SG3004-12(14)

Digital Impulse Measuring & Analyzing System

IMS-2000 Control + SG3004 Measuring System (Desk Type)

High voltage impulse test is used to assess the quality of any high voltage equipment. The test object is subjected to a fast voltage impulse of defined wave shape caused by the test object are used for detection of insulation strengths and/or faults. It is commonly used for routine testing of transformer, bushings or other high voltage equipment.

SG3004-12(14) is an excellent and reliable tool for accurate measurement of all kinds of wave-shapes. It also manufactures complete impulse voltage test systems to meet most requirements. This impulse generation capability plus impulse measurement offers a compete solution to modern testing needs.

SG3004-12(14) equips 12bit or 14bit, 100Ms/S sampling rating A/D card inside and user friendly software and powerful curve analyzing tools along with the report generating.

Measurement evaluation and analysis of impulse voltages and currents can be performed according to IEC 61083, IEC 60060, IEC 60076, IEC 60099 and IEC 60230, automatic evaluation of the impulse of the impulse shapes specified in the above standards.

SG3004-12(14) is controlled by the host computer, using the USB or Ethernet interface. SG3004-12(14) is complete system to be integrated with impulse voltage test system.

Features

- 12 bit or 14 bit vertical resolution at 100MS/sec.
- Automatic/Manual evaluation of all common impulse parameters.
- Report generation and customization, Logo updating feature etc.
- Easy and friendly graphical user interface.
- Software features like FFT, Difference, Comparison, user defined smoothing and many more.
- Fulfills IEC 61083, IEC 60060, IEC 60076, IEC 60099 and IEC 60230 standards.
- 2 separate channels available and it can choose CH1, CH2. Ext trigger
- User can save the testing parameters for different test object as files that can be retrieved.
- Available to set the sampling rating, max 100MS/sec.
- 1.5kV or 2kV Max input voltage is good for anti environment noise.
- 5kV (1.2/50us) over voltage protection ability.
- Fiber glass insulation protection and fully protection design.

SG3004-12 Measuring System (Moveable Type)

Applications

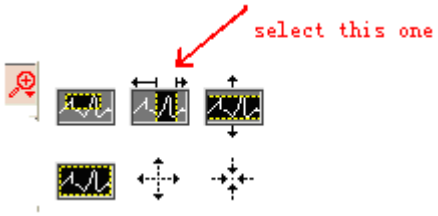
- Power / Distribution Transformers
- Switchgears
- Bushings
- Surge Arresters
- Laboratories & Universities
- Cables

Measurement and Analyzing Features

Real 12 bit /14bit amplitude resolution, a factor of 4 better compared to a common 9 bit system. Together with the powerful software analysis tools very detailed impulse diagnostics are possible. The effect of amplitude resolution on measurement accuracy is shown for 12 and 14 bit recorders using a signal with 1 % / 0.5% full scale deflection.

Variable memory depth up to 64M, Memory depth is automatically set by the system depending on the measuring time.

100 MS/s and an analogue bandwidth of 50 MHz are more than enough to capture all impulse shapes in high voltage test labs. High frequency signal components usually have very low amplitudes. High amplitude resolution is therefore critical. The highest bandwidth limit is usually determined by the external high voltage divider – higher bandwidths and sampling-rates in the digitizer create spurious higher frequency noise.

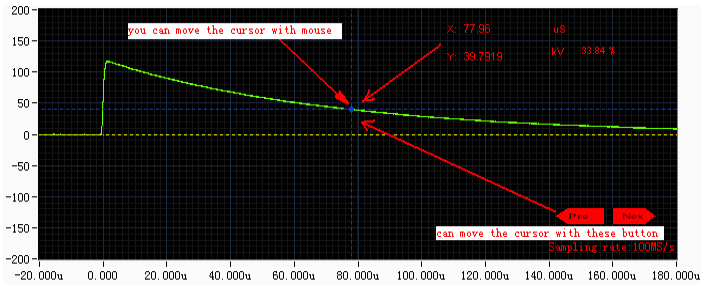


Excellent linearity and low noise level, noise level is lower than 0.01%, All tests of this 12 bit/14bit system achieve far better results than required by the related standards!

User can save the Testing Parameters for different Test Objects as files that can be retrieved.

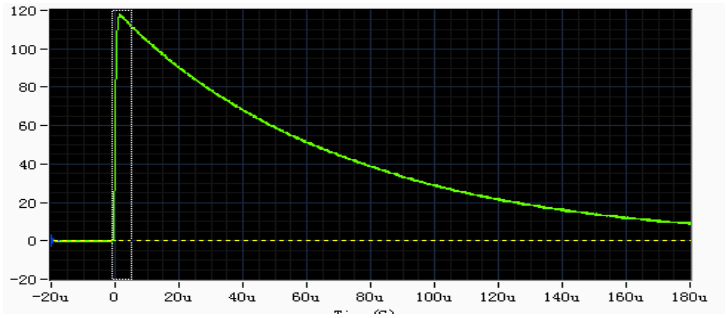
Two Independent Channels are available for difference type of the voltage and current measurement, User can Set and Save the values of all parameters from the measurement Window.

Tool Bar having the shortcuts to save graph, show/hide grid, Show/Hide data dots, Clear graph, print out the curve, manual evaluation, smooth, FFT calculation, edit curve information, save data as excel etc.



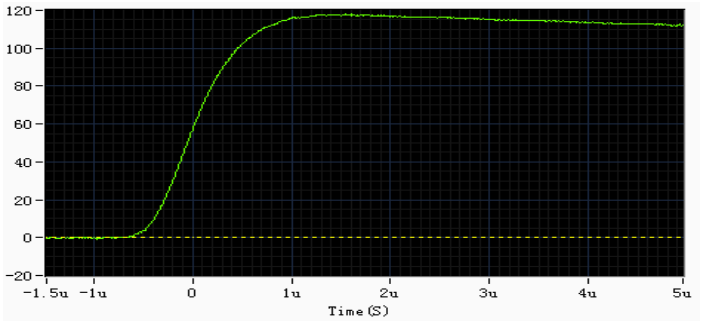
System can automatic or manual store over 10000 curve in the memory. It can easy edit and manage the name, date, also any curve in the memory can be invoking and analyze in any time.

Status Bar displays the Status of System (open/close). Capturing Mode (single/auto), Efficiency, Counter, Warning Messages etc.



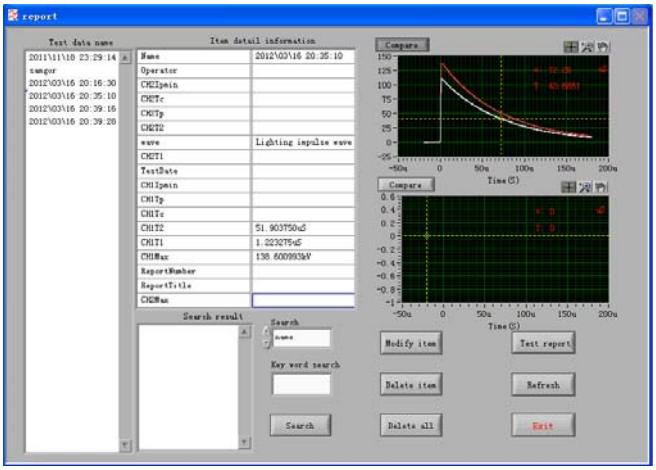
Display can be toggled between “Time Domain” and “Frequency Domain” .

Both Log and Liner scales can be selected in Frequency Domain.



Report can be saved in the Excel and PDF format, also can manual or automatic edit the data. Over 10 curves can put in one report.

Any two curves from the database can be compare and analyze.



Calibration Service

On customer’s request we supply the WUHARI test certification; the WUHARI is the authority lab in china also in the world.

Technical Specifications

System

Number of Channels:	Two (Independent) Channels
Printer:	Color laser printer (Option)
Monitor:	Desktop TFT 22' / Laptop TFT 12.1'
Memory:	1GB or more
Hardware:	500G or more
Operating system:	Window XP or Window 7

Input Signal

Connections:	LEMO 75Ω
Input voltage:	1.5V-1500V / 2V-1950V
Input range selection:	Automatic
Over voltage protection:	2kV
Input impedance:	2MΩ/20pF
Analog bandwidth:	50MHz for each channel
Trigger:	CH1, CH2 or Ext

Data Acquisition

Resolution:	12bit / 14bit
Sampling rate:	100MS/sec max
Measuring time:	1-9999μs
Accuracy:	±1% Upk ± 2 LSD / ±0.5% Upk ± 2 LSD (12bit)
	±2% T1, T2 and Tc / ±1% T1, T2 and Tc (14bit)

Operating Conditions

Supply voltage:	70V-270V
Relative Humidity:	10-95%
Temperature range:	10-50°C

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