

GPT-9900 Series



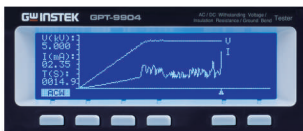
The GPT-9900 Series is built upon a platform of maximum power output AC 500VA which supports the major test items complying with safety standards, such as IEC, EN, UL, CSA, GB, JIS as well as other safety regulations.

The GPT-9900 Series safety tester inherits every feature and advantages from the GPT-9800 Series. The high-efficiency PWM amplifier, which is designed to impede the influence caused by voltage fluctuation of input AC source, is the core of GPT-9900 platform. The output voltage is automatically cut off (within 150 μs) upon the detection of an abnormal output voltage or a trip of current limits during the measurement to protect the operators from hazardous injury. The safety tester will automatically discharge the DUT after each test to eliminate excessive voltage remained inside DUT.

Other significant functions and features of the GPT-9900 Series include the “Sweep” function, which is used to display the test results represented by the trace graph; The output terminal at the rear panel is used for system applications; The open-circuit detection is used to ensure proper connections of apparatus for ground bond test; 100 sets of memory can save and recall the panel settings for individual or sequential tests; A remote output on-off terminal at the front panel and a signal I/O port at the rear panel provide an external control for remote start/stop of the safety tester; Thus, RS-232C, USB and GPIB (optional) interfaces are available for PC remote control and the storage of test results.

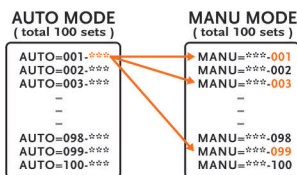
Unique Sweep Function

The Sweep Function is used to demonstrate the test results of DUT, which are represented by trace graph. This helps users verify the changes of measured parameter (current or resistance) during the whole measurement process instead of one final value at the end.



Convenient MANU and AUTO Test

Any test conditions that have been previously stored can be used for a single test or combined together for automatic testing.



Friendly User Interface

The 240 x 64 LCD displays the necessary information such as test conditions, measurement results within single screen. Besides, the function keys arranged below the LCD display provide users with easy execution of test setup.



Variety of Control Methods

Except using the START/STOP buttons to control, the GPT-9900 series provides a remote terminal and a signal I/O port. Furthermore, the interfaces including RS-232C, USB and GPIB (option) within all the models allow users to retrieve test results via a PC connection.



FEATURES

- 500VA AC Test Capacity
- 240x64 Ice Blue Dot Matrix LCD
- Sweep Function for DUT Characteristic Analysis
- Insulation Resistance Measurement up to 50GΩ
- Manual/Auto Mode
- Function Key for Quick Selecting
- High Intensity Flash for Caution & Status Indication
- Safety Interlock Function
- Zero Crossing Turn-on Operation
- Controllable Ramp-up Time
- True RMS Current Measurement
- High Resolution : 1 μA for Measuring Current, 2V for Setting Voltage
- PWM Switching Amplifier to Enhance the Power Efficiency and Reliable Testing
- Max. 100 Memory Block for Test Condition(Step) Setting. And Each Step can be Named Individually
- Remote Terminal on the Front Panel for “Start”and“Stop” Control by External
- Rear Panel Output available
- Interface : RS-232C, USB Device, Signal I/O and GPIB (Optional)



Rear Panel

APPLICATIONS

- Quality Assurance Verification
- Safety Standard Compliance Pre-qualification in R&D
- Safety Testing of Electrical Product in Manufacturing
  - Household and Similar Electrical Appliances
  - Luminaires
  - Audio, Video and Similar Electronic Apparatus

## SPECIFICATIONS

<b>AC WITHSTANDING</b>	Output-Voltage Range Output-Voltage Resolution Output-Voltage Accuracy Maximum Rated Load Maximum Rated Current Output-Voltage Waveform Output-Voltage Frequency Voltage Regulation Voltmeter Accuracy Current Measurement Range Current Best Resolution AC Current Measurement Accuracy Window Comparator Method ARC Detect RAMP (Ramp-Up Time) TIMER (Test Time)* Sweep Function* GND	0.100kV~ 5.000kV ac 2V/step $\pm(1\% \text{ of setting} + 5V)$ [no load] 500 VA (5kV/100mA) 100mA (0.5kV< V≤5kV); 10mA (0.1kV≤V≤0.5kV) Sine wave 50Hz/60Hz selectable $\pm(1\% \text{ of rdg} + 5V)$ [full load → no load] $\pm(1\% \text{ of rdg} + 5V)$ 0.001mA~100.0mA 0.001mA/0.01mA/0.1mA $\pm(1.5\% \text{ of rdg}+30\text{counts})$ when HI SET<1.11mA ; $\pm(1.5\% \text{ of rdg}+30\text{counts})$ when HI SET≥1.11mA Yes Yes 0.1s~999.9s OFF, 0.5s~999.9s Yes ON/OFF												
<b>DC WITHSTANDING</b>	Output-Voltage Range Output-Voltage Resolution Output-Voltage Accuracy Maximum Rated Load Maximum Rated Current Voltage Regulation Voltmeter Accuracy Current Measurement Range Current Best Resolution DC Current Measurement Accuracy Window Comparator Method ARC Detect RAMP (Ramp-Up Time) TIMER (Test Time)* Sweep Function* GND	0.100kV~6.000kV dc 2V/step $\pm(1\% \text{ of setting} + 5V)$ [no load] 100W(5kV/20mA) 20mA(0.5kV< V≤6kV); 2mA (0.1kV≤V≤0.5kV) $\pm(1\% \text{ of rdg} + 5V)$ [full load → no load] $\pm(1\% \text{ of rdg} + 5V)$ 0.001mA~20.0mA 0.001mA/0.01mA/0.1mA $\pm(1.5\% \text{ of rdg}+30\text{counts})$ when HI SET<1.11mA ; $\pm(1.5\% \text{ of rdg}+30\text{counts})$ when HI SET≥1.11mA Yes Yes 0.1s~999.9s OFF, 0.5s~999.9s Yes ON/OFF												
<b>INSULATION RESISTANCE</b>	Output Voltage Output-Voltage Resolution Output-Voltage Accuracy Resistance Measurement Range Test Voltage 50V≤V≤450V 500V≤V≤1000V Window Comparator Method Output Impedance RAMP (Ramp-Up Time) TIMER (Test Time) GND Sweep Function*	50V~1000V dc 50V/step $\pm(1\% \text{ of setting} + 5V)$ [no load] 0.001GΩ~ 50.00GΩ <table border="1"> <thead> <tr> <th>Measurable Range</th> <th>Accuracy</th> </tr> </thead> <tbody> <tr> <td>0.001 ~ 0.050GΩ</td> <td><math>\pm(5\% \text{ of rdg} + 1\text{count})</math></td> </tr> <tr> <td>0.051 ~ 2.000GΩ</td> <td><math>\pm(10\% \text{ of rdg} + 1\text{count})</math></td> </tr> <tr> <td>0.001 ~ 0.500GΩ</td> <td><math>\pm(5\% \text{ of rdg} + 1\text{count})</math></td> </tr> <tr> <td>0.501 ~ 9.999GΩ</td> <td><math>\pm(10\% \text{ of rdg} + 1\text{count})</math></td> </tr> <tr> <td>10.00 ~ 50.00GΩ</td> <td><math>\pm(15\% \text{ of rdg} + 1\text{count})</math></td> </tr> </tbody> </table> Yes 600kΩ 0.1s~999.9s 1s~999.9s OFF (fix) Yes	Measurable Range	Accuracy	0.001 ~ 0.050GΩ	$\pm(5\% \text{ of rdg} + 1\text{count})$	0.051 ~ 2.000GΩ	$\pm(10\% \text{ of rdg} + 1\text{count})$	0.001 ~ 0.500GΩ	$\pm(5\% \text{ of rdg} + 1\text{count})$	0.501 ~ 9.999GΩ	$\pm(10\% \text{ of rdg} + 1\text{count})$	10.00 ~ 50.00GΩ	$\pm(15\% \text{ of rdg} + 1\text{count})$
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<b>GROUND BOND</b> (GPT-9904 Only)	Output-Current Output-Current Resolution Output-Current Accuracy Test-Voltage Test-Voltage Frequency Resistance Measurement Range Resistance Measurement Resolution Resistance Measurement Accuracy Window Comparator Method TIMER (Test Time) Sweep Function* Test Method	03.00A~32.00A ac 0.01A $3A \leq I \leq 8A: (1\% \text{ of rdg}+0.2A)$ , $8A < I \leq 32A: (1\% \text{ of rdg}+0.05A)$ 6Vac max (open circuit) 50Hz/60Hz selectable 10mΩ~650.0mΩ 0.1mΩ $(1\% \text{ of rdg} + 2m\Omega)$ Yes 0.5s~999.9s Yes Four Terminal												
<b>MEMORY</b>	Single Step Memory Automatic Testing Memory	MANU : 100 blocks AUTO : 100 blocks, menu per auto : 16												
<b>INTERFACE</b>	Rear Output RS-232C USB GPIB Remote Terminal (Front) Signal I/O	Standard Standard Standard Option Standard Standard												
<b>DISPLAY</b>		240 x 64 Ice Blue Dot matrix LCD												
<b>POWER SOURCE</b>		AC100V/120V/220V/230V±10% , 50/60Hz												
<b>DIMENSIONS &amp; WEIGHT</b>		330(W)x148(H)x587(D)mm for GPT-9903/9904; 330(W)x148(H)x482(D)mm for GPT-9901A/9902A/9903A Approx. 27kg max.												

\* The sweep function and timer off can only be performed when the tester is in the special MANU mode.

Specifications subject to change without notice. PT-9900GD2DH

### ORDERING INFORMATION

<b>GPT-9904</b>	AC 500VA AC/DC Withstanding Voltage/Insulation Resistance/Ground Bond Tester
<b>GPT-9903</b>	AC 500VA AC/DC Withstanding Voltage/Insulation Resistance Tester
<b>GPT-9903A</b>	AC 500VA AC/DC Withstanding Voltage/Insulation Resistance Tester
<b>GPT-9902A</b>	AC 500VA AC/DC Withstanding Voltage Tester
<b>GPT-9901A</b>	AC 500VA AC Withstanding Voltage Tester

### ACCESSORIES

Quick Start Guide x 1, Power cord x 1, CDx1 (complete user manual), Interlock Key x 1, Remote terminal male plug x 1, Test lead GHT-114 x 1 for GPT-9903/9903A/9902A/9901A, Test lead GHT-114 x 1, GTL-115 x 1 for GPT-9904

### OPTION

Opt.1 GPIB card

### OPTIONAL ASSESSORIES

<b>GHT-113</b>	High Voltage Test Pistol
<b>GHT-205</b>	High Voltage Test Probe
<b>GTL-232</b>	RS-232C Cable, 9-pin Female to 9-pin, null Modem for Computer
<b>GTL-247</b>	USB Cable, A-A type, approx. 1.8m
<b>GTL-248</b>	GPIB Cable, approx. 2m
<b>GTL-251</b>	GPIB-USB-HS (High Speed)
<b>GRA-417</b>	RACK Adapter Panel (19", 4U)

\* GRA-417 can not be used with GPT-9904/9903

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