

SG3004 DIGITAL IMPULSE ANALYZING SYSTEM

INTRODUCTION

High voltage Impulse Tests are used to assess the quality of any high voltage equipment. The test object is subjected to a fast voltage impulse of defined wave shape and changes in the wave shape caused by the test object are used for detection of Insulation strengths and/or faults.

SG3004 with user friendly software and powerful curve analyzing tools along with report generating templates offers a complete solution to modern testing needs.

Complete impulse capturing of SG3004 enables to determine the detailed information about the test object faster and accurately. 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, the relevant standards for High Voltage Impulse Testing.

SG3004 Digital Impulse Analyzer system is controlled by the host computer, using the USB or Ethernet interface. SG3004 is complete system to be integrated with Impulse Voltage Test System.



FEATURES

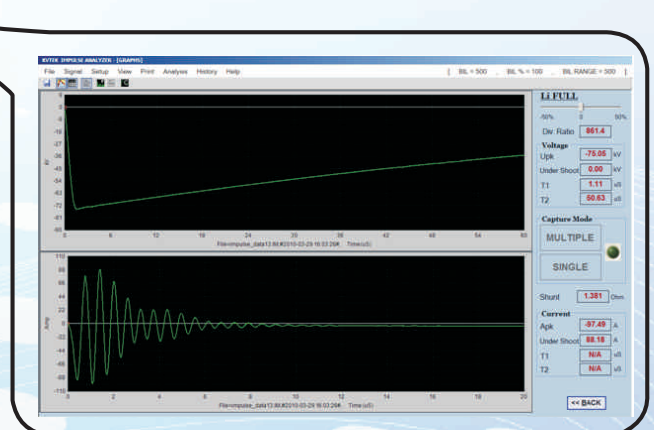
- 12 bit vertical resolution at 100 MS/sec.
- Automatic evaluation of all common impulse parameters.
- Report generation and customization. Logo updating feature etc.
- Easy and User Friendly GUI (Graphical User Interface).
- Software features like FFT, Difference, Comparison, user defined Smoothing and many more.
- Fulfills IEC 61083-1& IEC 61083-2 standards.

APPLICATIONS

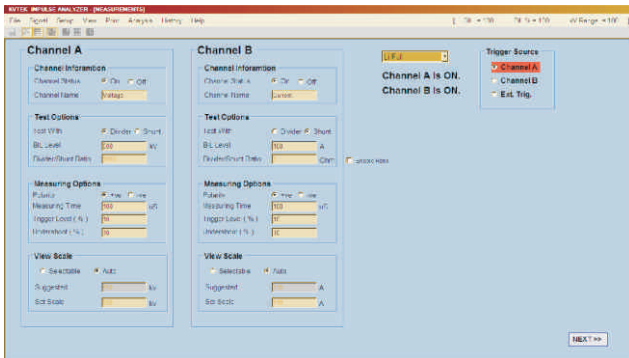
- Power/ Distribution Transformers
- Switchgears
- Bushings
- Surge Arresters
- Laboratories & Universities
- Cables

MEASUREMENT AND ANALYZING FEATURES

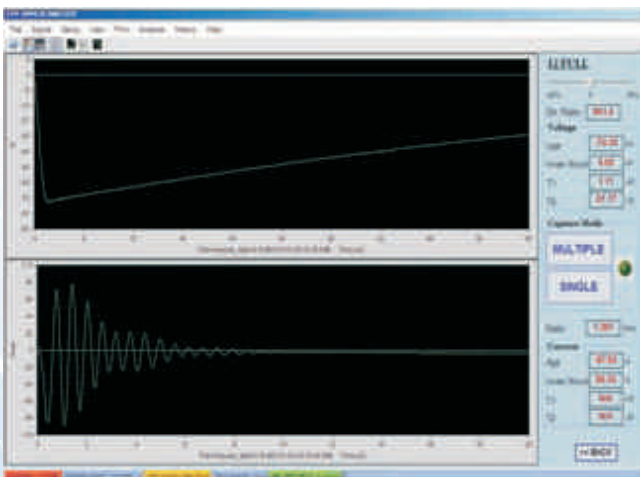
- Testing Parameters Window for Channel A and Channel B.
- Memory Depth is automatically set by the system depending on the measuring time.
- User can save the Testing Parameters for different Test Objects as files that can be retrieved.



- Two independent Channels are available for voltage and current measurement.

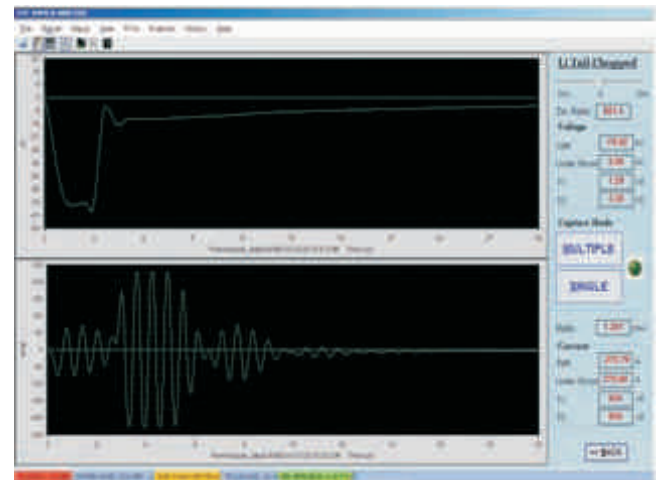


- User can Set and Save the values of all parameters from the measurement Window.
- Tool Bar having the shortcuts to save graph, show/hide grid, Show/Hide data dots, Clear graph etc.
- Mean curve is calculated from user selected 'Smoothness Filter Factor'.
- Real Curve and Mean Curve may be viewed individually or together.

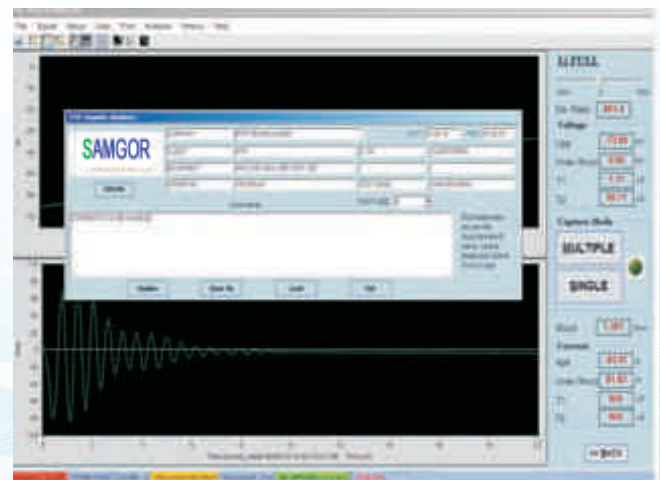


- Single or Multiple Acquiring Mode with process Status Display.
- Automatic and Manual mode for saving Impulse curves.
- Data Points corresponding to 10%, 50% 90% and 100% can be displayed or hidden.

- History Stack to view last 25 non-saved measurements.
- Captured Curve will be saved in History first if Manual mode of saving graph is selected.
- Display can be toggled between 'Time Domain' and 'Frequency Domain' with a click.

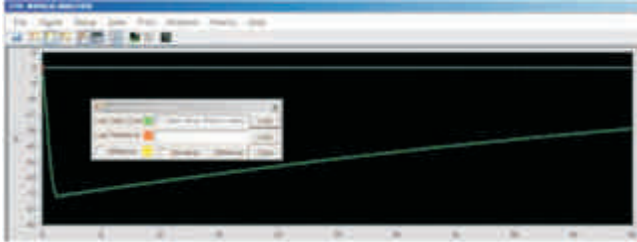


- Log or Linear scales can be selected in Frequency Domain
- Horizontal and/or Vertical zooming to view details on any section of the curves.
- Counter facility is available, counter is incremented automatically on every impulse.

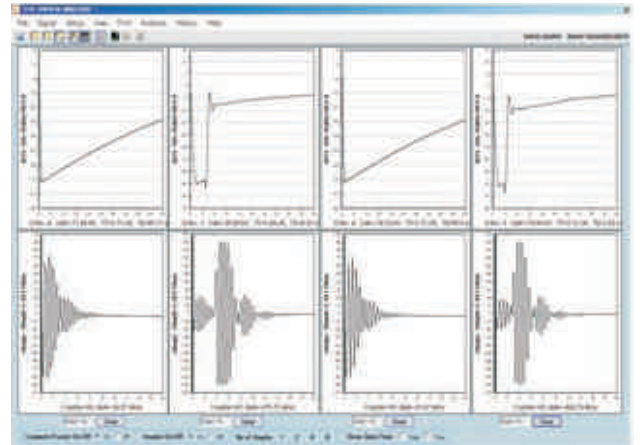


- Graph Grid can be On/Off as per requirement.
- Status Bar displays the Status of System (open/ Closed). Capturing Mode (Single/Auto). Efficiency, Counter, Warning Messages (etc).

- Report Header can be customized and updated as per requirement.
- Report Header can be saved and retrieved.
- Standard Curve can be displayed for the analysis purpose
- Report generation may be set to print 1, 2, 4 or 8 curves per sheet.



- Report Header and Comment could be hidden in case user need only graph curve on report.
- Any two measurements (graph data) from the database can be compared using the difference function.
- Before differentiate measurements can be normalized.



- Report can be saved in the PDF format.

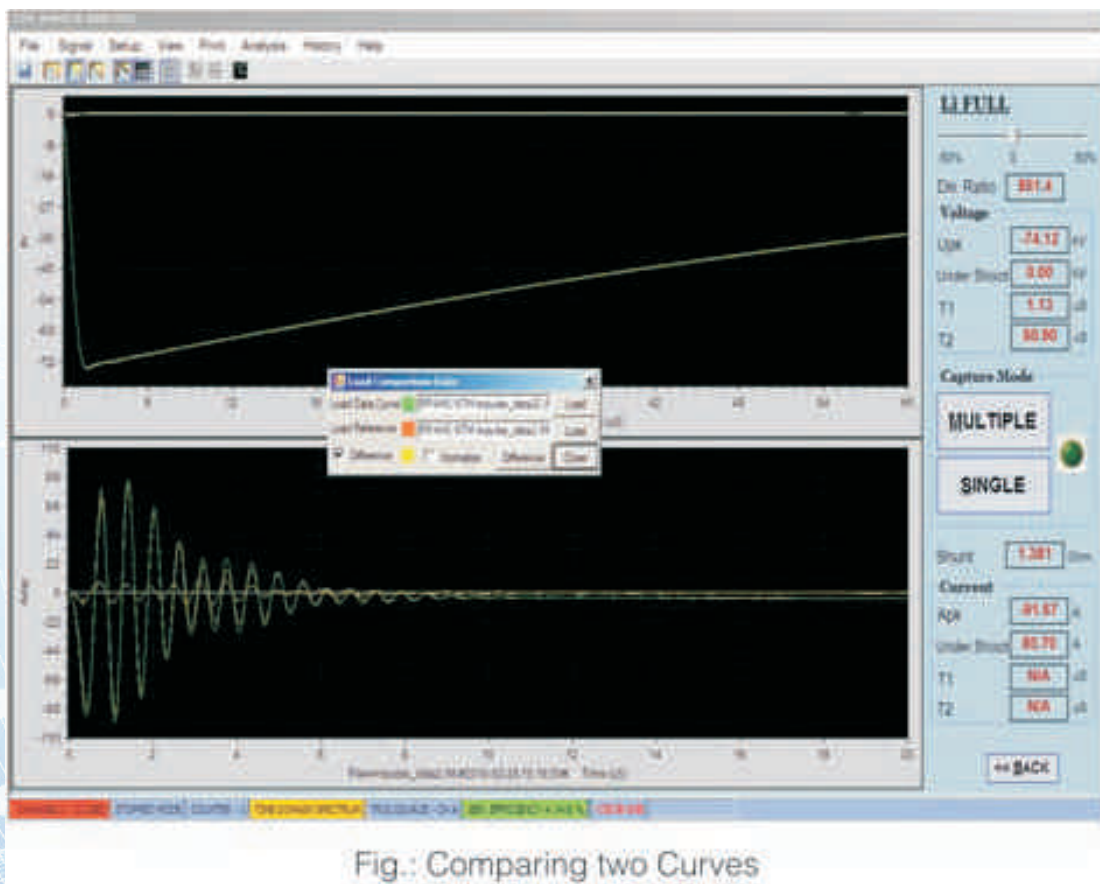


Fig.: Comparing two Curves

TECHNICAL SPECIFICATIONS

System Hardware

Number of Channels	:	Two (Independent) Channels
CPU	:	Speed 2GHz or More
Monitor	:	Desktop TFT 19"
Memory	:	1 + GB RAM & Min. 80 GB HD
Printer	:	Laser Printer,

Input Signal

Connections	:	LEMO 75 Ohms
Input voltage	:	2V to 1900 Vpp
Input Range Selection	:	Automatic (According to BIL set by user)
Over Voltage Protection	:	2 kV
Input Impedance	:	2 MOhm, 20pF
Analog Bandwidth	:	50 MHz for each channel
Triggering	:	Internal. Ch 1 or Ch2 selectable

Data Acquisition

Resolution	:	12 Bit
Sampling Rate	:	100 MS/s max.
Measuring Time:	:	1 to 9999 uSec, continuously settable
Accuracy	:	± 15 Upeak upto ± 2 of LSD, $\pm 1\%$ of T1, T2 and Tc upto ± 2 of 20ns

Operating Conditions

Supply Voltage	:	230 V \pm 10% , 50 Hz / 110 V AC \pm 10%, 60 Hz
Temperature Range	:	5 ^o - 50 ^o C
Relative Humidity	:	< 95 %