High-Voltage Pulse Generator

IPG 809

Surge testing of
X- and Y- capacitors

Cx = 0.1 - 27 nF

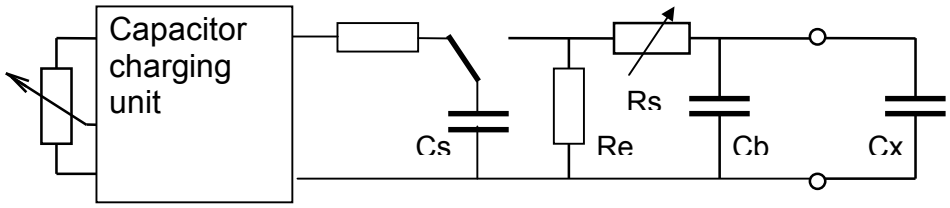
1.7/46 µs
0.2 - 8.0 kV

IEC 60384-14, EN 132400
VDE 0565

The High-Voltage Pulse Generator Type IPG 809 is designed for dielectric testing of X- and Y-capacitors with standard impulse voltages 1.7/46 µs –0/+50% up to 8 kV acc. to IEC 60384-14, EN 132400, VDE 0565 etc.

The output peak voltage can be preset continuously from 0.2 - 8 kV. The pulse-forming network allows generation of waveforms 1.7/46 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.

Principle
of operation:



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 and uses maintenance-free semiconductor switches for surge current generation.

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Technical specifications	IPG 809
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 an 1 kΩ
External Trigger output	10 V an 1 kΩ
Mains power	230 V / 50 /60Hz
Dimensions, 19" desk top case	453*160*520 mm^3
Weight	18kg
Pulse forming network for surge testing of capacitors	**0.1 - 27 nF**
Surge voltage output amplitude, adjustable via charging voltage	0.2 - 8 kV ± 10%
Waveform of impulse output voltage:	
Rise time	1.7 µs –0/+50%
Release time	46 µs –0/+50%
Polarity selectable	pos/neg
Max. energy content	9 Joule
Charging time at max. charging voltage	ca. 2 sec
Internal load capacitor	7800 pF ± 10%
Damping resistor Rs	selectable
Capacitor under test Cx = 18 - 27nF (22 nF)	27 Ω
Capacitor under test Cx = 10 - 15nF (12 nF)	27 Ω
Capacitor under test Cx = 4.7 -8.2nF (6.8 nF)	45 Ω
Capacitor under test Cx = 0.1 - 3.9nF (3.3 nF)	62 Ω
Impulse voltage divider, monitor output, BNC	ü=1000:1 ±2 %
Impulse voltage output connector	4 mm Ø
Safety test cover	
Mounted on the top of the equipment, Safety interlock loop connected to the limit switch	
Dimensions, W * H * D	400 * 130 * 280 mm^3
Accessories	
Power cable, turn key and instruction manual	
Option PC software	
Software for remote control of the generator, running under XP-WIN7, PC Interface USB/RS232, optically isolated and light guide, 5m	

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