IMS-2001

Automatic Impulse Generator Control System

IMS-2001 Automatic Impulse Generator Control system is specifically designed for needs of HV testing. The control system is supplied with a Windows 7 and Labview based control software package developed based on the 7 years plus experience and three generations of impulse generator control system.

IMS-2001 is made for high voltage testing laboratory operating environment, serious consider EMC hardware design, the system especially considering the impulse test characteristics used in most polluted areas, and it meet the standard such as IEC61083, IEC60060, IEEE1122, GB/T16896.1, IEC61000 and etc.

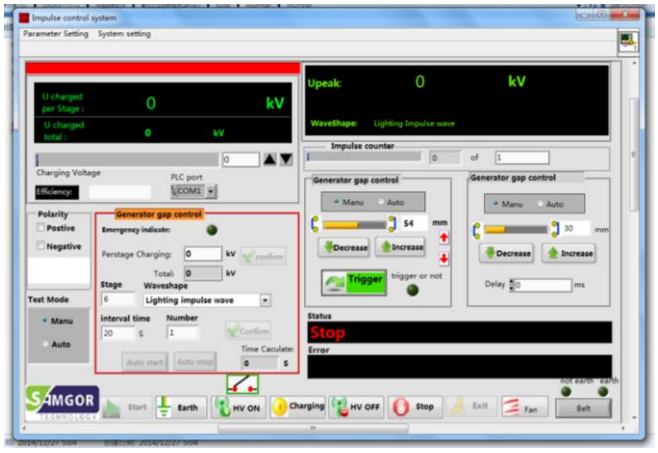
Active and passive safety is implemented into the system as independent external emergency switches, software watchdogs, graphic symbols and status information for fast understanding.

With the advantage software sequence it is possible to control complex test cycles and with the advantage 'software. Remote control also one of the function what be consider by software design.

Feature

- System controls charging voltage, charging time, polarity, triggering, counter, history, alarms, trips, safety earthing, chopping, status visualization, sphere gaps, data logging, data storage, status handling, automation, system diagram visualization;
- Synchronize sphere according to the charging voltage setting, automatically adjusts the sphere distance, and display the actual distance value. When sphere limit switch moves, it sends out the instruction; the special sphere distance trimming, makes easy to adjust the sphere distance;
- Manual or Automatic operation mode with all status information, optimization, efficiency calculation etc;
- Easy programmable sequence of testing to automatic production testing. All test sequences can be recorded and saved for later use or repetition.
- Full visualization of test system with measuring values, switch positions, earthing system, alarms and warnings etc;
- Well system protection and EMC/EMI design, system can work in serious polluted environment;
- Mitsubishi PLC and Siemens electronics component are be used in the control system for reliability;
- The primary and the lower level processor s communication is through full duplex mode，using special communication protocol, insuring communication reliability;
- Connect to SG series Impulse Measuring System, the software can simultaneously displays the testing voltage and tested product current waveform, that makes the analysis comparison easy;
- Emergency stop, the system design lots of safety protection device, include the emergency stop button and also software will according to the sampling, automatic stop the system by its judgment;

- Realize the remote control and the data transmission function through the network; the measure data may real-time sharing;



Control Software Interface

User Benefit

- Easy and intuitive understandable and useable graphic user interface;
- Windows and Labview control software with all its advantages of integration, remote control, LAN connection, decentral data storage, upgrade etc;
- Easy adaptable to different generators for a easy system upgrading or modernization of all types of impulse generator;
- Decrease human power requirement then normal and transitional design of impulse generator, easy operation;
- Pspice online support for various type of test object by complex feature.

Applications

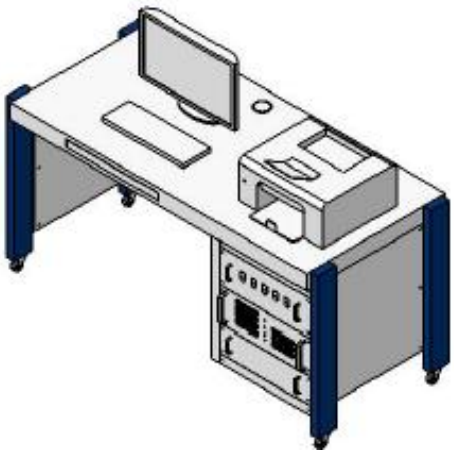
- Power Transformer Testing
- Instrument Transformer Testing
- Switchgear Testing
- Surge Arrestor Testing
- Bushing Testing
- Insulator Testing
- Cable Testing
- Research and Development
- Universities
- Etc

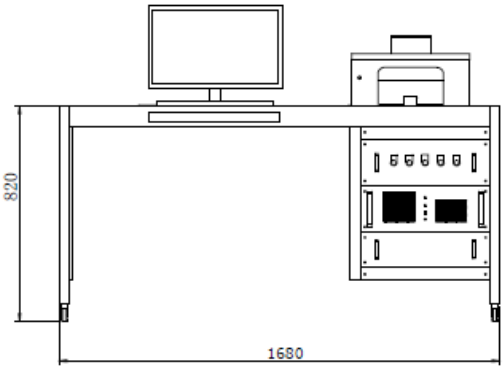
Hardware Design

IMS-2001 Impulse Control System consists of industrial process computer specifically designed for the need s of HV testing with peripheral devices as printer, monitor, screen, keyboard, mouse, control desk, control cabinet to connect the generator parts themselves.

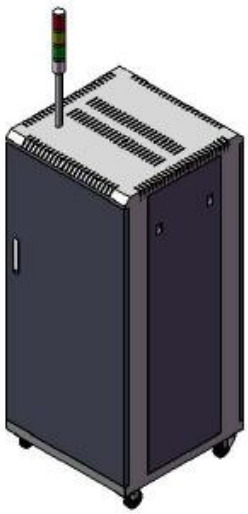
All control desk and control cabinet have special shielding against EMC disturbances as well as power supply. The complete system hardware has an EMC tested and hardened design for safe use also in the most pollutes areas.

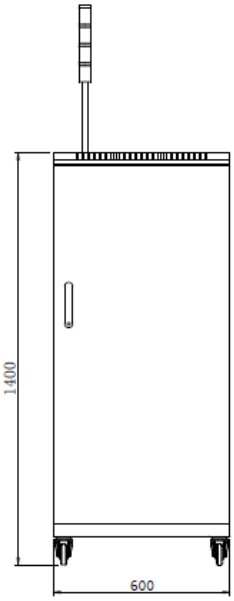
Safety grounding point both be design in the control desk and control cabinet, two emergency stop switch are be installed in the control desk, one is on the front interface, one is on the desk.





Samgor control desk with mini-rack and electronics inserts. Control and measuring desk are also available on request.





For 800kV or more impulse generator, control cabinet can be design together with charging units on request.

Technical Parameter

IMS-2001 Automatic Impulse Control System

System

Monitor: Industry Platform with TFT 23.5' Screen

Memory: 4GB or more

Hardware Disk: 500G or more

Operating system: Window 7

I/O control: Mitsubishi PLC 3U32MR

A/D sampling: Mitsubishi PLC 4A/D

D/A output: Mitsubishi PLC 4D/A

Channel of measuring: 4

A/D accuracy: 0.5% (16bit)

Over voltage test: 5kV (DC)

Operating Conditions

Supply voltage: 70V-270V

Relative Humidity: 10-95%

Temperature range: 10-50℃

For further information please contact:

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