GPT-9500 Series

Multi-Channel Hipot Tester

GW INSTEK Simply Reliable
Compliance with IEC 61010-2-034
GPT-9500 Series Multi-Channel Hipot Tester

FEATURES

- 150VA AC Test Capacity
- 3 in 1 Tester : AC, DC, IR
- Built-in 8 Channel Scanner
- 480 x 272 Color TFT LCD
- Test Parameter Export/Import Through USB Host
- Statistics (Counter) Function
- Insulation Resistance Measurement up to 10GΩ
- Open/Short Check (OSC)
- ARC Detection
- Multi-language : Traditional/Simplified Chinese, English
- Interface : RS-232C, USB Host/Device and Signal I/O

GW INSTEK
Simply Reliable

원문: GW Instek GPT-9500 시리즈 데이터시트 · 제조사 원문 자료입니다. 사양은 제조사 사정에 따라 변경될 수 있습니다.

GW Instek introduces a new multi-channel withstanding voltage tester-the GPT-9500 series. This series has 2 models and each model has a built-in 8-channel scanner. The series meets safety regulations: IEC, EN, UL, CSA, GB, JIS and other safety regulations. The series aims at the needs of the main test items of general electronic components or winding components during routine tests.

The GPT-9500 series is a three-in-one multi-channel tester, providing AC withstanding voltage (5kV max.), DC withstanding voltage (6kV max.), and insulation resistance (1000V max.). The design of the series conforms to the latest IEC-61010-2-034 standard requirements and it is built on the output platform of AC 150VA. The status of the 8 channels of GPT-9513 can be set to H, L or X according to the test requirements, especially suitable for winding components such as transformers to perform mutual testing of multiple points of single components. The status of the 8 channels of GPT-9503 only provides the setting of H or X, which is more suitable for general components such as passive components for high-voltage testing between two points.

The GPT-9500 series adopts 4.3' color LCD (480 x 272 resolution), which provides users with complete measurement information and a user-friendly operation interface, making operation and setting parameters easier and more convenient. AUTO test supports tabular display, therefore, there is unnecessary to switch the screen to see all the test results. At the same time, the series provides the statistical counting function. Users can quickly obtain the total number of tests and the number of NO-GOs without connecting an external counter. All scanning channels are all configured on the rear panel of the tester. Other than being relatively esthetic when the tester is mounted on the rack, the design can also avoid personal injury by preventing accidental contact during the output process. The disconnection detection function is provided for the series to avoid the misjudgment of the test caused by the disconnection of the wire.

Other functions and features of the GPT-9500 series include the export/import function of setting parameters, which can copy the settings of one tester to the same model testers on the production line through a USB flash drive. By so doing, the test stations of the production lines can be quickly expanded and the risk of errors caused by repeated inputs can also be avoided; the zero start function, which avoids the impact of instantaneous voltage on the DUT; the interlock function, which is a safety protection hardware structure to allow users to connect external protection devices; display in 3 languages, which include English, Traditional Chinese and Simplified Chinese; and the Signal I/O terminal and RS-232C/USB device on the rear panel, which can be used for external control and monitoring or measurement data acquisition.

PANEL INTRODUCTION

Model	GPT-9513	GPT-9503
Channel	8 CH	8 CH
Channel Status	H, L or X	H or X

CE | USB Host | USB Device | RS-232 | Signal I/O

1. 480 x 272 color LCD display screen supports the observation of the best setting parameters, test voltage and measurement results
2. High-brightness LED indicators show the status of the tester
3. High voltage output AC 5kV or DC 6kV IR 1kV max.
4. High voltage output RETURN terminal
5. USB host terminal can be used to import/ export setting parameters, firmware upgrade, and screen capture.
6. Function selection keys directly correspond to the functions indicated on the display
7. RS-232C / USB device are used for computer connection control
8. Signal I/O interface provides external control "start" and "stop", and can also monitor the status of the tester
9. 8-channel outputs provide H or L or X status settings according to different models

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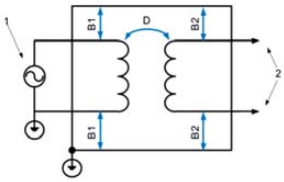
A. MEETS IEC 61010-2-034 DESIGN REQUIREMENTS



Meets IEC 61010-2-034 Design Requirements

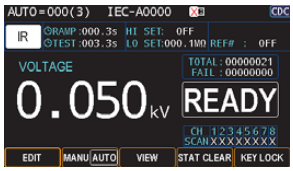
GPT-9500 is the world's first multi-channel hipot tester to comply with IEC 61010-2-034 (Safety requirement for electrical requirement for measurement, control and laboratory use – particular requirements for measurement equipment for insulation resistance and test equipment for electric strength). Apart from this, the safety considerations also include double insulation for input and output voltages, safe output/warning mechanism, post-test discharge mechanism, etc. to ensure user safety during the operation.

B. FRIENDLY USER INTERFACE

4.3' Color LCD, High-brightness Indicator and Function Keys

Operation design in simplicity is incorporated into the tester through configuring the function keys at the bottom of the LCD screen to easily change the test function by just pressing the function keys, or by rotating the knob to change the measurement value, which greatly improves the convenience of operation; updating various status indicators on the front panel immediately according to the status on the display, which not only provides users with a more comprehensive control of the test status, but also avoids unnecessary operation risks. For example, when the output is executed, the high-voltage output indicator will keep flashing.

C. COMPLETE INFORMATION PRESENTATION

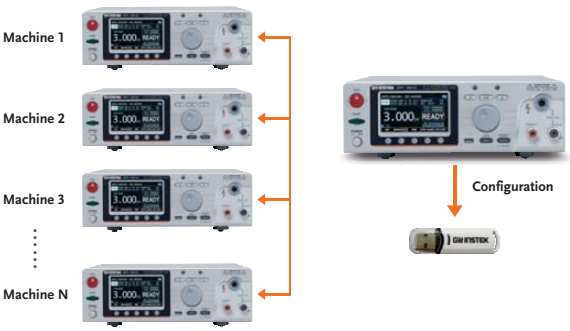


Rich Information

AUTO Mode Listed Result

The large-sized LCD clearly and simultaneously displays the test voltage, test parameters, test status, measurement value and judgment result. The channel usage status and statistical counting results (the total number of tests and the number of FAILs) can be displayed simultaneously, hence, users can easily obtain complete information without switching the screen or connecting an external counter. In addition, AUTO mode also supports tabular testing, which greatly improves the convenience of observation.

D. CONVENIENT PARAMETER DUPLICATION



Export/Import of Setting Parameters

The GPT-9500 series supports the export/import of setting parameters via a USB flash drive. Users only need to set one tester, and the settings can be quickly and massively copied to all testers on production lines that not only improves the efficiency of production testing, but also avoids errors caused by repeated inputs.

E. SETTING DATA EXPORT / IMPORT MECHANISM

Channels Configured on the Rear Panel

The channel outputs of the GPT-9500 series are all configured on the rear panel. Other than the aesthetics of the system configuration, it is more important to effectively reduce the possibility of accidental contact by personnel. Each channel provides disconnection detection to avoid performing an invalid test.

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SPECIFICATIONS

AC WITHSTANDING	**Output-Voltage Range**	0.050kV ~ 5.000kV
	Output-Voltage Resolution	1V
	Output-Voltage Accuracy	±(1% of setting + 5V) [no load]
	Maximum Rated Load	150 VA (5kV/30mA)
	Maximum Rated Current	30mA ; 0.001mA ~ 10mA (0.05kV≦V≦0.5kV) ; 0.001mA ~ 30mA (0.5kV< V≦5kV)
	Output-Voltage Waveform	Sine wave
	Voltage Regulation	±(1% + 5V) [maximum rated load → no load]
	Output-Voltage Frequency	50 Hz / 60 Hz selectable
	Voltmeter Accuracy	±(1% of reading + 5V)
	Current Measurement Range	0.001mA ~ 30.00mA
	Current Best Resolution	1 μA (0.001mA ~ 9.999mA) ; 10 μA (10.00mA ~ 30.00mA)
	Current Measurement Accuracy	±(1.5% of reading + 50 μA)
	Current Offset	80 μA maximum
	ARC Detect	Yes
	RAMP TIME (Rise Time)	0.1s~999.9s
	FALL Time	OFF~999.9s
	WAIT Time	OFF~999.9s
	TIMER (Test Time)	CONT[2], 0.3s~999.9s
	TIMER Accuracy	±(100ppm + 20ms)
	GND	ON/OFF
DC WITHSTANDING	**Output-Voltage Range**	0.050kV~6.000kV
	Output-Voltage Resolution	1V
	Output-Voltage Accuracy	±(1% of setting + 5V) [no load]
	Maximum Rated Load	50W (5kV/10mA)
	Maximum Rated Current	10mA ; 0.001mA ~ 2mA (0.05kV≦ V ≦0.5kV); 0.001mA ~ 10mA (0.5kV< V ≦6kV)
	Voltmeter Accuracy	±(1% of reading + 5V)
	Voltage Regulation	±(1% + 5V) [maximum rated load → no load]
	Current Measurement Range	0.001mA ~ 10.00mA
	Current Best Resolution	0.1 μA (0.1 μA ~ 999.9 μA) ; 1 μA (1 μA ~ 9.999mA) ; 10 μA (10.00mA)
	Current Measurement Accuracy	±(1% of reading + 1 μA) when I Reading < 1mA ; ±(1% of reading + 10 μA) when I Reading ≧1mA
	Current Offset	5 μA maximum
	ARC Detect	Yes
	RAMP TIME (Rise Time)	0.1s~999.9s
	FALL Time	OFF~999.9s
	WAIT Time	OFF~999.9s
	TIMER (Test Time)	CONT[2], 0.3s~999.9s
	TIMER Accuracy	±(100ppm + 20ms)
	GND	ON/OFF
INSULATION RESISTANCE	**Output Voltage**	0.050kV~1.000kV dc
	Output-Voltage Resolution	1V
	Output-Voltage Accuracy	± (1% of setting + 5V) [no load]
	Resistance Measurement	0.1MΩ~10GΩ
	Test Voltage	Measurement Range / Accuracy
	50V≦V<500V	0.1MΩ~10MΩ : ± (5% of reading + 3% fs); 10.1MΩ~50MΩ : ± (5% of reading + 1% fs); 50.1MΩ~2GΩ : ± (10% of reading + 1% fs)
	500V≦V≦1000V	0.1MΩ~10MΩ : ± (5% of reading + 3% fs); 10.1MΩ~500MΩ : ± (5% of reading + 1% fs); 500.1MΩ~10GΩ : ± (10% of reading + 1% fs)
	Voltage Regulation	± (1% + 5V) [maximum rated load → no load]
	Voltmeter Accuracy	± (1% of reading + 5V)
	Short-Circuit Current	10mA max.
	Output Impedance	2kΩ
	RAMP TIME (Rise Time)	0.1s~999.9s
	FALL Time	OFF~999.9s
	WAIT TIME	OFF~999.9s
	TIMER (Test Time)	0.3s~999.9s
	TIMER Accuracy	±(100ppm + 20ms)
	GND	ON/OFF
CONTINUITY TEST	**Output-Current**	100mA dc
	Ohmmeter Measurement Accuracy	±(10% of reading+2Ω), ON/OFF
INTERFACE	**Signal I/O**	Standard
	RS-232C	Standard
	USB (Device)	Standard
	USB (Host)	Standard (for Parameter/LCD Hardcopy)
	Rear Output	Scanner
DISPLAY		4.3" Color LCD
POWER SOURCE		AC 100V~240V ±10%, 50Hz/60Hz
POWER CONSOMPTION		400VA Max.
DIMENSIONS & WEIGHT		320(W) x 120(H) x 435(D) mm; Approx. 11kg

* The specifications apply when the GPT-9500 is powered on for at least 30 minutes under +15°C~+35°C. Specifications subject to change without notice. PT-9500GD2BH

ORDERING INFORMATION

GPT-9513 AC 150VA Multi-Channel Hipot Tester
GPT-9503 AC 150VA Multi-Channel Hipot Tester

ACCESSORIES

Quick Start Guide x 1, CD x 1 (Complete User Manual), Power Cord x 1, Test Leads GHT-115 x 1, GHT-116B x 1, GHT-116R x 8

OPTIONAL ASSESSORIES

GTL-236	RS-232C Cable, 9-pin F-M type, approx. 2m
GTL-246	USB Cable, A-B type, approx. 1.2m

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