Fast Transient / Burst Generator

NSG 2025

- **High end burst generator**
- **Pulse amplitudes up to 8kV**
- **Burst frequencies up to 1MHz**
- **Integrated single or 3-phase coupling network**

NSG 2025
The NSG 2025 is a high end burst generator and the choice for users who need the maximum in pulse amplitude/frequency capabilities, flexibility, coupling network features and EUT connectivity. Based on a 'building-block' concept, NSG 2025 lets you select and combine pulse generator, coupling and EUT adapters to create a flexible, upgradeable EMC test work station to match your needs today and into the future. It covers all the widely used burst test specifications of IEC, EN, ANSI-IEEE as well as the known extended manufacturer's requirements.

Powerful Pulse Generation
The NSG 2025 offers the most extensive range of pulse voltages and burst frequencies available in a single instrument. Pulses can be coupled into the mains supply voltage or applied as a pure high voltage for data and signal line testing.
Pre-programmed IEC standard tests are available at the touch of a button and pulse parameters are user configurable - manually via front panel control or via PC-Windows software control. Not only does the NSG 2025 meet all the requirements of current world test standards with comfortable margins, it also anticipates likely future modifications with functions including a user-configurable burst frequency to 1MHz and extended selectable coupling modes.

One System for all Needs
The NSG 2025 'building block' design allows you to select the most appropriate modules for your application.
Maximum voltage level, frequency range, current rating and coupling networks - single or three-phase - are selectable, with local or PC-based software control, or both.

A wide range of test accessories is available for the NSG 2025 and, for complete integrated EMC test and measurement, the NSG 2025 is fully compatible with the Schaffner ProfLine system. Testing products for world-wide markets is easy with the NSG 2025. The supply voltage is switchable between 110/115V and 220/240V, and country-specific power-line sockets for the EUT are interchangeable so full compliance and volume production tests can be run on finished products and systems destined for different markets.

Built-in Safety
Every component in the NSG 2025 that carries a high voltage is designed to be inherently safe, with interlock features built into the hardware, ensuring automatic power-down in case of violation of any safety condition.

Manual Control
The standard, pre-programmed IEC tests can be called up, and used straight away or be modified and saved. All test parameters including pulse amplitude, duration, rise time and polarity as well as burst frequency, duration and phase angle can be set manually, for custom testing. Up to eight different custom tests can be saved and used again or modified at any time.

Software Control
The WIN 2025 Windows-based software module allows remote, real-time access to all the instrument functions and provides a whole range of additional test sequencing, programming and reporting capabilities. With a just few simple point-and-click operations, engineers can set test parameters directly, or can set up and save tests, drastically reducing set-up times for repeated tests and avoiding potential errors in re-keying information.

Any of the saved, pre-programmed or custom tests can easily be combined into a sequence for automatic execution. When the sequence is run, WIN 2025 executes each of the tests in turn, without any need for further operator intervention. This allows engineers to optimise test procedures and to manage laboratory test time efficiently for maximum throughput.

Professional Reporting
A sophisticated report generator provides automatic reporting of results in a professional format - with a facility for on-line addition of engineers' comments. These records provide an invaluable reference for design engineers throughout the verification process and meet legal requirements for proof of compliance testing.

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NSG 2025 - Available Models

Type	max. burst amplitude	max. burst frequency	coupling
NSG 2025 - 7	8kV	500kHz	1-phase, 30A
NSG 2025 - 8	8kV	500kHz	3-phase, 30A per phase

Options

WIN 2025	Software control package
CDN 8015	Capacitive coupling clamp according to IEC 61000-4-4 with SHV connector and interlock, including interconnection cables
INA 161	Rack mounting brackets.

Adapters for EUT connection with national plugs

INA 250	IEC 309 32A 3-phase (red) for max burst voltage 8kV
INA 251	IEC 309 16A 1-phase (blue) for max burst voltage 8kV
INA 252	Germany, Schuko 1-phase 16A
INA 253	Switzerland, 1-phase 10A
INA 254	France, 1-phase 16A
INA 255	GB, 1-phase 13A
INA 256	US, 1-phase 15A
INA 260	Warning lamp assembly
INA 261	Separate SHV plug for 5mm cables
INA 262	Universal safety plug set
INA 303A	Optical link set (230V), 10m opto cable
INA 304A	Optical link set (115V), 10m opto cable
INA 305A	Optical link set (100V), 10m opto cable

UKAS Calibration option

Technical Specifications

Pulse amplitude	200V to 8kV (open circuit) in steps of 10V	Pulses per packet	1 to 150 pulses
Polarity	+ or - selectable	Burst repetition	100ms to 10s ± 2ms or 2%
Rise time	5ns ± 30% (10-90%)	Impedance	50Ω ± 20%
Pulse width	50ns ± 30% (50Ω / < 2Ω), 100ns ± 50% (> 1kΩ)	Phase angle	asynchronous/synchronous 0 - 360° ± 2°
Burst frequency	0.1kHz to 500 kHz ± 2%		