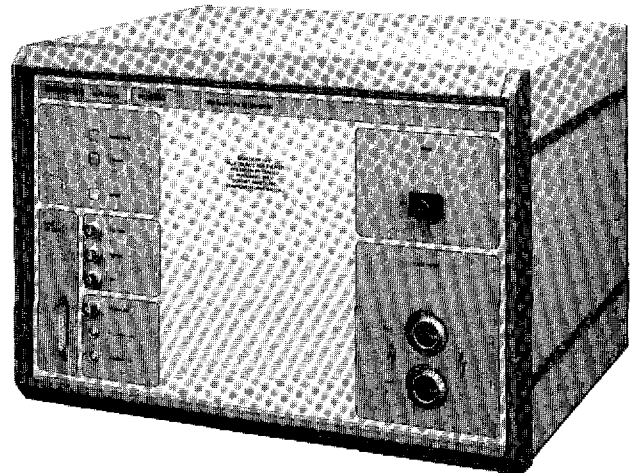


High Energy Pulse Generator NSG 650

- **Surge pulses** $1.2/50 \mu s$
 $8/20 \mu s$
 $>6kV/3 kAmps$
- **Ring wave** $0.5 \mu s/100 kHz$
 $>6kV/500 Amps$
- **Floating output**
- **Fully computer controlled**
- **Operating software included**
- **Automatic sequence programming**



The High Energy Pulse Generator NSG 650 produces hybrid pulses of the shape $1.2/50 \mu s$ (open circuit) $8/20 \mu s$ (short circuit) as well as the $0.5/100 kHz$ Ring wave pulse.

The unit thus complies with the standards and recommendations IEC 801-5, ANSI-IEEE C62.41, IEEE 587, VDE 0109 etc.

The NSG 650 is operated via a personal computer (IBMXT,AT or compatible). Alternatively the user can integrate the Generator into an existing computer environment.

The operating software supplied provides unique features which are otherwise not possible with front panel controls. This includes freely programmable test sequences which can be stored for further or repetitive use and which can be filed together with the test results.

To ease the operators task, the user-machine interface is designed in a menu structure.

Test parameters may be defined in 4 different modes:

- Single pulse
- Incremental voltage sequence
- Incremental phase angle sequence
- User-defined sequence of test profiles

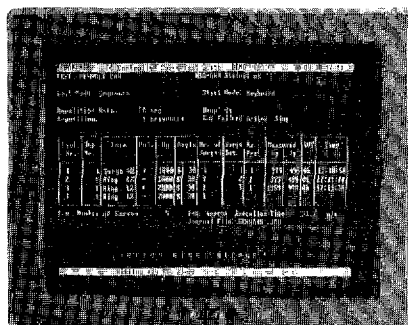
During the test the actual pulse peak values (V_p and I_p) at the EUT are measured and displayed. All the test parameters, including the status of the EUT are filed and can be printed in a table form.

Optionally, a digital I/O-board can be fitted for the automatic setup of an appropriate coupling network and interaction with other elements in the test setup.

For the coupling of the pulses on ac lines a matching coupling network CDN 110 is available.

In addition, a range of accessories such as test enclosures, warning lamps etc. is available to simplify the test set-up.

Considerable attention has been paid to the matter of personnel protection. Software checks are backed by visual and audible alerts and by hardware interlocking mechanisms.



Example of the TEST menu

Technical specifications

Instrument supply	115 V or 230 Vac, +15%/- 20% 50/60 Hz, 115 Watts approx.
Type of pulses:	
Surge	1, 2/50 μ s (open circuit) 8/20 μ s (short circuit) 200 V to 6.6 kV $\pm$ 10% up to 3.3 kAmps at 6.6 kV dyn. imp: low 2 Ohms high 12 Ohms
Ring wave	0.5 μ s/100 kHz 200 V to 6.6 kV up to 500 Amps dyn. imp: low 12 Ohms high 30 Ohms
Polarity	+ / -
Pulse outputs	floating
Controls	No front panel controls. All functions controlled via PC with the NSG 650 operating software
Type of PC	IBM compatible with min. 640 KB of memory
Interface	serial, RS 232C (Com 1)
Program menus	Diagnostics Parameter setup Journal Test File handling
Operating modes	Single pulse Increment voltage sequence Increment phase angle seq. User-defined sequence of test profiles
Parameters	Type of pulse: Surge (high imp.) Surge (low imp.) Ring (high imp.) Ring (low imp.) Voltage Voltage step Polarity Synchronous / asynchronous Phase angle (rel. to line) Phase angle step Repetition rate Number of surges Number of sequences

Start trigger	Keyboard and external
Peak detector	Vp and Ip measured at output and digitally reported to result table
EUT failure	Stop or continue mode
Optional Aux. I/O	8 input, 16 output, isolated
Monitor outputs	V(t), I(t) for oscilloscope
Test reports	automatic recording of test setup and test results with user-definable header
Safety interlock	Hardware and software safety provisions
Self diagnostic	on power up or on request, reporting statis- tics
Mechanical	Width: 449 mm (17.7") Height: 310 mm (12.2") Depth: 500 mm (19.7")
Weight	approx. 33.5 kg

Ordering informations

NSG 650	High Energy Pulse Generator The unit is supplied complete with the operating software, training software (both running on a IBM-PC or compatible), fil- tered monitor cables for an oscilloscope and is ready to be interconnected with the optional pulse coupling networks.
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Optional accessories

CDN 110	Surge coupling network, single phase
CDN 115	Signal-Line coupling network
INA 110-40	40 Ω resistor to be used with CDN 115
INA 120	Test enclosure
INA 121	Component test box
INA 140	Warning lamps
INA 161	Brackets for mounting in a 19" rack
INA 301	Opto link, 10 m, powered from datalines
INA 303	Opto Link, 10 m, with p. s. 230 Vac
INA 304	Opto Link, 10 m, with p. s. 115 Vac
150-828	HV coaxial connector (to use unit without CDN 110, e. g. for component testing) 2 off are needed
402-741	HV coaxial cable, 2m

Subject to change without notice

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