Intelligent Safety Analyzer
500VA Flagship model
GPT-15000 Series

GW INSTEK

Simply Reliable

GW Safety Analyzer, GPT-10000 family

The GPT-Series Select table.

Model name	Capacity	ACW	DCW	IR	GB	GC
GPT-15001	500VA	✅ *				✅
GPT-15002		✅ *	✅			✅
GPT-15003		✅ *	✅	✅ ~1200Vdc		✅
GPT-15004		✅ *	✅	✅ ~1200Vdc	✅ ~32.00Aac	✅
GPT-12001	200VA	✅				✅
GPT-12002		✅	✅			✅
GPT-12003		✅	✅	✅ ~1200Vdc		✅
GPT-12004		✅	✅	✅ ~1200Vdc	✅ ~32.00Aac	✅

* : short circuit current > 200mA

Flagship model GPT-15000 Series

GW Instek introduces the 500VA output capacity flagship model safety analyzer GPT-15000 series.

GPT-15000 series is the first safety analyzer in the world to comply with IEC 61010-2-034

500VA output capacity GPT-15000 provides better display, adjustment and measurement resolution, Ground Continuity check, more features such as Statistics, Analysis, Sweep and Rear Output, more functionalities such as IR mode, listed AUTO mode and User-Defined Signal I/O Output Signal, Capacitive load test capability up to 47µF and USB storage(Test result).

Outlook of GPT-15000 series

GPT-15001, GPT-15002, GPT-15003   GPT-15004

500VA GPT-15000 Series

Model name	ACW * 0.050k~5.000kV	DCW 0.050k~6.000kV	IR 50V~1200V dc	GB 03.00A~32.00A ac	GC(CONT) 100mA (Fixed)
GPT-15001	✅				✅
GPT-15002	✅	✅			✅
GPT-15003	✅	✅	✅		✅
GPT-15004	✅	✅	✅	✅	✅

* : short circuit current > 200mA

IEC 61010-2-034

Safety analyzer-the GPT-15000 series, is the first safety analyzer in the world 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).

IEC 61010-2-034 stipulates that the requirements of the software and hardware interfaces must be followed while designing high voltage and insulation resistance test and measurement instruments so as to ensure that users are provided with necessary protection and warning while using the instruments.

Double Insulation

AC input

OUTPUT Voltage

1 - network circuit

2 - output voltage

B1 and B2 - CLEARANCES values

D- CLEARANCE(mm) for DOUBLE INSULATION
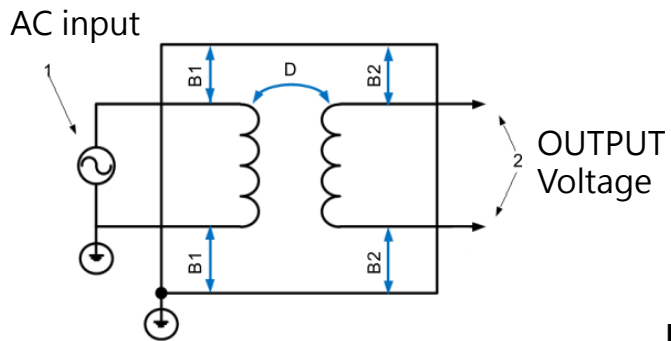
Hazard indicator:

High contrast color visible

High volume audible

Outlook of GPT-15000 Series

GPT-15001, GPT-15002, GPT-15003   **GPT-15004**
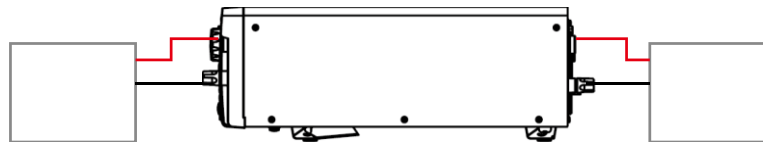

Interface: Rear Output, RS-232C, USB device, Signal I/O, and Optional GPIB

Rear Output   Rear Output
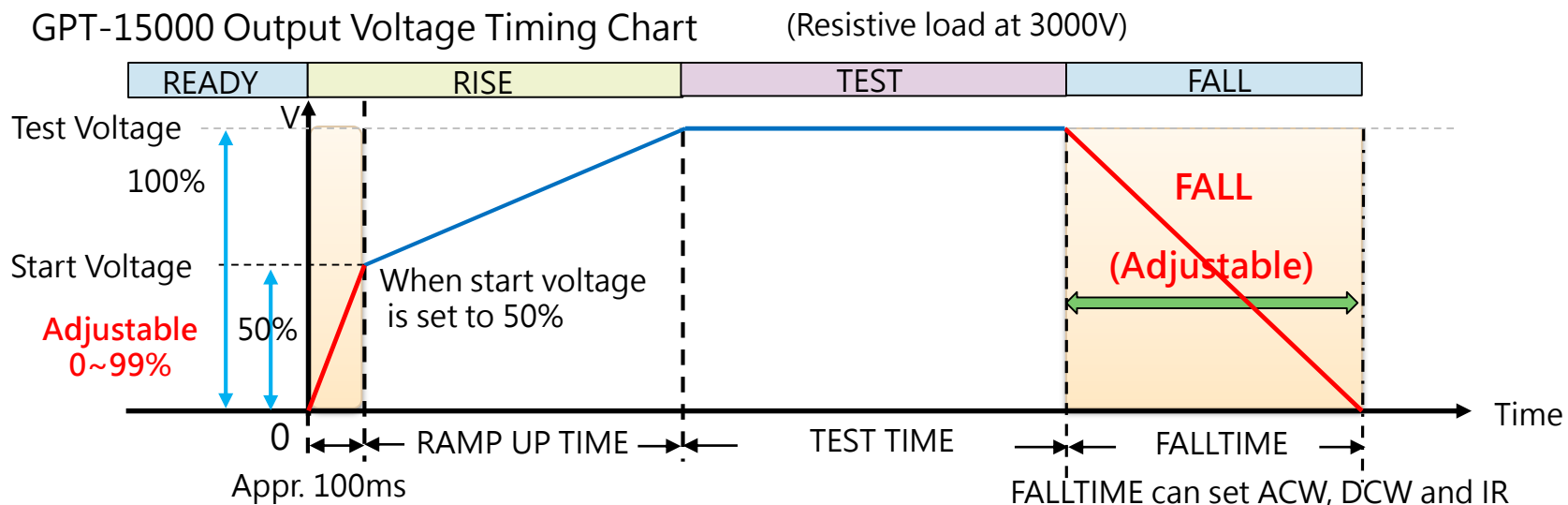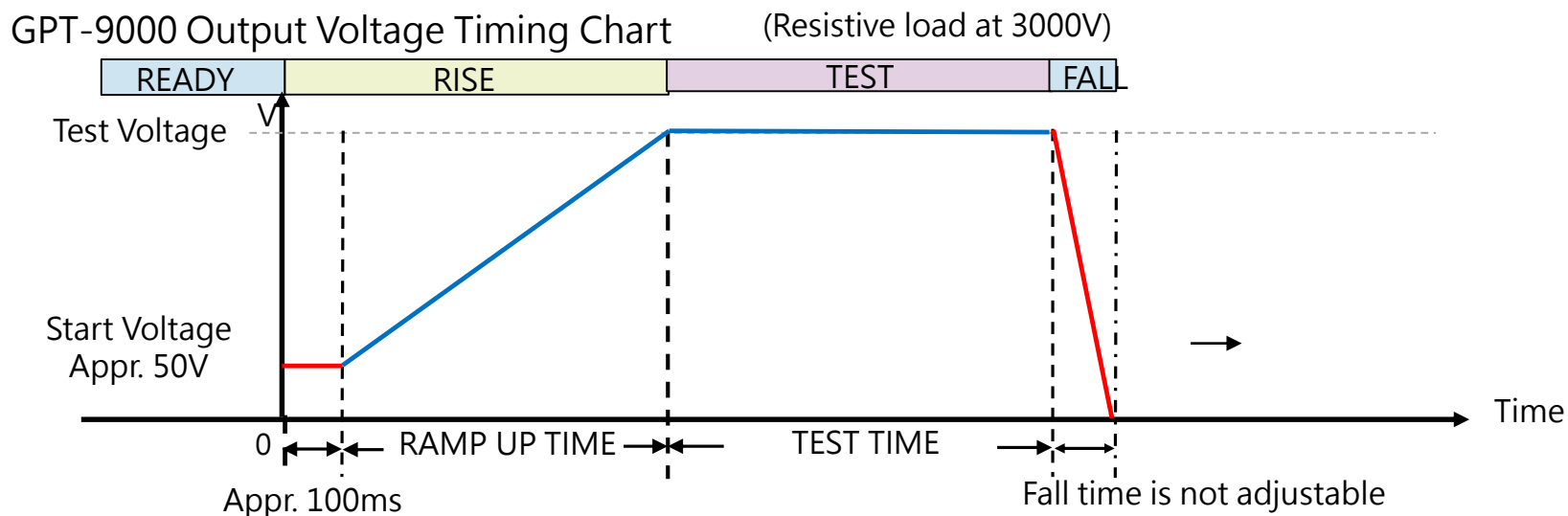
Do not connect the DUT to the front and rear terminals at the same time.

GPT–15000 Series Key Features

- 500VA AC Test Capacity (short circuit current > 200mA)
- 7" TFT LCD
- Comply with IEC 61010-2-034 design requirement
- Manual Test mode / Auto Test Mode
- True RMS Current Measurement
- Zero Crossing Turn-on Operation
- Controllable Ramp-up & Ramp-down Time
- Statistics & Analysis Function
- Capacitive Load Testing Capability up to 47μF
- Sweep Function for DUT Characteristic Analysis
- Convenience Listed AUTO mode easy to read result and judge
- Internal Storage and USB Storage available
- Barcode function available
- Rear panel output available
- Standard Interface : RS-232C, USB host/device and Signal I/O
- Optional Interface : GPIB or LAN
- Universal power input

# Main Feature1 : Time control ~ Ramp up & down

GPT-9000 Output Voltage Timing Chart (Resistive load at 3000V)

| READY | RISE | TEST | FALL |

Test Voltage

Start Voltage
Appr. 50V

0   RAMP UP TIME   TEST TIME

Appr. 100ms

Fall time is not adjustable

GPT-15000 Output Voltage Timing Chart (Resistive load at 3000V)

| READY | RISE | TEST | FALL |

Test Voltage

100%

Start Voltage

Adjustable
0~99%

50%

When start voltage
is set to 50%

FALL

(Adjustable)

0   RAMP UP TIME   TEST TIME   FALLTIME

Appr. 100ms

FALLTIME can set ACW, DCW and IR

Main Features 2: Statistics

The STATISTICS setting where PASS and FAIL amounts and TOTAL amounts to date are shown in the green highlight below. Also, the detailed distributions of PASS and FAIL amounts from each test functions are well disclosed for viewing in the red highlight below.


PASS, FAIL amounts & TOTAL amounts
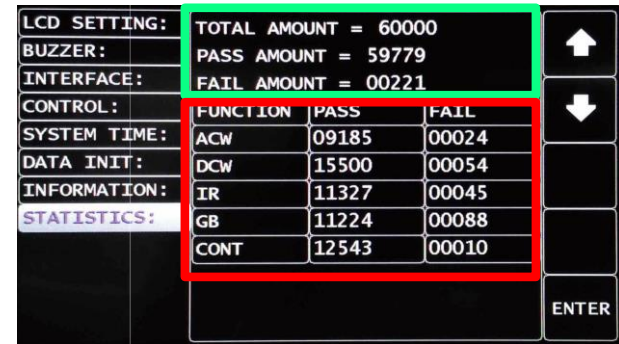
PASS & FAIL amounts distributions in each test function

The distributions of PASS and FAIL statistics are well illustrated in the histogram with table display in which the upper side reads the individual PASS and FAIL amounts for test function. The mid and lower side depicts FAIL amounts in the far-right red strip with number below, whilst the PASS amounts are described in strips of different colors with numbers below indicating the percentage of varied measured values in relation to the set HI & LOW range.
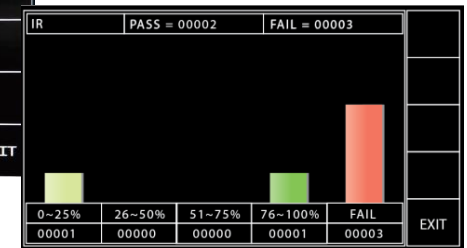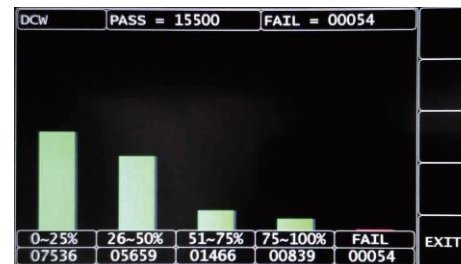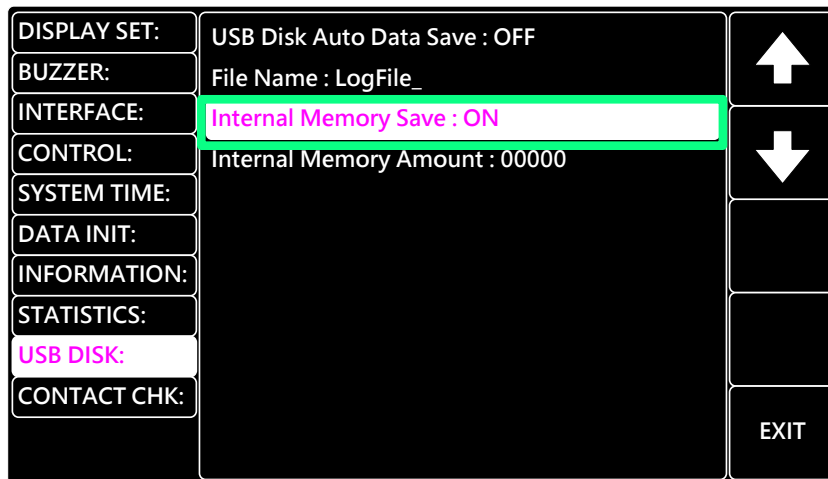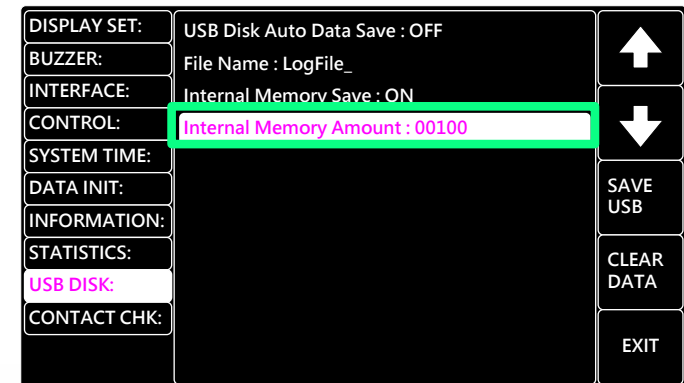
Internal storage function

GPT-15000 provides two ways, internal storage function and USB storage function, to save results during the testing period in addition to its own statistic and analysis functions.

When the internal storage function is activated, each time the test button (START) is pressed, the test results of all tests (every manual or automatic test item) are automatically saved into the internal memory and the maximum saved can **up to 30,000 data**.

After the test processing is complete or the internal memory is full, the data can be transfer to inserted USB flash disk for further analysis.


Internal Memory Save ON/OFF

Transfer saved Data

USB storage function

Another facilitate users to analyze the results of the safety test, GPT-15000 provides the USB storage function. When a USB Flash disk is inserted and the storage function is activated, each time the test button (START) is pressed, the test results of all tests (every manual or automatic test item) are automatically saved to the USB in the form of a text file (txt) for follow-up analysis.
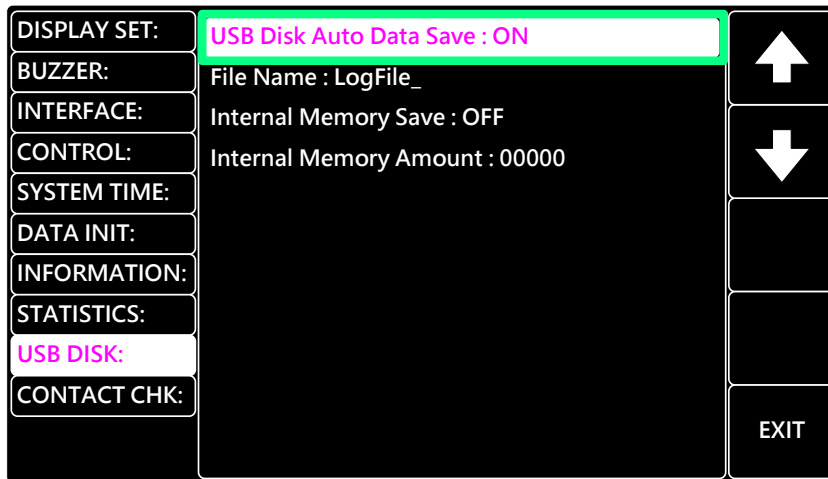
Auto Data Save ON/OFF


```
          Date/Time   ,Stp,MOD,Judge,  V/A  , Reading , Timer
2019-07-02 11:56:30,000,ACW,PASS ,0.100kV,  000 uA ,T=001.0s
2019-07-02 11:56:32,000,ACW,PASS ,0.099kV,  000 uA ,T=001.0s
2019-07-02 11:56:34,000,ACW,PASS ,0.099kV,  000 uA ,T=001.0s
2019-07-02 11:56:37,000,ACW,PASS ,0.100kV,  000 uA ,T=001.0s
2019-07-02 11:56:39,000,ACW,PASS ,0.099kV,  000 uA ,T=001.0s
```
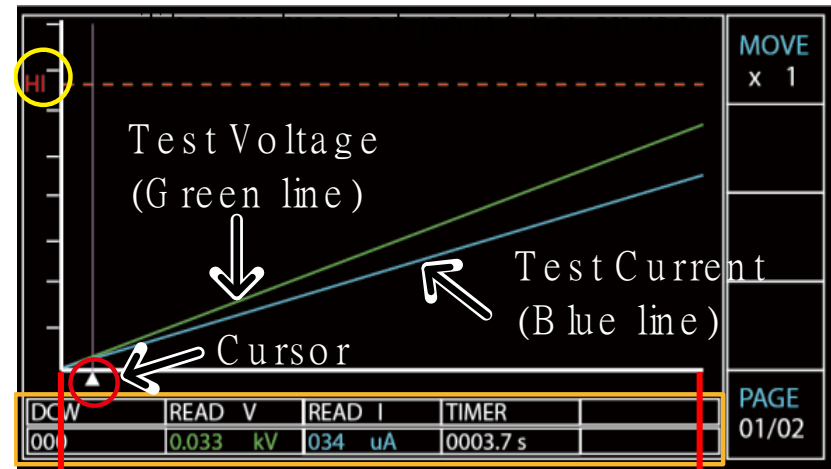
Main Feature3 : Sweep Function

The sweep mode function creates a graph of one of the ACW, DCW, IR, GB or CONT tests in either Manual test or the special MANU mode.

DCW Sweep Graph Example

TEST	GREEN	BLUE
ACW	Test voltage	Test current
DCW	Test voltage	Test current
IR	Test voltage	Test resistance
GB	Test current	Test resistance
CONT	Test current	Test resistance

Test Voltage (Green line)

Test Current (Blue line)

Cursor

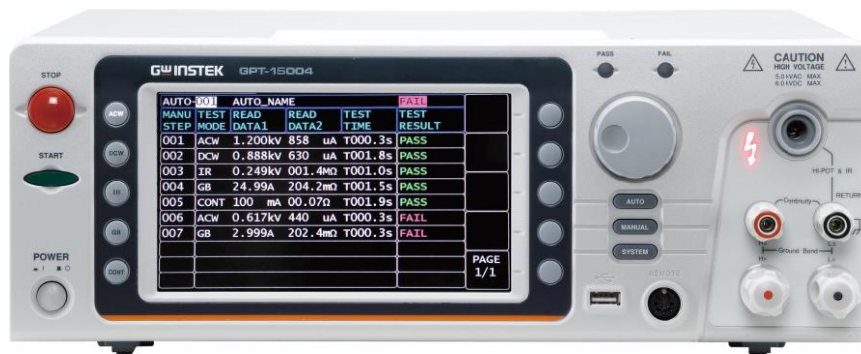| DCW	READ V	READ I	TIMER
000	0.033 kV	034 uA	0003.7 s

PAGE 01/02

The values of point by cursor

650 max./page

To show the trace graph of test results of the device under test.
Suitable for product characteristic analysis such as break-down voltage/current.

Main Feature4 : Listed AUTO Mode

- Better Observation :
  Makes testing condition, result and judgement in same screen

AUTO TEST result indicator

MANU STEP results indicators

Main Feature4 : Listed AUTO Mode

- Up to 5 groups of AUTO tests can be interconnected.

- Example: AUTO-005 to AUTO-007(5+5+5)=15 Test

AUTO-005   AUTO-006   AUTO-007

AUTO-005	AUTO_NAME				READY	
MANU STEP	TEST MODE	V/I SETTING	HI SETTING	LOW SETTING	STEP HOLD	↑
001	DCW	0.100kV	1.000mA	000 uA	P.C/F.H	
002	ACW	0.100kV	1.000mA	000 uA	P.H/F.C	↓
005	IR	0.050kV	066.8MΩ	000.1MΩ	P.C/F.S	
010	ACW	0.200kV	2.000mA	000 uA	P.C/F.C	SKIP
006	DCW	0.500kV	1.500mA	000 uA	P.H/F.S	
CON						DEL.
						STEP HOLD

AUTO-006	AUTO_NAME				READY	
MANU STEP	TEST MODE	V/I SETTING	HI SETTING	LOW SETTING	STEP HOLD	↑
001	DCW	0.100kV	1.000mA	000 uA	P.C/F.H	
002	ACW	0.100kV	1.000mA	000 uA	P.H/F.C	↓
005	IR	0.050kV	066.8MΩ	000.1MΩ	P.C/F.S	
010	ACW	0.200kV	2.000mA	000 uA	P.C/F.C	SKIP
006	DCW	0.500kV	1.500mA	000 uA	P.H/F.S	
CON						DEL.
						STEP HOLD

| AUTO-007	AUTO_NAME				READY	
MANU STEP	TEST MODE	V/I SETTING	HI SETTING	LOW SETTING	STEP HOLD	↑
001	DCW	0.100kV	1.000mA	000 uA	P.C/F.H	
002	ACW	0.100kV	1.000mA	000 uA	P.H/F.C	↓
005	IR	0.050kV	066.8MΩ	000.1MΩ	P.C/F.S	
010	ACW	0.200kV	2.000mA	000 uA	P.C/F.C	SKIP
006	DCW	0.500kV	1.500mA	000 uA	P.H/F.S	
						DEL.
						STEP HOLD

CON is chosen
from MENU STEP

Main Features5: User defined SIGNAL IO

- **PIN-OUT define**：can be set by user
- **Output timing**：can be edited by user based on production equipment requirement
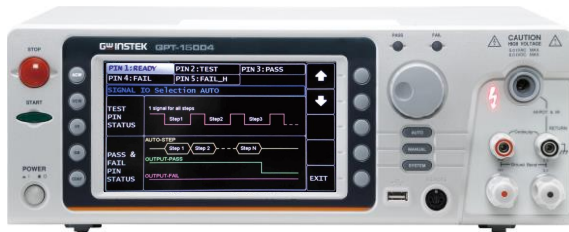
1 signal for all steps

It means one signal output of TEST PIN will be delivered to all steps all the way till the end of an AUTO test.
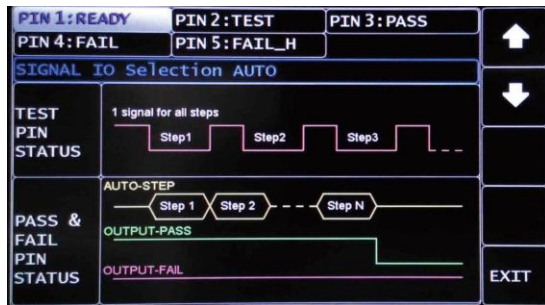
1 signal for each step

It means one signal output of TEST PIN will be delivered to each step with continuous counters within each interval between each step, which is particularly practical for certain applications.

HAZARD indicator lamp

Main Features6: Barcode Function

- Organize the existing testing process corresponding to specific barcode number of DUT (total 100 barcode numbers can be stored)

The scanned barcode is set with AUTO-001 with AUTO TEST ON

Q&A

Thank You For Your Continuous Support

Model Name

GPT-10000

Goodwill Safety Tester

Series

Functionality
01: ACW
02: ACW+DCW
03: ACW+DCW+IR
04: ACW+DCW+IR+GB

Output Capacity
2: 200VA
5: 500VA
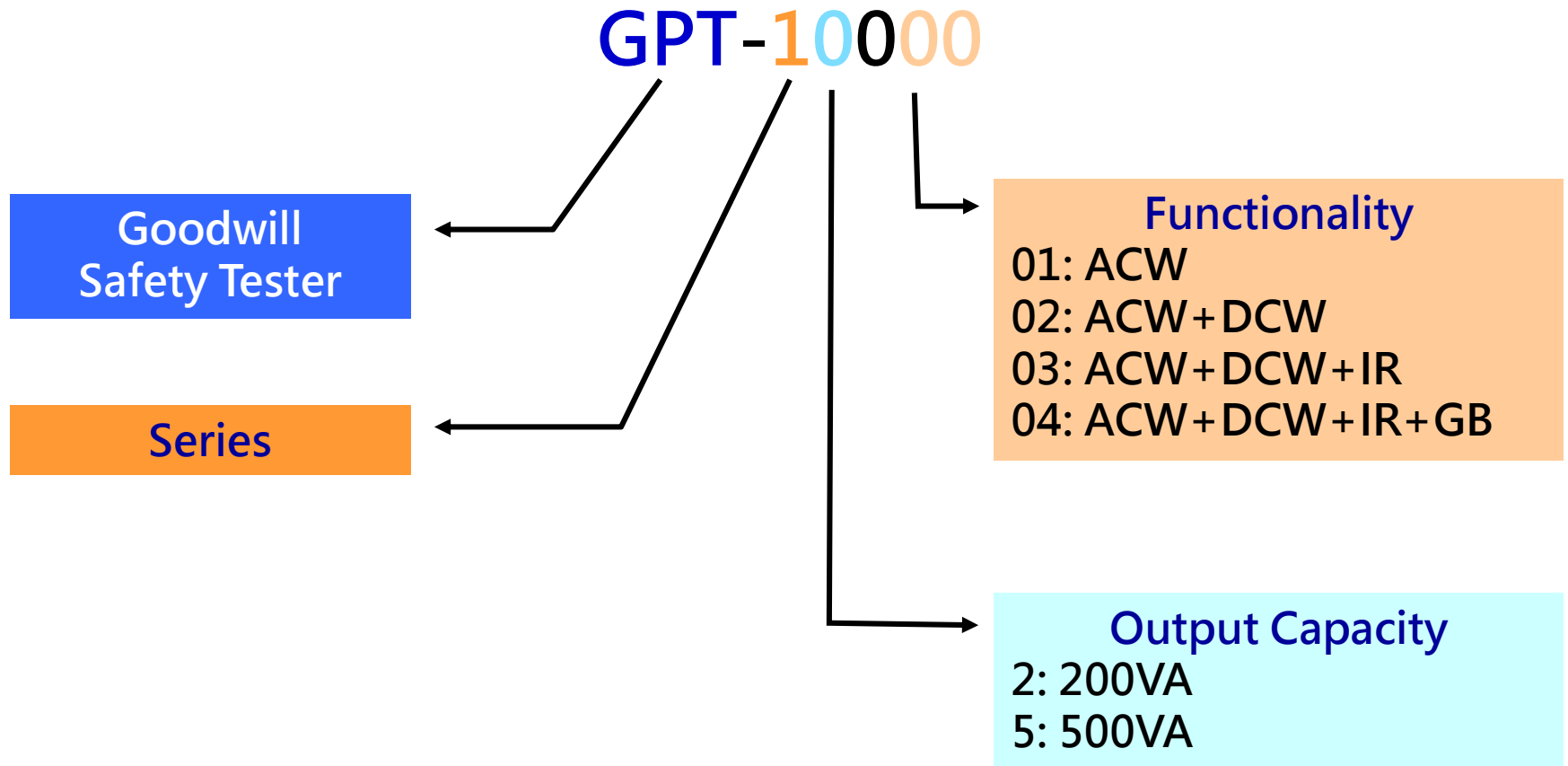
Test Lead Connection

ACW, DCW, IR Connection

GHT-115 test leads

GB Connection

GTL-215 test leads
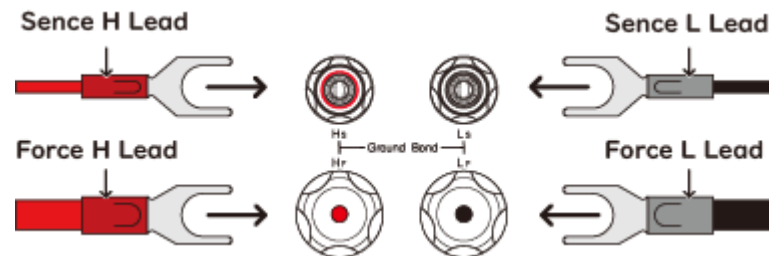
GC Connection

GTL-115 test leads
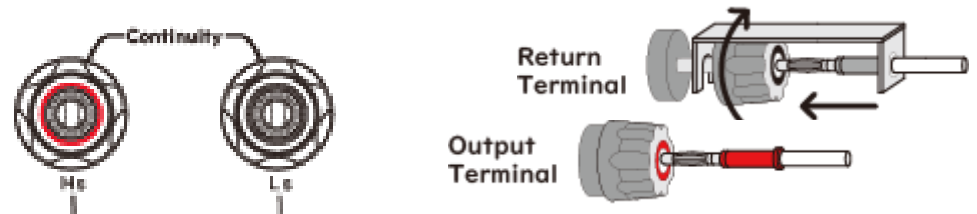
Accessories

Included Accessories

Quick Start Guide x 1, CD x1(completed user manual)

Power cord x 1, Interlock key x 1, Remote terminal Cable GHT-119 x 1

Test lead GHT-115 x 1 (for GPT-15003/15002/15001/12003/12002/12001)

Test lead GHT-115 x 1, GTL-215 x 1 (for GPT-15004/12004)

Optional Interface: *Opt.1 GPIB card*

Optional Interface: *Opt.2 LAN card*

Optional Accessories

GHT-113: High Voltage Test Pistol

GHT-117: High Voltage Adapter Box

GHT-118: High Voltage / Ground Bond Adapter Box

GHT-205: High Voltage Test Probe

GTL-232: RS232C Cable, 9-pin Female to 9-pin, null Modem for Computer

GTL-246: USB Cable, A-B type, approx. 1.2m

GTL-248: GPIB Cable, approx. 2m

GRA-440: Rack Mount Kit