ENGLISH

Datasheet

AC/DC/IR/GB Electrical Safety Analyzer

Stock No. :	Model :
2010450	RSST-2004
2010449	RSST-2003
2010448	RSST-2002
2010446	RSST-2001

CE | USB Host | RS-232 | GPIB | USB | Signal I/O | Rear Output

FEATURES

- Comply with IEC 61010-2-034
- 7" TFT LCD
- Manual / Auto Mode
- True RMS Current Measurement
- Zero Crossing Turn-on Operation
- Controllable Ramp-up & Ramp-down Time
- Capacitive Load Testing Capability up to 47µF
- Statistics Function
- Sweep Function for DUT Characteristic Analysis
- USB Storage Available
- Rear Panel Output Available
- Interface : RS-232C, USB Host/Device, Signal I/O
- Universal Power Input

RS PRO introduces the flagship model (200VA output capacity) safety analyzer-the RSST-2000 series, which 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), which 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.

The RSST-2000 series safety analyzer has four models: RSST-2004 features AC/DC withstanding voltage test, insulation resistance test, AC ground bond test and continuity test; RSST-2003 conducts AC/DC withstanding voltage test, insulation resistance test, and continuity test; RSST-2002 carries out AC/DC withstanding voltage test and continuity test; RSST-2001 executes AC withstanding voltage test and continuity test. The entire series provides an output capacity of 200VA and utilizes a high-efficient PWM amplifier to effectively exclude the influence from the fluctuating input voltage or distorted waveforms so as to guarantee a stable high-voltage output while conducting AC withstanding voltage test on the DUT to meet the safety regulations such as IEC、EN、UL、CSA、GB、JIS that demand the test requirements for various electronic/electrical products or parts.

To comply with IEC 61010-2-034 requirements, the series takes into account of safety by adopting the double insulation design for input power supply and output voltage to enhance user safety. Additionally, the retracted on-off switch design (START key) and various (optional) mechanisms for test activation (for instance, press and hold for 1 second to activate, activation by pressing double keys, etc.) are incorporated into the series to avoid accidentally touching that results in high voltage/large current output causing damage and danger to products or users. High illumination LED lights (flashing or permanently lit) and a high volume audial indicator are included in designing the series to provide warnings of the status of the on-going tests or judgement results from the safety analyzer. On top of that, the DUT will be automatically discharged to the safe voltage (approximately 30V) after each test to prevent large residual test voltage from causing harm to users.

The series utilizes 7-inch color TFT LCD and inherits the consistent simplicity key design style of the product family to allow users to experience easy operations and a clear observation of the test results. The major test functions include AC withstanding voltage test (AC 5kV/40mA), DC withstanding voltage test (DC 6kV/10mA), insulation resistance test (DC 50V~1200V/50GΩ max.), ground bond test (AC 32A/650mΩ max.), and grounding continuity test (DC 100mA fixed/70Ω max.). The series also collocates with superb output adjustment resolution, measurement resolution (AC withstanding voltage: 1μA; DC withstanding voltage: 0.1μA; insulation resistance: 0.1MΩ; ground bond: 0.1MΩ; continuity test: 0.01Ω), controllable voltage ramp up and ramp down time settings, and upper/lower limit judgement settings, and large capacitance test capability (up to 47μF) for DUT with large capacitance such as surge absorber and large capacitance on the input terminal of EMC/EMI prevention. For Insulation resistance, provides 10mA pre-charged current (fixed) to first rapidly fully charge the DUT's capacitive load and then to conduct test and measurement so as to avoid misjudgment from fluctuating inrush current. All the above features of the series facilitate a more flexible execution of the required tests so that users can obtain accurate test and measurement results.

The statistic function is the highlight of the series. Test items, number of tests, judgement results are recoded after testing and the test results can be shown by bar graph on the display. Users can immediately learn the status of product tests and judgement distribution during the manufacturing process without using a PC. The other strong feature is the sweep function, which can be used for the analysis on product's crash point. Users can use the sweep mode to see the curve diagram of the test results after finishing the functional tests. Users can also select any time point during the process to analyze the relation between voltage and current (when ACW or DCW is selected). The test result of the certain period of time can be swept by setting start and stop time points to analyze the relation between voltage and current under that time frame. Furthermore, the tabular continuity test function can combine 10 manual memory sets to carry out automatic tests or 9 manual memory sets with one connection device to connect next automatic test so as to increase the test items of the continuity test. Users can obtain various test values and judgement results without switching to a different display screen.
Other functions and features of the RSST-2000 series include 100 sets of manual test memory for the storage of different test conditions; rear output terminal for system integration; front panel remote control terminal mount/rear panel Signal I/O for users to conveniently control the analyzer's output/stop based upon the requirements. The USB storage function allows test results to be stored in the USB flash drive to save the trouble of using a PC, and the function is conducive to the follow-up data analysis. For users with the requirements of PC control and test results recording, the series also provides RS-232C, USB.

PANEL INTRODUCTION

1. Start & Stop Button
2. Function Selection Key
3. 7" LCD Display
4. Navigator Key
5. Status Indicator (PASS/FAIL)
6. Wheel & Test Mode key
7. USB Host
8. REMOTE Terminal
9. Hi-Voltage Output Terminal & Indicator
10. Current Output Terminal & Return
11. Rear Output Terminal & Indicator
12. Series Port (RS-232C/USB device)
13. Signal I/O

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			200 VA (5kV/40mA)
Maximum Rated Current			40mA (0.5kV< V≦5kV); 10mA (0.05kV≦ V ≦0.5kV)
Output-Voltage Waveform			Sine wave
Output-Voltage Frequency			50 Hz / 60 Hz selectable
Voltage Regulation			±(1% + 5V) [maximum rated load -- no load]
Voltmeter Accuracy			±(1% of reading + 5V)
Current Measurement Range			1μA~40.00mA
Current Best Resolution			1μA / 10μA
Current Measurement Accuracy			±(1.5% of reading + 30μA)
Window Comparator Method			Yes
ARC Detect			Yes
RAMP UP (Rise Time)			0.1s~999.9s
RAMP DOWN (Fall Time)			0.0s~999.9s
TIMER (Test Time)*			OFF, 0.3s~999.9s
WAIT TIME			0.0s~999.9s
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 (0.5kV< V ≦6kV); 2mA (0.05kV≦ V ≦0.5kV)
Voltage Regulation			±(1% + 5V) [maximum rated load -- no load]
Voltmeter Accuracy			±(1% of reading + 5V)
Current Measurement Range			1μA~10.00mA
Current Best Resolution			0.1μA /1μA /10μA
Current Measurement Accuracy			±(1.5% of reading + 3μA) when I Reading < 1mA ; ±(1.5% of reading + 30μA) when I Reading≧1mA
Window Comparator Method			Yes
ARC Detect			Yes
RAMP UP (Rise Time)			0.1s~999.9s
RAMP DOWN (Fall Time)			0.0s~999.9s
TIMER (Test Time)*			OFF, 0.3s~999.9s
WAIT TIME			0.0s~999.9s
GND			ON/OFF
INSULATION RESISTANCE			
Output Voltage			50V~5000V dc
Output-Voltage Resolution			50V
Output-Voltage Accuracy			±(1% of setting + 5V) [no load]
Resistance Measurement	Test Voltage	Display Range	Measurement Range / Accuracy
	50V≦V≦100V	0.1MΩ~10.00GΩ	0.1MΩ~1MΩ : ±(5% of reading + 3 count); 1 MΩ~50MΩ : ±(5% of reading + 1 count); 51MΩ~2GΩ : ±(10% of reading + 1 count)
	150V≦V≦450V	0.1MΩ~20.00GΩ	
	500V≦V≦1200V	0.1MΩ~50.00GΩ	0.1MΩ~1MΩ : ±(5% of reading + 3 count); 1 MΩ~500MΩ : ±(5% of reading + 1 count); 501MΩ~9.999GΩ : ±(10% of reading + 1 count); 10GΩ~50GΩ : ±(20% of reading + 1 count)
Voltage Regulation			±(1% + 5V) [maximum rated load -- no load]
Voltmeter Accuracy			±(1% of reading + 5V)
Short-Circuit Current			10mA max.
Output Impedance			2kΩ
Window Comparator Method			Yes
RAMP UP (Rise Time)			0.1s~999.9s
RAMP DOWN (Fall Time)			0.0s~999.9s
TIMER (Test Time)*			0.3s~999.9s
WAIT TIME			0.0s~999.9s
GND			ON/OFF
GROUND BOND			
Output-Current			03.00A~32.00A ac
Output-Current Resolution			0.01A
Output-Current Accuracy			3A≦I≦8A : ±(1% of reading + 0.2A); 8A<I≦32A : ±(1% of reading + 0.05A)
Test-Voltage			8Vac max (open circuit)
Test-Voltage Frequency			50Hz/60Hz selectable
Ohmmeter Measurement Range			1mΩ~ 650mΩ
Ohmmeter Measurement Resolution			0.1mΩ
Ohmmeter Measurement Accuracy			±(1% of reading + 2 mΩ)
Window Comparator Method			Yes
TIMER (Test Time)*			0.3s~999.9s
Test Method			Four Terminal
GND			ON/OFF
CONTINUITY TEST			
Output-Current			100mA dc (fixed)
Ohmmeter Measurement Range			0.10Ω~ 70.00Ω
Ohmmeter Measurement Resolution			0.01Ω
Ohmmeter Measurement Accuracy			±(10% of reading + 2 Ω)
Window Comparator Method			Yes
TIMER (Test Time)*			0.3s~999.9s
MEMORY			
Single Step Memory			MANU : 100 blocks
Automatic Testing Memory			AUTO : 100 blocks, Manu per auto : 10
INTERFACE			
Standard (Front)			REMOTE, USB host
Standard (Rear)			Rear Output, RS-232C, USB device, Signal I/O,
DISPLAY			
			7" color LCD
POWER SOURCE			
			AC 100V~240V ± 10%, 50Hz/60Hz; Power consumption : Max. 400VA
DIMENSIONS & WEIGHT			
			RSST-2004: 380(W) x 148(H) x 454(D) mm; Approx. 15kg ; RSST-2001/2002/2003: 380(W) x 148(H) x 436(D) mm; Approx. 11kg (Max.)

Note : * TIMER Accuracy: +/-(100ppm+20ms)

ORDERING INFORMATION

RSST-2004	**AC/DC/IR/GB Electrical Safety Analyzer**	**RSST-2002**	**AC/DC Electrical Safety Analyzer**
RSST-2003	**AC/DC/IR Electrical Safety Analyzer**	**RSST-2001**	**AC Electrical Safety Analyzer**

ACCESSORIES

Quick Start Guide x 1, Power cord x 1, Interlock Key x 1, Remote terminal Cable GHT-119 x 1,
Test lead GHT-115 x 1 for RSST-2001/2002/2003, Test lead GHT-115 x 1, GTL-215 x 1 for RSST-2004

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