TH9010

Parallel Multi-Channel AC/DC Withstand Voltage & Insulation Resistance Tester

The TH9010 is a parallel multi-channel hipot tester built on Tonghui's electrical-safety test platform. A single instrument tests up to eight channels at the same time, judging each channel's PASS/FAIL result independently — equivalent to running up to eight single-channel testers in parallel — which multiplies production-line throughput while saving floor space. Each channel can be extended with a TH90101 four-channel scanner, so one TH9010 can grow to as many as 128 test points as production needs change.



TH9010 — 8-channel parallel hipot tester

- **8-channel parallel** high-voltage output — up to 8× the throughput of a single-channel tester
- Each of the 8 test units is **fully independent** — no channel-to-channel interference
- Scalable to **128 test points**: each unit can be extended with up to four TH90101 four-channel scanners
- Scanner channels support **contact-check** (connection-integrity) verification
- Open/short-circuit detection (**OSC**) flags bad contacts before high voltage is applied
- Rapid discharge and **arc (ARC) detection** for insulation-fault monitoring
- Enhanced safety: ground-fault / electric-shock protection shuts down output automatically
- Programmable voltage rise/fall time and test time, freely set from 0.1–999.9 s
- Independent PASS/FAIL indication per channel, plus one overall file result
- Stores 100 test files (up to 20 steps each); import/export via front-panel USB

Key ratings at a glance

Withstand voltage

AC / DC hipot, per channel

AC output	5 kV / 10 mA
DC output	6 kV / 5 mA
Voltage accuracy	±2%

Insulation resistance

IR test, per channel

Test voltage	0.1–1 kV
Resistance range	0.1 MΩ–10 GΩ
Arc detection	1–20 mA

Channels

Parallel test units & expansion

Parallel units	8
Scan expander	TH90101 (8×4)
Max. test points	128

All eight test units share the same per-channel electrical performance. Standard safety functions (OSC, ARC, contact check, ground-fault protection) apply to every channel.

Applications

Production & automated test

Automated test systems, transformers and motors, electrical equipment — where parallel multi-channel testing raises line throughput without adding floor space.

Appliances & components

Household appliances, electronic components, lighting products requiring routine withstand-voltage and insulation-resistance safety testing.

Automotive & medical

New energy vehicle components and medical equipment, where independent per-channel PASS/FAIL judgement supports batch and multi-DUT test cells.

Technical specifications

Parameter	TH9010
Number of test units	8 independent channels
Withstand voltage test	
Output voltage — AC	0.10–5.00 kV ±2%
Output voltage — DC	0.10–6.00 kV ±2%
Current test range — AC	0–10.00 mA ±(2% reading + 5 digits)
Current test range — DC	0–5.00 mA ±(2% reading + 5 digits)
Rapid discharge	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	Voltage-dependent (see below)
— at test voltage ≥500 V	1–100 MΩ ±(5% F.S. + 5 digits) | 100 MΩ–1 GΩ ±(10% F.S. + 5 digits)
— at test voltage <500 V	0.1–100 MΩ ±(10% F.S. + 5 digits)
— above 1 GΩ to 10 GΩ (any voltage)	Reference only; no accuracy specified
Discharge function	Automatic discharge after test ends
Arc detection	
Test range (corresponding current)	1–20 mA
General specifications	
Voltage rise time	0.1–999.9 s
Test time (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	100 test files, up to 20 test steps per file
Scan expander	TH90101 (8×4 ports)
Max. test channels (with scanners)	128
Dimensions (W×H×D)	430×177×630 mm
Net weight	38 kg

Interfaces

RS232	USB Host	USB Device	Handler	SCPI	GPIB
STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	OPTIONAL

GPIB optional. SCPI supported; MODBUS not supported.

Standard accessories

Item	Description
—	EU power cable (Schuko, CEE 7/7)
TH26034	RS232 connection cable
TH90016	HV test cable (without clips)
TH90015	HV test cable (with clips)
—	Anti-interference ferrite ring ×8

Optional scan expander

Item	Description
TH90101	8-unit, 4-channel scan expander

Up to four scan expanders can be cascaded per unit. Ask your Techmize contact or authorized distributor for test-fixture options.

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