High-Voltage Impulse Generator

PG 14 - 1960

Lightning surge

10 / 700 µs
and
0.5 / 700 µs

Output voltage

0.2 - 14 kV

acc. to CCITT, CNET etc.

The high-voltage impulse generator PG 14-1960 generates standard impulse voltages with waveforms 10/700 µs. The output waveform can be switched to 0.5/700µs wave. Output voltage is adjustable between 0.2 kV and 14 kV. The polarity of the output voltage is selectable. Positive, negative or alternating polarity of the output voltage can be pre selected.

It is designed for dielectric testing of components and systems acc. to CCITT-K17/K20/K22, ITU-T/K44, IEC 61000-4-5, EN 61000-4-5, VDE 0847. Two high-voltage outputs with a series resistor of 25 Ω for direct testing of A - B wires are available.

External Coupling networks designed for testing telecom equipment with up to 80 ports at reduced output voltage are available. They are controlled from the generator via optical-link.

A built-in voltage divider 1000:1 allows monitoring of the impulse output waveform during testing.

PG 14-1960 features a microprocessor controlled user interface and display unit for ease of use. The microprocessor allows the user to execute either standard test routines, or a ´user defined´ test sequence. The test parameters, which are shown on the built in display, are easily adjusted by means of the rotary encoder. A standard parallel interface provides the ability to print a summary of the test parameters whilst testing is being carried out.

Moreover, all generator functions may be computer controlled via the isolated optical interface. The software program PG 14-2k allows full remote control of the test generator and documentation and evaluation of test results.

Technical specification: High-voltage Pulse Generator PG 14-1960

Mainframe:

Microprocessor controlled LCD module	8*40 characters
Parallel printer interface for on-line documentation	25-way ´D´ connector
Optical-interface for remote control of the generator	built-in
External Trigger input	10 V at 1 kΩ
External Trigger output	10 V at 1 kΩ
Diagnostic input for monitoring of the test device	four channels, 5 V - Level
Connector for external safety interlock loop	24 V =
and external red and green warning lamps acc. to VDE 0104	230 V, 60W
Mains power	230 V, 50/60 Hz
Dimensions: 19"-cabinet	555*604*600 mm^3
Weight	96 kg

High-voltage pulse generator

Impulse output voltage, adjustable	0.2-14.0 kV ± 5%
Polarity of output voltage/current, selectable	pos/neg/alt
Charging time	< 25 sec
Pulse forming networks:	selectable
a) Impulse voltage 10/700µs acc. to CCITT K17/K20	PFN 10/700
Energy storage capacitor	20 µF / 14.6 kV
Discharging resistor / Series resistor	50 Ω / 15 Ω
Load capacitance	0.2 µF
Wave form: front time/tail time	10 / 700 µs ± 20%
b) Impulse voltage 0.5/700 µs acc. to CNET	PFN 0.5/700
Load capacitance	0.007 µF
Wave form: front time/tail time	0.5 / 700 µs ± 30/20%
Two impulse voltage outputs of the rear panel	coaxial
current limiting resistors	25 Ω / 25 Ω
Monitor output for pulse output voltage	ratio = 1000 : 1 ± 5%

OPTION 1: PG 14-2k software test package, for the external control of the device includes 5 m long fibre optic cable and PC Interface.

Additional accessories available: Test cabinet: PA 502
Coupling/decoupling networks CDN 5-80, etc