

HIGH-VOLTAGE PULSE GENERATOR

PG 5-200-2

Switching Surge
10 / 700 μ s

Lightning Surge
1.2 / 50 μ s

CCITT K17-K22
ITU – T, K44



The high-voltage pulse generator PG 5-200 creates standard impulse voltages with waveforms 1.2/50 μ s and 10/700 μ s. It is designed for dielectric testing of components and systems as well as testing of the electromagnetic compatibility of electronic systems and devices acc. to CCITT-K17/K20/K22, ITU-T/K44, IEC 61000-4-5 etc.

Output impulse voltage waveform can be selected:

- Lightning Surge with waveform 1.2/50 μ s acc. to IEC 60060
- Switching Surge with waveform 10/700 μ s acc. to IEC 60060

The peak value of the test voltage is continuously adjustable from 0.2 kV to 5 kV. Positive or 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 PG 5-200 excels by its compact design, simple handling and precise reproducibility of test impulses. The generator uses maintenance-free semiconductor switches.

The generator excels by its compact design, simple handling and precise reproducibility of test impulses. It features a microprocessor controlled user interface and a 5" touch screen unit for ease of use. The microprocessor allows the user to execute either standard test routines or a "user defined" test sequence. A standard USB port provides the ability to print a summary of the test parameters to a USB stick.

The software program HILO-REMOTE allows full remote control of the test generator via Ethernet light guide 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). Moreover all generator functions may be computer controlled via the isolated optical interface.

External coupling networks designed for testing telecom equipment with up to 8 ports are available.

Technical specification:		PG 5-200-2	
Mainframe			
Microprocessor controlled touch panel		5", 800X480, 24 bit	
Optical Ethernet Interface for remote control of the generator		optional	
Interface for saving reports		USB	
External trigger input /output		10 V at 1 k Ω	
Nominal voltage, nominal current		250 V, 16 A $\approx$ / 10 A =	
Connector for external safety interlock loop		24 V =	
External red and green warning lamps		230 V, 60W	
Mains power		230 V, 50/60 Hz	
Dimensions of desk top case W * H * D		450*185*500 mm ³	
Weight		25 kg	
Generator section:			
Peak value of impulse output voltage, adjustable, 1 V steps		200 V - 5000 V $\pm$ 10%	
Waveform of impulse output voltage, acc. to IEC 60600		selectable:	
Surge waveform, acc. IEC60600-1		1.2/50 μ s 30/ $\pm$ 20%	10/700 μ s $\pm$ 30/ $\pm$ 20%
Energy storage capacitor	C _S	1.0 μ F	20 μ F
Max. stored energy	W _E	10 J	200 J
Discharging resistor	R _E	75 Ω	50 Ω
Damping Resistor	R _D	15 Ω	15 Ω
Load capacitance	C _B	0.03 μ F	0.2 μ F
Resistor in series to the output R _S		0 Ω R _{Ges} =R _D +R _S = 15 Ω	2 * 25 Ω R _{Ges} =R _D +R _S = 40 Ω
Output polarity, selectable		pos / neg /alt	
Trigger: a) manual		push button	
b) external Trigger input		10 V / 1 k Ω	
c) internal, automatic, adjustable via test procedure		1 – 1000 pulses	
Repetition time, selectable		5-1000 s	20-1000 s
Impulse voltage divider, built-in		ratio= 1000:1 $\pm$ 2 %, 50 W	
Current Sense:			
Threshold value, selectable		1-500 μ As	1-2500 μ As
Current sense working range		0.2 kV - 5kV-max	
Impulse voltage divider, built-in		ratio 1000:1 $\pm$ 2%	
HV output, HV-OUT		HV connector	
Mains synchronous triggering, phase shifting, digitally selectable		0 - 360 °, step 1°	
Accessories: power cable, turn key, instruction manual			
Option :			
Software IPG-REMOTE, for remote control			
With Impulse Recording Function (IRF)			
(XP, WIN7) incl. 5 m fibre optic cable and PC Ethernet interface			
Option:			
External coupling / decoupling network, CDN 304, 4 wire, acc. IEC 61000-4-5			