SURGE GENERATOR
PG 6 - 500

Surge voltage
2 / 10 µs
0.2 - 5.0 kV

Surge current
2 / 10 µs
100 / 500 A

acc. to GR-1089-CORE

The surge generator PG 6-500 is a combined impulse-current-/impulse-voltage generator (combination wave generator) which, for high-impedance loads, RL > 100Ω, delivers a standard impulse voltage with waveform 2 / 10 µs and, for short-circuited output, a standard impulse current with waveform 2 / 10 µs.

The generator is designed for testing 2-wire and 4-wire telecom ports according to Fig. 4.2 of GR-1089-CORE standard.

Following test levels can be selected:

First-Level Lightning Surge	± 2500 V	500 A	2/10 µs	max. 4 wires
Second-Level Lightning Surge	± 5000 V	500 A	2/10 µs	max. 4 wires
Intra-Building Lightning Surge	± 800 V	100 A	2/10 µs	max. 4 wires
Intra-Building Lightning Surge	± 1500 V	100 A	2/10 µs	max. 4 wires

Moreover, the connections to the test object and the ground connections of unused inputs can be selected from the front panel of the generator:

Test Mode:	T ⇒ GND	TIP to generator	RING, T1 and R1 grounded
	R ⇒ GND	RING to generator	TIP, T1 and R1 grounded
	T1 ⇒ GND	T1 to generator	RING, TIP and R1 grounded
	R1 ⇒ GND	R1 to generator	RING, TIP and T1 grounded
	T&R ⇒ GND	TIP & RING to generator	T1 and R1 grounded
	T1&R1 ⇒ GND	T1 & R1 to generator	TIP and RING grounded
	ALL ⇒ GND	T, R, T1 & R1 to generator	

PG 6-500 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 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.

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The PG 6-500 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.

Technical specification	**PG 6-500**
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
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*580 mm^3
Weight	35 kg

SURGE	**according to GR-1089-CORE**	
	Impulse voltage, adjustable (open loop output)	0.2 - 5 kV, +15%/-0%
	Impulse current (output short circuited with 1m cable)	100 / 500 A, +15%/-0%
	Front-time, of open loop output voltage	2 µs +0%/-50%
	Time to half value, of open loop output voltage	10µs +50%/-0%
	Front-time, of short circuit output current, 4 wires	2 µs +0%/-10%
	Time to half value, of short circuit output current, 4 wires	10µs +10%/-0%
	Front-time, of short circuit output current, 2 wires	2 µs + 0%/-20%
	Time to half value, of short circuit output current, 2 wires	10µs +20%/-0%

Following test levels can be selected:

First-Level Lightning Surge	± 2500 V, 4*500 A
Second-Level Lightning Surge	± 5000 V, 4*500 A
Intra-Building Lightning Surge	± 800 V, 4*100 A
Intra-Building Lightning Surge	± 1500 V, 4*100 A

Test mode selectable:

Test Mode:		
	T ⇒ GND	TIP to generator, RING, T1 and R1 grounded
	R ⇒ GND	RING to generator, TIP, T1 and R1 grounded
	T1 ⇒ GND	T1 to generator, RING, TIP and R1 grounded
	R1 ⇒ GND	R1 to generator, RING, TIP and T1 grounded
	T&R ⇒ GND	TIP & RING to generator, T1 and R1 grounded
	T1&R1 ⇒ GND	T1 & R1 to generator, TIP and RING grounded
	ALL ⇒ GND	T, R, T1 & R1 to generator

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Polarity of pulse output voltage/current, selectable	pos/neg
max. stored energy	500 Joule
Charging time for max. charging voltage	< 20s
Display of peak values of output voltage / current	built-in
Monitor output for impulse output voltage	ratio = 500 : 1 ± 5%
Monitor output for impulse output current	5V ≡ 500 A ± 5%

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