

# Surge Current Generator PG 20 - 10k

Waveform  
8/20  $\mu$ s +/-10%

Surge current  
amplitude:  
up to 70 kA

acc. Standard IEC 61643-11

The surge current generators PG20-10k generates standard impulse currents with waveform 8/20  $\mu$ s according to IEC, EN, VDE. Pulse current output amplitude is controlled by preset charging voltage and can be adjusted up to 70 kA.

The generator is designed for testing electrical components, over-voltage protectors and surge protection devices. The generator possess an electronically regulated high-voltage power supply, which allows an excellent reproducibility of the pulse output amplitude.

The pulse-forming network contains a pulse-fidelity current viewing resistor for monitoring the output waveform. The impulse current output is located at the top of the equipment and provides high-current bolts M12 with a changing test adapter M12.

The generator features a microprocessor controlled user interface and display unit for ease of use. The microprocessor allows the user to either execute 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.



TECHNICAL SPECIFICATIONS	PG 20-10k
<b>Control unit:</b>	
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
Diagnostic input for monitoring of the test device	4 channels, 5 V - Level
Mains supply voltage	230V / 50-60 Hz
Build in 19"-cabinet	
Internal red and green warning lights according to VDE 0104	220V/60W
<b>Pulse generator section:</b>	
Peak value of charging voltage, adjustable,	0 - 20 kV, ± 2%
Max. stored energy	10 000 Ws
Charging time for max. charging voltage	< 80 sec
Waveform of impulse output current	8 / 20 μs ± 10 %
Impulse output current, adjustable via charging voltage	5 - 70 kA ± 10 %
Pulse repetition rate for 70kA	1/83 sec
Pulse repetition rate for 40kA	1/47 sec
Output pulse polarity, switchable	POS/NEG/ALT
Current viewing resistor, built-in	0.25 mΩ, 10 MHz
Impulse current output terminals: in the test chamber	M12 bolts
test adapter on the output terminals	M12 bolts
Ground rod	0,6 m
Dimensions: 19"-cabinet W * H * D	ca. 560*1950*950 mm <sup>3</sup>
Weight	200 kg
<b>OPTION 1:</b> Remote control PC Software Incl. 5 m long fibre optic cable and USB-PC Interface ( XP, WIN7 )	
<b>OPTION 2:</b> Test chamber on top, build in 19" rack, with security glass door, safety interlock protects the high-voltage output terminals. Upon opening of the door, 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 space ca. W*H*D 470*530*490 mm <sup>3</sup>	
<b>OPTION 3:</b> Current impulse triggering synchronization 0-360° to the zero crossing of the sinusoidal mains voltage, phase angle in steps of 1°. Mains power (E.U.T. power supply) 400Veff / 50Hz Without decoupling from HV – power supply.	
<b>OPTION 4:</b> Galvanic isolated measurement of current impulse with a Pierson coil.	
<b>OPTION 5:</b> Polycarbonate security door with solid hinges and fasteners made of stainless steel.	