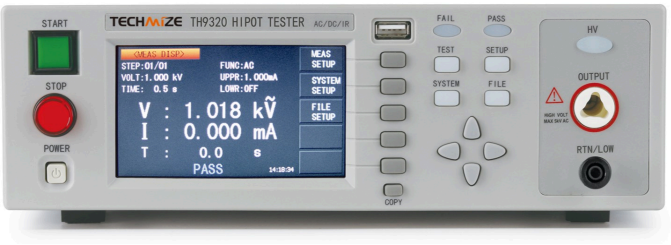
TH9310 / TH9320 Series

AC/DC Withstand Voltage & Insulation Resistance Tester

The TH9310/TH9320 series is a compact, intelligent electrical safety tester for AC/DC withstand- voltage (hipot) and insulation-resistance testing. It combines a 480 × 272 colour TFT-LCD, rapid discharge, arc detection and enhanced operator protection in a light, easy-to-operate chassis, and covers safety testing of household appliances, transformers, motors, electrical equipment and components. Three models cover a straightforward line-up: an AC-only entry point, a standard AC/DC/insulation-resistance tester, and a higher-current version for larger loads.



Dimensions: 280(W) × 88(H) × 428(D) mm · Weight: 11 kg (TH9310 / TH9310B) · 12.3 kg (TH9320)

- **AC withstand voltage** 0.05–5.00 kV, up to 10.00 mA (TH9310 / TH9310B) or 20.00 mA (TH9320), 50/60 Hz selectable
- **DC withstand voltage** 0.05–6.00 kV, up to 5.00 mA (TH9310) or 10.00 mA (TH9320) — not on TH9310B
- **Insulation resistance test** 0.10–1.00 kV, 0.1 MΩ–10.0 GΩ (TH9310 / TH9320 — not on TH9310B)
- 480 × 272-dot TFT-LCD colour display, English UI
- Rapid discharge and arc detection (ARC) on every model
- Enhanced operator protection: ground-leakage (GFI) shock protection
- Programmable voltage rise/fall, test and wait times
- 20 stored test files, 20 test steps per file
- Lockable keyboard; PLC interface; firmware upgrade via USB
- Standard RS232, USB Host, USB Device, HANDLER, SIGNAL, PLC; SCPI & MODBUS

Three models, one platform

TH9310B

Entry point: AC withstand voltage only

AC withstand voltage	5 kV / 10 mA
DC withstand voltage	—
Insulation resistance	—
Arc detection	Yes

TH9310

Standard: AC + DC withstand voltage + insulation resistance

AC withstand voltage	5 kV / 10 mA
DC withstand voltage	6 kV / 5 mA
Insulation resistance	Yes
Arc detection	Yes

TH9320

Higher current: for larger loads and capacitive DUTs

AC withstand voltage	5 kV / 20 mA
DC withstand voltage	6 kV / 10 mA
Insulation resistance	Yes
Arc detection	Yes

All three models share the same chassis, display, interfaces and general timing parameters. The main differences are maximum test current, weight, and which withstand-voltage/insulation-resistance functions are enabled.

Applications

Test & production systems

Automated test systems, electronic components, electrical equipment safety testing.

Consumer & household

Household appliances, electric heating appliances, lighting products.

Industrial & e-mobility

Transformers and motors, new-energy-vehicle components, medical devices.

Technical specifications

Parameter	TH9310B	TH9310	TH9320
Display	480 × 272-dot TFT-LCD, colour		
AC WITHSTAND VOLTAGE TEST			
Output voltage	0.05 – 5.00 kV, ±(2% reading + 5 V); 50 Hz / 60 Hz selectable		
Current test range	1 µA – 10.00 mA, ±(2% reading + 5 digits)	1 µA – 10.00 mA, ±(2% reading + 5 digits)	1 µA – 20.00 mA, ±(2% reading + 5 digits)
DC WITHSTAND VOLTAGE TEST			
Output voltage	——	0.05 – 6.00 kV, ±(2% reading + 10 V)	0.05 – 6.00 kV, ±(2% reading + 10 V)
Current test range	——	0.1 µA – 5.00 mA, ±(2% reading + 5 digits)	0.1 µA – 10.00 mA, ±(2% reading + 5 digits)
Discharge function	——	Automatic discharge after test ends (DCW)	
INSULATION RESISTANCE TEST			
Output voltage	——	0.10 – 1.00 kV, ±2%	
Resistance test range	——	0.1 MΩ – 10.0 GΩ	
Resistance test accuracy	——	0.10–999 MΩ: ±(10% rdg + 2 digits) 1.00–10.0 GΩ: ±(20% rdg + 2 digits)	
Discharge function	——	Automatic discharge after test ends	
ARC DETECTION			
Arc-current detection range	1 – 20 mA, independent of the model's withstand-voltage current rating (separate sensing circuit)		
GENERAL PARAMETERS			
Voltage rise time	0.1 – 999.9 s		
Test time setting (AC/DC)	0.2 – 999.9 s		
Voltage fall time	0.1 – 999.9 s		
Waiting time (IR)	——	0.2 – 999.9 s	
Time accuracy	±(1% + 0.1 s)		
Memory	20 test files, 20 test steps per file		
Dimensions (W × H × D)	280 × 88 × 428 mm		
Weight	11 kg	11 kg	12.3 kg
Power supply	100–121 V / 198–242 V AC (switchable), 47.5–63 Hz		
Interfaces, standard	HANDLER, SIGNAL, PLC, RS232, USB Device (PC), USB Host (USB drive)		

Interfaces

RS232	USB Host	USB Device	Handler	Signal	PLC
standard	standard	standard	standard	standard	standard

Remote-control protocols: SCPI and MODBUS, both standard over the interfaces above.

Standard accessories

Item	Description
—	EU power cable (Schuko, CEE 7/7)
TH90003D	Withstand voltage test cable
TH90003R	Withstand voltage test cable

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