

PG 6-401

Impulse voltage tests of X- and Y- capacitors

Generator	PG 6-401
Surge voltage 1.6 / 47 μ s	0.2 – 6 kV
Capacitors	27 nF – 470 nF



According to

IEC 60384-11

EN 132400

VDE 0565

The High-Voltage Pulse Generator Type PG 6-401 is designed for dielectric testing of X- and Y-capacitors with standard impulse voltages 1.6/47 μ s up to 6 kV acc. to IEC 384-14, etc. The generator has the same principle of operation as the IPG 809 but allows testing capacitance values of 33 nF - 470 nF.

The impulse voltage output connectors are located at the top of the equipment and are protected by a dielectric cover with safety interlock. Upon lifting of the cover, switching-off of the generator or mains blackout a built-in high-voltage grounding switch discharges the test object and the internal energy storage capacitor.

Test devices are connected to a plug-in test adapter.

The PG6-401 excels by its compact design, simple handling and precise reproducibility of test impulses. The output current- and voltage waveforms, due to built-in sensors, can be recorded via separate signal outputs for current and voltage.

The generator features a microprocessor controlled user interface and a 7" touch screen 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 touch screen.

A standard USB port provides the ability to print a summary of the test parameters to a USB stick.

Moreover, all generator functions may be computer controlled.

The software program PG-REMOTE allows full remote control of the test generator via fiber optic Ethernet interface as well as documentation and evaluation of test results, accordingly to the IEC 17025. To record definite impulses, it is equipped with an Impulse Recording Function (IRF)

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

Options	PG 6-401
PROTECTIVE COVER ON THE EQUIPMENT TOP	
With safety interlock switch, connected to the safety interlock loop, red and green warning lamps installed acc. VDE 0104	
Type PA 503, Dimensions W * H * D	400 * 140 * 300 mm ³
PC software for remote control	
PG-REMOTE	
PG Remote software test package, running under Microsoft Windows, for the external control of the device (XP, WIN7, WIN10) includes 5 m long fibre optic cable and Ethernet PC Interface	
CAPACITOR-CALIBRATION-KIT	
CCK	
27nF,45nF,68nF,113nF ± 3%	

TECHNICAL SPECIFICATIONS		PG 6-401
Mainframe		
Microprocessor controlled touch panel		7", capacitive
Optical Ethernet Interface for remote control of the generator		optional
Interface for saving reports		USB
External Trigger input / output		Switch / 10 V
Connector for external safety interlock loop		24 V =
and external red and green warning lamps acc. to VDE 0104		24 V=, 40 mA
Mains power		230V, 50/60 Hz
Dimensions: desk top case W * H * D		450 * 330 * 500 mm ³
Weight		22 kg
High- Voltage Pulse Generator:		
Impulse output voltage, adjustable $\pm 5\%$		0.2 – 6.0 kV $\pm 5\%$
Waveform of Impulse output voltage		
Risetime		1.6 μ s -0/+50%
Backtime		47 μ s -0/+50%
Polarity, selectable		pos./neg.
Maximum stored energy Cs		400 J
Charging time for max. charging voltage		approx. 14sec
Interior load capacitance Cp		3300 pF $\pm 10\%$
Pulse forming networks to test solar modules:		Cp = 27 - 470nF selectable
Area	EUT capacitances nominal	range of EUT capacitances
1	33nF	27 - 39 nF
2	47 nF	39 - 56 nF
3	68 nF	56 - 82 nF
4	100 nF	82 - 120 nF
5	150 nF	120 - 180 nF
6	220 nF	>180 nF
7	330 nF	330 nF
8	470 nF	470 nF
Spark-over detection:		PASS / FAIL
Impulse current output: on the generator's rear panel		HV female connector
Impulse high voltage dividers to observe the impulse wave shape		built-in
ratio		1000 : 1 $\pm 2\%$
Accessories		
Mains cable, key, HV-connection cable, operation instructions		