

# HV - IMPULSE GENERATOR IPG 620 IPG 1050



**1.2 / 50  $\mu$ s**  
**0.3 kV - 6 kV /**  
**0.3 kV - 10 kV**

**Surge testing acc. to CCITT, ITU-T**

HV - Impulse generators IPG 620 and IPG 1050 create standard impulse voltages with waveform 1.2 / 50  $\mu$ s acc. to IEC 60. The generators simulate surges caused by switching of inductive loads, power system switching, lightning strokes etc.

They are designed for testing of impulse dielectric strength of components, insulation, air-and surface flash-over gaps as well as for testing surge immunity of devices and systems acc. to CCITT - K22, ITU-T-K44.

The peak value of the test voltage is continuously adjustable from 0.2 kV to 6 / 10 kV respectively. Positive and negative polarity of output voltage can be selected. A built-in voltage divider 1000:1 allows monitoring of the impulse output waveform during testing.

The generator features a microprocessor controlled user interface and display 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 IPG-TEST allows full remote control of the test generator, documentation and evaluation of test results.

The generator excels by its compact design, simple handling and precise reproducibility of test impulses.

**Technical specification:**
**IPG 620**
**IPG 1050**
**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 k $\Omega$
External Trigger output	10 V at 1 k $\Omega$

Connectors for external safety interlock loop (not with Opt. 1) and external red and green warning lamps acc. to VDE 0104	24 V =
Mains power	230 V, 60 W
Dimensions: 19" desk top case	230 V, 50/60 Hz
Weight	450*180*425 mm <sup>3</sup>
	16.5 kg

**Generator section:**

Peak value of impulse output voltage, adjustable, $\pm 5\%$	0.3 - 6 kV	0.3 - 10 kV
Waveform of impulse output voltage, acc. to IEC 60	1.2 / 50 - $\mu$ s $\pm 30\%/20\%$	
Max. stored energy	20 Wsec	50 Wsec

Energy storage capacitor	C <sub>S</sub>	1.0 $\mu$ F	1.0 $\mu$ F
Discharging resistor	R <sub>E</sub>	76 $\Omega$	76 $\Omega$
Series resistor	R <sub>S</sub>	13 $\Omega$	13 $\Omega$
Load capacitance	C <sub>B</sub>	0.03 $\mu$ F	0.03 $\mu$ F
Resistor in series to the output	R <sub>O</sub>	25 $\Omega$	25 $\Omega$
Output polarity, selectable		pos./neg.	

Trigger:	a) manual	push button
	b) external Trigger input	10 V / 1 k $\Omega$
	c) internal, automatic, adjustable via test procedure	1 - 1000 pulses
	Repetition time, selectable	5-1000 sec 10-1000 sec

CURRENT SENSE, threshold value, selectable	/ $\mu$ As	300 - 3000	500 - 5000
range of operation, impulse voltage setting:		0.5 - 6 kV	1.0 - 10 kV

Impulse voltage divider, built-in	ratio 1000:1 $\pm 2\%$
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**OPTION 1:** Protective cover on the equipment top, PA 503, safety interlock switch connected to the safety interlock loop, red and green warning lamps installed.

**OPTION 2:** Software IPG-TEST for remote control of the generator, incl. light guide, l = 5 m, and PC-Interface.