1-1. Test Script

This section describes how to use the Test function to run, load and save test scripts for automated testing. The Test function is useful if you want to perform a number of tests automatically. The PSW test function can store ten test scripts in memory.

The test data can be read from a USB drive device that you created in CSV format. Please use it in the state that you deleted files other than test.

1-1-1. Filename of TestScript

Background	The test files are saved in csv file format. Each file is saved as tXXX.csv, where XXX is the save file number 001~010. Please copy from the CD binary file of "tst" extension with the same file name. It becomes the test set of data in two files.

1-1-2. Test Script Settings

RUN	Runs the chosen test script from the internal memory. The script will run by “OUTPUT” key. T-01 1~10
Load (USB→PSW)	Loads a test script from the USB drive to the designated save slot in memory. A script must first be loaded into internal memory before it can be run. T-02 1~10
Export (PSW→USB)	Exports a script from the designated memory save slot to the USB drive. T-03 1~10
Remove	Deletes the chosen test file from the PSW internal memory. T-04 1~10
Test Memory	Display remaining capacity of the PSW internal memory. T-05 1~1852 (kByte)

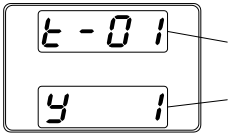
1-1-3. Setting the Test Script

Steps

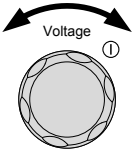
The test script settings (T-01~T-05) are set with the Test key.

1. Press the Test key. The Test key will light up.

2. The display will show T-01 on the top and the memory no. for T-01 on the bottom. Number that test data is displayed in front of the “Y” memory number, “N” will be displayed if it is not.

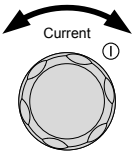


3. Rotate the voltage knob to change the T setting (Test setting).

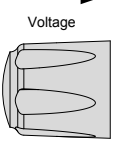


RUN	T-01
Load	T-02
Export	T-03
Remove	T-04
Test Memory	T-05

4. Rotate the current knob to choose a memory number.
   memory number 1~10



5. Press the Voltage knob to complete the setting.



Exit Test Script

6. Press the Test key again to exit the Test settings. The Test key light will turn off

1-1-4. Load Test Script from USB drive

Overview

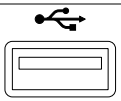
Before a test script can be run, it must first be loaded into a one of the 10 memory save slots. Before loading a test script into memory:

- Ensure the script file is placed in the root directory.
- Ensure the file name number corresponds to the memory number that you wish to save to.

For example: A test file named t001.tst can only be saved to memory number 01, t002.tst can only be saved to memory number 02, and so on.

Steps

1. Insert a USB flash drive into the front panel USB-A slot. Ensure the flash drive contains a test script in the root directory.

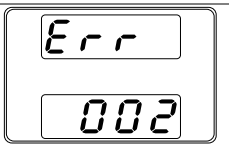


2. Turn on the power. MS (Mass Storage) will be displayed on the screen after a few seconds if the USB drive is recognized.

Note	If the USB drive is not recognized, check to see that the function settings for F-20 = 1 If not, reinsert the USB flash drive.

3. Configure T-02 (Test Load) to 1~10
   T-02 1~10 (t001 ~t010)
   Memory number
4. The script will now be available in the memory slot the script was saved to.

Note	Error messages: If you load a file that is not present on the USB drive “Err 002” will be displayed on the display.



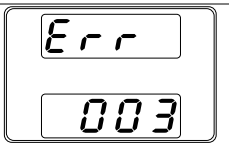
1-1-5. Run Test Script

Overview	A test script can be run from one of ten memory slots.

Steps

1. Before a test script can be run, it must first be loaded into one of the 10 memory save slots. Please check the left edge of the memory number display from becoming “Y”.
2. Configure T-01 (Run Test) to 1~10
   T-01 1~10
   Memory number
3. Press the Voltage knob to select the memory number. Press the OUTPUT key to run the test script from the step1.
4. Suspend by pressing the OUTPUT key again. Then run from STEP1 Press the OUTPUT button.

Note	Error messages: If you try to run a test script from an empty memory location “Err 003” will be displayed on the display.



1-1-6. Export Test Script to USB

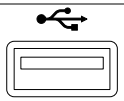
Overview

The Export Test function saves a test file to the root directory of a USB flash drive.

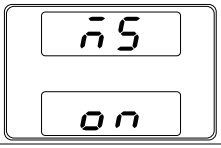
- Files will be saved as tXXX.tst where XXX is the memory number 001~010 from which the test script was exported from.
- Files of the same name on the USB flash drive will be written over.

Steps

1. Insert a USB flash drive into the front panel USB-A slot.



2. Turn on the power. MS (Mass Storage) will be displayed on the screen after a few seconds if the USB drive is recognized.



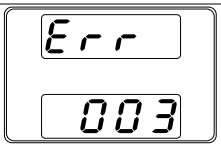
Note

If the USB drive is not recognized, check to see that the function settings for F-20 = 1. If not, reinsert the USB flash drive.

3. Configure T-03 (Test Export) to 0~10 (save memory slot)
   T-03 1~10
   Memory number
4. The script will now be copied to the USB flash drive.

Note

Error messages: If you try to export a test script from an empty memory location “Err 003” will be displayed on the display.



1-1-7. Remove Test Script

Overview

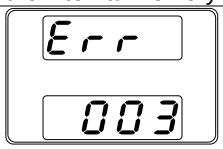
The Remove Test function will delete a test script from the internal memory.

Steps

1. Select T-04 (Test Remove) and choose which test script to remove from the internal memory.
   T-04 1~10
   Memory number
2. The test script will be removed from the internal memory.

Note

Error messages: If you try to remove a test script from an empty memory location “Err 003” will be displayed on the display.



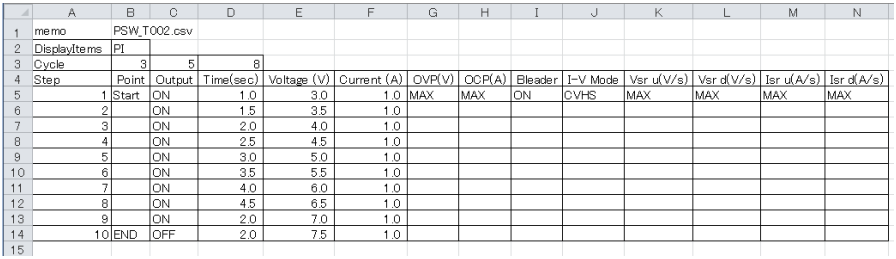
1-1-8. Test Memory

Overview	Display remaining capacity of the PSW internal memory.
Steps	1. Select T-05 (Test memory) T-05 1~1852 (kByte) Test Memory This function is display only.

1-1-9. Data structure of the test Script

Test consists of two files. Extension requires both binary files and text data tst of csv.
Editing of test data in the text edit in the editor Excel or CSV file.
If you do all of the previous line, you can omit the item. Please note that you can not omit only step1.
The line will not be interpreted to describe “memo” in the first column.
It does not change the contents of the "tst" file.
Please use it to copy from the User Manual CD for 10 files (t001.tst ~ t010.tst).

Sample file



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	memo	PSW_T002.csv												
2	DisplayItems	PI												
3	Cycle	3	5	8										
4	Step	Point	Output	Time(sec)	Voltage (V)	Current (A)	OVP(V)	OCP(A)	Bleader	I-V Mode	Vsr u(V/s)	Vsr d(V/s)	Isr u(A/s)	Isr d(A/s)
5	1	Start	ON	1.0	3.0	1.0	MAX	MAX	ON	CVHS	MAX	MAX	MAX	MAX
6	2		ON	1.5	3.5	1.0								
7	3		ON	2.0	4.0	1.0								
8	4		ON	2.5	4.5	1.0								
9	5		ON	3.0	5.0	1.0								
10	6		ON	3.5	5.5	1.0								
11	7		ON	4.0	6.0	1.0								
12	8		ON	4.5	6.5	1.0								
13	9		ON	2.0	7.0	1.0								
14	10	END	OFF	2.0	7.5	1.0								
15														

```
memo,PSW_T002.csv,,,,,,,,,,,,,,
DisplayItems,PI,,,,,,,,,,,,,,
Cycle,3,5,8,,,,,,,,,,,,
Step,Point,Output,sec,Voltage(V),Current(A),OVP(V),OCP(A),Bleader,I
-V Mode,Vsr u(V/s),Vsr d(V/s),Isr u(A/s),Isr d(A/s),IR,Beep
1,Start,ON,1,3,1,MAX,MAX,ON,CVHS,MAX,MAX,MAX,MAX,MIN,OFF
2,,ON,1.5,3.5,1,,,,,,,,,,
3,,ON,2,4,1,,,,,,,,,,
4,,ON,2.5,4.5,1,,,,,,,,,,
5,,ON,3,5,1,,,,,,,,,,
6,,ON,3.5,5.5,1,,,,,,,,,,
7,,ON,4,6,1,,,,,,,,,,
8,,ON,4.5,6.5,1,,,,,,,,,,
9,,ON,2,7,1,,,,,,,,,,
10,END,OFF,2,7.5,1,,,,,,,,,,
```

1-1-10. Setting values of the test Script

Title		unit	value
CYCLE Setting(mandatory)			Set “CYCLE”
	Loop Count		0(infinity)/1～1000000000
	Loop Start		1～19999
	Loop End		2～20000
DisplayItem setting			Set “DisplayItems”
	Item		VI Voltage ・Current PI Power ・Current VP Voltage ・Power
Setting Values		Unit	Value
Step(mandatory)			Title / Number
Point(mandatory)			START：1 Mid： Blank END：Last Point
OUTPUT(mandatory)			ON/OFF
Holding time(mandatory)		sec	0, 0.05～1000000.00 Resolution:0.01 sec 0:Skip the execution (Time error occurs total time lag will occur Skip.)
Voltage		V	Value or MAX/MIN (See ratings)
Current		A	Value or MAX/MIN (See ratings)
OVP		V	Value or MAX/MIN (See ratings)
OCP		A	Value or MAX/MIN (See ratings)
Bleeder			ON/OFF
V-I Mode			CVHS：CV High speed priority CCHS：CC High speed priority CVLS：CV slew rate priority CCLS：CC slew rate priority
V Slew Rate up		V/s	Value or MAX/MIN (See ratings)
V Slew Rate down		V/s	Value or MAX/MIN (See ratings)
A Slew Rate up		A/s	Value or MAX/MIN (See ratings)
A Slew Rate down		A/s	Value or MAX/MIN (See ratings)
IR(Internal resistance)		Ω	Value or MAX/MIN (See ratings)
Beeper			ON/OFF

Set of items that are not mandatory, you can omit the input when the same content as the previous line. Please delete any line blank.
The number of steps is limited to free memory area, but it is up to step up to 20000.
Setting of time is 0.01 seconds resolution, 0.05 seconds in the shortest.
You must be careful follow-up of the setting so constrained by the setting and load conditions.

Rating

Script Number	10, stored in the non-volatile memory.
Maximum of steps	20000step
Loop	0(infinity)/1～1000000000
Time resolution	0.01s
Time range	0.05s～1000000.00s
Memory size	1~1852 kByte

Please refer to the body rating setting range voltage and current, the slew rate.