

HIGH-VOLTAGE IMPULSE GENERATOR

PG 6 - 364

Lightning surge:
1.2 / 50 μ s

Switching surge:
10 / 700 μ s

0.5 / 700 μ s
1.0 / 700 μ s
0.5 / 1000 μ s
1.0 / 1000 μ s

CCITT, ITU-T, IEC, VDE



The high-voltage impulse generator PG 6-364 generates standard impulse voltages with waveforms 1.2/50 μ s and 10/700 μ s. Output voltage is adjustable between 0.2 kV and 6 kV. The polarity of the output voltage is selectable. Positive, negative or alternating polarity of the output voltage can be preselected.

The generator 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 / ITU-T K17/K20/K22, IEC 1000-4-5, EN 61000-4-5, VDE 0847.

PG 6-364 features a microprocessor controlled user interface and display 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 the rotary encoder. A standard parallel interface provides the ability to print a summary of the test parameters whilst testing is being carried out.

The PG 6-364 excels by its compact design, simple handling and precise reproducibility of test impulses. A built-in voltage divider 1000:1 allows monitoring of the impulse output waveform during testing.

Moreover, all generator functions may be computer controlled via the isolated optical interface. The software program PG 6-364 allows full remote control of the test generator and documentation and evaluation of test results.

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
Optical-interface for remote control of external CDN's	built-in
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
Connector for external safety interlock loop	24 V =
and external red and green warning lamps acc. to VDE 0104	230 V, 60W
Mains power	230 V, 50/60 Hz
Dimensions: desk top case W * H * D	453*320*520 mm ³
Weight	35 kg

HV-unit, pulse forming networks:

Charging voltage, adjustable	0 - 6.3 kV
Polarity of the output pulse voltage selectable	pos/neg/alt
Charging time	< 15 sec
Impulse voltage outputs of the rear panel	coaxial
current limiting resistors	0 Ω / 25 Ω / 25 Ω
Impulse voltage divider integrated	ratio = 1000:1 \pm 2%

Pulse forming networks, built-in

a) Impulse voltage 1.2/50 μ s acc. to CCITT / ITU-T K22	switchable
Energy storage capacitor	1.0 μ F / 6.3 kV
Max. stored energy	20 J
Discharging resistor	75 Ω
Series resistor	13 Ω
Load capacitor	0.03 μ F
Wave form: front time/tail time	1.2 / 50 μ s \pm 20%
b) Impulse voltage 10/700 μ s acc. to CCITT / ITU-T K17/K20, IEC 1000-4-5	
Energy storage capacitor	20 μ F / 6.3 kV
Max. stored energy	400 J
Discharging resistor	50 Ω
Series resistor	15 Ω
Load capacitance	0.2 μ F
Wave form: front time/tail time	10 / 700 μ s \pm 20%
c) Additional wave forms, see OPTION 2	

OPTION 1: PG 6-364 software test package, running under Microsoft Windows, for the external control of the device, includes 5 m long fibre optic cable and PC Interface.

Additional accessories available:

Coupling network 4 * 100 Ω	KN 100-4
Coupling network	CDN 5-80
Test cabinet	PA 501

OPTION 2:	One additional wave form, alternative		built-in
	Energy storage capacitor		20 μ F / 6.3 kV
	Max. stored energy		400 J
Option 2.1:	Impulse voltage 0.5/700 μ s acc. to CNET		PFN 0.5/700
	Discharging resistor	50 Ω	
	Series resistor		15 Ω
	Load capacitance		0.007 μ F
	Wave form: front time/tail time		0.5 / 700 μ s \pm 30/20%
Option 2.2:	Impulse voltage 1/700 μ s		PFN 1/700
	Discharging resistor	50 Ω	
	Series resistor		15 Ω
	Load capacitance		0.015 μ F
	Wave form: front time/tail time		1 / 700 μ s \pm 30/20%
Option 2.3:	Impulse voltage 0.5/1000 μ s acc. to CNET		PFN 0.5/1000
	Discharging resistor	75 Ω	
	Series resistor		15 Ω
	Load capacitance		0.007 μ F
	Wave form: front time/tail time		0.5 / 1000 μ s \pm 30/20%
Option 2.4:	Impulse voltage 1/1000 μ s		PFN 1/1000
	Discharging resistor	75 Ω	
	Series resistor		15 Ω
	Load capacitance		0.015 μ F
	Wave form: front time/tail time		1 / 1000 μ s \pm 30/20%