working humidity	10% ～ 90%
Working temperature	0℃ ～ 40℃
Storage temperature	-20℃ ～ 60℃

RDBT-8605
PORTABLE DC GROUNDING FAULT TESTER

Product Characteristics

1. The instrument is divided into signal transmitter (analyzer) and receiver (locator). The analyzer takes power directly from the bus, without external AC or battery power supply.
2. Able to solve all the faults of grounding and detect the value of bus capacitance.
3. Completely eliminate the DC system grounding fault, and accurately lock the fault in the minimum range and locate it.
4. Accurately detect the size and phase of line leakage current.
5. Fault current spectrum analysis function to improve the detection accuracy.
6. System to ground voltage measurement function realizes the voltage monitoring range of 0-300V.
7. Signal output power: < 0.15W; various protective functions make it safe to use.
8. With ripple analysis and digital oscilloscope function; able to be used as high-precision ammeter, and the current measurement resolution can reach 0.01mA.

Technical Parameters

Working voltage	Directly from the bus (working voltage is 48V ~ 280V)
Voltage measurement range	0 ～ 300V
Voltage measurement accuracy	0.5%
Bridge working mode	unbalanced bridge
The measurement range of positive to ground insulation impedance	0 ～ 999.9kΩ;
AC channeling voltage measurement range	0 ～ 280V
Power consumption	<10W
Overall dimension (L × w × h)	200×145×46 (mm)
Weight	1.7 kg
Suitable temperature	-10℃ ～ +50℃
Technical Parameters of the Locator	
Working power supply	12V (working voltage of lithium battery is 9.6V ～ 12.6V)
Detection range of branch grounding resistance	0-300 kΩ
Branch grounding resistance measurement accuracy	0-100kΩ ≤10% ±2kΩ
	100-300kΩ display specific value
Leakage current detection sensitivity	<0.1mA
Measurement accuracy	100%
Alarm mode	Voice, graphics, data, grounding direction
Power consumption	<1W
Overall dimension (L × w × h)	180×100×40 (mm)
Weight	1.5 kg
Suitable temperature	-10℃ ～ +50℃
Working power supply	Lithium battery(12V 3100mAh rechargeable)

RDBT-8606
BATTERY CHARGE AND DISCHARGE TESTER

Product Characteristics

1. One machine for multiple purposes.
2. The whole battery discharge process is absolutely safe and reliable.
3. With 7.0 inch graphic LCD touchscreen, Chinese and English display, and menu operation.
4. Dual functions of wired and wireless communication.
5. The collected data can be transferred to the U disk then to the PC, and can be processed by a powerful software then be displayed and printed in form of charts.
6. Multiple protections.
7. Automatic identification of battery pack status within 10 seconds and with hierarchical warning and alarm.
8. Whole chargingprocess monitoring.
9. With the battery activation function.
10. Calibration correction of the total voltage and current of the battery pack.

Technical Parameters

Working power supply	AC three phase four wire 380V			
Battery pack voltage	DC48V	DC110V	DC220V	DC380V
Charge and discharge current	0 ～ 150A	0 ～ 100A	0 ～ 50A	0 ～ 20A
Charge voltage	38 ～ 60V	88 ～ 132V	176 ～ 264V	304 ～ 456V
Discharge termination voltage	38 ～ 60V	88 ～ 132V	176 ～ 264V	304 ～ 456V
The accuracy of charge and discharge current	1%			
Current resolution	0.1A or 1%			
The accuracy of voltage test	0.5%			
Communication Interface	USB、RS232			
Sampling interval	10s			
Working environment	Humidity : 5% ～ 90%; temperature: 0℃ ～ +55℃			
Cooling mode	Forced air cooling			
Note: All kinds of discharge meters with special specifications can be customized according to customers' requirements.				

RDBT-8607
BATTERY CHARGING INSTRUMENT

Product Characteristics

1. Imported high quality control IC and components with optimum design ensure the reliability and stability of the machine.
2. The average charging voltage can be set continuously within the range of 243 ~ 280V by fine tuning.
3. The charging current can be set continuously on the panel in the range of (2 ~ 40) A with fine adjustment.
5. According to the charging characteristic curve of the battery, the charging is safe and efficient.
6. Digital voltage / current meter display.
7. AC input over-current and output short-circuit protection, intelligent temperature control fan cooling and overheating automatic shutdown protection function are to ensure the safe use of users.
8. Small size, light weight, easy to move.

Technical Parameters

AC input voltage	AC(180 ～ 264)V, frequency: 50Hz±10%
Constant current charging current setting range	2 ～ 40A
Battery type	Lead acid battery
Battery capacity	20Ah ～ 200Ah
Battery nominal voltage	216V
Floating charge voltage	243V
Average charging voltage	243 ～ 280V(factory set 270V)
Charging constant current value	2 ～ 40A(factory set 20A)
Total precision of voltage stabilization	1%
Total precision of current stabilization	1%
Efficiency	≥92%
Power factor	≥0.85
Insulation strength	Input to shell and to output ≥AC 1500V; output to shell≥AC 500V
Meantime between failures (MTBF)	≥50000h
Thermal shutdown temperature threshold	(80 ～ 85)℃

DBT-8608
BATTERY GROUP CHARGING INSTRUMENT

Product Characteristics

1. High-performance self-cooling charging module adopted to improve the reliability and stability.
2. The charging device can continuously and stably supply power to the bus in case of monitoring unit failure.
3. Siemens dedicated air switches are adopted; DC voltage and current monitoring system with faults alarm signals.
4. The product is miniaturized and multi modularized, which can be configured simply and flexibly.
5. The number of modules can be flexibly adjusted and expanded according to different system parameters, which greatly improves the use scope of the equipment.
6. AC voltage limiting surge protective device (SPD) with phase to ground (L-PE) and neutral line to ground (N-PE) protection mode and nominal discharge current not less than 10kA (8/20μs) shall be installed at AC power access.

Technical Parameters

AC input rated voltage	380V
Rated frequency of AC input	50Hz
Rated DC output voltage	220V、110V
Rated DC output current	60A
DC output current after expansion	≤100A
Power factor	≥0.92
Efficiency	≥95%
Steady current accuracy	⩽ 0.5% loaded current
Ripple coefficient	≤0.05%
Voltage stabilization accuracy	≤0.5%
Floating charge output DC voltage	198 ～ 260V （220V Series）
Average charging output DC voltage	220 ～ 286V （220V Series）
Floating charge output DC voltage	99 ～ 130V （110V Series）
Floating charge output DC voltage	110 ～ 143V （110V Series）

RDBT-3018D
BATTERY DISCHARGE TESTER

Product Characteristics

1. The test voltage range is wide, covering the 0-300V voltage range battery pack discharge test.
2. The product uses customized nickel-chromium alloy resistors as the load source with low resistance value, high precision, low temperature coefficient, and resistant to current impact.
3. Intelligent chip control of the discharge process.
4. 7-inch bright LCD touchscreen with a resolution of 1024x600; simple and clear, with strong anti-interference ability.
5. Automatic discharge current calculation function.
6. During the process of battery charging and discharging, the voltage of each cell is detected and displayed in real time.
7. The voltage and current curves of the battery pack during the charge&discharge process can be reviewed.
8. The host is configured with U disk for data transfer and support data analysis and report generation.

Technical Parameters

Discharge voltage range	DC 10-300V
Discharge current range	Range 1: 10-20V; Current: 0-40A continuously adjustable
	Range 2: 20-40V; Current: 0-80A continuously adjustable
	Range 3: 40-60V; current: 0-150A continuously adjustable
	Range 4: 60-120V; Current: 0-100A continuously adjustable
	Range 5: 120-300V; current: 0-60A continuously adjustable
Power Input-AC	Single-phase AC 220V, the frequency range is 40-60Hz
Operation mode	Touch screen
Display	7 inch TFT LCD screen, resistive touch screen, resolution 1024x600
Communication	RS485x1
Internal data storage	128MB
Voltage measurement accuracy	±0.5%fs+0.1V Max
Current measurement accuracy	±1%fs+0.1A
Group voltage display accuracy	0.01V
Group current display accuracy	0.1A
Discharge current control accuracy	±1%FS
Protection	Over temperature, over current, current out of control trigger shutdown protection
Emergency stop	High voltage DC switch 120A
Reverse connection protection	Support
Abnormal protection	Power line power failure protection, main cable power failure protection
Over temperature protection	Resistance box over temperature 85℃; radiator over temperature 100℃
Protection	Over temperature, over current, current out of control trigger shutdown protection
Withstand-voltage test	AC input-chassis: 2200V DC 1min AC input-chassis
	DC input-output: 2200V DC 1min DC input-chassis
Cooling	Forced air cooling
Temperature	Operating temperature range: -5~50℃; storage temperature: -40~70℃
Humidity	0~90% PH （40±2℃）
Altitude	Rated 2000 meters above sea level

REACTIVE COMPENSATION AND GENERATOR TESTER

SERIES 12

RDLC-501
SINGLE PHASE CAPACITANCE AND INDUCTANCE TESTER

Product Characteristics

1. Able to measure the single capacitance or single-phase capacitance of group shunt capacitors without removing the wires and measure the inductance of various reactors, meeting the needs of various field application.
2. The capacitance or inductance value as well as the voltage, current, and other relative data are displayed at the same time.
3. With 8.0-inch color touchscreen and menu prompt, it can be observed clearly during the day and night, easy to operate.
4. 200 groups of measurement data can be stored in the built-in large capacity nonvolatile memory.
5. Equipped with U disk interface, which can store any group of measurement data according to the capacity of U disk.
6. With built-in high-precision real-time clock to calibrate the date and time.
7. With high-speed micro thermal printer to print measurement and historical data.
8. Power over-current protection function protects the instrument from power output short circuit damage.

Technical Parameters

Test voltage	AC 25V±10%, 50Hz; AC 1.25V±10%, 50Hz 25VA	
Measurement range and accuracy	Measurable capacitance range	0.1uF ～ 6800uF ± (1%rdg+0.01uF)
	Measurable inductance range	50uH ～ 20H ±(3%rdg+0.01mH)
	Measurable current range	5mA ～ 20A±(3%rdg+0.1mA)
	Measurable resistance range	50mΩ ～ 20kΩ±(3%rdg+1mΩ)
Overall Dimensions	405mm×330mm×180mm	
Weight of instrument	8.5kg (excluding test line)	
Service conditions	Ambient temperature	-20℃ ～ 40℃
	Ambient humidity	≤85%RH
Working power supply	AC220V±10%, 50±1Hz	

RDLC-503
THREE PHASES CAPACITANCE AND INDUCTANCE TESTER

Product Characteristics

1. Able to measure the single capacitance (single-phase capacitance and three-phase capacitance) of group shunt capacitors without removing the wires and measure the inductance of various reactors, meeting the needs of various field application.
2. The capacitance or inductance value as well as the voltage, current, and other relative data are displayed at the same time.
3. With 8.0-inch color touchscreen and menu prompt, it can be observed clearly during the day and night, easy to operate.
4. 200 groups of measurement data can be stored in the built-in large capacity nonvolatile memory.
5. Equipped with U disk interface, which can store any group of measurement data according to the capacity of U disk.
6. With built-in high-precision real-time clock to calibrate the date and time.
7. With high-speed micro thermal printer to print measurement and historical data.
8. Power over-current protection function protects the instrument from power output short circuit damage.

Technical Parameters

Test voltage	AC 25V±10%, 50Hz; AC 1.25V±10%, 50Hz 25VA	
Measurement range and accuracy	Measurable capacitance range	0.1uF ～ 6800uF ± (1%rdg+0.01uF)
	Measurable inductance range	50uH ～ 20H ±(3%rdg+0.01mH)
	Measurable current range	5mA ～ 20A±(3%rdg+0.1mA)
	Measurable resistance range	50mΩ ～ 10kΩ±(3%rdg+1mΩ)
Overall Dimensions	405mm×330mm×180mm	
Weight of instrument	8.5kg (excluding test line)	
Service conditions	Ambient temperature	-20℃ ～ 40℃
	Ambient humidity	≤85%RH
Working power supply	AC220V±10%, 50±1Hz	

RD3205S
WATER COOLED GENERATOR INSULATION RESISTANCE TESTER

Product Characteristics

1. The high-voltage generator module adopts fully enclosed technology and has internal protection resistance, which is safe and reliable.
2. Strong anti-interference ability, can meet the on-site operation of ultra-high voltage substation.
3. Automatic discharge after the test, and monitoring the discharge process in real time.
4. Suitable for measuring the insulation resistance, absorption ratio (R60S/R15S) and polarization index (R10min/R1min) of water-cooled generators.
5. Automatic compensation adjustment of water polarization potential.
6. It has the function of automatically compensating and adjusting the water polarization potential.

Technical Parameters

Function	Insulation Resistance Test (IR); Polarization Index Test (PI); Absorption Ratio Test (DAR)
Rated voltage	2.5kV, 5kV
Output voltage accuracy	±(5%+5 digits)
Insulation resistance test range	0.1M ～ 200GΩ
Short circuit current	≥25mA
Measuring time	1 ~ 10 mins (depending on the measuring method)
Temperature measurement	-25℃ ～ 125℃
Display mode	LCD, digital display and analog progress bar display
Working power supply	AC 220V,50Hz
Working environment	Temperature: -10 ～ 40℃; relative humidity: 20 ～ 80%RH

RDZGS-80/300
WATER COOLED GENERATOR DC WITHSTAND VOLTAGE TESTER

Product Characteristics

1. Able to completely eliminate the interference of stray current and the polarization potential of the sink pipe.
2. It adopts medium frequency double voltage circuit.
3. It adopts the latest PWM (pulse width modulation) technology and high-power IGBT devices.
4. Special shielding, isolation and grounding measures are adopted.
5. With high quality, portable, and able to withstand the rated voltage discharge without damage.

Technical Parameters

Output voltage	80 kV
Output current	300 mA
Output power	24000 W
Voltage measurement error	1.0% ± 2 digits
Current measurement error	1.0% ± 2 digits
Overvoltage and rectification error	≤1.0%
Ripple factor	≤3.0%
Voltage stability	≤1.0%
Power supply	AC380V (3-phase, 4-wire line)

RDFV-II
GENERATOR SURFACE POTENTIAL TESTER

Product Characteristics

1. Safe to use and convenient to carry.
2. Simple operation and accurate measurement.
3. The tester adopts a three-stage disassembly and assembly structure, which can decide whether to install an extension rod according to the length of the measurement distance.

Technical Parameters

Test range	DC 0.1~30kV
Accuracy	1.5 level
Power supply	6F22 9V battery
Operating temperature	-10℃ ~ 40℃
Relative humidity	≤85%, no condensation

GROUNDING AND INSULATION RESISTANCE TESTER

SERIES 13

RD3000B
GROUNDING RESISTANCE TESTER

Product Characteristics

1. Using high-performance single chip microcomputer control, the test process can be intelligent.
2. Small size, easy to carry and operate.
3. High precision, fast testing speed, good repeatability and intuitive reading.
4. 2000 sets of data can be read, checked, saved, reported, and printed through the data software.

Technical Parameters

Function	Ground resistance, soil resistivity test; ground voltage, AC voltage test
Measurement mode	Precision 4-wire, 3-wire measurement, simple 2-wire measurement of ground resistance
Measurement method	Grounding resistance: rated current changing pole method, measuring current 20mA Max
	Soil resistivity: four-pole method (winner method)
	Voltage to ground: average rectification (between P (S) -ES interface)
Measuring range	Measure the ground resistance (R) with two, three and four wires: 0.000Ω ~ 30000Ω
	Soil resistivity (ρ): 0.00Ωm ~ 9000kΩm
	Ground voltage: AC 0.0 ~ 100.0V
Maximum resolution	Two, three or four wire method for measuring ground resistance (R): 0.001Ω
	Soil resistivity (ρ): 0.01Ωm
	Ground voltage: 0.1V
Precision	Two, three and four wire method for measuring grounding resistance (R):
	± 2% rdg ± 5dgt (0.000Ω ~ 29.999Ω)
	± 2% rdg ± 3dgt (30.00Ω ~ 2999.9Ω)
	± 4% rdg ± 3dgt (3000Ω ~ 30000Ω)
	Soil resistivity (ρ): according to the measurement accuracy of R (P = 2πaR a: 1 m ~ 100m; π = 3.14)
	Ground voltage: ± 2% rdg ± 3dgts
	Note: 1. The additional error at rC max or rP max is ≤ ± 5% rdg ± 5dgts (rC max: 4kΩ + 100R < 50kΩ, rP max: 4kΩ + 100R < 50kΩ)
	2. The additional error at 5V interference voltage is ≤ ± 5% rdg ± 5dgts
Short-circuit test current	AC 20mA max
Open circuit test voltage	AC 40V max

RDDT-10A
GROUNDING DOWN LEAD CONDUCTION TESTER

Product Characteristics

1. Using high-performance single chip microcomputer control, the test process can be intelligent.
2. Small size, easy to carry and operate.
3. High precision, fast testing speed, good repeatability and intuitive reading.

Technical Parameters

Test current	AUTO、1A、3A、5A、10A
Measuring range	0.8mΩ-0.8Ω (10A)
	1mΩ-2Ω (5A)
	5mΩ-3Ω (3A)
	10mΩ-10Ω (1A)
Minimum resolution	0.1μΩ
Accuracy	±(0.5%±2 digits)
Display	LCD display, resistance display, 4 significant digits
Data storage	1000 groups
	Ambient temperature:0℃ ～ 40℃
Working environment	Relative humidity <90% RH , no condensation
Power supply	Built-in lithium battery AC 220V±10V, 50Hz±1 Hz，fuse 2A
Maximum power consumption	100W

RDWR-5A GROUNDING RESISTANCE TESTER

Product Characteristics

1. The measured power frequency equivalence is good.
2. Strong anti-interference ability. High anti-interference performance makes the test data stable and reliable.
3. High measurement accuracy; the basic error is only 0.005 Ω.
4. Powerful function. It can measure current pile, voltage pile, grounding grid impedance, grounding resistance, grounding conduction, soil resistivity, etc.
5. Full touch LCD and super large full graphic operation interface have each process very clear.
6. With calendar chip and large capacity memory; able to display, save and print the results at any time.
7. Scientific and advanced data management.
8. Various protection functions to ensure the safety of test personnel and equipment.
9. With vector test function, able to measure the impedance angle.
10. Less wiring labor, no need for high current wire.
11. Integrated type, with standard resistance and constant current source, convenient for field test.
12. Controlled by microprocessor, the instrument is easy to operate.

Technical Parameters

Measurement range	0 ～ 5000Ω (including current pile impedance)
Resolution	0.001mΩ
Measurement error	± (2%rdg+0.005Ω)
Anti-power frequency 50 Hz voltage interference ability	10V
Test current waveform	Sine wave
Test current frequency	Single frequency: 40-70Hz, resolution 0.1Hz (set at will)
	Single frequency: 40-70Hz, resolution 0.1Hz (set at will)
	Dual frequency: 50±0.1Hz to 50±10Hz (set at will); 60±0.1Hz to 60±10Hz (set at will)
Output current	5A (reach 30A by using external power supply)
Output voltage	400V (reach 1000V by using external power supply)
	Cross section area of copper core of current line ≥1.5mm2
	Cross section area of copper core of voltage wire≥1.0mm2
	(The measuring line is provided by the user)
Test power supply	Built-in 2kW variable frequency power supply
Power supply	AC 220V±10% ,50Hz

RDIR3480A/3480B INSULATION RESISTANCE TESTER

Product Characteristics

1. Controllable off-white backlight, suitable for dark places.
2. With automatic discharge function.
3. With automatic shutdown function.
4. With data hold function.

Technical Parameters

Function	Insulation resistance test, DAR, PI, AC/DC voltage test
Power supply	DC 1.5V LR14×6pcs
Rated voltage	RDIR3480A: 50V, 250V, 500V, 1kV, 2.5kV
	RDIR3480B: 50V, 250V, 500V, 1kV, 2.5kV, 5kV
Insulation resistance range	RDIR3480A: 0.1MΩ ~ 200GΩ
	RDIR3480B: 0.1MΩ ~ 400GΩ
Voltage range	AC/DC 0V ~ 750V
Shout circuit current	2mA Max
Max capacitive load	1μF
Display mode	4 digital LCD, backlight
Measurement indication	LED flicker and buzzer ring in measurement
Battery voltage	Battery voltage symbol display, when battery voltage is low will remind to replace the battery in time
Automatic discharge	Automatic release the voltage of the measured object, During discharging,symbol flash.Discharge completion symbol extinguish
Auto shutdown	15 minutes after boot up, the meter shuts down automatically without any operation
Working temperature and humidity	-10℃ ~ 40℃; below 80%RH
Suitable safety standard	IEC61010-1(CAT III 300V CAT IV 150V Pollution 2)

RDER2000C+
MULTI-FUNCTION CLAMP EARTH RESISTANCE TESTER

Product Characteristics

1. Self-test quickly, start immediately into the test.
2. Using the most advanced processing algorithms and digital integration technology.
3. The product is light in weight, more in line with characteristics of hand-held devices.
4. New design, panel operation with 6 buttons, better performance.
5. Increase sound and light alarm function.
6. Increase the interference signal recognition indicator function, with "beep-beep-beep" indicator.
7. Lower power consumption, Maximum operating current less than 50mA.

Technical Parameters

Power supply	6VDC (4 PCS LR6 alkaline batteries)
Clamp size	65mm×32mm
LCD size	4 Digits LCD; screen: 47mm×28.5mm
Range	Resistance 0.01Ω-1200Ω, current 0.00mA ～ 20.0A.
Resolution	Resistance 0.001Ω, current 0.05mA
Accuracy	Resistance ±1%±0.01Ω, current ±2.5%rdg±1mA
Data storage	99 sets
Data upload function	RS232 Interface (Optional)
Auto shutdown	Automatically power off after 5 minutes without any operation
Power consumption	≤50mA, continuously working for 30 hours
Working temperature and humility	-20℃~55℃; 20%~80%RH
Alarm threshold setting range	Resistance: 1~199Ω, current 1 ～ 499mA.
Protection level	Double insulation
Range shift	Automatic
External magnetic field	<40A/m
External electrical field	<1V/m
Single measurement time	0.5 second
Resistance measurement frequency	>1kHz
Measured current frequency	50/60Hz automatic
Tester weight	1160g (including battery)
Tester Dimensions	285mm×85mm×56mm

RDER2100C+
MULTI-FUNCTION CLAMP EARTH RESISTANCE TESTER

Product Characteristics

1. Self-test quickly, start immediately into the test.
2. Using the most advanced processing algorithms and digital integration technology.
3. The product is light in weight, more in line with characteristics of hand-held devices.
4. New design, panel operation with 6 buttons, better performance.
5. Increase sound and light alarm function.
6. Increase the interference signal recognition indicator function, with "beep-beep-beep" indicator.
7. Lower power consumption, Maximum operating current less than 50mA.

Technical Parameters

Power supply	6VDC (4 PCS LR6 alkaline batteries)
Clamp size	Φ32mm
LCD size	4 Digits LCD; screen: 47mm×28.5mm
Range	Resistance 0.01Ω-1200Ω; current 0.00mA ～ 20.0A.
Resolution	Resistance 0.001Ω, current 0.05mA
Accuracy	Resistance ±1%±0.01Ω, current ±2.5%rdg±1mA
Data storage	99 sets
Data upload function	RS232 Interface (Optional)
Auto shutdown	Automatically power off after 5 minutes without any operate
Power consumption	≤50mA, Continuously working for 30 hours
Working temperature and humility	-20℃~55℃; 20%~80%RH
Alarm threshold setting range	Resistance: 1~199Ω, current 1 ～ 499mA.
Protection level	Double insulation
Range shift	Automatic
External magnetic field	<40A/m
External electrical field	<1V/m
Single measurement time	0.5 second
Resistance measurement frequency	>1kHz
Measured current frequency	50/60Hz automatic
Tester weight	1160g (including battery)
Tester Dimensions	285mm×85mm×56mm

RD3215E
HIGH VOLTAGE INSULATION RESISTANCE TESTER

Product Characteristics

1. The charge of the tested object can be released automatically after the test.
2. Large capacity rechargeable lithium battery pack is adopted.
3. Able to automatically record the test time and stores the test results with date and time.
4. The fully isolated USB interface can upload the test data to the PC safely.
5. The instrument adopts a strong double-shell structure, and the outer case of the instrument has a protection rating of IP65 (close the case).

Technical Parameters

Functions	Insulation resistance measurement (IR)
	polarization index measurement (PI)
	Dielectric Absorption Ratio Test (DAR)
	Ramp Test Mode (RAMP)
	filtered resistance test (10S, 20S, 30S, 40S)
	Voltage measurement (V)
	Current measurement (nA)
	Capacity measurement(uF)
Power supply	Rechargeable lithium battery pack 6.2Ah
Rated voltage	250V, 500V, 1kV, 2.5kV, 5kV, 10kV, 15kV
Output voltage accuracy	(5%~10%)±10V
Insulation resistance range	0.5MΩ~30.0TΩ
Short circuit current	7mA Max
Voltage measurement	Range: AC/DC 0V~1000V; Accuracy: ± 5%rdg±3V
Leackage current measurement	Range: 0.01nA~7mA; Accuracy: ± 5%rdg+0.5nA
Capacitance measurement	Range: 10nF~25uF; Accuracy: ± 10%rdg ± 10 nF
Test time	Automatic record test time, time range: 0s~9999s
Battery Power Display	With battery power display, when battery voltage low will remind to charging the battery
Automatic Shutdown	After 15 minutes start up will shut down automatically without any operation
Meter Dimensions	280mm×260mm×160mm
Weight	4900g(including battery)
Working temperature and humidity	-20℃ ~ 50℃, 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

RD3022E
EARTH RESISTANCE SOIL RESISTIVITY TESTER

Product Characteristics

1. The fuselage is light, easy to carry and operate.
2. The large LCD display of host machine, with white backlight and bar graph indicating that can be seen clearly.
3. 300 sets of data can be stored.
4. With the functions as historical data access, reading and preservation.
5. The tester case is made of waterproof protection box, anti-collision, anti-drop, waterproof (protection grade IP65), strong and durable.

Technical Parameters

Functions	2/3/4-pole measurement for earth resistance, soil resistivity, earth voltage, AC voltage
Power supply	DC 7.4V 2600mAh rechargeable lithium battery, full of about 8.4V
Measurement range	Earth Resistance: 0.00Ω ~ 30.00kΩ
	Soil Resistivity: 0.00Ωm ~ 9000kΩm
	Earth Voltage: 0V~ 600V
Measurement mode	Precise 4-pole measurement, 3-pole measurement, simple 2-pole measurement of earth resistance
Measurement method	Earth Resistance: rated current change-pole method, test current 20mA Max
	Soil Resistivity: 4-pole method (Wenner method)
	Earth Voltage: average rectification (between P(S)-ES)
Test frequency	128Hz/111Hz/105Hz/94Hz(AFC)
Short-circuit test current	AC 20mA max
Open-circuit test current	AC 40V max
Test voltage wave	Sine wave
Display mode	4-digital super-large LCD, white screen backlight
Meter Dimensions	215mm(L)×178mm(W)×83mm(H)
Measuring times	Over 5000 times (short-circuit test, interval time should be at least 30 seconds)
Working current	Standby: about 20mA (backlight close)
	Boot up and open backlight: about 45mA (25mA backlight close)
	Measurement: about 100mA (backlight close)
Weight	Tester: 4.73kg
	Test wires: 1.56kg
	Auxiliary ground rods: 0.935kg (4pcs)
Working temperature and humidity	-10℃ ~ 40℃, below 80%RH
Overload protection	Measuring earth resistance: between each interfaces of C(H)-E and P(S)-ES, AC 280V/3 seconds
Insulation resistance	Over 20MΩ (between circuit and enclosure it is 500V)
Withstand voltage	AC 3700V/rms (between circuit and enclosure)
Electromagnetic features	IEC61326(EMC)
Suitable safety standard	IEC61010-1 (CAT III 300V, CAT IV 150V, Pollution 2), IEC61010-031,
	IEC61557-1 (earth resistance), IEC61557-5 (soil resistivity)

RD3031E
DOUBLE CLAMP GROUNDING RESISTANCE TESTER

Product Characteristics

1. Light, easy to carry and operate.
2. Host machine with large LCD screen, white backlight and bar graph indicating.
3. It can store 2000 groups of test data.
4. Alarm indication and auto shutdown.
5. With the functions as historical data access, reading and preservation.

Technical Parameters

Power supply	DC 9V (alkaline dry LR14 1.5V×6PCS); continues standby 300 hours
LCD size	124mm x 67mm (with backlight)
Automatic shutdown	Automatically shut down after 15 minutes start up
Power consumption	Turn on the backlight: 45mA Max
	Turn off the backlight: 25mA Max
	Measurement: 100mA Max (backlight shut off)
Working temperature and humidity	-10℃ ~ 40℃, below 80%RH
Clamp caliber	Φ68mm
Measuring method	2/3/4 pole measurement method: Change-pole method, measurement current 20mA Max
	Selection measurement method: Change-pole method, measurement current 20mA Max
	Double clamp measurement method: Non-connect mutual inductance method, measurement current 1mA Max
	Soil Resistivity: 4-pole measurement (wenner method)
	AC current: Mutual inductance method (clamp)
	Earth Voltage: Average rectification (between P(S)-ES)
Test frequency	128Hz/111Hz/105Hz/94Hz (AFC)
Line resistance check	Automatic calibration
Measuring rate	AC current: about 2 times/second
	Earth Voltage: about 2 times/second
	Earth resistance，soil resistivity: about 7 seconds/time
Measuring times	Over 5000 times (Short-circuit test, interval time should be at least 30seconds)
Short-circuit test current	AC 20mA max
Open-circuit test voltage	AC 40V max
Test voltage wave	Sine wave
Overload protection	Measure earth resistance: between each interfaces of E-P,E-E- C,AC 280V/3 seconds
Insulation resistance	Over 20MΩ (between circuit and outside shell is 500V)
Withstand voltage	AC 3700V/rms. (between circuit and outside shell)
Electromagnetic features	IEC61010- 4-3,Wireless frequency electromagnetic field ≤1 V/m
Protection type	IEC61010-1 (CAT III 300V,CAT IV 150V,Pollution 2)
	IEC61010-031
	IEC61557-1 (earth resistance)
	IEC61557-5 (soil resistivity)
	JJG 366-2004 (grounding resistance meter)

RDCR5000
POWER QUALITY ANALYZER

Product Characteristics

1. The analyzer adopt DSP and ARM double processor.
2. Analog signal acquisition is completed by 2 pieces AD7655 of ADI company to ensure the accuracy of the channel and the information integrity.
3. DSP working frequency is over 200 MHZ, which can realize the synchronization of power frequency and sampling frequency.
4. The 5.6-inch LCD color screen with a resolution of 640 dots × 480 dots and with different display color which enables users to understand the status of grid parameters more efficiently and intuitively.
5. Built-in flash memory can store 60 group of screenshots at the same time, 150 groups of capture transient voltage/current waveform figure, and 12800 groups of alarm list. Starting current detection model, it can continuously capture starting current waveform for 100 s.
6. Built-in 2G memory card can store the trend curve records for 300 days.

Technical Parameters

Power supply	Rechargeable lithium-ion battery packs 9.6V, backup charger
Working current	about 590mA, continuous working 8hours
Display mode	LCD color screen, 640×480, 5.6 inches, display field 116mm × 88mm
Instrument size	240mm×170mm×68 mm
Number of channels	4 voltages, 4 currents
Line Voltage	1.0V~2000V
Phase Voltage	1.0V~1000V
Frequency	40Hz~70Hz
Phasor Diagram Display	Automatic
Menu language	English/Chinese
Working Temperature	-10°C~40°C; below 80%Rh
Input Impedance	Test voltage input impedance: 1MΩ
Withstand voltage	Withstand the sine wave AC voltage of 3700V/50Hz one minute between the instrument line and out shell
Insulation	Between instrument line and shell ≥10MΩ
Structure	Double insulation, with insulation shock-proof sheath
Other functions	Data storage, automatic shutdown, data Hold, low battery prompt, backlight, USB interface
SuitableSafely Standard	IEC 61010 1000V Cat III / 600V CAT IV, IEC61010-031, IEC61326, Pollution degree: 2
Note: The following data are presented in reference conditions and ideal current sensors (completely linear and without phase displacement).	

Current Sensor Characteristics (Optional)

1. The analyzer adopt DSP and ARM double processor.
2. Analog signal acquisition is completed by 2 pieces AD7655 of ADI company to ensure the accuracy of the channel and the information integrity.
3. DSP working frequency is over 200 MHZ, which can realize the synchronization of power frequency and sampling frequency.
4. The 5.6-inch LCD color screen with a resolution of 640 dots × 480 dots and with different display color which enables users to understand the status of grid parameters more efficiently and intuitively.
5. Built-in flash memory can store 60 group of screenshots at the same time, 150 groups of capture transient voltage/current waveform figure, and 12800 groups of alarm list. Starting current detection model, it can continuously capture starting current waveform for 100 s.
6. Built-in 2G memory card can store the trend curve records for 300 days.

Current Sensor Characteristics (Optional)

Current sensor model	Current Clamp	Current True RMS	Current True RMS Max Error	Phase Angle φ Max Error
008B		10mA ～ 99mA	±(1%rdg+3dgt)	±(1.5°), Arms≥20mA
Small sharp current clamp: 7.5mm×13mm		100mA ～ 10.0A	±(1%rdg+3dgt)	±(1°)
040B		0.10A ～ 0.99A	±(1%rdg+3dgt)	±(1.5°)
Round jaw current clamp: Φ40mm		1.00A ～ 100A	±(1%rdg+3dgt)	±(1°)
068B		1.0A ～ 9.9A	±(2%rdg+3dgt)	±(3°)
Round jaw current clamp: Φ68mm		10.0A ～ 1000A	±(2%rdg+3dgt)	±(2°)
300F		10A ～ 99A	±(1%rdg+3dgt)	±(3°)
Flexible Coil Current Sensor: Φ300mm		100A ～ 3000A	±(1%rdg+3dgt)	±(2°)
Note: The above four current sensors are selected by users according to their own needs. (If not, selected R068B round jaw current clamp by default)				

POWER METERING PRODUCTS

SERIES 14

RDJL-602
THREE PHASE WATT HOUR METERCALIBRATOR

Product Characteristics

1. Verifying on site the error of single and three phrase watt hour meters and power acquisition terminals.
2. Able to detect the error without power outage or changing the wiring of the measuring circuit.
3. Voltage, current, phase angle, power factor and other electrical parameters ensure the accuracy of fault detection.
4. Wiring errors in metering devices can be visually checked by vector diagram of three-phase voltage and current.
5. Clamp type transformer is used to make the operation quick, simple, safe and reliable.
6. The comprehensive error of reactive energy meter can be detected without changing the wiring.
7. Able to display voltage and current waveforms simultaneously or separately; able to analyze 1-32 harmonic content and harmonic value, and draw a histogram.
8. With built-in EMWIN operating system, 7-inch true color LCD full touchscreen; A variety of electrical parameters can be displayed on one screen.
9. Supporting DBF database management and query; USB disk export and Excel spreadsheet opening.

Technical Parameters

Voltage	2 ~ 450V, automatic conversion limit, minimum resolution 0.01V
Current	Built-in CT: 0.1-5A, accuracy 0.05 grade (10A optional)
	External clamp CT: 0.1 ~ 5 A, accuracy is 0.1 grade (10A optional)
Power measurement	Active power: 0 ~ 99999W, minimum resolution: 0.01W
	Total active power: 0-999999W, minimum resolution: 0.01 W
	Reactive power: 0 ~ 99999W, minimum resolution: 0.01W
	Total reactive power: 0-999999 W, minimum resolution: 0.01W
	Power factor: 0.001 ~ 1, minimum resolution: 0.0001
Phase angle	0 ～ 359.9 °, minimum resolution 0.0001°
Frequency	45 ~ 55Hz, resolution
Working temperature	- 20 ℃ ～ + 50 ℃
Working power supply	AC 80V ~ 265V
Power consumption	≤ 3VA

RDCF-150KV
AC/DC HIGH VOLTAGE DIVIDER

Product Characteristics

1. Precision high-voltage film capacitor and precision high-voltage glass glaze resistor are adopted to improve the measurement accuracy and stability.
2. Special shielding technology is adopted to improves the anti-interference ability, so as to achieve high stability and high linearity.
3. The high-voltage divider is filled with DuPont filling material and sealed by special process. No oil leakage. When working, the high and low voltage parts are far away, so the work is safe and reliable.
4. Using dial switch to switch high and low voltage, AC and DC, convenient and fast.
5. It adopts portable structure. The whole machine is made of aluminum alloy packing box, which can be easily disassembled. Small in size, light in weight, easy to carry, very convenient to use.

Technical Parameters

Divider impedance	1800 MΩ
Voltage class of voltage divider	AC: 150kV; DC: 150kV
Display meter range	Low: 0-20kV; High: 0-150kV
AC measurement mode	True RMS measurement
Precision	AC: 1.0%; DC: 0.5%
Insulating medium	DuPont dry dielectric materials
Divider ratio	1000:01:00
Connecting coaxial cable	3m
Ambient temperature	0~40℃
Humidity	≤85%RH

RDML-400A
TRIPLE-CLAMP DIGITAL PHASE VOLTAMMETER

Product Characteristics

1. Equipped with anti-vibration, anti-slip, high insulation sheath and USB interface.
2. 500 groups of data can be stored; USB interface; the stored data can be uploaded to the computer, easy to analyze and manage.
3. 2.8-inch TFT color LCD; all parameters can be displayed on the same screen.

Technical Parameters

Measurement function	Measurement range	Resolution	Basic error
Voltage	AC 0.00V ～ 600V	0.01V	± (0.5% range)
Current	AC 0.0mA ～ 20.0A	0.1mA	± (0.5% range)
Phase position	0.0° ～ 360°	0.1°	±1°
Active power (p)	0.0W ～ 12kW	0.1W	± (1.0% range)
Reactive power (Q)	0.0var ～ 12kvar	0.1var	± (1.0% range)
Apparent power (s)	0.0VA ～ 12kVA	0.1VA	± (1.0% range)
Frequency (f)	45Hz ～ 65Hz	0.01Hz	± (1.0% range)
Power factor (PF)	-1 ～ +1	0.001	±0.03
Power Supply	DC 9V (1.5V LR6×6PCS)		
Jaw size	Φ8mm		
Work environment	-10 ℃ ~ 40 ℃; below 80% RH		
Phase sequence	Normal phase: U1, U2, U3 or I1, I2, I3 cursor flashes from left to right		
	Reverse phase: U1, U2, U3 or I1, I2, I3 cursor flashes from right to left		
Other functions	Data storage, automatic shutdown, data hold, low battery prompt, backlight, USB interface		
Suitable for safety regulation	IEC61010-1 CAT III 600V, IEC61010-031, IEC61326, Pollution level 2		

RDXZ-2
PHASE DETECTOR

Product Characteristics

1. The clamp type non-contact inductive measurement is adopted to detect the phase sequence without stripping the cable skin or contacting the high-voltage exposed live wire; safe and fast.
2. Dynamic acousto-optic indication of the positive phase or reverse phase state of the three-phase power supply; phase sequence is clear at a glance.
3. The bottom plate of the instrument is equipped with four magnets, which can fix the instrument on the metal shell of the equipment during the test to make the operation convenient and handy.

Technical Parameters

Power supply	DC 3V (1.5V LR6×2PCS)
Jaw size	Φ1.6mm ～ Φ16mm
Voltage range	AC 70~1000V
Automatic shutdown	Automatic shutdown in about 5 minutes
Working environment	-10 ~ 50 ℃, below 80% RH
Maximum voltage	AC1000V
Insulation strength	5.4kVrms
Maximum rated power	300mVA
Suitable for safety regulation	En61010-1:2001, en61010-031:2002, pollution level 2, cat III (600V), instantaneous overvoltage 6000V
Weight	About 215g (including battery)
Size	Width×Height×Thickness: 70mm × 75mm × 30mm

AFTER-SALES SERVICES

Our company has a well-trained after-sales service team. According to the after-sales service commitment, we are to provide customers with high-quality and efficient services, including product installation, technical guidance for commissioning, technical training for users and all technical support services required in products maintenance.

1. During the "three guarantees" period (within12 months), our company provides the following after-sales (technical) services free of charge:

(1) Regularly organizes remote training for users on equipment installation, commissioning, operation and maintenance technology according to users' requirements;

(2) Provides users with detailed product manuals and other technical documents stipulated in the contract;

(3) Once receiving the user's complaint on the quality of products, we will response immediately within 12 hours, and provide free replacement parts with free shipping and free training during the three guarantees period of products;

(4) Provides a follow-up technical support system for users, and the software is to be upgraded free within 12 months;

(5) Regularly keeps track of users' feedback on the quality of products once or twice a year. Users' opinions and suggestions on products and services are precious for us to improve our work and the supply of spare parts.

2. Even beyond the product "three guarantees" period, our factory will continue to provide our users with timely and satisfactory technical advice and related services, be responsible for the lifelong maintenance of the products, and ensure the supply of consumables and spare parts required for product use and maintenance. For the replacement and repair, the fee charged will be only the cost of replacement and repairing parts.

3. We will provide free lifelong return-to-factory calibration service and provide its factory calibration reports.

Rui Du Mechanical and electrical (Shanghai) Co., Ltd.

COMMON TEST EQUIPMENT OF 500KV SUBSTATION

No.	Equipment Name	Specification and Model	Purpose
1	HV Test Equipment		
1	DC High Voltage Generator	RDZG-350/5	To conduct DC withstand voltage test of power transformers, cables and other equipment; to test DC characteristics of zinc oxide lightning arrester
2	Series Resonant Device With Variable Frequency	RDXZ-2400kVA/800kV	To conduct AC withstand voltage test of 500kV and below substation CT, PT, circuit breaker, disconnector, wall bushing, pillar insulator, etc.
3	Power Frequency Withstand Voltage Tester	RDYD-10kVA/100kV	To conduct the withstand voltage test of 35kV switch, PT, CT and other electrical equipment
4	Power Frequency Withstand Voltage Tester	RDYD-5kVA/50kV	To test the voltage resistance of 10kV and below switches, PT, CT and other electrical equipment
5	Multiple Frequency Voltage Generator	RDDF-10kVA	To test inductive withstand voltage of transformers and instrument transformers
6	AC/DC High Voltage Divider AC/DC	RDCF-200kV	To measure test voltage
2	Electrical Characteristics Test Equipment		
1	Transformer Tan Delta Tester	RD6000A	To measure the capacitance or dielectric loss of transformer, PT and CT.
2	Transformer Turn Ratio Tester	RDB-II	To measure the ratio and group of transformer and voltage transformer
3	Transformer Load and No Load Tester	RDBK-IV	To measure transformer short-circuit impedance and load loss, no-load current and no-load loss
4	Transformer On-load Tap-changer Analyzer	RDKC-2000	Accurately to measure parameters such as transition time, transition waveform, transition resistance and other parameters of on-load tap-changers
5	Frequency Sweeping Response Analyzer	RDRB-IV	To conduct transformer winding deformation measurement
6	Transformer DC Resistance Tester	RDZR-40A	To measure the resistance of transformer and instrument transformer windings

7	Partial Discharge Tester	RDPDD-104H	To conduct partial discharge measurement and analysis of electrical equipment
8	Circuit Breaker Analyzer	RDGC-8A	To measure the operating time, simultaneity, bouncing process, opening distance, stroke, and the open-close speed of the circuit breaker
9	Loop Resistance Tester	RDHL-200A	To measure the circuit resistance of the closed Circuit breaker
10	Vacuum Switch Vacuum Tester	RDZK-IV	To measure the vacuum degree of the vacuum circuit breaker
11	Microcomputer Relay Protection Tester	RDJB-1600M	To perform comprehensive protection detection: voltage protection, current protection, differential protection, low cycle protection, whole set of tests, etc.
12	Transformer Comprehensive Characteristic Tester	RDHG-D	To test the 5% or 10% error curve, transformation ratio and polarity of CT as to verify whether the requirements for the protective device are met
13	Intelligent Primary Current Injector	RDSL-82-6000A	To test the primary current of the equipment
14	Cable Fault Testing System	RDCD-II	To test the fault point of the cable and to pinpoint it precisely
15	High Voltage Wireless Phase Detector	RDF-500	Wirelessly to detect the phase angle, frequency and other parameters of high-voltage lines
16	Metal Oxide Surge Arrester Analyzer	RDYZ-302	To measure the full current, resistive current and harmonic current of zinc oxide arrester and other parameters
17	Arrester Counter Tester	RDYZ -IV	To test the action of lightning arrester discharge counters
18	Battery Discharge Tester	RDBT-3018D	Mainly to test discharge of lead-acid battery packs for backup power supply in China Telecom, China Mobile,China Unicom, and power DC industries
19	Battery Internal Resistance And Capacity Tester	RDBT-8604	To test online the battery voltage, internal resistance, connection bar resistance and other important battery parameters
20	Portable DC Grounding Fault Tester	RDBT-8605	To find out grounding fault for battery packs
21	Capacitance And Inductance Tester	RDLC-503	To measure the capacitance of capacitors and the inductance of reactors
22	Insulation Resistance Tester	RD3215E	To measure the insulation resistance, absorption ratio, polarization index
23	Grounding Resistance Tester	RD3000B	To conduct grounding resistance and soil resistivity test
24	Grounding Grid Resistance Tester	RDWR-5A	A special instrument for measuring the grounding resistance of grounding grid and the grounding continuity between the grounding points

3	Insulating Oil and SF6 GasTest Equipment		
1	Insulating Oil Dielectric Strength Tester	RDJJH-100kV	Fully automatically to conduct breakdown and withstand voltage test of the insulating oil
2	Insulating Oil Dielectric Loss Tester	RDJS-610J	To measure the dielectric loss and volume resistivity of the insulating oil
3	Insulating Oil Micro Water Tester	RDKF-106J	To measure the Micro-water content of insulating oil
4	Intelligent Micro Water Tester	RDWS-142	To measure micro water content in SF6 gas
5	SF_6 Gas Purity Tester	RDCD-706	To test the purity of SF6 gas
6	SF_6 Decomposition Products Tester	RDFJ-708B	To measure the content of SO_2, H_2S, CO and HF resulting from the decomposition of SF_6
7	SF_6 Gas Leak Detector	RDWG-III	To detect the welded joints and the gas pipeline joints of the sealed gas chamber
8	SF_6 Density Relay Tester	RDMJ-711	To verify the action accuracy of SF_6 density relay
9	SF_6 Gas Recovery and Purification	RDQH-60/200	To recover and purify SF_6 gas in the equipment gas chamber
10	SF_6 Vacuum Charging Device 抽真空充气装置	RDQC-150	To vacuum the gas chamber of the equipment
4	Common Instruments		
1	Single Phase Voltage Regulator	TDGC2-3	To regulate AC single-phase 0~250V voltage
2	Three Phase Voltage Regulator	TSGC2-9	To regulate AC three-phase 0~380V voltage
3	Digital clamp meter	UT205	To measure conventional electrical parameter
4	Earth Rod, Electroscope		To perform safety protection and electrical measurement
5	Digital Multimeter	UT53	To measure conventional electrical parameter
6	Phase Detector	RDXZ-2	To indicate the sequence of the phase of three-phase AC power supply
7	Triple-clamp Digital Phase Voltammeter	RDML-12A	To inspect the current and voltage of a circuit
8	Infrared Thermometer	UT300	To measure the temperature of environment and sample

COMMON TEST EQUIPMENT OF POWER PLANT

No	Equipment Name	Specification and Mode	Purpose
1	Generator Test Equipment		
1	Power Frequency Series Resonant Test System	RDXZL-800kVA/50kV	To conduct power frequency AC withstand voltage test of generator
2	Water Cooled Generator DC Withstand Voltage Tester	RDZGS-80/300	To conduct leakage current and DC withstand voltage test of water-cooled generator
3	Water Cooled Generator Insulation Resistance Tester	RD3205S	To conduct insulation resistance measurement test of water-cooled generators
4	Generator Rotor AC Impedance Tester	RD-605	To measure AC impedance and test characteristic curve under static generator rotor winding
5	Generator Surface Potential Tester	RDFV-II	To check the insulation quality of the ends by measuring the surface potential of the generator ends
2	HV Test Equipment		
1	DC High Voltage Generator	RDZG-350/5	To conduct DC withstand voltage test of power transformers, cables and other equipment; to test DC characteristics of zinc oxide lightning arrester
2	Water Cooled Generator DC Withstand Voltage Tester	RDXZ-2400kVA/800kV	To conduct AC withstand voltage test of 500kV and below substation CT, PT, circuit breaker, disconnector, wall bushing, pillar insulator, etc.
3	Power Frequency Withstand Voltage Tester	RDYD-10kVA/100kV	To conduct the withstand voltage test of 35kV switch, PT, CT and other electrical equipment
4	Power Frequency Withstand Voltage Tester	RDYD-5kVA/50kV	To test the voltage resistance of 10kV and below switches, PT, CT and other electrical equipment
5	Multiple Frequency Voltage Generator	RDDF-10kVA	To test Inductive withstand voltage of transformers and instrument transformers
6	AC/DC High Voltage Divider AC/DC	RDCF-200kV	To measure test voltage
3	Electrical Characteristics Test Equipment		
1	Transformer Tan Delta Tester	RD6000A	To measure the capacitance or dielectric loss of transformer, PT and CT.
2	Transformer Turn Ratio Tester	RDB-II	To measure the ratio and group of transformer and voltage transformer
3	Transformer Load and No Load Tester	RDBK-IV	To measure transformer short-circuit impedance and load loss, no-load current and no-load loss
4	Transformer On-load Tap-changer Analyzer	RDKC-2000	Accurately to measure parameters such as transition time, transition waveform, transition resistance and other parameters of on-load tap-changers

5	Frequency Sweeping Response Analyzer	RDRB-IV	To conduct transformer winding deformation measurement
6	Transformer DC Resistance Tester	RDZR-40A	To measure the resistance of transformer and instrument transformer windings
7	Partial Discharge Tester	RDPDD-104H	To conduct partial discharge measurement and analysis of electrical equipment
8	Circuit Breaker Analyzer	RDGC-8A	To measure the operating time, simultaneity, bouncing process, opening distance, stroke, and the open-close speed of the circuit breaker
9	Loop Resistance Tester	RDHL-200A	To measure the circuit resistance of the closed Circuit breaker
10	Vacuum Switch Vacuum Tester	RDZK-IV	To measure the vacuum degree of the vacuum circuit breaker
11	Microcomputer Relay Protection Tester	RDJB-1600M	To perform comprehensive protection detection: voltage protection, current protection, differential protection, low cycle protection, whole set of tests, etc.
12	Transformer Comprehensive Characteristic Tester	RDHG-D	To test the 5% or 10% error curve, transformation ratio and polarity of CT as to verify whether the requirements for the protective device are met
13	Intelligent Primary Current Injector	RDSL-82-6000A	To test the primary current of the equipment
14	Cable Fault Testing System	RDCD-II	To test the fault point of the cable and to pinpoint it precisely
15	High Voltage Wireless Phase Detector	RDF-500	Wirelessly to detect the phase angle, frequency and other parameters of high-voltage lines
16	Metal Oxide Surge Arrester Analyzer	RDYZ-302	To measure the full current, resistive current and harmonic current of zinc oxide arrester and other parameters
17	Arrester Counter Tester	RDYZ -IV	To test the action of lightning arrester discharge counters
18	Battery Discharge Tester	RDBT-3018D	Mainly to test discharge of lead-acid battery packs for backup power supply in China Telecom, China Mobile,China Unicom, and power DC industries
19	Battery Internal Resistance And Capacity Tester	RDBT-8604	To test online the battery voltage, internal resistance, connection bar resistance and other important battery parameters
20	Portable DC Grounding Fault Tester	RDBT-8605	To find out grounding fault for battery packs
21	Capacitance And Inductance Tester	RDLC-503	To measure the capacitance of capacitors and the inductance of reactors
22	Insulation Resistance Tester	RD3215E	To measure the insulation resistance, absorption ratio, polarization index
23	Grounding Resistance Tester	RD3000B	To conduct grounding resistance and soil resistivity test
24	Grounding Grid Resistance Tester	RDWR-5A	A special instrument for measuring the grounding resistance of grounding grid and the grounding continuity between the grounding points

4	Insulating Oil and SF6 GasTest Equipment		
1	Transformer Oil Gas Chromatography	RDSP-3401	To measure gases and their corresponding content in transformer oil
2	Insulating Oil Dielectric Strength Tester	RDJJH-100kV	Fully automatically to conduct breakdown and withstand voltage test of the insulating oil
3	Insulating Oil Dielectric Loss Tester	RDJS-610J	To measure the dielectric loss and volume resistivity of the insulating oil
4	Insulating Oil Micro Water Tester	RDKF-106J	To measure the Micro-water content of insulating oil
5	Acid Value Tester	RDSZ-3003	To measure the acid value of insulating oil
6	Insulating Oil Closed Flash Point Tester	RDBS-3001	To test the flash point of suspended solids in the insulating oil under test conditions
7	Double –stage High Efficiency Vacuum Oil Purifier	ZYD-200	To purify the insulating oil
8	Intelligent Micro Water Tester	RDWS-142	To measure micro water content in SF6 gas
9	SF6 Gas Purity Tester	RDCD-706	To test the purity of SF6 ga
10	SF6 Decomposition Products Tester	RDFJ-708B	To measure the content of SO2, H2S, CO and HF resulting from the decomposition of SF6
11	SF6 Gas Leak Detector	RDWG-III	To detect the welded joints and the gas pipeline joints of the sealed gas chamber
12	SF6 Density Relay Tester	RDMJ-711	To verify the action accuracy of SF6 density relay
13	SF6 Gas Recovery and Purification	RDQH-60/200	To recover and purify SF6 gas in the equipment gas chamber
14	SF6 Vacuum Charging Device	RDQC-150	To vacuum the gas chamber of the equipment
5	Common Instruments		
1	Single Phase Voltage Regulator	TDGC2-3	To regulate AC single-phase 0~250V voltage
2	Three Phase Voltage Regulator	TSGC2-9	To regulate AC three-phase 0~380V voltage
3	Digital clamp meter	UT205	To measure conventional electrical parameter
4	Earth Rod, Electroscope		To perform safety protection and electrical measurement
5	Digital Multimeter	UT53	To measure conventional electrical parameter
6	Phase Detector	RDXZ-2	To indicate the sequence of the phase of three-phase AC power supply
7	Triple-clamp Digital Phase Voltammeter	RDML-12A	To inspect the current and voltage of a circuit
8	Infrared Thermometer	UT300	To measure the temperature of environment and sample