

High-Voltage Pulse Generator

IPG 809

Surge testing of
X- and Y- capacitors

$C_x = 0.1 - 27 \text{ nF}$

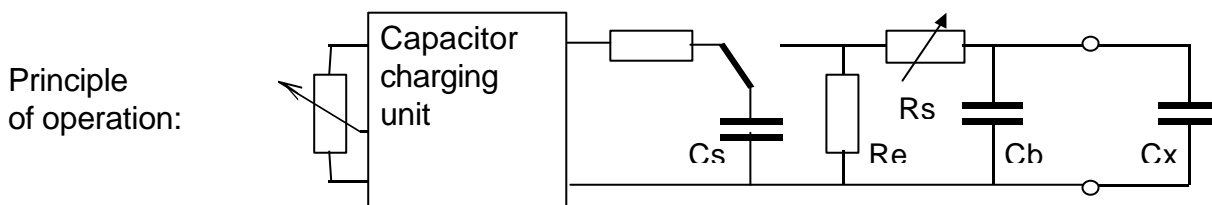
1.2/50 μs
0.2 - 8.0 kV

IEC 384-14, EN 132400
VDE 0565 (1999)



The High-Voltage Pulse Generator Type IPG 809 is designed for dielectric testing of X- and Y- capacitors with standard impulse voltages 1.2/50 $\mu\text{s} \pm 30\%$ up to 8 kV acc. to IEC 384-14, EN 132400, VDE 0565(1999) etc.

The output peak voltage can be preset continuously from 0.2 - 8 kV. The pulse-forming network allows generation of waveforms 1.2/50 μs across capacitive loads from 100 pF to approx. 27 nF within given tolerances. A built-in voltage divider allows monitoring of the output voltage waveform during testing.



The high-voltage output terminals are located on the top of the generator. A dielectric cover with safety interlock protects them. Upon lifting of the cover, switching-off of the generator or mains blackout the test a built-in high-voltage grounding switch discharges object and the internal energy storage capacitor. Test devices are connected to a plug-in test adapter.

The pulse generator IPG 809 features a microprocessor controlled user interface and display unit for ease of use. The microprocessor allows the user to operate the generator manually or to generate, save and execute a 'user defined' test sequence. The test parameters, charging voltage, polarity number of pulses, pulse repetition time 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 generator excels by it's compact design, simple handling and precise reproducibility of test pulses.

The generator uses maintenance-free semiconductor switches for surge current generation.

Technical specifications

IPG 809

Mainframe:

Microprocessor controlled LCD module	8*40 characters
Optical-interface for remote control of the generator	built-in
Parallel printer interface for on-line documentation	25-way 'D' connector
External Trigger input	10 V at 1 k Ω
External Trigger output	10 V at 1 k Ω
Diagnostic input for monitoring of the test device	4 channels, 5 V - Level
Mains power	230 V, 50/60 Hz
Dimensions: 19" desk top case W * H * D	471*165*520 mm ³
Weight	16.5 kg

Pulse forming network for surge testing of capacitors: 0.1 - 27 nF

Surge voltage output amplitude, adjustable via charging voltage	0.2 - 8.0 kV \pm 10 %
Waveform of impulse output voltage	1.2/50 μ s \pm 30/20%
Polarity selectable	pos./neg.

Max. energy content, Cs	9 J
Charging time at max. charging voltage	ca. 2 sec

Internal load capacitor	7800 pF \pm 10%
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Damping resistor, Rs	selectable:
Cx-Range:	Rs:
capacitor under test Cx=18-27 nF (22 nF)	16 Ω
capacitor under test Cx=10-15 nF (12 nF)	22 Ω
capacitor under test Cx=4.7-8.2 nF (6.8 nF)	28 Ω
capacitor under test Cx=0.1-3.9 nF (3.3 nF)	45 Ω

Impulse voltage divider	ratio=1000:1 \pm 2%
Impulse voltage output connector	4 mm \varnothing

Safety test cover:

Mounted on the top of the equipment,	
Safety interlock loop connected to the limit switch	
Dimensions: W * H * D	400*150*250 mm ³

Acc.: power cable, turnkey and instruction manual.

OPTION 1: Software for remote control of the generator, running under Windows 98.
PC Interface card, optically isolated and light guide, 5 m long.