

SURGE CURRENT GENERATOR PG 6 - 432

Surge current
2 * 5 - 100 A

10/700 μ s
10/1000 μ s

Impulse Life Test /
Hold-over Test
acc. to CCITT, K12



The Surge Test Generator PG 6-432 produces impulse currents with standard waveforms 10/700 μ s or 10/1000 μ s. Testing two-gap over-voltage protectors the generator delivers simultaneous at two outputs impulse currents adjustable up to 100 A each. The pulse-forming network contains a high pulse-fidelity current viewing resistor for measurement of the output current amplitude and waveform with a scope.

For IMPULSE LIFE TEST of overvoltage protectors according to CCITT-K12, impulse currents up to 200 A can be generated by connecting the two output terminals in parallel. A presettable pulse counter allows generation of 1 - 1000 pulses with the same specification. Up to five devices can be tested successively with pulse repetition rate adjustable, 10 -1000 sec. Pulse polarity may be selected positive, negative or alternating.

Moreover, the generator contains all additional wiring, adjustable power supplies PS1 and PS2, relays for polarity reversal and monitor outputs to execute HOLD OVER TEST of two-gap over-voltage protectors according to CCITT K12.

Test devices are connected to a plug-in test adapter. The impulse current 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 the test object and the internal energy storage capacitor are discharged by a built-in high-voltage grounding switch.

The surge current generator PG 6-432 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, and the output voltage of the power supplies PS1 and PS2, 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 its compact design,

simple handling and precise reproducibility of test pulses. The generator uses maintenance-free semiconductor switches for surge current generation.

Technical specification:

PG 6-432

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 kΩ
External Trigger output			10 V at 1 kΩ
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			25 kg

Pulse forming network:

surge current

10/700μs, 10/1000μs

Charging voltage, adjustable			0.2 - 6.3 kV
Surge current output amplitude, adjustable via charging voltage (by connecting the two output terminals in parallel a total output current of 200A is available)			5 - 100 A ± 5 %
Polarity of output current, selectable			pos/neg/alternating
Waveform:			selectable
PFN 1: front time / time to half value			10/700 μs ± 20%
PFN 2: front time / time to half value			10/1000 μs ± 20%
Max. stored energy			432 Joule
Charging time for max. charging voltage			< 8 sec
Pulse current output terminals: 3 terminals for 5 test devices			4 mm Ø, connector
Monitor output for pulse output current			10V ≙ 200 A ± 1%
Pulse counter, digitally preset able			1 - 1000
Pulse repetition rate, selectable			10 - 1000 sec
Successive changeover switching of 5 devices		built-in	

Additional parallel impedances acc. to CCITT-K12:

R2 + C1		150 Ω+100 nF, 272 Ω+ 43 nF
R3, two pieces each		260 Ω, 330 Ω, 750 Ω, 1300 Ω
R4 + C2, two pieces each		136 Ω / 145 Ω + 83 nF
Serial diode with switchover relays, 2 pieces		built-in
Switchover relays for polarity reversal of PS1 and PS2		built-in
Power supplies PS1 and PS2, built-in		30 - 150V, 1A

Safety test cover:

mounted on the top of the equipment, safety interlock loop
connected to the limit switch, red an green warning lamps installed,
plug-in test adapter for 5 test samples.

Dimensions:	W * H * D	400*150*250 mm ³
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