

IPG 506

FRONT-CHOPPED-WAVE GENERATOR

Measurement of dc spark-over voltage
and impulse spark-over voltage

Rise of output voltage, selectable:

600 V= : 100 V/s

5 kV impulse: 100V/μs - 5000 V/μs

Insulation resistance 0.5 - 3 GΩ



Picture: incl. Option PA 503

According to CCITT / ITU-T, K12

The front-chopped-wave generator IPG 506 is used for measuring dc spark-over voltage and impulse spark-over voltage of over-voltage protectors according to CCITT / ITU-T, K12.

Dc spark-over voltage:

A linearly rising voltage, rate of rise 100 V/s up to 640 V, is connected to the device under test. The spark-over voltage measured is shown in the display.

Impulse spark-over voltage:

A linearly rising impulse voltage, rate of rise 100 V/μs up to 5000 V/μs, open loop amplitude 5000 V, is connected to the device under test. The spark-over voltage is measured by use of a peak detector. The result is shown in the display. A built-in impulse voltage divider allows measurement of the spark-over voltage by use of an externally connected scope.

Moreover, the insulation resistance of the test device can be measured in the range of 0.5 – 3 GΩ. Test voltage selectable: 50 / 100 V.

The high-voltage output terminals are located on the top of the generator. They are protected by a dielectric cover with safety interlock.

A switch-unit can be integrated, which allows successive testing of up to 8 devices.

The generator excels by its compact design, simple handling and precise reproducibility of test impulses. It features a microprocessor controlled user interface and a 7" 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 IPG-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.

Options	IPG 506
Software IPG-REMOTE, for remote control	
With Impulse Recording Function (IRF)	
(XP, WIN7, WIN10) incl. 5m long light guide and PC Ethernet interface	
PROTECTIVE COVER ON THE EQUIPMENT TOP	
With safety interlock switch, connected to the safety interlock loop, red and green warning lamps installed acc. VDE 0104.	See picture
Typ PA 503, Dimensions W * H * D	400 * 140 * 300 mm ³
Typ PA 505, Dimensions W * H * D	400 * 250 * 400 mm ³

TECHNICAL SPECIFICATION	IPG 506
Mainframe	
Microprocessor controlled touch panel	7", capacitive
Optical Ethernet Interface for remote control of the generator	Optional
Interface for saving reports	USB
External Trigger input/ output	Switch/ 10V
Connector for external safety interlock loop	24 V=
External red and green warning lamps	24 V=, 40 mA
Mains power	90V – 264V / 50/60 Hz
Dimensions of desk top case W * H * D	450*180*500 mm ³
Weight	18kg
Generator section	
Output terminals	8HV x 4 mm Ø, connector
Switch-unit for successive testing of 8 devices	1GND x 4 mm connector
Dc spark-over voltage	
Test voltage, controlled by a 12 bit DAC	640 V
Rate of rise	100 V/sec
Measurement of spark-over voltage, accuracy	12 bit
Impulse spark-over voltage	
Test voltage, amplitude of the open loop impulse voltage	5 kV ± 10%
Rate of rise, selectable	100/200/500 V/µs 1000/2000/5000 V/µs
Repetition time, selectable	5 - 1000 sec
Number of pulses, selectable	1 - 1000
Polarity of output voltage, selectable	pos/neg
Max. stored energy	6 Joule
Measurement of spark-over voltage	500 - 1500 V +5%/-15%
Monitor output for impulse output voltage	ratio 1000:1 ± 3%
Measurement of insulation resistance	
Measuring range of insulation resistance	0.5 kΩ - 3 GΩ
Test voltage selectable	50 V / 100 V