



MEASUREMENT SOLUTION PROVIDER



CATALOGUE NO. ET-E22

# ELECTRONIC TESTING

## Wide Applications, Serving Key Industries

**Aerospace:** Provides micro-ohm level resistance measurement and high-voltage insulation testing for precision component manufacturing.

**Automotive Manufacturing:** Used for electrical safety testing and performance evaluation of automotive electronic systems and battery packs.

**Electronics Industry:** Facilitates precise electrical parameter testing and quality control for semiconductor components and PCB boards.

**Nuclear Power and High-Speed Rail:** Offers testing support for the reliability of electrical connections and insulation performance of critical equipment.

**Education and Research:** Adopted by numerous vocational institutions and research units in China for teaching, training, and scientific research.

## Core Advantages, Creating Value for Customers

**High Precision and Reliability:** Products strictly adhere to national metrological verification regulations, ensuring every measurement is accurate and reliable.

**Improved Efficiency, Reduced Costs:** Digital and paperless operations streamline workflows, reduce human error, enhance inspection efficiency, and lower overall costs.

**Leading Technology, Continuous Innovation:** The company emphasizes product R&D and technological innovation, boasting multiple independent patents and continuously expanding and upgrading its product lines.

**Comprehensive Service, Global Support:** With multiple branches and offices domestically and internationally, the company provides timely technical support, after-sales service, and training.

## Partner with INSIZE, Precisely Mastering the Future

Choosing INSIZE electrical measurement products means not only selecting a set of high-quality tools but also gaining a trusted partner. We are committed to leveraging advanced measurement technologies to help you enhance product quality, optimize production processes, and strengthen market competitiveness.





## DIGITAL MULTIMETERS (HANDHELD)

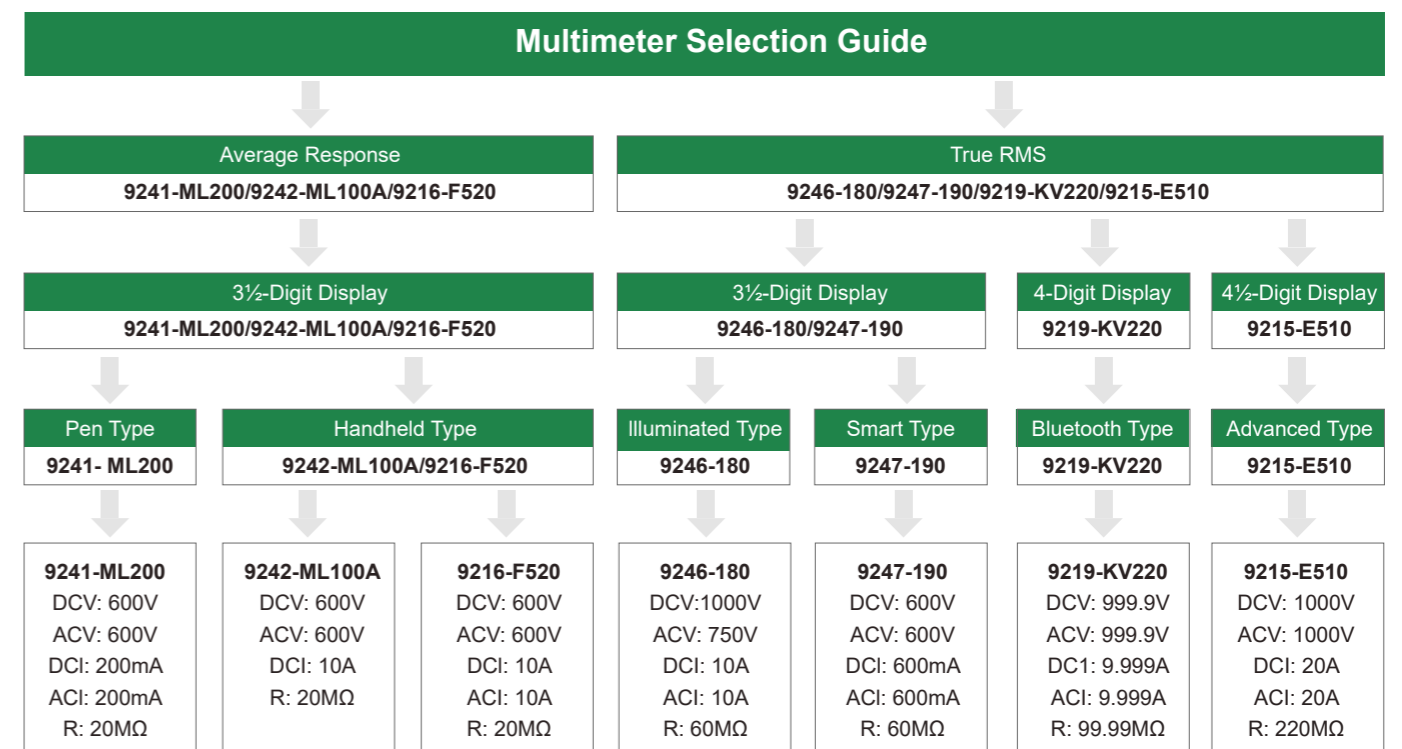
INSIZE digital multimeters are the ideal electrical meters for professionals. Our digital multimeters undergo rigorous testing for a wide range of environmental applications, ensuring accuracy in every measurement.

INSIZE offers digital multimeters which are not just tools but partners in performance, guaranteeing safety and delivering the strongest warranty in the industry.

## INSIZE Quick-Finder



### Multimeter Selection Guide



MULTIMETER SELECTION TABLE

Code	9241-ML200	9242-ML100A	9216-F520	9246-180	9247-190	9219-KV220	9215-E510
Digits of display	3.5	3.5	3.5	3.5	3.5	4	4.5
Maximum display	2000	2000	2000	6000	6000	9999	22000
DC Voltage	600V	600V	600V	1000V	600V	999.9V	1000V
AC Voltage	600V	600V	600V	750V	600V	999.9V	1000V
DC Current	200mA	10A	10A	10A	600mA	9.99A	20A
AC Current	200mA	-	10A	10A	600mA	9.99A	20A
Resistance	20MΩ	20MΩ	20MΩ	60MΩ	60MΩ	99.99MΩ	220MΩ
Temperature	-	-	√	-	-	√	-
True RMS	-	-	-	√	√	√	√
Auto range	√	-	√	-	√	√	√
NCV	√	-	-	√	√	√	√
Duty cycle	-	-	-	√	√	√	√
Continuity check	√	√	√	√	√	√	√
Diode test	√	√	√	√	√	√	√
LPF ACV	-	-	-	-	-	-	√
Data transmission	-	-	-	-	-	Bluetooth	USB



9241-ML200

### PEN-TYPE DIGITAL MULTIMETER CODE 9241-ML200

- Auto/manual ranging
- Maximum mode
- Data hold
- NCV detection
- Low battery indication
- Auto power off
- Safety rating: CAT III 600V



VIDEO

#### SPECIFICATION

Function	Range	Resolution	Accuracy
<b>DC Voltage</b>	200mV/2V/20V/200V/600V	0.1mV/1mV/10mV/0.1V/1V	±(0.7%+2d)
<b>AC Voltage</b>	200mV/2V/20V/200V	0.1mV/1mV/10mV/0.1V	±(0.8%+3d)
	600V	1V	±(1.0%+3d)
<b>DC Current</b>	20mA/200mA	10µA/0.1mA	±(1.5%+3d)
<b>AC Current</b>	20mA/200mA	10µA/0.1mA	±(2.0%+3d)
	200Ω	0.1Ω	±(1.0%+3d)
<b>Resistance</b>	2kΩ/20kΩ/200kΩ/2MΩ	1Ω/10Ω/0.1kΩ/1kΩ	±(1.0%+1d)
	20MΩ	10kΩ	±(1.0%+5d)
<b>Logic level test</b>	<1.5V (green LED on); 1.5~3.5V (green & red LED off); >3.5V (red LED on)		
<b>Diode</b>	open circuit voltage 1.5V		
<b>Continuity buzzer</b>	<50Ω		
<b>Power supply</b>	2×1.5V AAA batteries		

#### STANDARD DELIVERY

Main unit	1 pc
Test lead	1 pc
Clip	2 pcs
Battery (AAA)	2 pcs



clips (included)



test lead (included)

POPULAR  
MODEL

9242-ML100A

### MINI DIGITAL MULTIMETER (BASIC TYPE) CODE 9242-ML100A

- Portable size with protective case
- 1999 counts digital display
- Data hold
- Display with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 600V



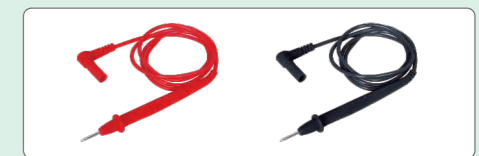
VIDEO

#### SPECIFICATION

Function	Range	Resolution	Accuracy
<b>DC Voltage</b>	200.0mV	0.1mV	±(0.7%+3d)
	2000mV	1mV	±(0.5%+2d)
<b>AC Voltage (40~400Hz)</b>	20.00V/200.0V/600V	0.01V/0.1V/1V	±(0.7%+3d)
	200.0V/600V	0.1V/1V	±(1.2%+3d)
<b>DC Current</b>	200.0µA/200.0mA	0.1µA/0.1mA	±(1.0%+2d)
	10.00A	0.01A	±(1.2%+5d)
<b>Resistance</b>	200.0Ω	0.1Ω	±(1.0%+2d)
	2000Ω/20.00kΩ/200.0kΩ	1Ω/0.01kΩ/0.1kΩ	±(0.8%+2d)
	20.00MΩ	0.01MΩ	±(1.2%+3d)
<b>Battery test</b>	1.5V/9V/12V battery check		
<b>Diode test</b>	open circuit voltage: 2.1V DC		
<b>Continuity test</b>	<50Ω		
<b>Power supply</b>	2×1.5V AAA batteries		
<b>Dimension (L×W×H)</b>	134×77×47mm		
<b>Net weight</b>	206g		

#### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs
Test lead	2 pcs



test leads (included)



9216-F520

### DIGITAL MULTIMETER CODE 9216-F520

- 2000 counts digital display
- Auto ranging (except 200mV AC)
- Data hold
- Max hold
- Display with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 600V

#### SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	200mV	0.1mV	$\pm(0.5\%+2d)$
	2V/20V/200V	0.001V/0.01V/0.1V	$\pm(1.0\%+2d)$
	600V	1V	$\pm(1.2\%+2d)$
AC Voltage (50~60Hz)	200mV	0.1mV	$\pm(1.5\%+30d)$
	2V	0.001V	$\pm(1.2\%+3d)$
	20V/200V	0.01V/0.1V	$\pm(1.5\%+3d)$
DC Current	600V	1V	$\pm(2.0\%+4d)$
	200 $\mu$ A	0.1 $\mu$ A	$\pm(1.0\%+3d)$
	2000 $\mu$ A/20mA/200mA	1 $\mu$ A/0.01mA/0.1mA	$\pm(1.5\%+3d)$
AC Current (50~60Hz)	10A	0.01A	$\pm(2.5\%+5d)$
	200 $\mu$ A	0.1 $\mu$ A	$\pm(1.5\%+5d)$
	2000 $\mu$ A/20mA/200mA	1 $\mu$ A/0.01mA/0.1mA	$\pm(1.8\%+5d)$
Resistance	10A	0.01A	$\pm(3.0\%+7d)$
	200 $\Omega$	0.1 $\Omega$	$\pm(1.2\%+4d)$
	2k $\Omega$	0.001k $\Omega$	$\pm(1.0\%+2d)$
	20k $\Omega$ /200k $\Omega$ /2M $\Omega$	0.01k $\Omega$ /0.1k $\Omega$ /0.001M $\Omega$	$\pm(1.2\%+2d)$
Temperature (type-K)	20M $\Omega$	0.01M $\Omega$	$\pm(2.0\%+3d)$
	-50°C to 1000°C	1°C	$\pm(3.0\%+5d)$
Diode test	-58°F to 1832°F	1°F	$\pm(3.0\%+8d)$
Continuity check	test current: 0.3mA typical	1mV	$\pm(10\%+5d)$
Power supply	less than 100 $\Omega$		
Dimension (L×W×H)	9V battery		
Net weight	150×70×48mm		
	255g		

#### STANDARD DELIVERY

Main unit	1 pc
Thermocouple adapter	1 pc
Temperature probe	1 pc
9V battery	1 pc
Test lead	2 pcs



temperature probe and adapter (included)



test leads (included)



9246-180

### DIGITAL MULTIMETER (WITH JACK INDICATOR LIGHT) CODE 9246-180

- Jack indicator light: jacks flash green to indicate the corresponding jacks for test leads
- NCV detection and judge the strength by light and buzzer
- Self-calibration when power on to ensure accuracy
- LIVE firewire recognition
- Double color backlight (orange backlight prompts high voltage or current: the orange backlight automatically lights up when voltage is higher than 80V or the current is higher than 1A)
- Large range capacitance meter 100mF
- True RMS measurement
- Battery test function
- Max/Min mode
- Data hold
- Low battery indication
- Auto power off
- Safety rating: CAT III 600V



VIDEO

#### SPECIFICATION

Function	Range	Resolution	Accuracy
DC Voltage	600mV/6V/60V/600V/1000V	0.1mV/0.001V/0.01V/0.1V/1V	$\pm(0.5\%+3d)$
AC Voltage	6V/60V/600V/750V	0.001V/0.01V/0.1V/1V	$\pm(0.8\%+5d)$
DC Current	60 $\mu$ A/60mA/600mA/10A	0.01 $\mu$ A/0.01mA/0.1mA/0.01A	$\pm(1.2\%+3d)$
AC Current	60mA/600mA/10A	0.01mA/0.1mA/0.01A	$\pm(1.5\%+3d)$
Resistance	600 $\Omega$ /6k $\Omega$ /60k $\Omega$ /600k $\Omega$	0.1 $\Omega$ /0.001k $\Omega$ /0.01k $\Omega$ /0.1k $\Omega$	$\pm(1.0\%+3d)$
	6M $\Omega$ /60M $\Omega$	0.001M $\Omega$ /0.01M $\Omega$	$\pm(1.5\%+3d)$
Capacitance	10nF/100nF/1000nF/10 $\mu$ F/100 $\mu$ F/1000 $\mu$ F	0.001nF/0.01nF/0.1nF/0.001 $\mu$ F/0.01 $\mu$ F/0.1 $\mu$ F	$\pm(4.0\%+5d)$
	10mF/100mF	0.001mF/0.01mF	$\pm(5.0\%+5d)$
Frequency	10Hz/100Hz/1000Hz/10kHz/100kHz/1000kHz	0.001Hz/0.01Hz/0.1Hz/0.001kHz/0.01kHz/0.1kHz	$\pm(1.0\%+3d)$
	10MHz	0.001MHz	$\pm(3.0\%+3d)$
Duty cycle	1~99%	0.1%	$\pm(3.0\%+3d)$
Diode measurement	forward DC current 2.5mA, reverse DC voltage 3.0V		
Continuity measurement	<30 $\Omega$		
Power supply	2×1.5V AA batteries		
Dimension (L×W×H)	188×88×50mm		
Net weight	424g		

#### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Battery (AA)	2 pcs



test leads (included)



9247-190

### SMART DIGITAL MULTIMETER CODE 9247-190

- Automatically identify test modes for AC voltage /DC voltage/resistance/continuity
- NCV detection and judge the strength by light and buzzer
- Self-calibration when power on to ensure accuracy
- LIVE firewire recognition
- Display with backlight
- True RMS measurement
- Data hold
- Low battery indication
- Auto power off
- Safety rating: CAT III 600V



VIDEO

#### SPECIFICATION

Function	Range	Resolution	Accuracy
<b>DC Voltage</b>	60mV/600mV/6V/60V/600V	0.01mV/0.1mV/0.001V/0.01V/0.1V	±(0.5%+3d)
<b>AC Voltage</b>	60mV/600mV/6V/60V/600V	0.01mV/0.1mV/0.001V/0.01V/0.1V	±(1.0%+3d)
<b>DC Current</b>	6000μA/60mA/600mA	1μA/0.01mA/0.1mA	±(1.2%+5d)
<b>AC Current</b>	6000μA/60mA/600mA	1μA/0.01mA/0.1mA	±(1.5%+5d)
<b>Resistance</b>	600Ω/6kΩ/60kΩ/600kΩ	0.1Ω/0.001kΩ/0.01kΩ/0.1kΩ	±(1.0%+5d)
	6MΩ/60MΩ	0.001MΩ/0.01MΩ	±(1.5%+3d)
<b>Capacitance</b>	6nF/60nF/600nF/6μF/60μF/600μF	0.001nF/0.01nF/0.1nF/0.001μF/0.01μF/0.1μF	±(4.0%+5d)
	6mF/60mF	0.001mF/0.01mF	±(5.0%+5d)
<b>Frequency</b>	10Hz/100Hz/1000Hz/10kHz/100kHz/1000kHz	0.001Hz/0.01Hz/0.1Hz/0.001kHz/0.01kHz/0.1kHz	±(1.0%+5d)
	10MHz	0.001MHz	±(3.0%+5d)
<b>Duty cycle</b>	1~99%	0.1%	±(3.0%+5d)
<b>Diode measurement</b>	open circuit voltage 2.0V		
<b>Continuity measurement</b>	<50Ω		
<b>Power supply</b>	2×3V CR2032 batteries		
<b>Dimension (L×W×H)</b>	133×68×18mm		
<b>Net weight</b>	178g		

#### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Battery (CR2032)	2 pcs



test leads (included)



9219-KV220

### BUILT-IN BLUETOOTH DIGITAL MULTIMETER CODE 9219-KV220

DATA OUTPUT

- Built-in bluetooth
- Mobile app included Measures
- 9999 counts digital display
- True RMS measurement
- Display with backlight
- Relative measurement mode
- Auto/manual ranging
- Auto power off
- Data hold
- NCV detection
- Low battery indication
- Safety rating: CAT III 600V



VIDEO

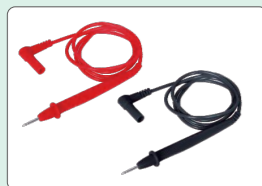
#### SPECIFICATION

Function	Range	Resolution	Accuracy
<b>DC Voltage</b>	9.999mV/99.99mV 999.9mV/9.999V/99.99V/999.9V	0.001mV/0.01mV 0.1mV/0.001V/0.01V/0.1V	±(0.7%+8d) ±(0.5%+3d)
<b>AC Voltage (40~400Hz)</b>	9.999mV/99.99mV 999.9mV/9.999V/99.99V/999.9V	0.001mV/0.01mV 0.1mV/0.001V/0.01V/0.1V	±(1.0%+3d) ±(0.8%+3d)
<b>DC Current</b>	999.9μA 999.9mA/9.999A	0.1μA 0.1mA/0.001A	±(0.8%+3d) ±(1.0%+3d)
<b>AC Current (40~400Hz)</b>	999.9μA 999.9mA/9.999A	0.1μA 0.1mA/0.001A	±(1.0%+3d) ±(1.2%+3d)
<b>Resistance</b>	999.9Ω/9.999kΩ/99.99kΩ/999.9kΩ 9.999MΩ	0.1Ω/0.001kΩ/0.01kΩ/0.1kΩ 0.001MΩ	±(0.8%+2d) ±(1.5%+3d)
	99.99MΩ	0.01MΩ	±(2.0%+5d)
<b>Capacitance</b>	9.999nF 9.999nF/99.99nF/999.9nF/9.999μF /99.99μF/999.9μF	0.001nF 0.001nF/0.01nF/0.1nF/0.001μF /0.01μF/0.1μF	±(4.0%+10d) ±(4.0%+5d)
<b>Frequency</b>	9.999mF 99.99Hz~9.999MHz	0.001mF 0.01Hz~0.001MHz	±(10.0%) ±(0.1%+5d)
<b>Temperature</b>	-40~1000°C	-40~0°C >0~100°C >100~1000°C	1°C 1°C 1°C
		-40~32°F >32~212°F >212~1832°F	1°F 1°F 1°F
<b>Duty cycle</b>	0.1%~99.9%	0.1%	±(3%+5d)
<b>Diode test</b>	open circuit voltage 3.3V, test current 1.5mA		
<b>Continuity check</b>	<30Ω		
<b>Power supply</b>	3×1.5V AAA batteries		
<b>Dimension (L×W×H)</b>	187×88×56mm		
<b>Net weight</b>	400g		

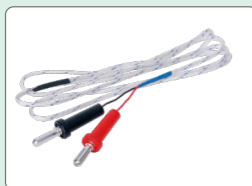
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**STANDARD DELIVERY**

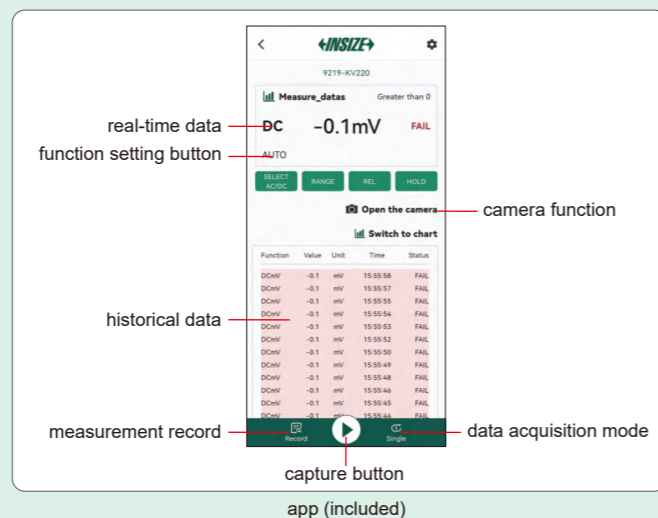
Main unit	1 pc
Test lead	2 pcs
Temperature probe	1 pc
Battery (AAA)	3 pcs



test leads (included)



temperature probe (included)



9215-E510

**DIGITAL MULTIMETER  
CODE 9215-E510**

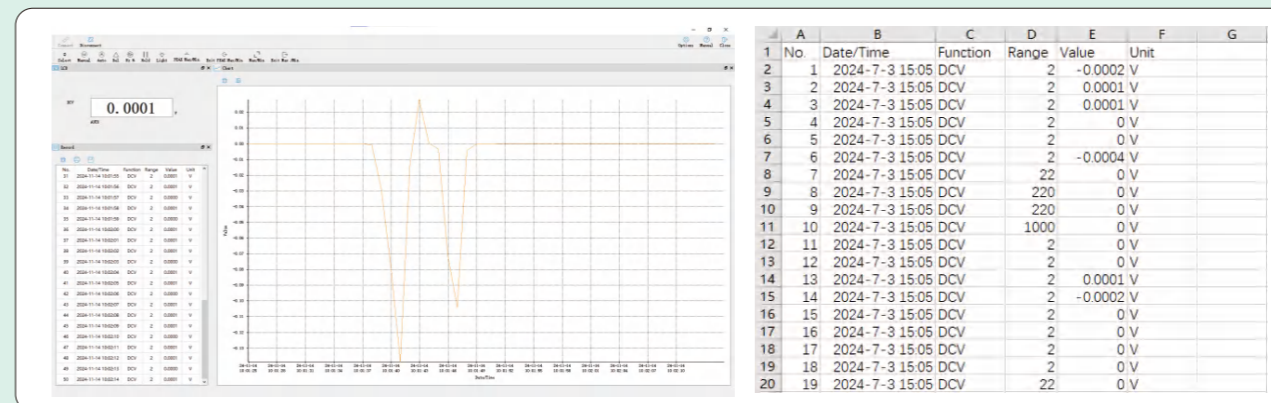
DATA OUTPUT

- 22000 counts digital display
- Data transmission via USB
- True RMS measurement
- Data hold
- Peak/Max/Min mode
- Low pass filter function
- NCV detection
- Low battery indication
- Auto power off
- Safety rating: CAT III 1000V, CAT IV 600V



To be continued

Continued from previous page



computer software (included): connect to PC software via USB cable to collect, display and store data

**SPECIFICATION**

Function	Range	Resolution	Accuracy
<b>DC Voltage</b>	220mV	0.01mV	±(0.1%+5d)
	2.2V/22V/220V	0.1mV/0.001V/0.01V	±(0.05%+5d)
	1000V	0.1V	±(0.1%+5d)
<b>AC Voltage</b>	220mV	0.01mV	±(1.0%+10d), 40Hz~1kHz ±(1.5%+30d), 1kHz~10kHz
	2.2V/22V	0.1mV/1mV	±(0.8%+10d), 40Hz~1kHz ±(1.2%+50d), 1kHz~10kHz
	220V	10mV	±(0.8%+10d), 40Hz~1kHz ±(2.0%+50d), 1kHz~10kHz
<b>DC Current</b>	220μA/2200μA/22mA/220mA	0.01μA/0.1μA/0.001mA/0.01mA	±(1.2%+10d), 40Hz~1kHz ±(3.0%+50d), 1kHz~10kHz
	20A	0.001A	±(1.2%+50d)
<b>AC Current</b>	220μA/2200μA	0.01μA/0.1μA	±(0.8%+10d), 40Hz~1kHz ±(3.0%+50d), 1kHz~10kHz
	22mA/220mA/20A	0.001mA/0.01mA/0.001A	±(1.2%+10d), 40Hz~1kHz ±(3.0%+50d), 40Hz~1kHz
<b>Resistance</b>	220Ω/2.2kΩ/22kΩ/220kΩ	0.01Ω/0.0001kΩ/0.001kΩ/0.01kΩ	±(0.5%+10d)
	2.2MΩ	0.0001MΩ	±(0.8%+10d)
	22MΩ	0.001MΩ	±(1.5%+10d)
<b>Capacitance</b>	22nF/220nF/2.2μF/22μF	0.001nF/0.01nF/0.0001μF/0.001μF	±(3.0%+5d)
	220μF/2.2mF	0.01μF/0.0001mF	±(4.0%+5d)
	22mF	0.001mF	±(10%+5d)
<b>Frequency</b>	10Hz~220MHz	0.01Hz~0.01MHz	±(20%+5d)
<b>Duty cycle</b>	0.1%~99.9%	0.1%	±(0.01%+5d)
<b>Transistor hFE</b>	range: 1β~1000β		±(2.0%+5d)
<b>Diode test</b>	open circuit voltage: 3V		
<b>Continuity check</b>	<50Ω		
<b>Power supply</b>	4×1.5V AAA batteries		
<b>Dimension (L×W×H)</b>	186×89×49mm		
<b>Net weight</b>	400g		

**STANDARD DELIVERY**

Main unit	1 pc
Test lead	2 pcs
USB connection cable	1 pc
Conversion plug (transistor)	1 pc
Battery (AAA)	4 pcs



conversion plug (transistor) (included)



USB connection cable (included)



## DIGITAL CLAMP METERS

INSIZE digital clamp meters are good basic troubleshooting tools for professionals. They are designed to perform in the toughest environments and provide reliable results, so you can trust them to help you confidently diagnose problems almost anywhere. Their slim, compact size and rugged design make them well suited for measuring current in tight cable compartments.



### 9243-CA600

- 6000 counts display
- 28mm jaw opening
- NCV detection with light and sound alarm
- Live/neutral wire measurement function
- True RMS measurement
- Auto ranging
- REL (zero) function
- Data hold
- Polarity indication
- LCD screen with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 300V/CAT II 600V



### 9315-CF210

- 4000 counts display
- 28mm jaw opening
- NCV detection with light and sound alarm
- True RMS measurement
- Auto ranging
- REL (zero) function
- Data hold
- Polarity indication
- LCD screen with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 300V/CAT I 600V



### 9312-CB120

- 6000 counts display
- 28mm jaw opening
- NCV detection with light and sound alarm
- Live/neutral wire measurement function
- True RMS measurement
- Auto ranging
- REL (zero) function
- Data hold
- Polarity indication
- LCD screen with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 300V/CAT II 600V

#### CLAMP METERS SELECTION TABLE

Code	9243-CA600	9315-CF210	9312-CB120
Display Counts	6000	4000	6000
AC Current	600A/50Hz~100Hz	400A/45Hz~400Hz	600A/45Hz~400Hz
DC Current	—	400A	600A
AC Voltage	600V/45Hz~400Hz	600V/45Hz~400Hz	600V/45Hz~400Hz
DC Voltage	600V	600V	600V
Resistance	60MΩ	40MΩ	60MΩ
Capacitance	60mF	40mF	60mF
Frequency	10MHz	10MHz	10MHz
True RMS	√	√	√
Diode	√	√	√
Duty cycle	√	√	√
Temperature	—	—	√
Auto range	√	√	√
NCV	√	√	√



9243-CA600

### AC DIGITAL CLAMP METER CODE 9243-CA600

- 6000 counts display
- 28mm jaw opening
- NCV detection with light and sound alarm
- Live/neutral wire measurement function
- True RMS measurement
- Auto ranging
- REL (zero) function
- Data hold
- Polarity indication
- LCD screen with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 300V/CAT II 600V

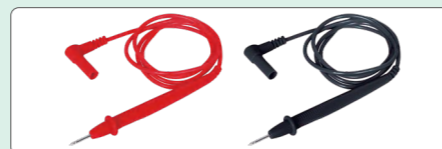
#### SPECIFICATION

Function	Range	Resolution	Accuracy
<b>AC current *</b>	6.000A	0.001A	±(4.0%+10d)
	60.00A/600.0A	0.01A/0.1A	±(2.0%+10d)
<b>AC current frequency</b>	50Hz~100Hz	0.1Hz	±(1.0%+5d)
	600.0mV	0.1mV	±(0.7%+3d)
<b>DC voltage</b>	6.000V	0.001V	±(0.5%+2d)
	60.00V/600.0V	0.01V/0.1V	±(0.7%+3d)
<b>AC voltage *</b>	6.000V	0.001V	±(1.0%+5d)
	60.00V/600.0V	0.01V/0.1V	±(0.8%+5d)
<b>AC voltage frequency</b>	10Hz~10kHz	0.01Hz~0.01kHz	±(1.0%+5d)
	600.0Ω	0.1Ω	±(1.0%+2d)
<b>Resistance</b>	6.000kΩ/60.00kΩ/600.0kΩ	0.001kΩ/0.01kΩ/0.1kΩ	±(0.8%+2d)
	6MΩ/60MΩ	0.001MΩ/0.01MΩ	±(2.0%+5d)
<b>Capacitance</b>	6.000nF/60.00nF/600.0nF	0.001nF/0.01nF/0.1nF	±(4.0%+10d)
	6.000μF/60.00μF/600.0μF	0.001μF/0.01μF/0.1μF	±(4.0%+5d)
	6.000mF/60.00mF	0.001mF/0.01mF	±10.0%
<b>Frequency</b>	10Hz~10MHz	0.01Hz~0.01MHz	±(0.1%+4d)
<b>Duty cycle</b>	0.1%~99.9%	0.1%	±(3.0%+5d)
<b>Diode test</b>	0V~6V		
<b>Continuity check</b>	<30Ω		
<b>Power supply</b>	2×1.5V AAA batteries		
<b>Dimension (L×W×H)</b>	215×63×36mm		
<b>Net weight</b>	245g		

\* AC current frequency response: 50Hz~100Hz, AC voltage frequency response: 45Hz~400Hz, true RMS display

#### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs
Test lead	2 pcs



test leads (included)



9315-CF210

### AC/DC DIGITAL CLAMP METER CODE 9315-CF210

- 4000 counts display
- 28mm jaw opening
- NCV detection with light and sound alarm
- True RMS measurement
- Auto ranging
- REL (zero) function
- Data hold
- Polarity indication
- LCD screen with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 300V/CAT II 600V



VIDEO

#### SPECIFICATION

Function	Range	Resolution	Accuracy
<b>DC Current</b>	40.00A/400.0A	0.01A/0.1A	±(2.0%+5d)
<b>AC Current *</b>	40.00A/400.0A	0.01A/0.1A	±(2.0%+5d)
	400.0mV	0.1mV	±(0.7%+3d)
<b>DC Voltage</b>	4.000V/40.00V/400.0V/600V	0.001V/0.01V/0.1V/1V	±(0.5%+2d)
	4.000V	0.001V	±(1.0%+5d)
<b>AC Voltage *</b>	40.00V/400.0V/600V	0.01V/0.1V/1V	±(0.8%+5d)
	10Hz~60kHz	0.01Hz~0.01kHz	±(0.5%+2d)
<b>AC Voltage frequency</b>	400.0Ω	0.1Ω	±(1.0%+2d)
	4.000kΩ/40.00kΩ/400.0kΩ	0.001kΩ/0.01kΩ/0.1kΩ	±(0.8%+2d)
<b>Resistance</b>	4MΩ/40MΩ	0.001MΩ/0.01MΩ	±(2.5%+5d)
	40.00nF/400.0nF/4.000μF/40.00μF/400.0μF	0.01nF/0.1nF/0.001μF/0.01μF/0.1μF	±(4.0%+5d)
<b>Capacitance</b>	4.000mF/40.00mF	0.001mF/0.01mF	±10.0%
	10Hz~10MHz	0.01Hz~0.01MHz	±(0.1%+4d)
<b>Duty cycle</b>	0.1%~99.9%	0.1%	±(3.0%+5d)
<b>Diode test</b>	open circuit voltage: 4V		
<b>Continuity check</b>	<30Ω		
<b>Power supply</b>	2×1.5V AAA batteries		
<b>Dimension (L×W×H)</b>	215×75×37mm		
<b>Net weight</b>	235g		

\* AC voltage/current frequency response: 45Hz~400Hz, true RMS display

#### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs
Test lead	2 pcs



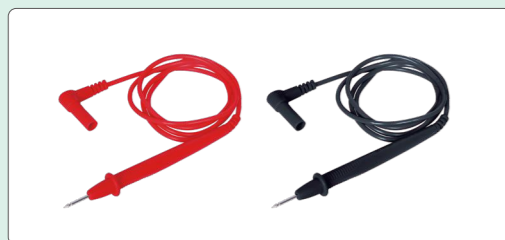
test leads (included)

9312-CB120



### AC/DC DIGITAL CLAMP METER CODE 9312-CB120

- 6000 counts display
- 28mm jaw opening
- NCV detection with light and sound alarm
- Live/neutral wire measurement function
- True RMS measurement
- Auto ranging
- REL (zero) function
- Data hold
- Polarity indication
- LCD screen with backlight
- Low battery indication
- Auto power off
- Safety rating: CAT III 300V/CAT II 600V



test leads (included)



K-type thermocouple (included)

To be continued

Continued from previous page

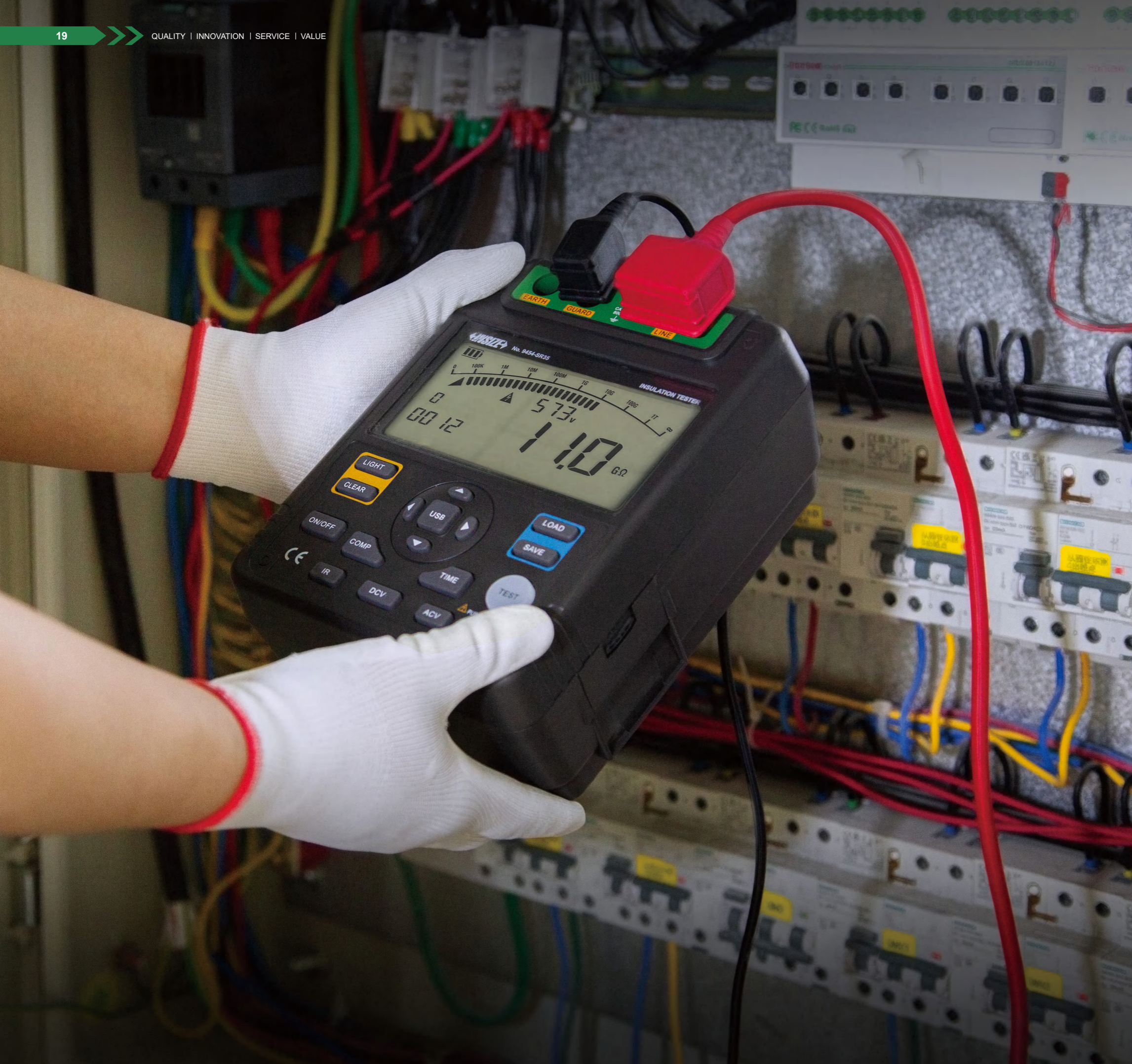
#### SPECIFICATION

Function	Range	Resolution	Accuracy	
DC current	60.00A/600.0A	0.01A/0.1A	±(2%+5d)	
AC current *	60.00A/600.0A	0.01A/0.1A	±(2%+5d)	
DC voltage	600.0mV	0.1mV	±(0.7%+3d)	
	6.000V/60.00V/600.0V	0.001V/0.01V/0.1V	±(0.5%+2d)	
AC voltage *	6.000V	0.001V	±(1%+5d)	
AC voltage frequency	60.00V/600.0V	0.01V/0.1V	±(0.8%+5d)	
	10Hz~60kHz	0.01Hz~0.01kHz	±(0.5%+2d)	
Resistance	600.0Ω	0.1Ω	±(1%+2d)	
	6.000kΩ/60.00kΩ/600.0kΩ	0.001kΩ/0.01kΩ/0.1kΩ	±(0.8%+2d)	
Capacitance	6MΩ/60MΩ	0.001MΩ/0.01MΩ	±(2.5%+5d)	
	60.00nF/600.0nF/6.000μF/ 60.00μF/600.0μF	0.01nF/0.1nF/0.001μF/ 0.01μF/0.1μF	±(4%+5d)	
Frequency	6.000mF/60.00mF	0.001mF/0.01mF	±10%	
	10Hz~10MHz	0.01Hz~0.01MHz	±(0.1%+4d)	
Temperature	-40~1000°C	-40~40°C	1°C	±4°C
		>40~500°C	1°C	±(1.5%+5d)
	-40~1832°F	>500~1000°C	1°C	±(2%+5d)
		-40~104°F	1°F	±6°F
	>104~932°F	1°F	±(2%+6d)	
	>932~1832°F	1°F	±(2.5%+4d)	
Duty cycle	0.1%~99.9%	0.1%	±(3.0%+5d)	
Diode test	0V~6V			
Continuity check	<30Ω			
Power supply	2×1.5V AAA batteries			
Dimension (L×W×H)	215×63×36mm			
Net weight	230g			

\* AC voltage/current frequency response: 45Hz~400Hz, true RMS display

#### STANDARD DELIVERY

Main unit	1 pc
Battery (AAA)	2 pcs
Test lead	2 pcs
K-type thermocouple	1 pc



## Safety Testers

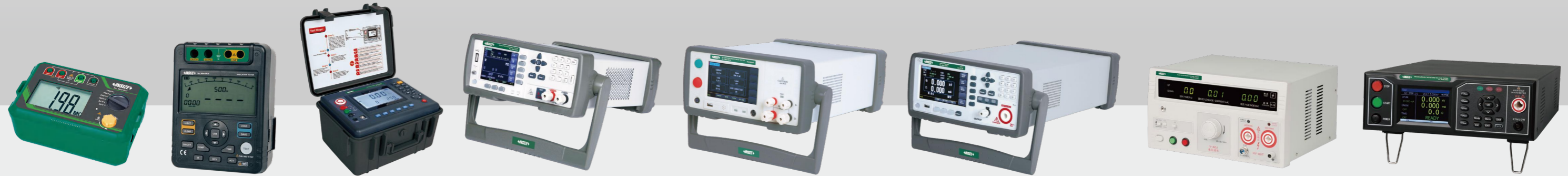
Safety testers are crucial tools for ensuring the electrical safety performance of equipment. Among them, Withstand Voltage Testers, AC Ground Resistance Testers and Insulation Resistance Testers each possess distinct advantages.

Withstand Voltage Testers simulate extreme voltage surges by applying high voltage to electrical equipment, enabling rapid and precise detection of dielectric strength.

AC Ground Resistance Testers are primarily used to measure the resistance value of an electrical equipment's grounding system. This ensures the system can rapidly conduct fault currents into the earth. They feature high-current output capability and strong noise immunity, allowing for accurate ground resistance measurement.

Insulation Resistance Testers evaluate the insulating properties of materials by applying a DC high voltage to measure their resistance value. They offer the advantages of extensive selectable high-voltage ranges and high measurement accuracy specifications.

# INSIZE Quick-Finder



## Safety Tester Selection Guide

### Single Function      Multifunctional

Insulation Resistance Tester 9452-IR21/9454-SR35/9455-TR Series/9456-DR01      Programmable Withstanding Voltage Tester 9458 Series      Withstanding Voltage Tester 9457 Series      AC Ground Resistance Tester      AC/DC Withstanding Voltage Insulation Tester

Portable      Benchtop      AC      AC/DC      AC      AC/DC      40A/600mΩ

- 9452-IR21**  
1000V/5GΩ
- 9454-SR35**  
5000V/1000GΩ
- 9455-TR05**  
5000V/2000GΩ
- 9455-TR10**  
10kV/2000GΩ
- 9456-DR01**  
1000V/10GΩ
- 9458-AW52**  
AC 5kV/20mA
- 9458-DW61**  
AC 5kV/20mA  
DC 6kV/10mA
- 9457-HA502**  
AC 5kV/20mA
- 9457-HA510**  
AC 5kV/100mA
- 9457-HD501**  
AC 5kV/20mA  
DC 5kV/10mA
- 9457-HD1002**  
AC 10kV/20mA  
DC 10kV/10mA
- 9457-HD1005**  
AC 10kV/50mA  
DC 10kV/20mA
- 9457-HD1010**  
AC 10kV/100mA  
DC 10kV/20mA
- 9460-GR40**  
40A/600mΩ
- 9453-ST01**  
Voltage Withstand  
AC 5kV/10mA  
DC 6kV/5mA  
Insulation Resistance  
1000V/10GΩ
- 9453-ST02**  
Voltage Withstand  
AC 5kV/20mA  
DC 6kV/10mA  
Insulation Resistance  
1000V/10GΩ



## INSULATION RESISTANCE TESTERS

INSIZE insulation resistance testers are advanced instruments designed to ensure the safety and reliability of electrical systems across diverse industries. Combining cutting-edge technology, durability and user-centered design, they meet the toughest testing challenges. Whether in power plants, construction sites or renewable energy facilities, they empower professionals to maintain safety, compliance and operational efficiency.

With models such as the 9455-TR10 for high-voltage grids and the 9452-IR21 for infrastructure, INSIZE ensures comprehensive coverage across a wide range of industries.



### 9452-IR21

- Continuous measurement: press and rotate the test button to measure continuously
- Alarm function: the tester alerts with buzzer when the insulation resistance is less than 4MΩ
- Over-range indication
- Data hold
- High-voltage output alert
- Auto backlight display
- Low battery indication
- Auto power off



### 9454-SR35

- Continuous measurement, comparative measurement
- Timed measurement, polarization index measurement
- AC and DC voltage measurement
- Data storage, USB interface data transmission
- High voltage output warning, automatic discharge
- Battery level indication
- Backlight display function
- Auto power off function



### 9455-TR Series

- Continuous measurement, comparative measurement
- Absorption ratio, polarization index measurement
- AC and DC voltage measurement
- Data storage, USB interface data transfer
- High voltage output warning, automatic discharge
- Battery level indication
- Backlight display function
- Auto power off function

MULTIMETER SELECTION TABLE

Code	9452-IR21	9454-SR35	9455-TR05	9455-TR10
Test Voltage	100V~1000V	500V~5000V	100V~5000V	250V~10kV
Insulation Resistance	5GΩ	1000GΩ	2000GΩ	2000GΩ
ACV Measurement	30V~750V	30V~600V	0V~750V	0V~750V
DCV Measurement	—	30V~600V	0V~1000V	0V~1000V
Compare Function	—	√	√	√
PI Measurement	—	√	√	√
DAR Measurement	—	—	√	√
Data Transmission	—	√	√	√



9452-IR21

### INSULATION RESISTANCE TESTER (BASIC TYPE) CODE 9452-IR21

- Continuous measurement: press and rotate the test button to measure continuously
- Alarm function: the tester alerts with buzzer when the insulation resistance is less than 4MΩ
- Over-range indication
- Data hold
- High-voltage output alert
- Auto backlight display
- Low battery indication
- Auto power off



VIDEO

#### SPECIFICATION

Insulation resistance	test voltage*	100V	250V	500V	1000V
	range	100MΩ	500MΩ	2.00GΩ	5.00GΩ
	resolution	0.00MΩ~9.99MΩ: 0.01MΩ 10.0MΩ~99.9MΩ: 0.1MΩ 100MΩ~999MΩ: 1MΩ 1.00GΩ~5.00GΩ: 0.01GΩ			
	accuracy	0~99.9MΩ: ±(3%+5d); 100MΩ~5.00GΩ: ±(5%+5d)			
AC voltage**	range	30~750V (50/60Hz)			
	resolution	1V			
	accuracy	±(2%+3d)			
Short-circuit current	<2.0mA				
Operation environment	temperature: 0°C~35°C; humidity: <75%RH				
Power supply	6×1.5V AA batteries or AC/DC adapter (optional)				
Dimension (L×W×H)	184×115×75mm				
Net weight	600g				

\*Open-circuit voltage: DC voltage 0~+10%

\*\*Data hold and backlight display function are not applicable for AC voltage measurement

#### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Test clip	2 pcs
Battery (AA)	6 pcs



test clips (included)



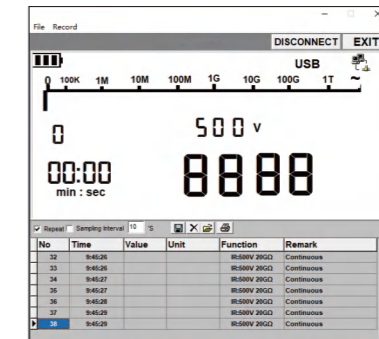
test leads (included)

#### OPTIONAL ACCESSORY

AC/DC adapter	9452-AP
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9454-SR35



computer software (included):  
connects to PC via USB cable,  
displays and stores data

### INSULATION RESISTANCE TESTER CODE 9454-SR35

DATA OUTPUT

- Continuous measurement, comparative measurement
- Timed measurement, polarization index measurement
- AC and DC voltage measurement
- Data storage, USB interface data transmission
- High voltage output warning, automatic discharge
- Battery level indication
- Backlight display function
- Auto power off function



VIDEO

#### SPECIFICATION

Insulation resistance	test voltage*	500V	1000V	2500V	5000V
	range	0.5MΩ~20MΩ	1MΩ~40GΩ	2.5MΩ~100GΩ	5MΩ~1000GΩ
	resolution	0.5MΩ~99.9MΩ: 0.1MΩ 1GΩ~9.99GΩ: 0.01GΩ	100MΩ~999MΩ: 1MΩ 10GΩ~1000GΩ: 0.1GΩ		
DC voltage	accuracy**	0.5MΩ~99.9MΩ: ±(3%+5d) 10GΩ~99.9GΩ: ±(10%+5d)	100MΩ~9.99GΩ: ±(5%+5d) 100GΩ~1000GΩ: ±(20%+5d)		
	range	±(30~600)V			
AC voltage (50/60Hz)	resolution	1V			
	accuracy	±(2%+3d)			
Short-circuit current	>3.0mA				
Operation environment	temperature: -10°C~40°C; humidity: ≤85%RH				
Power supply	8 LR14 batteries or power adapter				
Dimension (L×W×H)	202×155×94mm				
Net weight	1.28kg				

\*Open-circuit voltage: DC voltage 0%~+20%

\*\*Insulation resistance of 100GΩ or more should be measured under 50% RH humidity

#### STANDARD DELIVERY

Main unit	1 pc
Alligator clip test lead	3 pcs
Battery (LR14)	8 pcs
Power adapter	1 pc
USB cable	1 pc

## 9455-TR Series



## INSULATION RESISTANCE TESTER

DATA OUTPUT

- Continuous measurement, comparative measurement
- Absorption ratio, polarization index measurement
- AC and DC voltage measurement
- Data storage, USB interface data transfer
- High voltage output warning, automatic discharge
- Battery level indication
- Backlight display function
- Auto power off function



## SPECIFICATION

Code	9455-TR05	9455-TR10
Test voltage	100V~5000V	250V~10kV
Insulation resistance	0.05MΩ~2000GΩ	0.1MΩ~2000GΩ
DC voltage	range	±(0~1000)V
	resolution	0.1V
	accuracy	±(1.5%+3d)
AC voltage (50/60Hz)	range	(0~750)V
	resolution	0.1V
	accuracy	±(1.5%+3d)
Short-circuit current	≥5.0mA	
Operation environment	temperature: -10°C~40°C; humidity: ≤85%RH	
Power supply	rechargeable battery, power adapter	
Dimension (L×W×H)	277×227.5×153mm	
Net weight	2.75kg	

## STANDARD DELIVERY

Main unit	1 pc
High voltage test rod	1 pc
Alligator clip test lead	2 pcs
Power adapter	1 pc
USB cable	1 pc
Software	1 pc



high voltage test rod, test leads (included)

To be continued

Continued from previous page

## SPECIFICATION

Test voltage	Insulation resistance	Accuracy	Resolution
100V (only 9455-TR05)	0.05MΩ~5MΩ	±(3%+5d)	0.01MΩ
	5MΩ~50MΩ	±(3%+5d)	0.01MΩ
	50MΩ~500MΩ	±(3%+5d)	0.1MΩ
	0.5GΩ~5GΩ	±(5%+5d)	0.01GΩ
250V	5GΩ~20GΩ	±(20%+5d)	0.1GΩ
	0.1MΩ~10MΩ	±(3%+5d)	0.01MΩ
	10MΩ~100MΩ	±(3%+5d)	0.1MΩ
	100MΩ~1000MΩ	±(3%+5d)	1MΩ
500V	1GΩ~10GΩ	±(5%+5d)	0.01GΩ
	10GΩ~30GΩ	±(20%+5d)	0.1GΩ
	0.2MΩ~20MΩ	±(3%+5d)	0.01MΩ
	20MΩ~200MΩ	±(3%+5d)	0.1MΩ
1000V	200MΩ~2000MΩ	±(3%+5d)	1MΩ
	2GΩ~20GΩ	±(20%+5d)	0.01GΩ
	20GΩ~50GΩ	±(20%+5d)	0.1GΩ
	0.5MΩ~50MΩ	±(3%+5d)	0.01MΩ
2500V	50MΩ~500MΩ	±(3%+5d)	0.1MΩ
	500MΩ~5000MΩ	±(3%+5d)	1MΩ
	5GΩ~50GΩ	±(20%+5d)	0.01GΩ
	50GΩ~100GΩ	±(20%+5d)	0.1GΩ
5000V	1MΩ~10MΩ	±(3%+5d)	0.01MΩ
	10MΩ~100MΩ	±(3%+5d)	0.1MΩ
	100MΩ~1000MΩ	±(3%+5d)	1MΩ
	1GΩ~10GΩ	±(10%+5d)	0.01GΩ
10kV (only 9455-TR10)	10GΩ~100GΩ	±(20%+5d)	0.1GΩ
	100GΩ~300GΩ	±(20%+5d)	1GΩ
	2MΩ~20MΩ	±(3%+5d)	0.01MΩ
	20MΩ~200MΩ	±(3%+5d)	0.1MΩ
10kV (only 9455-TR10)	200MΩ~2000MΩ	±(3%+5d)	1MΩ
	2GΩ~20GΩ	±(10%+5d)	0.01GΩ
	20GΩ~200GΩ	±(20%+5d)	0.1GΩ
	200GΩ~2000GΩ	±(20%+5d)	1GΩ
10kV (only 9455-TR10)	5MΩ~50MΩ	±(3%+5d)	0.01MΩ
	50MΩ~500MΩ	±(3%+5d)	0.1MΩ
	500MΩ~5000MΩ	±(5%+5d)	1MΩ
	5GΩ~50GΩ	±(10%+5d)	0.01GΩ
10kV (only 9455-TR10)	50GΩ~500GΩ	±(20%+5d)	0.1GΩ
	500GΩ~2000GΩ	±(20%+5d)	1GΩ

\* Open-circuit voltage: DC voltage 0%~+10%

\*\* Insulation resistance of 100GΩ or more should be measured under 50%RH humidity

9456-DR01



## INSULATION RESISTANCE TESTER CODE 9456-DR01

- Rapidly assess in as fast as 50 ms
- Quick discharge of residual voltage
- Charge timer function for capacitive loads
- Contact check function and short-circuit check function prevent errors due to poor contact and potential defects
- Comparator function, beep can be set
- Save 10 test files, USB supports file access
- Various communication interfaces to meet automation test requirements



### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
HANDLER connector	1 pc
RS232 communication cable	1 pc

To be continued

Continued from previous page

### SPECIFICATION

Output voltage	range	10V~1000V	
	resolution	1V	
	setting accuracy	$\pm(1\%+2d)$	
	readback accuracy	$\pm(2\%+1d)$	
Insulation resistance	range	0.000M $\Omega$ ~9.99G $\Omega$	
	resolution	0.001M $\Omega$ ~1M $\Omega$	
	basic accuracy	$\pm 2\%$	
Measurement speed	contact check	mode off	mode on
	auto range	slow: 2 times/sec	slow: 1.9 times/sec
		medium: 13 times/sec	medium: 11 times/sec
		fast: 18 times/sec	fast: 15 times/sec
manual range	slow: 2.2 times/sec	slow: 2 times/sec	
	medium: 18 times/sec	medium: 15 times/sec	
	fast: 29 times/sec	fast: 22 times/sec	
List sweep	list count	5 groups	
	discharge time	synchronized setup: 10ms~10s	
	charge time	independent setup: 0.1s~99s	
	test time	independent setup: 0.1s~99s	
	comparator	independent setup: 0.000M $\Omega$ ~10G $\Omega$	
Short-circuit current	<2mA		
Maximum of charging current	1.8mA		
Display result	reading, current, resistance, peak, sorting result, audible and visual alarm		
Interface	Handler interface, RS232 interface, USB interface, RS485 interface		
Operation environment	temperature: 10°C~40°C; relative humidity: 10%~85%		
Power supply	AC 100V~240V, 50Hz/60Hz, 20VA		
Dimension (L×W×H)	264×304×107mm		
Net weight	2.25kg		

Test voltage	Range	Accuracy	Resolution
10V≤V <sub>x</sub> <100V	0M $\Omega$ ~4M $\Omega$	$\pm(2\%+5d)$	0.001M $\Omega$
	1.9M $\Omega$ ~40M $\Omega$		0.01M $\Omega$
	19M $\Omega$ ~400M $\Omega$	$\pm(5\%+5d)$	0.1M $\Omega$
100V≤V <sub>x</sub> <500V	0M $\Omega$ ~4M $\Omega$	$\pm(2\%+5d)$	0.001M $\Omega$
	1.9M $\Omega$ ~40M $\Omega$		0.01M $\Omega$
	19M $\Omega$ ~400M $\Omega$	$\pm(5\%+5d)$	0.1M $\Omega$
	190M $\Omega$ ~4G $\Omega$	$\pm(5\%+10d)$	1M $\Omega$
500V≤V <sub>x</sub> ≤1000V	0M $\Omega$ ~4M $\Omega$		0.001M $\Omega$
	1.9M $\Omega$ ~40M $\Omega$	$\pm(2\%+5d)$	0.01M $\Omega$
	19M $\Omega$ ~400M $\Omega$		0.1M $\Omega$
	190M $\Omega$ ~4G $\Omega$	$\pm(5\%+5d)$	
	4G $\Omega$ ~9.99G $\Omega$	$\pm(25\%+10d)$	1M $\Omega$



### 9458 Series

- High-voltage test with adjustable rise and fall time
- Arc detection function, contact check function
- Various over-limit alarms with buzzer, LCD display, Fail indicator
- 20 test files can be edited, each file can be edited for 50 test items
- Standard communication interface to meet automation test requirements



### 9457 Series

- Adjustment of the output by voltage regulator, featuring high reliability and durability
- High voltage output alarm, remote control available, high safety
- Realtime display of breakdown current and voltage values
- Breakdown alarm current can be set
- Optional PLC interface

AC WITHSTANDING VOLTAGE TESTER SELECTION TABLE

Code	9457-HA502	9457-HA510	9458-AW52
AC Withstand Voltage	5kV	5kV	5kV
AC Leakage Current	20mA	100mA	20mA
Voltage Ramp Up	-	-	√
Voltage Ramp Down	-	-	√
Arc Detection	-	-	√
Data Transmission	-	-	√

AC/DC WITHSTAND VOLTAGE TESTER SELECTION TABLE

Code	9457-HD501	9457-HD1002	9457-HD1005	9457-HD1010	9458-DW61
AC Withstand Voltage	5kV	10kV	10kV	10kV	5kV
AC Leakage Current	20mA	20mA	50mA	100mA	20mA
DC Withstand Voltage	5kV	10kV	10kV	10kV	6kV
DC Leakage Current	10mA	10mA	20mA	20mA	10mA
Voltage Ramp Up	-	-	-	-	√
Voltage Ramp Down	-	-	-	-	√
Arc Detection	-	-	-	-	√
Data Transmission	-	-	-	-	√



9458-DW61

## PROGRAMMABLE WITHSTANDING VOLTAGE TESTERS

DATA OUTPUT

- High-voltage test with adjustable rise and fall time
- Arc detection function, contact check function
- Various over-limit alarms with buzzer, LCD display, fail indicator
- 20 test files can be edited, each file can be edited for 50 test items
- Standard communication interface to meet automation test requirements



### SPECIFICATION

Code	9458-DW61	9458-AW52	
AC withstand voltage test	output voltage		
	range	0.05kV~5kV	
	resolution (d)	1V	
	accuracy	±(2%+5d)	
test current	range	20mA	
	resolution (d)	1μA	
	accuracy	±(2%+5d)	
DC withstand voltage test	output voltage		
	range	0.05kV~6kV	-
	resolution (d)	1V	-
	accuracy	±(2%+5d)	-
test current	range	10mA	-
	resolution (d)	1μA	-
	accuracy	±(2%+5d)	-
Timer	range	(0.1~999)s, OFF: continuous test	
	ramp up	(0.1~999)s, OFF: mode off	
	ramp down	(0.1~999)s, OFF: mode off	
Arc detection		1mA~20mA	
Interface		HANDLER interface, RS232 interface, RS485 interface	
Operation environment		temperature: 0°C~40°C, humidity: 20%RH~80%RH (no condensation)	
Storage environment		temperature: -20°C~60°C, humidity: ≤90%RH	
Power supply		100V~240V, 50Hz/60Hz	
Dimension (L×W×H)		260×400×100mm	
Net weight		6.7kg	

### STANDARD DELIVERY

Main unit	1 pc
High voltage test lead	1 pc
Ground test lead	1 pc
RS232 communication cable	1 pc



high voltage test lead (included)



ground test lead (included)



9457-HD501

## WITHSTANDING VOLTAGE TESTERS

- Adjustment of the output by voltage regulator, featuring high reliability and durability
- High voltage output alarm, remote control available, high safety
- Realtime display of breakdown current and voltage values
- Breakdown alarm current can be set
- Optional PLC interface



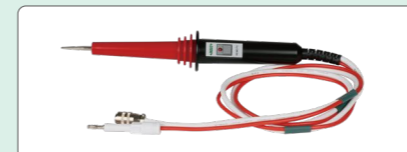
### SPECIFICATION

Code	9457-HD501	9457-HA502	9457-HA510
AC withstand voltage test	output voltage	range	(0~5)kV
		resolution (d)	10V
		accuracy	±(5%+3d)
	test current	range	0.1mA~2mA/20mA
resolution (d)		2mA: 1μA 20mA: 10μA	2mA: 1μA 20mA: 10μA 100mA: 0.1mA
accuracy		±(5%+3d)	
DC withstand voltage test	output voltage	range	(0~5)kV
		resolution (d)	10V
		accuracy	±(5%+3d)
	test current	range	0.1mA~2mA/10mA
resolution (d)		2mA: 1μA 10mA: 10μA	—
accuracy		±(5%+3d)	—
Timer	range	(0~999)s	
	resolution (d)	0.1s	
	accuracy	±(1%+50ms)	
Operation environment	temperature: 0°C~40°C, humidity: 20%RH~80%RH (no condensation)		
Storage environment	temperature: -20°C~60°C, humidity: ≤90%RH		
Power supply	220V±10%, 50Hz/60Hz		
Dimension (L×W×H)	318×255×179mm		
Net weight	10.1kg	9.75kg	14.4kg

Continued from previous page

### SPECIFICATION

Code	9457-HD1002	9457-HD1005	9457-HD1010	
AC withstand voltage test	output voltage	range	(0~5/10)kV	
		resolution (d)	10V	
		accuracy	±(5%+3d)	
	test current	range	0.1mA~2mA/20mA	0.1mA~2mA/20mA/50mA
resolution (d)		2mA: 1μA 20mA: 10μA	2mA: 1μA 20mA: 10μA 50mA: 10μA	2mA: 1μA 20mA: 10μA 100mA: 0.1mA
accuracy		±(5%+3d)		
DC withstand voltage test	output voltage	range	(0~5/10)kV	
		resolution (d)	10V	
		accuracy	±(5%+3d)	
	test current	range	0.1mA~2mA/10mA	0.1mA~2mA/20mA
resolution (d)		2mA: 1μA 10mA: 10μA	2mA: 1μA 20mA: 10μA	
accuracy		±(5%+3d)		
Timer	range	(0~999)s		
	resolution (d)	0.1s		
	accuracy	±(1%+50ms)		
Operation environment	temperature: 0°C~40°C, humidity: 20%RH~80%RH (no condensation)			
Storage environment	temperature: -20°C~60°C, humidity: ≤90%RH			
Power supply	220V±10%, 50Hz/60Hz			
Dimension (L×W×H)	377×282×193mm	378×407×193mm		
Net weight	15.9kg	24.8kg	27.6kg	



remote high voltage test lead (included)



high voltage test lead (included)



ground test lead (included)

### STANDARD DELIVERY

Main unit	1 pc
Remote high voltage test lead (9457-REMOTE)	1 pc
High voltage test lead	1 pc
Ground test lead	1 pc

### OPTIONAL ACCESSORY

Withstanding voltage tester with PLC interface	9457-HD501P
	9457-HA502P
	9457-HA510P
	9457-HD1002P
	9457-HD1005P
9457-HD1010P	



9460-GR40

### AC GROUND RESISTANCE TESTER CODE 9460-GR40

- 5-inch LCD touch screen display
- Comparator function: sound and light alarms for upper and lower limit
- User correction function
- Keyboard lock function



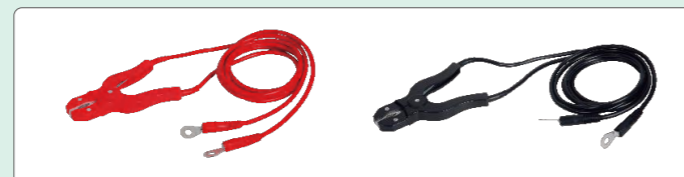
VIDEO

#### SPECIFICATION

Current	range	AC 5A~40A
	resolution	0.1A
	accuracy	±(2%+5d)
Resistance test	range	0~600mΩ
	resolution	0.1mΩ
	accuracy	±(2%+5d)
Frequency		50Hz, 60Hz
Output voltage		≤6V
Output power		when the input voltage is 110V, the output power≤75VA; when the input voltage is 220V, the output power≤150VA
Time		0~999.9s
Interface		HANDLER interface, RS-232C interface
Power supply		AC 110V/220V, 50Hz/60Hz
Dimension (L×W×H)		320×250×120mm
Net weight		7kg

#### STANDARD DELIVERY

Main unit	1 pc
Test clamp	2 pcs



test clamps (included)



9453-ST01



high voltage test clips (included)



high voltage test rod (included)

RS232 communication cable (included)

### AC/DC WITHSTANDING VOLTAGE INSULATION TESTERS

- 5-inch LCD touch screen display
- Arc detection function
- Electric shock protection function 10 test files can be stored, each file can be edited with 16 test steps
- Standard communication interface to meet automation test requirements
- Applications: home appliance, transformer, electrical device, component



VIDEO

#### SPECIFICATION

Code		9453-ST01	9453-ST02
Withstand voltage test	output voltage	range	AC: 5kV; DC: 6kV
		resolution (d)	0.001kV
		accuracy	±(2%+5d)
	test current	range	AC: 10mA; DC: 5mA
		resolution (d)	AC: 0.001mA~0.01mA; DC: 0.1μA~0.01mA
		accuracy	±(2%+5d)
Insulation resistance test	output voltage	range	1kV
		resolution (d)	0.001kV
		accuracy	±(1%+2d)
	test resistance	range	10GΩ
		resolution (d)	0.001MΩ~0.01GΩ
		accuracy	output voltage≥500V, test resistance 1MΩ-1GΩ: ±(5%+5d); output voltage≥500V, test resistance 1GΩ-10GΩ: ±(10%+5d); output voltage<500V, test resistance 0.1MΩ-1GΩ: ±(10%+5d)
Discharge function		discharge after testing	
Arc detection		1~9 level (AC/DC), factory default is 5	
Time		voltage rising time: 0.1s~999.9s; voltage falling time: 0.1s~999.9s; voltage testing time: 0.1s~999.9s	
Interface		HANDLER interface, RS232C interface, USB interface	
Operation environment		temperature: 10°C~40°C; relative humidity: ≤70%	
Power supply		AC 110V/220V, 50Hz/60Hz	
Dimension (L×W×H)		450×270×130mm	
Net weight		9.2kg	10.5kg

#### STANDARD DELIVERY

Main unit	1 pc
High voltage test clip	2 pcs
High voltage test rod	1 pc
RS232 communication cable	1 pc



9721-250

### DIGITAL VOLTAGE TESTER CODE 9721-250

- Direct AC test (contact): 12-250V  
Two way display: voltage displays on LCD screen and neon lamp lights up (when voltage>80V)
- Induction AC test (non-contact): 12-250V to detect power source or recognize the phase line, ground line and break point
- Direct DC test (contact): 6-36V instant sense and display
- Work without battery
- Tester tip: CRV material

#### SPECIFICATION

Range	AC: 12-250V; DC: 6-36V
Neon lamp life	30000 times
Dimension (L×W×H)	133×21×19mm
Net weight	22g



9723-400

### AC PHASE AND VOLTAGE DETECTOR CODE 9723-400

- Non-contact phase sequence detection high and low voltage, wire distinction
- Low battery indication
- Auto power off
- Flashlight



#### SPECIFICATION

Phase sequence detection	screen shows clockwise or counterclockwise
High and low voltage detection	beep: slow~fast, backlight: green~red, analog bar: low~high
Wire distinction	green backlight indicates neutral wire red backlight indicates live wire
Power supply	2×1.5V AAA batteries
Dimension (L×W×H)	157×27×23mm
Net weight	32g



9722-250

### VOLTAGE TESTER CODE 9722-250

- Tester tip: CRV material

#### SPECIFICATION

Range	AC: 100-250V
Neon lamp life	30000 times
Dimension	145×Ø15mm
Net weight	21g



0716-ER120

### EARTH RESISTANCE TESTER CODE 0716-ER120

- Timed measurement function
- Auto power off
- Display with backlight
- Data hold
- Low battery indication



#### SPECIFICATION

Function	Range	Resolution	Accuracy
Earth resistance	20Ω	0.01Ω	±(2%+10d)
	200Ω/2000Ω	0.1Ω/1Ω	±(2%+3d)
AC earth voltage	1000V	1V	±(2%+5d)
DC voltage	1500V	1V	±(1%+5d)
Test methods	2-wire testing, 3-wire testing		
Power supply	8×1.5V AA batteries		
Dimension (L×W×H)	178×110×59mm		
Net weight	600g		

#### STANDARD DELIVERY

Main unit	1 pc
Test lead	5 pcs
Auxiliary grounding rod	2 pcs
Battery (AA)	8 pcs



auxiliary grounding rods (included)



0719-1000

## CLAMP EARTH RESISTANCE TESTERS

- Over-limit audible and visual alarm
- Data storage
- Data hold
- Low battery indicator
- Earth resistance measurement: capable of quickly and safely testing indoor/outdoor earthing loop resistance
- AC leakage current measurement: AC leakage current can be measured without disconnecting the earthing system

### SPECIFICATION

Code	0719-200	0719-500	0719-1000
Resistance	0.01~200Ω	0.01~500Ω	0.01~1000Ω
Current	--	--	30A
Jaw size	55mm×32mm		
Test time	0.5s/t		
Resistance test frequency	>1kHz		
Data storage	99 groups		
Operation environment	-10°C~55°C, 10%RH~90%RH		
Power supply	4×1.5V AA batteries		
Dimension (L×W×H)	277×100×57mm		
Net weight	880g		

### RESISTANCE AND CURRENT SPECIFICATION

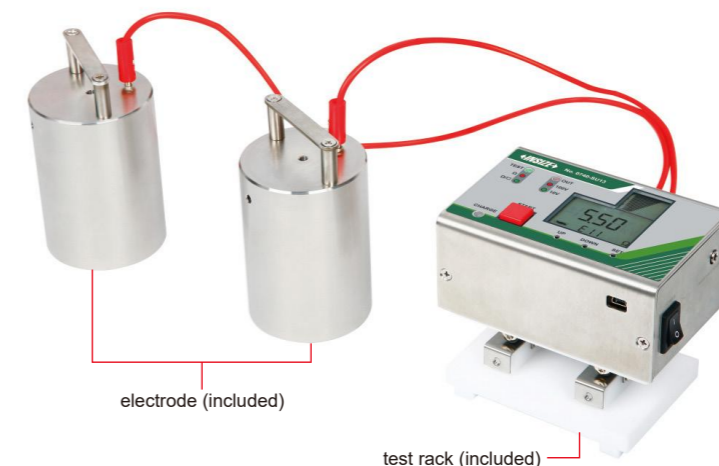
Function	Range	Resolution	Accuracy
Resistance	0.010Ω-0.099Ω	0.001Ω	±(1%rdg+0.01Ω)
	0.10Ω-0.99Ω	0.01Ω	±(1%rdg+0.01Ω)
	1.0Ω-49.9Ω	0.1Ω	±(1%rdg+0.1Ω)
	50.0Ω-99.5Ω	0.5Ω	±(1.5%rdg+0.5Ω)
	100Ω-199Ω	1Ω	±(2%rdg+1Ω)
	200Ω-395Ω	5Ω	±(5%rdg+5Ω)
	400Ω-590Ω	10Ω	±(10%rdg+10Ω)
	600Ω-1000Ω	20Ω	±(20%rdg+20Ω)
Current (50Hz)	0.00mA-9.99mA	0.01mA	±(2.5%rdg+1mA)
	10.0mA-99.9mA	0.1mA	±(2.5%rdg+5mA)
	100mA-299mA	1mA	±(2.5%rdg+10mA)
	0.30A-2.99A	0.01A	±(2.5%rdg+0.1A)
	3.0A-9.9A	0.1A	±(2.5%rdg+0.3A)
	10.0A-19.9A	0.1A	±(2.5%rdg+0.5A)
	20.0A-30.0A	0.1A	±(3%rdg+1A)

### STANDARD DELIVERY

Main unit	1 pc
Battery (AA)	4 pcs
1Ω loop resistance standard	1 pc



1Ω loop resistance standard (included)



0740-SU13

## SURFACE RESISTANCE TESTER CODE 0740-SU13

- Designed to EOS/ESD, CECC, ASTM and UL standards.
- Suitable for testing table mats, floors, paint, work clothes, bags, etc.
- Automatic selection of resistance range and test voltage



VIDEO

### SPECIFICATION

Range	1×10 <sup>3</sup> ~1×10 <sup>13</sup> Ω
Accuracy	<10 <sup>11</sup> : 10% ≥10 <sup>11</sup> : 20%
Test voltage	10V/100V, ±5%
Test time	15s, 30s, 60s
Working environment	temperature: 0°C~49°C, humidity: ≤80%RH
Power supply	rechargeable lithium battery: 3.7V, 1800mAh
Dimension (L×W×H)	115×79×69mm
Net weight	630g

### STANDARD DELIVERY

Main unit	1 pc
Electrode	2 pcs
Conductive rubber	2 pcs
Test lead	3 pcs
Test rack	1 pc
Power adapter	1 pc

### OPTIONAL ACCESSORY

Digital thermohygrometer	9362-TH27
Digital thermohygrometer	0317-TH37

## POWER METERS



9670-PM70

### AC/DC DIGITAL POWER METER CODE 9670-PM70

- Basic accuracy: 0.2%
- AC/DC universal, input signal bandwidth: DC, 15Hz-5kHz
- High measurement speed, up to 0.1s refresh rate
- Voltage and current ratio function
- Sound and light alarm for voltage, current, power over the limits
- Standard RS232 interface to support test automation and data transmission



#### SPECIFICATION

Measurement parameters	voltage (U), current (I), active power (P), reactive power (Q), apparent power (S), power factor ( $\lambda$ ), phase angle ( $\Phi$ ), voltage frequency (f), voltage peak (Vpk), current peak (Apk), electric energy (Wh), current integration (Ah), electric energy time (Time)	
Wiring method	single phase	
Voltage range	15/30/60/150/300/600V	
Current range	100mA/200mA/500mA/1A/2A/5A/10A/20A	
Voltage	display range	0.15V~600V
	accuracy (23±5°C)	DC, 15Hz≤f≤5kHz: ±(0.1%×display+0.1%×range)
Current	display range	0.5mA~20A
	accuracy (23±5°C)	DC, 15Hz≤f≤5kHz: ±(0.1%×display+0.1%×range)
	display range	1.0mW~12kW
Active power	accuracy (23±5°C)	DC, 15Hz≤f≤5kHz: PF>0.5: ±(0.1%×display+0.1%×range) PF≤0.5: ±(0.25%×display+0.25%×range)
	display range	15Hz~5kHz
Frequency	display range	±(0.1%×display) (voltage amplitude should be greater than 10% of range)
	accuracy (23±5°C)	
Electric energy	display range	0~9999MWh
	accuracy (23±5°C)	±(0.5%×display)
Current integration	display range	0~9999MAh
	accuracy (23±5°C)	±(0.5%×display)
Power factor	±(0.010~1.000)	
Ratio range(voltage, current)	0.1~6000	
Interface	RS232 interface, supports MODBUS and ASCII code protocols	
Power supply	AC 100V~240V, 50/60Hz	
Dimension (L×W×H)	281×213×99mm	
Net weight	2550g	

#### STANDARD DELIVERY

Main unit	1 pc
RS232 communication cable	1 pc



9675-EU03

## SOCKET-TYPE POWER METERS

- Large LCD screen with 3-row display
- Displays time, power consumption, voltage, current, power, power factor, and energy cost
- Total kWh and cost can display up to 9999
- Built-in rechargeable battery prevents data loss in case of power outage

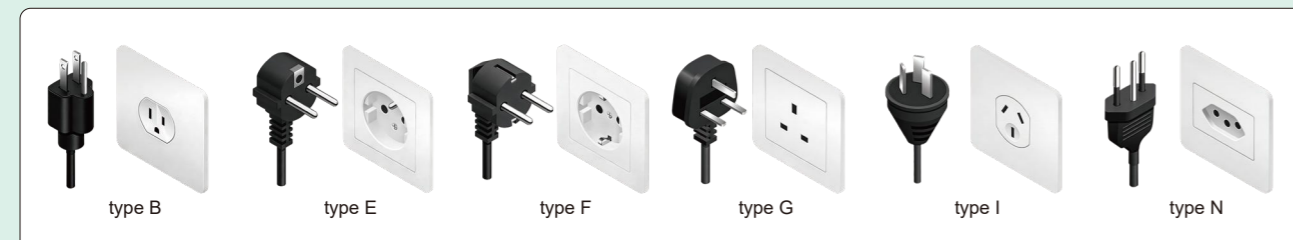


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### SPECIFICATION

Code	9675-US01	9675-FR02	9675-EU03	9675-UK04	9675-AU05	9675-BR06
Power plug type	type B	type E	type F	type G	type I	type N
Rated voltage	100V~127V	220V~240V				
Rated current	15A	16A		13A	10A	
Maximum load	1800W	3680W		3120W	2400W	2200W
Accuracy	±2%					
Working environment	temperature: 10°C~40°C, humidity: 20%RH~80%RH					
Dimension (L×W×H)	58×75×125mm					
Net weight	150g					

### PLUG AND SOCKET TYPE



9680-ZX21A

## DC RESISTANCE BOX CODE 9680-ZX21A

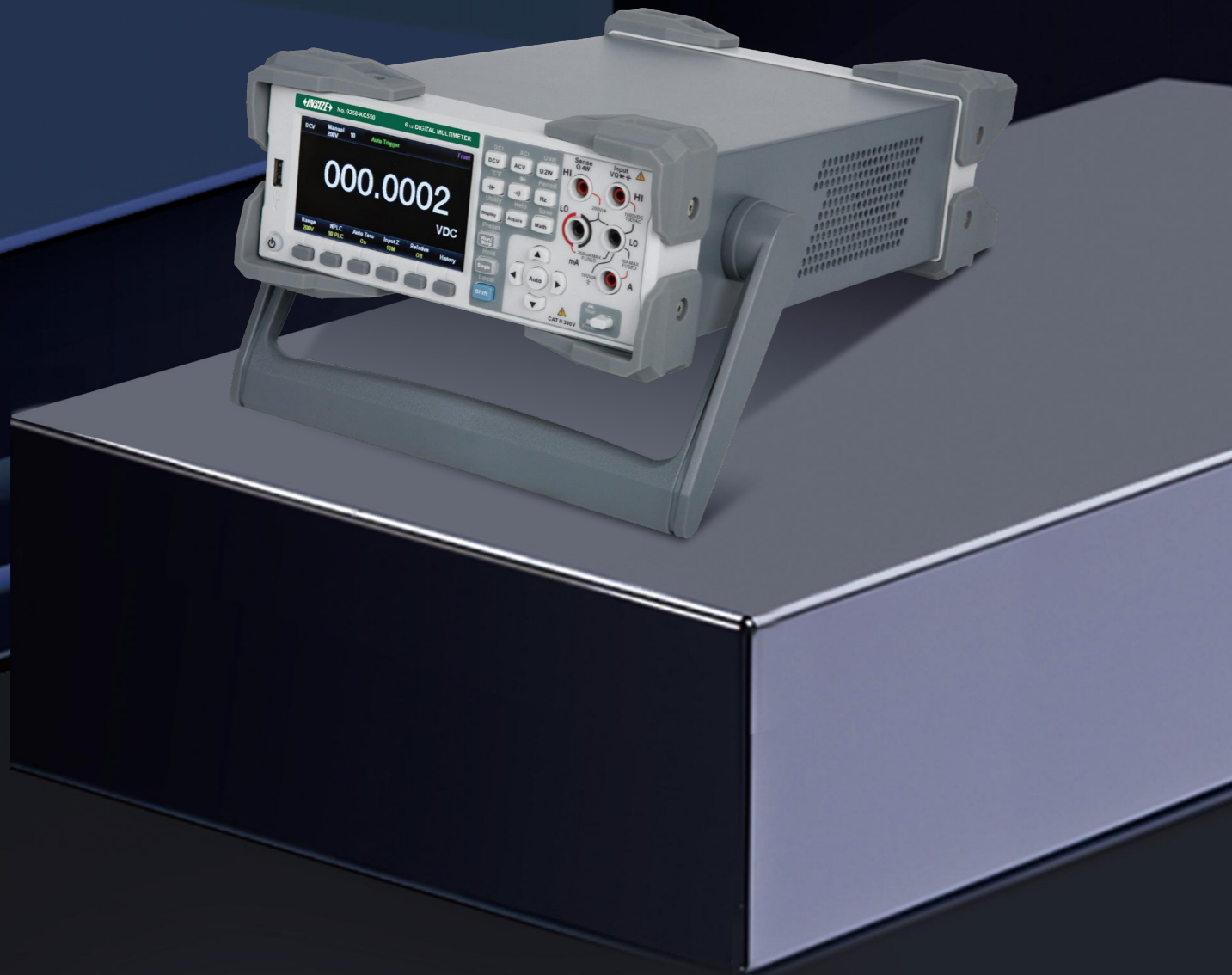
- Basic accuracy: 0.1%
- Resistance range: 0.1Ω~111111.0Ω
- Compact design for easy operation
- Suitable as a test standard for educational institutions, research organisations and metrology laboratories

### SPECIFICATION

Range	0.1Ω~111111.0Ω					
Resistance per step (×10)	10kΩ	1kΩ	100Ω	10Ω	1Ω	0.1Ω
Accuracy	0.1%				0.5%	2%
Max current	0.003A	0.015A	0.05A	0.15A	0.5A	1.5A
Max voltage (per step)	30V	15V	5V	1.5V	0.5V	0.15V
Zero resistance (R0)	R0≤25mΩ (≤11Ω) ; R0≤53mΩ (>11Ω)					
Dielectric strength	circuit-to-enclosure insulation resistance: ≥1000MΩ/500V DC circuit-to-enclosure withstand voltage: 1000V AC (50 Hz), 1 min duration					
Dimension (L×W×H)	200×150×130mm					
Net weight	1.5kg					

## DIGITAL MULTIMETER (BENCHTOP)

INSIZE 6.5-digit digital multimeter is designed for high-precision and multifunctional testing requirements, featuring outstanding sampling rates and accuracy. It supports data statistics analysis, multiple data visualization functions, and standard SCPI commands, making it suitable for applications in R&D, quality verification, automated production, education and training, and other fields.



9258-KC550

### DIGITAL MULTIMETER CODE 9258-KC550

DATA OUTPUT

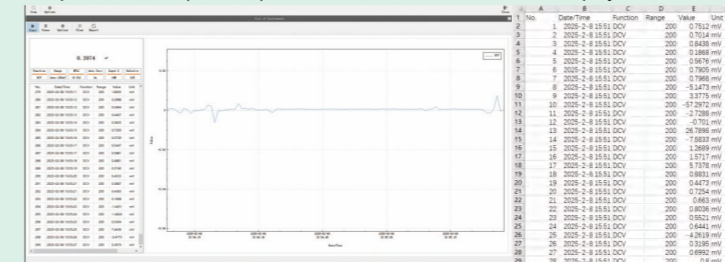
- 6 ½ digits resolution
- Measuring speed up to 10k rdgs/s
- Built-in thermocouple cold-end compensator
- Support statistical analysis of data
- Support bar graph, trend graph, histogram display
- Rear panel test function
- Supports standard SCPI remote control commands



#### SPECIFICATION

Function	Range	Basic accuracy (reading%+range%)
DC voltage	200mV/2V/20V/200V/1000V	±(0.0035+0.0006)
AC voltage	200mV/2V/20V/200V/750V	±(0.06+0.03)
DC current	2μA/20μA /200μA/2mA/20mA/200mA/2A/10A	±(0.05+0.002)
AC current	200μA/2mA/20mA/200mA/2A/10A	±(0.1+0.04)
Resistance	20Ω/200Ω/2kΩ/20kΩ/200kΩ/2MΩ/10MΩ/100MΩ/1GΩ	±(0.01+0.001)
Capacitance	2nF/20nF/200nF/2μF/20μF/200μF/2mF/20mF/100mF	±(1+0.1)
Frequency	3Hz~1MHz	±(0.007)
Temperature	supports thermocouple and RTD testing	
Continuity check	adjustable from 0Ω~2000Ω, default is 30Ω	
Diode test	0V~4V	
Frequency response	300kHz	
Mathematical operation	maximum, minimum, average, standard deviation, relative, dBm, dB	
Trigger	automatic trigger, single trigger, external trigger	
Display	digital, dual-window, histogram, tendency chart, bar chart	
Interface	communication interface: USB/LAN/RS232; storage interface: U disk	
Operation environment	temperature: 0°C~28°C, humidity: <90%RH; temperature: 28°C~40°C, humidity: <75%RH; temperature: 40°C~55°C, humidity: <50%RH (non-condensation)	
Storage environment	temperature: -20°C~70°C, humidity: <95%RH (non-condensation)	
Power supply	100V~120V, 45~440Hz, 200V~240V, 45~66Hz	
Size (L×W×H)	378×256×113mm	
Net weight	3.4kg	

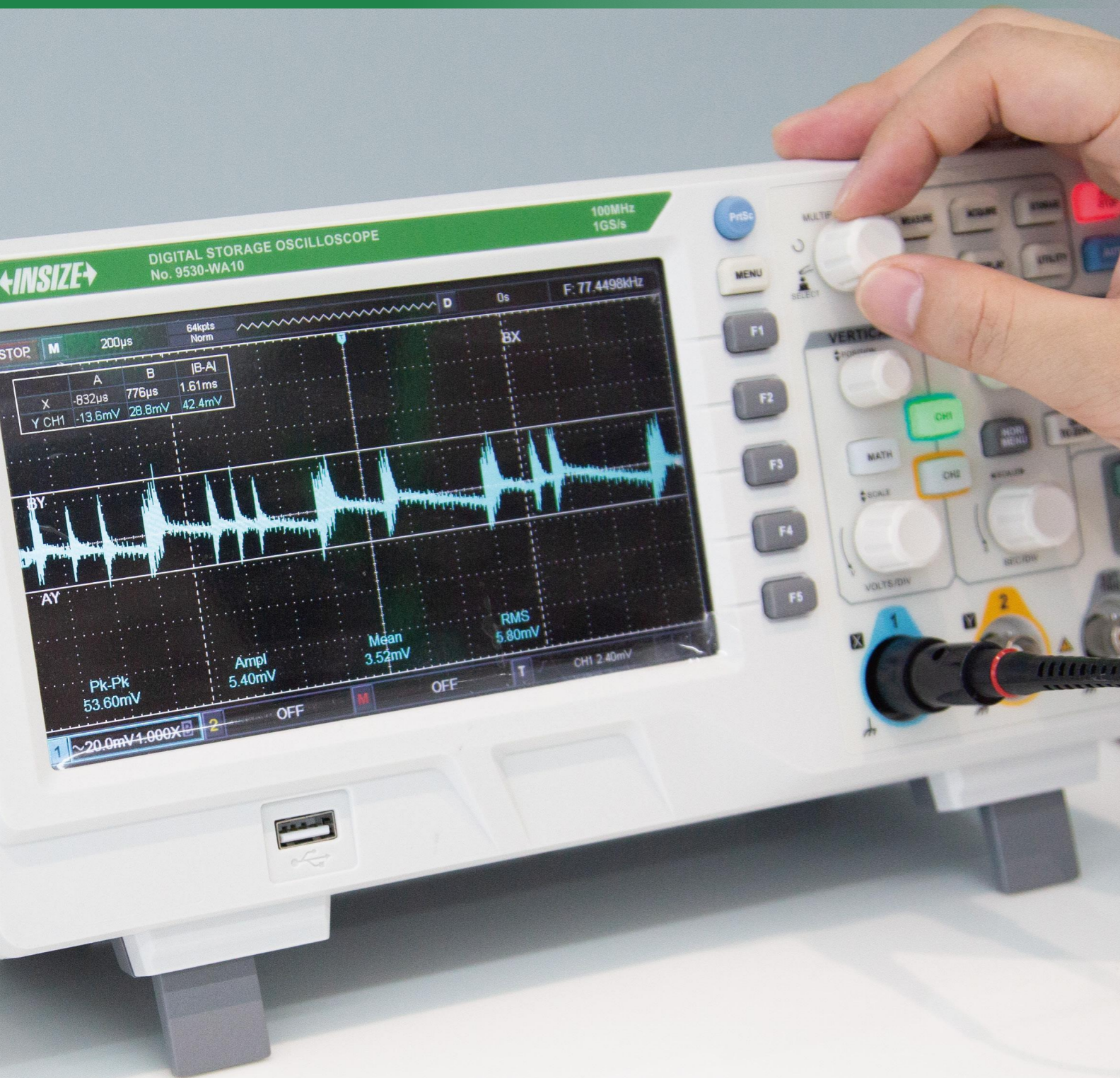
computer software (included): connect to PC software via cable, display and store data



#### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs
Test clip	2 pcs
RS232 cable	1 pc
USB cable	1 pc
K-type thermocouple	1 pc

## DIGITAL OSCILLOSCOPE



9530-WA10

### DIGITAL OSCILLOSCOPE CODE 9530-WA10

DATA OUTPUT

- Analogue bandwidth: 100MHz
- Memory depth: 64kpts
- Sampling rate per channel: 1GSa/s (non-interleaved mode)
- Waveform capture rate: 5,000wfms/s
- Automatic measurement of multiple waveform parameters
- Multiple frequency standard square waves can be output: 10Hz, 100Hz, 1kHz, 10kHz
- Sampling mode: real-time sampling and equivalent sampling
- Lissajous method: measuring the phase of a waveform



VIDEO

#### SPECIFICATION

Analogue bandwidth	100MHz
Channel	2
Maximum real-time sampling rate	1GSa/s (non-interleaved mode)
Rise time	≤3.5ns
Memory depth	64kpts
Waveform capture rate	5000wfms/s
Vertical scale (V/div)	1mV/div~20V/div
Time base scale (s/div)	2ns/div~50s/div
Storage method	setup, wave, bitmap
Trigger type	edge, pulse, alternate, slope, video
Trigger mode	auto, normal, single
Trigger coupling	DC, AC, HF, LF, noise
Cursor measurement	time, voltage, tracking
Parameter measurement	automatic measurement of multiple waveform parameters
Mathematical operation	+, -, ×, ÷, FFT, filter
Digital filter	low pass, high pass, band pass, band stop
Setting	internal: 20 groups, USB: 200 groups
Waveform	internal: 20 groups, USB: 200 groups
Recorded frame	1000 frames of screen data
Interface	USB Host, USB Device, Pass/Fail
Maximum input voltage	300Vrms, the transient over voltage is 1000 Vpk.
Probe compensator output	voltage: about 3Vp-p frequency: 10Hz, 100Hz, 1kHz, 10kHz
Power supply	AC 100V~240V, 50-60Hz
Dimension (L×W×H)	306×138×124mm
Net weight	2.5kg

#### STANDARD DELIVERY

Main unit	1 pc
Passive probe	2 pcs
USB cable	1 pc



passive probe (included)

# DC POWER SUPPLIES

INSIZE DC power supplies can be widely used in various fields such as electronic devices, industrial automation, communication equipment, and medical equipment. It can provide stable power for electronic devices like computers and mobile phones to ensure their normal operation. In the industrial automation scenario, it can supply power to sensors, actuators, etc. It can also be used in communication equipment such as wireless base stations and fiber optic communication systems. INSIZE DC power supplies are available in small desktop models, and also in standard chassis height models suitable for system integration, and can be customized according to customer requirements.



9911-PS305 basic type



9914-BP506



9911-PS305

## DC POWER SUPPLY (BASIC TYPE) CODE 9911-PS305

- Four-digit LED display
- Output power display
- Output switch control
- Panel locking function to prevent misoperation
- USB interface for power supply
- OVP/OCP protection
- 3 shortcut keys for presetting

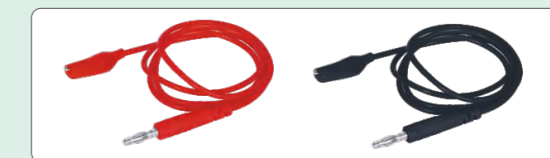


### SPECIFICATION

Voltage	range	30V
	setting resolution	10mV
	setting accuracy	≤0.1%+20mV
	readback resolution	10mV
	readback accuracy	≤0.1%+20mV
	load regulation	≤0.1%+5mV
	line regulation	≤0.01%+5mV
Current	range	5A
	setting resolution	1mA
	setting accuracy	≤0.2%+6mA
	readback resolution	1mA
	readback accuracy	≤0.2%+6mA
	load regulation	≤0.2%+3mA
	line regulation	≤0.2%+3mA
ripple	8mArms	
OVP	0~33V	
OCP	0~5.5A	
Work condition	temperature: 0~40°C, humidity: ≤80%RH	
Storage condition	temperature: -20~60°C, humidity: ≤80%RH	
Cool system	fan cool	
Power supply	AC 220V±10%, 50Hz/60Hz	
Dimension (L×W×H)	230×80×150mm	
Net weight	1.45kg	

### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs



test leads (included)



9914-BP506

## DC POWER SUPPLY CODE 9914-BP506

- Four-digit LED display
- Independent voltage and current control knob
- Output switch control
- Panel locking function to prevent misoperation
- USB interface for power supply
- OVP/OCP protection
- 3 shortcut keys for presetting



VIDEO

### SPECIFICATION

Rate output voltage	0~50V	
Rate output current	0~6A	
Maximum output power	150W	
Voltage	setting resolution	10mV
	setting accuracy	≤0.5%+50mV
	readback resolution	10mV
	readback accuracy	≤0.5%+50mV
	load regulation	≤0.05%+5mV
	line regulation	≤0.1%+3mV
Current	ripple	≤5mVrms
	setting resolution	1mA
	setting accuracy	≤0.5%+5mA
	readback resolution	1mA
	readback accuracy	≤0.5%+5mA
	load regulation	≤0.1%+3mA
OVP	0~55V	
OCP	0~6.5A	
Work condition	temperature: 0°C~40°C, humidity: ≤75%RH	
Storage condition	temperature: -20°C~50°C, humidity: ≤90%RH	
Cool system	fan cool	
Power supply	110V/220V±10%, 50Hz/60Hz	
Dimension (L×W×H)	200×80×155mm	
Net weight	1.23kg	

### STANDARD DELIVERY

Main unit	1 pc
Test lead	2 pcs



Unit: mm

## HIGH POWER DC POWER SUPPLIES

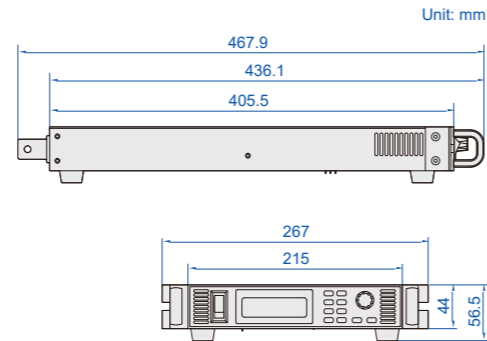
- High precision and low ripple
- OVP/OCP/OPP/OTP protection
- 1U half rack, suitable for system integration
- Remote compensation function
- Various communication interfaces



VIDEO

### SPECIFICATION

Code	9915-NCK61	9915-NCK62	9915-NCK63	9915-NCK91	9915-NCK92	9915-NC1K1	
Rate output voltage	0~30V	0~60V	0~100V	0~30V	0~60V	0~100V	
Rate output current	0~20A	0~10A	0~6A	0~30A	0~15A	0~10A	
Maximum output power	600W			900W		1000W	
Voltage	setting resolution	1mV	10mV	1mV	10mV	10mV	
	setting accuracy	≤0.05%+0.2%FS	≤0.05%+0.1%FS	≤0.05%+0.2%FS	≤0.05%+0.1%FS	≤0.05%+0.1%FS	
	readback resolution	1mV	10mV	1mV	10mV	10mV	
	readback accuracy	≤0.05%+0.2%FS	≤0.05%+0.1%FS	≤0.05%+0.2%FS	≤0.05%+0.1%FS	≤0.05%+0.1%FS	
	load regulation	≤0.05%+20mV	≤0.1%+20mV	≤0.1%+30mV	≤0.05%+20mV	≤0.1%+20mV	≤0.1%+30mV
	line regulation	≤0.05%+20mV	≤0.1%+20mV	≤0.1%+30mV	≤0.05%+20mV	≤0.1%+20mV	≤0.1%+30mV
	ripple	≤30mVrms	≤60mVrms	≤80mVrms	≤30mVrms	≤60mVrms	≤80mVrms
Current	setting resolution	1mA		1mA		1mA	
	setting accuracy	≤0.1%+0.1%FS	≤0.1%+0.5%FS	≤0.1%+0.1%FS	≤0.1%+0.5%FS	≤0.1%+0.1%FS	
	readback resolution	1mA		1mA		1mA	
	readback accuracy	≤0.1%+0.2%FS	≤0.1%+0.5%FS	≤0.1%+0.2%FS	≤0.1%+0.5%FS	≤0.1%+0.2%FS	
	load regulation	≤0.05%+20mA	≤0.1%+20mA	≤0.1%+30mA	≤0.05%+20mA	≤0.1%+20mA	≤0.1%+30mA
	line regulation	≤0.05%+20mA	≤0.1%+20mA	≤0.1%+30mA	≤0.05%+20mA	≤0.1%+20mA	≤0.1%+30mA
ripple	≤30mArms	≤60mArms	≤80mArms	≤30mArms	≤60mArms	≤80mArms	
Work condition	temperature: 0°C~40°C, humidity: 20%RH~80%RH						
Storage condition	temperature: -10°C~55°C, humidity: 10%RH~90%RH						
Cool system	fan cool						
Power supply	220V±10%, 50Hz/60Hz						
Dimension (L×W×H)	215×360×44mm						
Net weight	4kg						



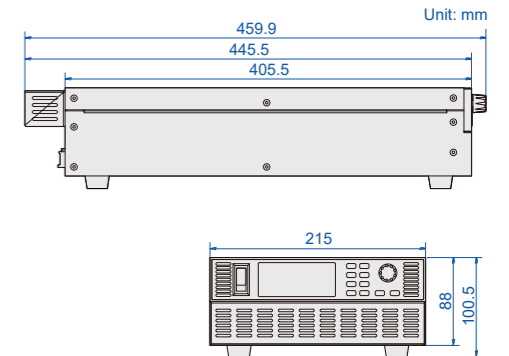
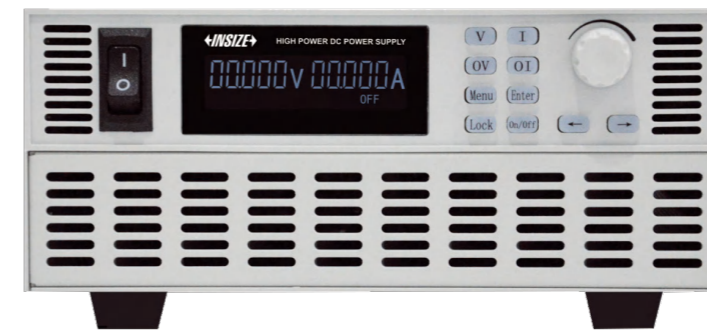
### HIGH POWER DC POWER SUPPLIES

- High precision and low ripple
- OVP/OCP/OPP/OTP protection
- 1U half rack, suitable for system integration
- Remote compensation function
- Various communication interfaces
- Customized specifications are available



#### SPECIFICATION

Code	9916-HC1K81	9916-HC1K82	9916-HC1K83	9916-HC1K84	9916-HC1K85
Rate output voltage	0~30V	0~60V	0~100V	0~150V	0~300V
Rate output current	0~60A	0~30A	0~18A	0~12A	0~6A
Maximum output power	1800W				
Voltage	setting resolution	1mV	10mV		
	setting accuracy	≤0.05%+0.2%FS	≤0.05%+0.1%FS		≤0.05%+0.05%FS
	readback resolution	1mV	10mV		
	readback accuracy	≤0.05%+0.2%FS	≤0.05%+0.1%FS		≤0.05%+0.05%FS
	load regulation	≤0.05%+20mV	≤0.1%+20mV	≤0.1%+30mV	
	line regulation	≤0.05%+20mV	≤0.1%+20mV	≤0.1%+30mV	
ripple	≤30mVrms	≤60mVrms	≤80mVrms	≤100mVrms	≤150mVrms
Current	setting resolution	1mA			
	setting accuracy	≤0.1%+0.05%FS	≤0.1%+0.1%FS	≤0.1%+0.2%FS	≤0.05%+0.5%FS
	readback resolution	1mA			
	readback accuracy	≤0.1%+0.05%FS	≤0.1%+0.1%FS	≤0.1%+0.2%FS	≤0.1%+0.5%FS
	load regulation	≤0.05%+20mA	≤0.1%+20mA	≤0.1%+30mA	
	line regulation	≤0.05%+20mA	≤0.1%+20mA	≤0.1%+30mA	
ripple	≤30mArms	≤60mArms	≤80mArms	≤100mArms	≤300mArms
Work condition	temperature: 0°C~40°C, humidity: 20%RH~80%RH				
Storage condition	temperature: -10°C~55°C, humidity: 10%RH~90%RH				
Cool system	fan cool				
Power supply	220V±10%, 50Hz/60Hz				
Dimension (L×W×H)	215×405.5×44mm				
Net weight	4.5kg				



### HIGH POWER DC POWER SUPPLIES

- High precision and low ripple
- OVP/OCP/OPP/OTP protection
- 2U half rack, suitable for system integration
- Remote compensation function
- Various communication interfaces
- Customized specifications are available



#### SPECIFICATION

Code	9917-FC3K61	9917-FC3K62	9917-FC3K63	9917-FC3K64	9917-FC3K65	
Rate output voltage	0~30V	0~60V	0~100V	0~150V	0~300V	
Rate output current	0~120A	0~60A	0~36A	0~24A	0~12A	
Maximum output power	3600W					
Voltage	setting resolution	1mV	10mV			
	setting accuracy	≤0.05%+0.2%FS	≤0.05%+0.1%FS		≤0.05%+0.05%FS	
	readback resolution	1mV	10mV			
	readback accuracy	≤0.05%+0.2%FS	≤0.05%+0.1%FS		≤0.05%+0.05%FS	
	load regulation	≤0.05%+20mV	≤0.1%+20mV	≤0.1%+30mV		
	line regulation	≤0.05%+20mV	≤0.1%+20mV	≤0.1%+30mV		
ripple	≤50mVrms	≤60mVrms	≤100mVrms	≤150mVrms	≤300mVrms	
Current	setting resolution	10mA	1mA			
	setting accuracy	≤0.1%+0.05%FS		≤0.1%+0.1%FS	≤0.1%+0.2%FS	≤0.05%+0.5%FS
	readback resolution	10mA	1mA			
	readback accuracy	≤0.1%+0.05%FS		≤0.1%+0.1%FS	≤0.1%+0.2%FS	≤0.1%+0.5%FS
	load regulation	≤0.1%+30mA	≤0.1%+20mA	≤0.1%+30mA		
	line regulation	≤0.1%+30mA	≤0.1%+20mA	≤0.1%+30mA		
ripple	≤60mArms		≤100mArms	≤150mArms	≤300mArms	
Work condition	temperature: 0°C~40°C, humidity: 20%RH~80%RH					
Storage condition	temperature: -10°C~55°C, humidity: 10%RH~90%RH					
Cool system	fan cool					
Power supply	220V±10%, 50Hz/60Hz					
Dimension (L×W×H)	215×405.5×88mm					
Net weight	7.5kg					

# BATTERY TESTER

The INSIZE Battery Tester is a high-precision and highly stable professional testing device. This equipment employs a four-terminal measurement method to accurately measure the internal resistance and voltage of batteries. It is suitable for testing various types of batteries, including lithium batteries, lead-acid batteries, and button cells. The device features rapid testing capabilities, enabling batch testing of batteries. It supports USB and LAN interfaces for computer connectivity, facilitating data export and remote control. Widely used in fields such as new energy battery R&D, electric vehicles, energy storage systems, and electronic manufacturing, it ensures battery performance and safety while enhancing quality control and production efficiency.



9657-1000



kelvin test lead (included)



test probe (optional)

## BATTERY TESTERS

- 5-inch LCD touch screen display
- AC four-terminal method sampling for more accurate test result
- Simultaneously measure resistance and voltage
- Supports storing data and saving screenshot with a USB flash drive
- High sampling rate and standard multiple communication interfaces suitable for automated testing

### SPECIFICATION

Code	9657-80	9657-200	9657-400	9657-800	9657-1000	
Range	voltage	8V/80V	8V/80V/200V	8V/80V/400V	8V/80V/800V	10V/100V/1000V
	resistance	3mΩ/30mΩ/300mΩ/3Ω/30Ω/300Ω/3000Ω				
Range mode	auto range, manual range, nominal range					
Calibration	short circuit clearing for full ranges					
Test speed	slow: 4t/s, medium: 8t/s, fast: 20t/s, exfast: 55t/s					
Comparing method	absolute tolerance, percentage tolerance, direct-reading comparison					
Trig	internal and external					
Interface	RS232/RS485/USB DEVICE/LAN interface, support SCPI and Modbus agreement					
Power supply	AC: 100V~240V, 50~60Hz					
Dimensions (L×W×H)	307×265×105mm					
Net weight	2.8kg					

### RESISTANCE SPECIFICATION

Range	3mΩ	30mΩ	300mΩ	3Ω	30Ω	300Ω	3000Ω
Maximum display	3.1000mΩ	31.000mΩ	310.00mΩ	3.1000Ω	31.000Ω	310.00Ω	3200.0Ω
Resolution	0.1μΩ	1μΩ	10μΩ	100μΩ	1mΩ	10mΩ	100mΩ
Measurement current	100mA	100mA	10mA	1mA	100μA	10μA	1μA
Frequency of measurement current	1kHz						
Accuracy	slow	±(0.5%rdg+10dgt)		±(0.5%rdg+5dgt)			
	medium	±(0.5%rdg+15dgt)		±(0.5%rdg+10dgt)			
	fast	±(0.5%rdg+20dgt)		±(0.5%rdg+10dgt)			
Temperature coefficient	±(0.05%rdg+1dgt)/°C			±(0.05%rdg+0.5dgt)/°C			

### VOLTAGE SPECIFICATION

Range	8V	80V	200V/400V/800V
Resolution	10V	100V	1000V
Accuracy	slow	±(0.01%rdg+5dgt)	
	medium	±(0.01%rdg+7dgt)	
	fast	±(0.05%rdg+7dgt)	
Temperature coefficient	±(0.001%rdg+0.5dgt)/°C		

### STANDARD DELIVERY

Main unit	1 pc
Kelvin test lead	1 pc
RS232 cable	1 pc
HANDLER connector	1 pc

### OPTIONAL ACCESSORY

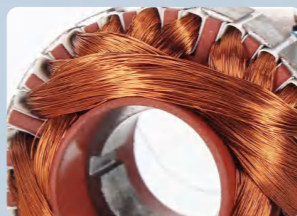
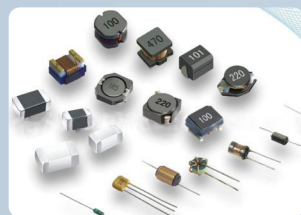
Test probe	9657-TL01*
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\*The test probe (9657-TL01) included for 9657-400/800/1000



## DC RESISTANCE TESTERS

INSIZE DC resistance testers employ the four-terminal method (Kelvin bridge) principle, effectively eliminating the influence of test lead resistance and contact resistance to ensure measurement accuracy. With high precision, high resolution, and rapid measurement capabilities, they enable swift diagnosis of faulty connections, winding irregularities, and material defects, serving as essential tools for safeguarding power system reliability and equipment quality.



### 9650-HA20

- Maximum reading: 20000
- Basic accuracy: 0.05%
- 3.5 inch LCD screen with adjustable backlight
- Temperature compensation function
- Full-range short-circuit zero function
- Comparator function: upper and lower limit alarms
- Data hold
- Keyboard lock function
- Automatic power off



### 9651-RM20

- Maximum reading: 220000
- Basic accuracy: 0.05%
- 3.5 inch LCD screen
- Temperature compensation function
- Short-circuit zeroing calibration
- Bad contact detection
- Comparator: pass or fail judge
- Keyboard lock function



### 9654-LW50

- Maximum reading: 5000
- Basic accuracy: 0.2%
- 0.8 inch high brightness digital tube
- Full-range short-circuit zero function
- Comparator function: upper and lower limit alarms



### 9655-RM03

- Maximum reading: 30000
- Basic accuracy: 0.1%
- Short-circuit zero function
- Temperature compensation function
- Comparator: pass or fail judge

Code	9650-HA20	9651-RM20	9654-LW50	9655-RM03
Type	Portable	Benchtop	Benchtop	Benchtop
Range	20MΩ	2MΩ	200kΩ	30kΩ
Basic Accuracy	0.05%	0.05%	0.2%	0.1%
Maximum Reading	20000	220000	5000	30000
Temperature Compensation	√	√	-	√
Contact Check	-	√	-	-
Compare Function	√	√	-	√
Data Transmission	√	√	√	√



test clip (included)

9650-HA20

### HANDHELD DC OHMMETER CODE 9650-HA20

- Maximum reading: 20000
- Basic accuracy: 0.05%
- 3.5 inch LCD screen with adjustable backlight
- Temperature compensation function
- Full-range short-circuit zero function
- Comparator function: upper and lower limit alarms
- Data hold
- Keyboard lock function
- Automatic power off



VIDEO

#### SPECIFICATION

Function	Range	Resolution	Accuracy	
High current mode	Slow & medium speed test	20mΩ	0.01mΩ	±(0.5%+3d)
		200mΩ/2Ω/20Ω/200Ω/ 2kΩ/20kΩ/200kΩ	0.01mΩ/0.0001Ω/0.001Ω/0.01Ω/ 0.0001kΩ/0.001kΩ/0.01kΩ	±(0.05%+1d)
		2MΩ	0.0001MΩ	±(0.5%+1d)
	Fast speed test	20MΩ	0.01MΩ	±(1%+3d)
		20mΩ	0.01mΩ	±(0.5%+5d)
		200mΩ/2Ω/20Ω/200Ω/ 2kΩ/20kΩ/200kΩ	0.01mΩ/0.0001Ω/0.001Ω/0.01Ω/ 0.0001kΩ/0.001kΩ/0.01kΩ	±(0.1%+3d)
Low current mode*	Slow, medium, fast speed test	2MΩ	0.0001MΩ	±(1%+3d)
		20MΩ	0.01MΩ	±(2%+5d)
		20mΩ	0.01mΩ	±(0.5%+5d)
		200mΩ/2Ω/20Ω/200Ω/ 2kΩ/20kΩ/200kΩ	0.01mΩ/0.0001Ω/0.001Ω/0.01Ω/ 0.0001kΩ/0.001kΩ/0.01kΩ	±(0.1%+3d)
Range mode	auto range, manual range and nominal range			
Test speed	slow: 3t/s, medium speed: 15t/s, fast: 30t/s			
Trigger	internal trigger, manual trigger, remote trigger			
Interface	Mini USB interface, compatible with SCPI command			
Power supply	rechargeable lithium battery (operation time ≥ 8 hours)			
Dimension (L×W×H)	130×210×38mm			
Net weight	700g			

\*When using the 2MΩ and 20MΩ ranges, it is recommended to select the high current mode

#### STANDARD DELIVERY

Main unit	1 pc
Power adapter	1 pc
Mini USB communication cable	1 pc
Test clip	1 pc

#### OPTIONAL ACCESSORY

Test probe	9650-TL
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9651-RM20



RS232 communication cable (included)



temperature probe (included)



test clip (included)



test probe 9651-TL (optional)

### DC RESISTANCE TESTER CODE 9651-RM20

WIRELESS TRANSMISSION IS OPTIONAL

- Maximum reading: 220000
- Basic accuracy: 0.05%
- 3.5 inch LCD screen
- Temperature compensation function
- Short-circuit zeroing calibration
- Bad contact detection
- Comparator: pass or fail judge
- Keyboard lock function



VIDEO

#### SPECIFICATION

Function	Range	Resolution	Accuracy
Slow test	20mΩ	0.001mΩ	±(0.1%+3d)
	200mΩ/2Ω/20Ω/200Ω/ 2kΩ/20kΩ/200kΩ	0.001mΩ/0.00001Ω/0.0001Ω/0.001Ω/ 0.00001kΩ/0.0001kΩ/0.001kΩ	±(0.05%+2d)
	2MΩ	0.0001MΩ	±(0.1%+5d)
Medium speed test	20mΩ	0.001mΩ	±(0.2%+5d)
	200mΩ/2Ω/20Ω/200Ω/ 2kΩ/20kΩ/200kΩ	0.001mΩ/0.00001Ω/0.0001Ω/0.001Ω/ 0.00001kΩ/0.0001kΩ/0.001kΩ	±(0.1%+3d)
	2MΩ	0.0001MΩ	±(0.2%+5d)
Fast test	20mΩ	0.01mΩ	±(0.8%+5d)
	200mΩ/2Ω/20Ω/200Ω/ 2kΩ/20kΩ/200kΩ	0.01mΩ/0.0001Ω/0.001Ω/0.01Ω/ 0.0001kΩ/0.001kΩ/0.01kΩ	±(0.5%+5d)
	2MΩ	0.0001MΩ	±(0.8%+5d)
Range mode	auto range, manual range and nominal range		
Test speed	slow: 3t/s, medium speed: 18t/s, fast: 60t/s		
Trigger	internal trigger, manual trigger, external trigger		
Interface	handler interface, RS232 interface, RS485 interface, USB interface and temperature compensation interface		
Power supply	AC 100V~240V, 50Hz/60Hz		
Dimension (L×W×H)	307×264×107mm		
Net weight	2.5kg		

#### STANDARD DELIVERY

Main unit	1 pc
RS232 communication cable	1 pc
Temperature probe	1 pc
Test clip	1 pc

#### OPTIONAL ACCESSORY

Test probe	9651-TL
Data output cable (keyboard format)	7302-9651
Wireless transmitter (receiver is needed)	7315-9651

\*Receiver code 9651-REC



9654-LW50

### DC RESISTANCE TESTER (BASIC TYPE) CODE 9654-LW50

- Maximum reading: 5000
- Basic accuracy: 0.2%
- 0.8 inch high brightness digital tube
- Full-range short-circuit zero function
- Comparator function: upper and lower limit alarms



VIDEO

#### SPECIFICATION

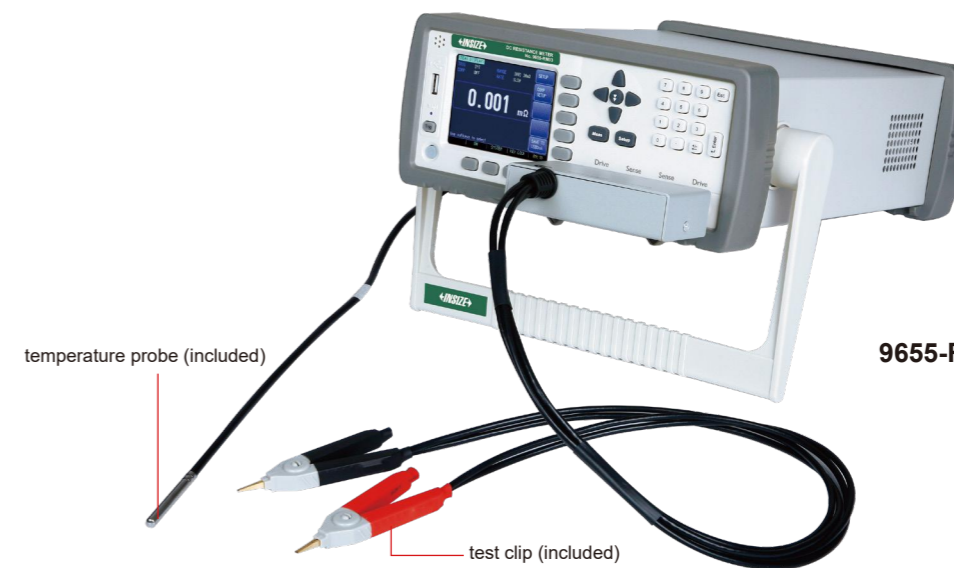
Function	Range	Resolution	Accuracy
Slow test	50mΩ	0.01mΩ	±(0.2%+5d)
	500mΩ	0.1mΩ	±(0.2%+3d)
	5Ω/50Ω/500Ω/5kΩ	0.001Ω/0.01Ω/0.1Ω/0.001 kΩ	±(0.2%+2d)
	50kΩ	0.01kΩ	±(0.2%+3d)
	200kΩ	0.1kΩ	±(0.2%+5d)
Fast test	50mΩ	0.01mΩ	±(0.5%+5d)
	500mΩ/5Ω/50Ω/500Ω/ 5kΩ/50kΩ	0.1mΩ/0.001Ω/0.01Ω/ 0.1Ω/0.001kΩ/0.01kΩ	±(0.5%+3d)
	200kΩ	0.1kΩ	±(0.5%+5d)
Range mode	auto range and manual range		
Test speed	slow: 3t/s, fast: 10t/s		
Beep	OK, NG		
Power supply	AC 220V±10%, 50Hz		
Dimension (L×W×H)	259×220×85mm		
Net weight	2.1kg		

#### STANDARD DELIVERY

Main unit	1 pc
Test clip	1 pc



test clip (included)



9655-RM03

temperature probe (included)

test clip (included)

### DC RESISTANCE TESTER CODE 9655-RM03

WIRELESS TRANSMISSION IS OPTIONAL

- Maximum reading: 30000
- Basic accuracy: 0.1%
- Short-circuit zero function
- Temperature compensation function
- Comparator: pass or fail judge

#### SPECIFICATION

Function	Range	Resolution	Accuracy of medium speed test	Accuracy of slow speed test	Test current
Resistance test	30mΩ	0.001mΩ	±(0.2%+5d)	±(0.1%+3d)	1A
	300mΩ	0.01mΩ	±(0.2%+3d)	±(0.1%+2d)	1A
	3Ω	0.0001Ω	±(0.2%+3d)	±(0.1%+2d)	100mA
	30Ω	0.001Ω	±(0.2%+3d)	±(0.1%+2d)	10mA
	300Ω	0.01Ω	±(0.2%+3d)	±(0.1%+2d)	1mA
	3kΩ	0.0001kΩ	±(0.2%+3d)	±(0.1%+2d)	1mA
	30kΩ	0.001kΩ	±(0.2%+3d)	±(0.1%+2d)	100μA
Range mode	auto range, manual range and nominal range				
Test speed	slow: 2t/s, medium speed: 12t/s				
Trigger	internal trigger, manual trigger, bus trigger				
Interface	RS232/RS485 communication interface, USB storage interface, temperature compensation interface				
Power supply	AC: 220V±10%, 50Hz/60Hz				
Dimension (L×W×H)	349.5×264×107mm				
Net weight	3.5kg				

#### STANDARD DELIVERY

Main unit	1 pc
RS232 cable	1 pc
Temperature probe	1 pc
Test clip	1 pc

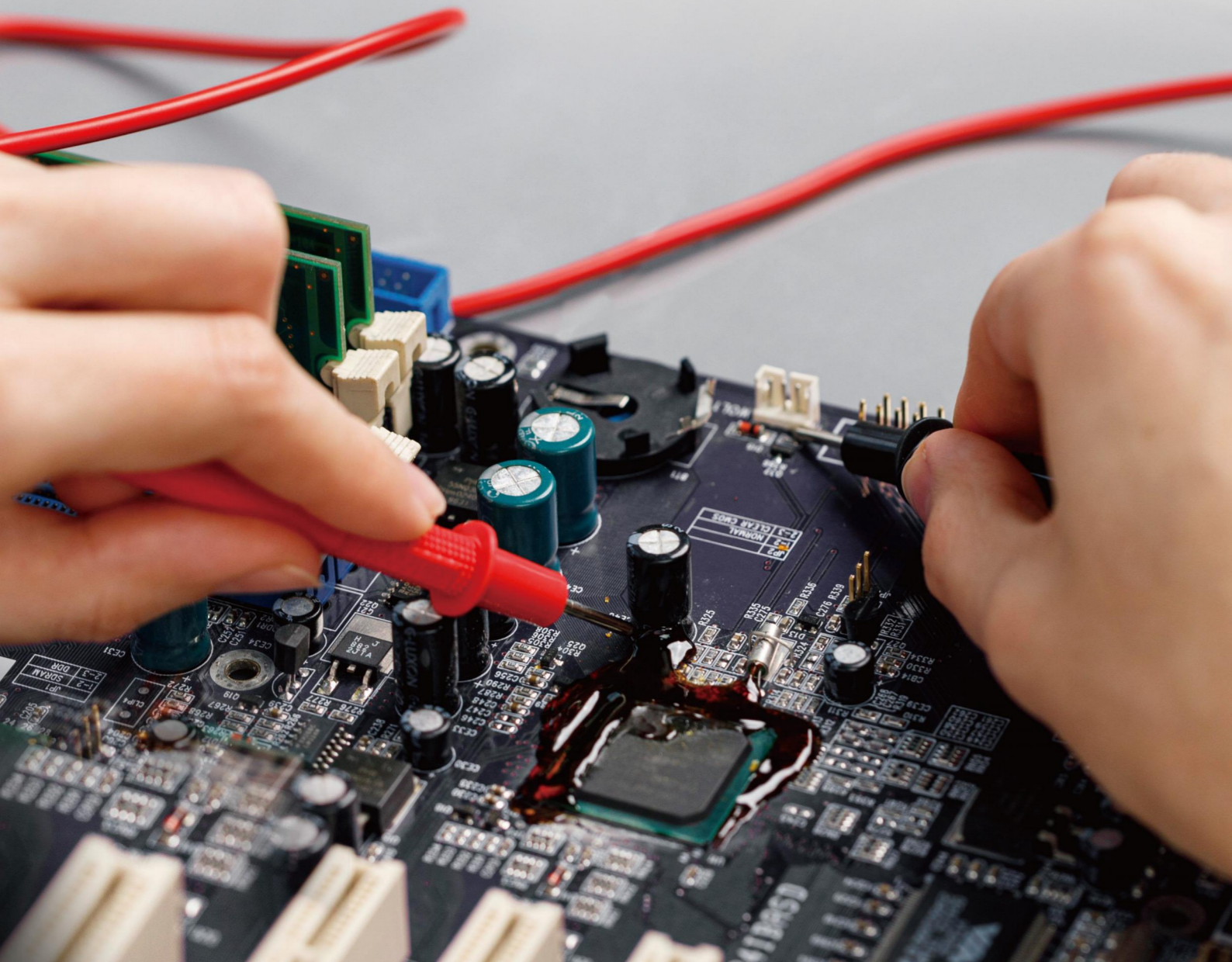
#### OPTIONAL ACCESSORY

Test probe	9655-TL
Data output cable (keyboard format)	7302-9651
Wireless transmitter (receiver is needed)	7315-9651

\*Receiver code 9651-REC

## LCR METERS

INSIZE LCR meters are high-precision, high-performance fundamental electronic measurement instruments, specifically designed for accurately measuring the AC impedance characteristics of electronic components. Its core functions include measuring key parameters of inductance (L), capacitance (C), and resistance (R) at specific frequencies, as well as other parameters such as DC resistance (DCR), Quality factor (Q), and Dissipation factor (D). Renowned for its outstanding measurement accuracy, stability, rapid testing speed, and user-friendly interface, the INSIZE LCR meters are widely used in R&D design, production inspection, maintenance diagnostics, and educational laboratories. It serves as an essential professional tool for technicians to screen, verify, and analyze passive electronic components.



### 9653 Series

- 3.5-inch TFT LCD display
- Basic accuracy: 0.05%
- Auto level control
- Calibration function: full-scale open circuit and short-circuit sweep frequency clear, three groups of users point frequency calibration
- List test: cyclic scanning of up to 10 groups of frequency or level is performed and the results are compared to the set values.
- Comparator: 11-level sorting function, up to 999,999 measured parts can be counted.



### 9652-RC02

- Automatic measure inductance (L), capacitance (C), resistance (R), impedance (Z), quality factor (Q), dissipation factor (D), phase ( $\theta$ ) and DC resistance (DCR)
- Internal trigger
- Data hold
- Full range open and short compensation
- Equivalent circuit: series and parallel
- Compare main parameter with nominal value and display percent deviation
- Built in USB-C interface for data transmission and charging
- Language: English, Chinese
- LCD touch screen with adjustable backlight
- Automatic power off



9652-RC02

kelvin clip lead (included)

**HANDHELD LCR METER  
CODE 9652-RC02**

DATA OUTPUT

- Automatic measure inductance (L), capacitance (C), resistance (R), impedance (Z), quality factor (Q), dissipation factor (D), phase ( $\theta$ ) and DC resistance (DCR)
- Internal trigger
- Data hold
- Full range open and short compensation
- Equivalent circuit: series and parallel
- Compare main parameter with nominal value and display percent deviation
- Built in USB-C interface for data transmission and charging
- Language: English, Chinese
- LCD touch screen with adjustable backlight
- Automatic power off



**SPECIFICATION**

Measuring parameters	C-D, C-Q, C-R, L-D, L-Q, L-R, L-Rdc, R-Q, R-X, R-Rdc, Rdc, Z-D, Z-Q, Z- $\theta$ r, Z- $\theta$ d
Range	8 levels, auto range or hold range
Basic accuracy	0.2%
Test frequency	50Hz, 60Hz, 100Hz, 120Hz, 200Hz, 400Hz, 500Hz, 1kHz, 2kHz, 4kHz, 5kHz, 10kHz, 20kHz, 40kHz, 50kHz, 100kHz accuracy: 0.02%
Signal level	0.1V, 0.3V, 0.7V, 1V; accuracy: 10%
Test speed	slow 2.5 times/sec, fast 10 times/sec
Interface	USB-C interface: support HID and VCOM communication, compatible with SCPI command
Operation environment	0°C~40°C, <80%RH
Working time	50% brightness: 9h; 100% brightness: 7h
Power supply	rechargeable Li-ion battery
Power	<1.5W
Dimension (L×W×H)	195×90×41mm
Net weight	380g

**STANDARD DELIVERY**

Main unit	1 pc
Kelvin clip lead	1 pc
SMD tweezer lead	1 pc
Short-circuit plate	1 pc



SMD tweezer lead (included)



short-circuit plate (included)



9653-YS01



short-circuit plate (included)



kelvin clip lead (include)



test fixture (include)



SMD tweezer lead (optional)



SMD tweezer lead (optional)



SMD test fixture (optional)

**LCR METERS**

- 3.5-inch TFT LCD display
- Basic accuracy: 0.05%
- Auto level control
- Calibration function: full-scale open circuit and short-circuit sweep frequency clear, three groups of users point frequency calibration
- List test: cyclic scanning of up to 10 groups of frequency or level is performed and the results are compared to the set values.
- Comparator: 11-level sorting function, up to 999,999 measured parts can be counted.



**SPECIFICATION**

Code	9653-YS002	9653-YS01	9653-YS02	9653-YS03
Test frequency	10Hz~20kHz	10Hz~100kHz	10Hz~200kHz	10Hz~300kHz
Parameters	Cs-Rs, Cs-D, Cp-Rp, Cp-D, Lp-Rp, Lp-Q, Ls-Rs, Ls-Q, G-B, R-X, Z- $\theta$ rad, Z- $\theta$ deg, DCR			
Monitor parameters	Z, D, Q, $\theta$ rad, $\theta$ deg, R, X, G, B, Y, Vac, Iac, $\Delta$ , $\Delta$ %			
Signal level	voltage: 10mV~2V; current: 100 $\mu$ A~20mA			
DC bias	-2.5V~+2.5V			
Source resistance	30 $\Omega$ , 50 $\Omega$ , 100 $\Omega$			
Range	auto range, manual range and nominal range, 9 levels of ranges			
Maximum reading	main parameter: 999999; secondary parameter: 999999			
Test speed	fast: 40t/s; medium speed: 10t/s; slow: 3t/s			
Comparator	11-level sorting, 9-level GD, 1-level NG, 1-level AUX			
Interface	RS232 interface, RS485 interface, USB interface, HANDLER interface			
Power supply	AC 100V~240V, 50/60Hz			
Dimension (L×W×H)	350×264×107mm			
Net weight	2.6kg			

**STANDARD DELIVERY**

Main unit	1 pc
Kelvin clip lead	1 pc
Test fixture	1 pc
Short-circuit plate	1 pc

**OPTIONAL ACCESSORY**

SMD test fixture	9653-ST01
SMD tweezer lead	9653-ST02
SMD tweezer lead	9653-ST03*

\*The 9652-YS02 and 9652-YS03 come standard with the 9653-ST03 test lead



0710-SD420



soldering tip 0710-SK (included)



soldering tip 0710-J (included)

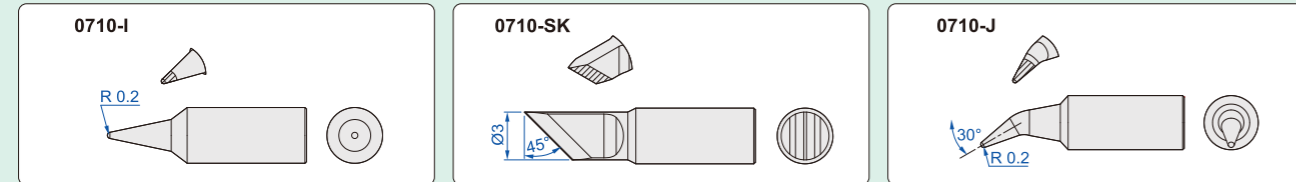
**INTELLIGENT CORDLESS SOLDERING IRON  
CODE 0710-SD420**

- Built-in lithium battery, easy to carry
- Integral precision soldering tip, fast heating speed
- Automatic sleep function
- Temperature calibration function

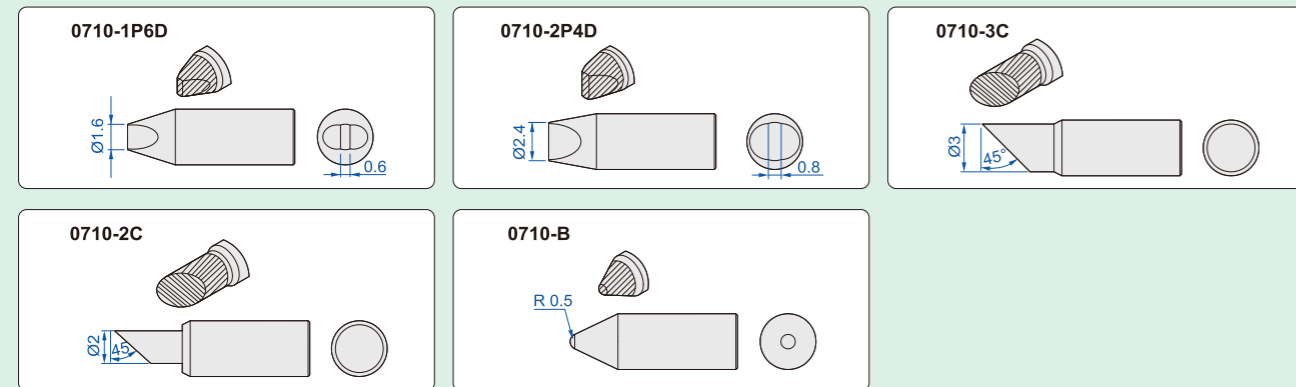


Unit: mm

soldering tips (included)



soldering tips (optional)



**SPECIFICATION**

Display screen	OLED
Temperature range	100°C~420°C
Power	10W
Work hours	30 minutes (indicates V-P when the battery is low)
Power supply	rechargeable lithium battery: 3.7V, 2600mAh
Dimension (L×W×H)	198×27×21mm
Net weight	85g



soldering iron stand (included)

**STANDARD DELIVERY**

Main unit	1 pc
Soldering tip (0710-I)	1 pc
Soldering tip (0710-J)	1 pc
Soldering tip (0710-SK)	1 pc
Soldering iron stand	1 pc

**OPTIONAL ACCESSORY**

Soldering tip	0710-1P6D
Soldering tip	0710-2P4D
Soldering tip	0710-3C
Soldering tip	0710-2C
Soldering tip	0710-B



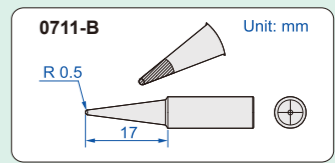
0711-SS480

soldering tip 0711-B (included)

soldering iron stand (included)

**LEAD FREE SOLDERING STATION  
CODE 0711-SS480**

- Fast heat-up and temperature return of the welding table
- Quickly switch between 3 different temperatures
- Temperature calibration function
- Compatible with general-purpose soldering nozzles, easy to use and economical

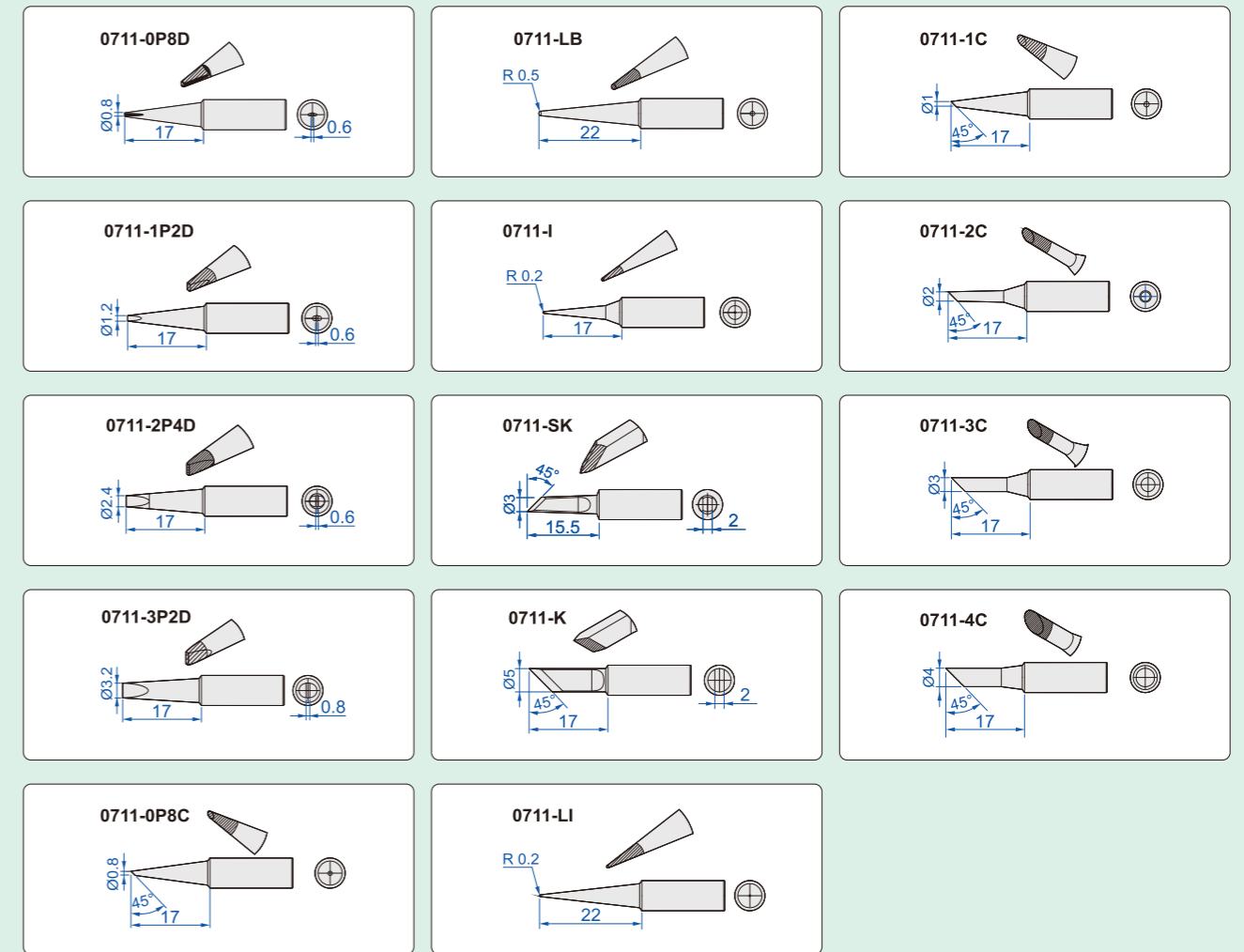


soldering tips (included)



Unit: mm

soldering tips (optional)



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**OPTIONAL ACCESSORY**

Soldering tip	0711-0P8D
Soldering tip	0711-1P2D
Soldering tip	0711-2P4D
Soldering tip	0711-3P2D
Soldering tip	0711-LB
Soldering tip	0711-I
Soldering tip	0711-1C
Soldering tip	0711-2C
Soldering tip	0711-3C
Soldering tip	0711-4C
Soldering tip	0711-0P8C
Soldering tip	0711-K
Soldering tip	0711-LI
Soldering tip	0711-SK

**SPECIFICATION**

Display screen	LCD
Temperature range	100°C~480°C
Temperature stability	±2°C (when the air is still and no load)
Power	70W (MAX)
Tip to ground potential	<2mV
Tip to ground resistance	<2Ω
Power supply	AC 220V, 50Hz
Dimension (L×W×H)	87×140×119mm
Net weight	1.75kg

**STANDARD DELIVERY**

Main unit	1 pc
Soldering tip (0711-B)	1 pc
Soldering iron stand	1 pc



soldering tip 0712-I (included) soldering iron stand (included)

**INTELLIGENT LEAD FREE SOLDERING STATION  
CODE 0712-SS450**

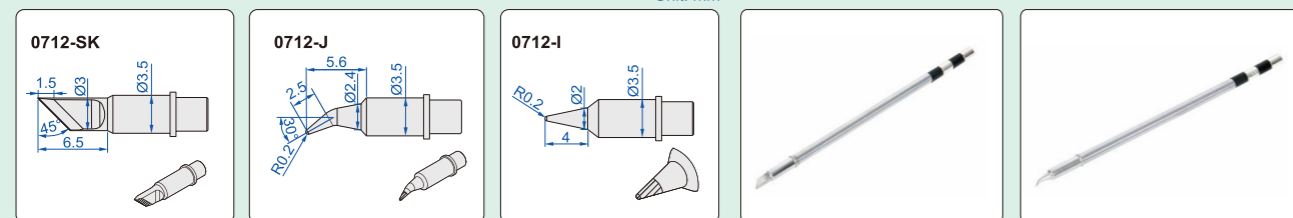
- Fast heat-up and temperature return of the welding table
- Quickly switch between 3 different temperatures
- Temperature calibration function

- Automatic sleep function
- Unit: °C/°F



soldering tips (included)

Unit: mm



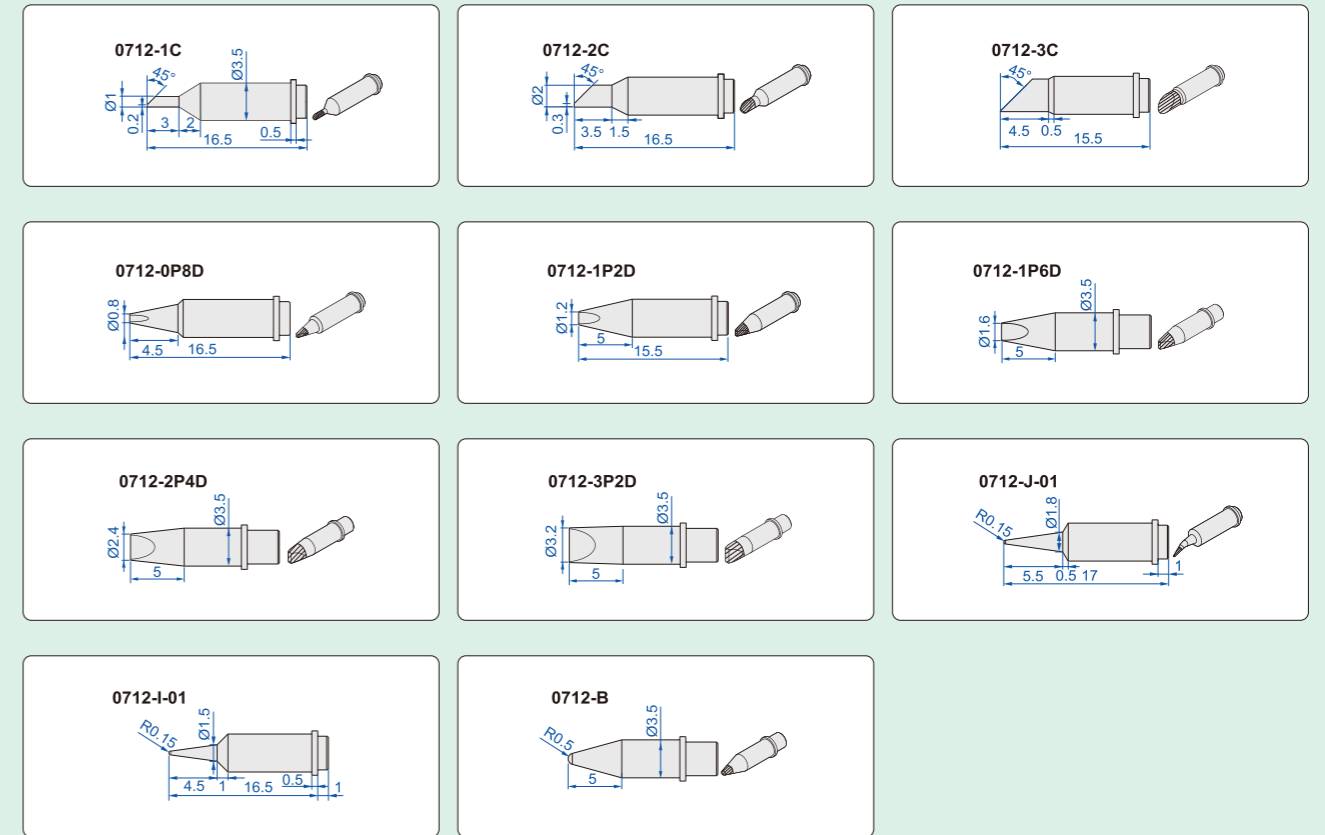
soldering tip 0712-SK (included) soldering tip 0712-J (included)

To be continued

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soldering tips (optional)

Unit: mm



**SPECIFICATION**

Display screen	IPS
Temperature range	100°C~450°C/212°F~842°F
Temperature stability	±2°C (when the air is still and no load)
Power	90W (MAX)
Tip to ground potential	<2mV
Tip to ground resistance	<2Ω
Power supply	AC 220V, 50Hz
Dimension (L×W×H)	116×149×93mm
Net weight	1.8kg

**OPTIONAL ACCESSORY**

Soldering tip	0712-1C
Soldering tip	0712-2C
Soldering tip	0712-3C
Soldering tip	0712-0P8D
Soldering tip	0712-1P2D
Soldering tip	0712-1P6D
Soldering tip	0712-2P4D
Soldering tip	0712-3P2D
Soldering tip	0712-J-01
Soldering tip	0712-I-01
Soldering tip	0712-B

**STANDARD DELIVERY**

Main unit	1 pc
Soldering tip (0712-SK)	1 pc
Soldering tip (0712-J)	1 pc
Soldering tip (0712-I)	1 pc
Soldering iron stand	1 pc



MEASUREMENT SOLUTION PROVIDER

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