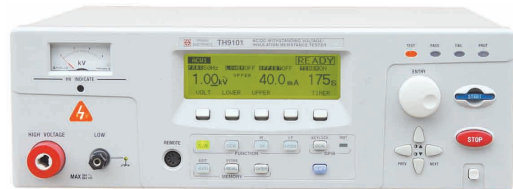


Safety Tester/Hipot Tester

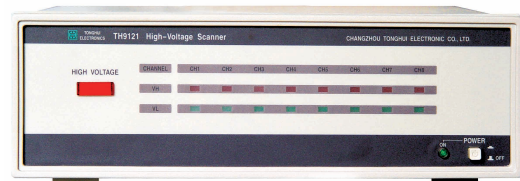
E. TH9100 AC/DC Withstanding Voltage & Resistance Tester

Features

- TH9101/B: AC/DC withstanding voltage and insulation resistance tester
- TH9101A/C: AC withstanding voltage and insulation resistance tester
- 240×64 dot-matrix graphic LCD display
- New operation interface, shortcut keys combination keys make operation easy and friendly ; keylock function
- Code switch instead of inconvenient number keys
- Advanced switch power technology
- Perfect protection function
- Output power up to AC 500W , DC 50W and IR 1W
- Randomly set starting voltage,voltage rising time , holding time,voltage falling time (only for AC hipot), and current judgment waiting time for DC hipot and IR according to loads of different characteristics
- Voltage double indicators:analog meter and LCD
- 20 instrument setups for each kind of test; both one channel continuous test , and multi channels' simultaneous test, and different channels' continuous test with TH9121 high-voltage scanner; 20 programmable tests
- Base clear function for AC withstanding voltage
- Fast/medium/slow speed set for current test of AC hipot,ARC detection function
- GND/FLOAT modes to provide safe measurement and high-accuracy test result
- Multi-channel scanning control interface SCANNER
- Handler , RS-232C, remote control interface, GPIB interface (optional) ,REMOTE controller (optional)



TH9101



TH9121

Brief Introduction

As a high-quality and a high-performance tester with new technology, TH9101 applies high-efficiency switch power supply and PWM switch amplifying circuit to realize high stability and reliability. Strong functions can be easily and conveniently used. Special grounding mode also ensures security and high accuracy, and perfect protection function makes the test reliable. It has wide range of output power up to AC 500W and DC 50W. The tester can perform not only separated test for AC/DC and IR, but continuous test with programming function. If with TH9121 multi-channel scanning controller, 2 instruments can be connected to form extended 16 channels. GPIB, RS232, HANDLER interfaces and REMOTE controller meet all the requirements. The instrument can be widely used for safety inspection of device, instrument and component.

Safety Tester/Hipot Tester

E. TH9100 AC/DC Withstanding Voltage & Resistance Tester

Specifications

Model		TH9101	TH9101A	TH9101B	TH9101C
Voltage output					
AC	Output-voltage range	0.5kV—5kV,			
	Voltage resolution	10V			
	Voltage accuracy	±(1.5% of setting +20V) (with no load)			
	Voltage frequency	50Hz, 60Hz			
	Frequency accuracy	±0.2%			
	Max. output current	100mA		40mA	
	Max. output power	500VA (5kV/100mA)		200VA (5kV/40mA)	
	Short-circuit current	≥200mA at output voltage ≥ 500V		≥100mA at output voltage ≥ 500V	
	Load adjustment rate	≤3%			
	Voltage waveform	Sine wave			
	Waveform distortion	≤3% (with no load or pure resistive load at output voltage more than 0.5kV)			
Voltage output mode	PWM switching				
DC	Output voltage range	0.5kV—6kV	-----	0.5kV—6kV	-----
	Voltage accuracy	±(1.5% of setting + 20V) (with no load)	-----	±(1.5% of setting + 20V) (with no load)	-----
	Voltage resolution	10V	-----	10V	-----
	Max. output current	10mA	-----	10mA	-----
	Max. output power	50VA	-----	50VA	-----
	Output short-circuit current	≥45mA	-----	≥45mA	-----
	Load adjustment rate	≤1%	-----	≤1%	-----
	Ripple (5kV)	≤3% with no load	-----	≤3% with no load	-----
	Discharge function	Forced discharge after test	-----	Forced discharge after test	-----
IR	Output voltage range	-25V -- -1000V			
	Voltage resolution	1V			
	Voltage accuracy	±(1.5% of setting + 2V)			
	Max. output current	1mA			
	Max. output power	1 VA (-1000V/1mA)			
	Short-circuit current	≥1.1mA			
	Load adjustment rate	≤1%			
	Ripple (1kV)	≤0.5% (1k, with no load)			
	Discharge function	Forced discharge after test			
Voltmeter					
Analog voltmeter accuracy		6kV AC/DC F.S ±5%F.S			
Digital	Measurement range	0.00kV – 6.00kV AC/DC			
	Accuracy	±(1.0% of reading + 30V)			
	Display resolution	10V			
Ammeter					
Measurement range	AC	0.00mA – 110mA		0.00mA – 40mA	
	DC	0.00mA – 11mA	-----	0.00mA – 11mA	-----

Safety Tester/Hipot Tester

E. TH9100 AC/DC Withstanding Voltage & Resistance Tester

Current display range	0 μ A – 999 μ A 1.00mA – 9.99mA 10.0mA – 99.9mA 100mA – 110mA			
Accuracy	\pm (3% of reading + 20 μ A) (after correction)			
Current measurement time	100ms			
Insulation resistance display				
Analog voltmeter accuracy	6kV AC/DC F.S \pm 5%F.S			
Voltage measurement range	-1200V – 0 V			
Voltage measurement accuracy	\pm (1% of reading + 1V)			
Voltage display resolution	1V			
Resistance measurement range	0.01M Ω – 9.99G Ω , (current range from 50nA to 1mA)			
Resistance display range	0.01M Ω – 9.99M Ω 10.0M Ω – 99.9M Ω 100M Ω – 999M Ω 1.00G Ω – 9.99G Ω			
Resistance measurement accuracy	\pm (20% of reading) (50nA – 100nA) \pm (10% of reading) (100nA – 200nA) \pm (5% of reading) (200nA – 1 μ A) \pm (2% of reading) (1 μ A – 1mA)			
Current measurement accuracy	\pm (3% of reading +20 μ A) (after correction)			
Parameter setting				
Starting voltage set	0% – 99% of set voltage (resolution of 1%)			
Voltage rise-time	0.1s – 200s			
Voltage fall-time	0 s – 200s, (only with PASS judgment in AC withstanding voltage testing)			
Voltage wait-time	0.3s – 10s (only for DC withstanding voltage testing, rise time+ test time > wait time)			
Test time setting	0.3s – 999s (at TIMER ON)			
Time accuracy	\pm (0.02% of set value + 20ms)			
Comparator				
Judgment mode	Window comparator mode I_{low} ON: at $I_x < I_x < I_{high}$, PASS; at $I_x \leq I_{low}$ or $I_x \geq I_{high}$, FAIL (condition: $I_{low} < I_{high}$) I_{low} OFF: at $I_x < I_{high}$, PASS; at $I_x \geq I_{high}$, FAIL The same judgment mode for insulation resistance judgment			
Current high-limit setting I_{high}	AC	0.01mA – 110mA		0.01mA – 44mA
	DC	0.01mA – 11mA	-----	0.01mA – 11mA
Current low-limit setting I_{low} (LOWER OFF)	AC	0.01mA – 110mA	0.01mA – 44mA	
	DC	0.01mA – 11mA	-----	0.01mA – 11mA
Resistance high-limit setting	0.01M Ω – 9.99G Ω			
Resistance low-limit setting	0.01M Ω – 9.99G Ω			
Judgment output	PASS/FAIL LCD and LED display, beeper alarm			
Measurement function				
Display	240 × 64 dot matrix graphic LCD display			
Voltage measurement hold	The voltage measured at the end of the test is held during the PASS or FAIL interval			
Current measurement hold	The current measured at the end of the test is held during the PASS or FAIL interval			
Base clear function	Insulation resistance flowing among output cables and current of stray capacitance can be cleared (valid only in AC withstanding voltage testing, up to 100 μ A/kV)			

Safety Tester/Hipot Tester

E. TH9100 AC/DC Withstanding Voltage & Resistance Tester

Low-terminal mode selection	GND: normal mode of the LOW terminal connecting to the chassis (ground). FLOAT: to measure the current flowing to the LOW terminal, not including the current flowing to the chassis (ground).
Current response speed	High-limit judgment current-detection speed: Fast/Medium/Slow (valid only in AC withstanding voltage testing)
Alarm volume adjustment	Off, High, Low
HV indication, protection indication	LED indicator
Storage and interface	
File program and storage	20 programmable test files, 20 test steps respectively set for AC, DC, insulation resistance in each file
Parameter storage	Parameter settings automatically saved, and automatically loaded next time of turning on the tester
REMOTE control (front panel)	START, STOP, START—ENABLE, HV ON indication
Status output interface	PASS, FAIL
Communication interface	RS232C, REMOTE, SCANNER, GPIB (optional)

General Specifications

Working temperature & humidity	0°C - 40°C, ≤90%RH	
Power supply	99V-121V,198V-242V,47.5-63Hz	
Power consumption	TH9101/A	≤ 800VA
	TH9101B/C	≤ 450VA
Dimensions	430mm×140mm×385mm	
Weight	TH9101/A	Approx. 20kg
	TH9101B/C	Approx. 16kg

Ordering Information

TH9101 AC/DC Withstanding Voltage Insulation Resistance Tester
TH9101A AC Withstanding Voltage Insulation Resistance Tester
TH9101B AC/DC Withstanding Voltage Insulation Resistance Tester
TH9101C AC Withstanding Voltage Insulation Resistance Tester

Instrument Accessories

TH90001R	withstanding voltage test clip	1
TH90001B	withstanding voltage grounding clip	1
TH90002	withstanding voltage test lead	1

Options

TH90003	remote control withstanding voltage test lead
TH90005	remote control box
TH9121	8-channel high-voltage scanner
TH90006R	scanning high-voltage connection cable
TH90006B	scanning grounding-line connection cable
TH9100-GPIB	interface board
TH9100-SOFT	RS232C communication control software