

FRONT-CHOPPED-WAVE GENERATOR

IPG 506 SYM

**Measurement of
DC spark-over voltage and
impulse spark-over voltage
for 3-Pole Gas Discharge Tubes**

**Rise of output voltage, selectable:
600 V = : 100 V/s
5 kV impulse: 100V/μs - 5000 V/μs**

Insulation resistance 0.5kΩ - 3 GΩ

Acc. 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, simultaneous plus and minus, is connected to the device under test. The spark-over voltage of these two simultaneous impulses are measured and shown in the display.

Impulse spark-over voltage:

A linearly rising impulse voltage, simultaneous plus and minus, 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 results of these two simultaneous impulses are shown on the display.

Two built-in impulse voltage dividers allows measurement of the spark-over voltage, plus and minus, by use of an externally connected scope.

Moreover, the **insulation resistance** of the test device can be measured in the range of 0.5 kΩ - 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.

The front-chopped-wave generator IPG 506 feature 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, which are shown on the built-in display, are easily adjusted on the 5" touch screen.

A standard USB interface provides the ability to print a summary of the test parameters and measured values of spark-over voltage whilst testing is being carried out on an USB stick.

TECHNICAL SPECIFICATIONS	IPG 506 SIM
Mainframe	
Microprocessor controlled touch panel	5", 800x480, 24 bit
Optical Ethernet Interface for remote control of the generator	optional
Interface for saving reports	USB
Connector for external safety interlock loop	24 V =
External red and green warning lamps	230 V, 60W
Mains power	230 V, 50/60 Hz
Dimensions of desk top case W * H * D	450*310*500 mm ³
Weight	30 kg
Generator section	
Output terminals	4 mm Ø, connector
DC spark-over voltage, plus and minus simultaneous:	
Test voltage, controlled by a 8 bit DAC	637.5 V
Rate of rise	100 V/sec
Measurement of spark-over voltage, accuracy	12 bit ± 2 digit
Impulse spark-over voltage, plus and minus simultaneous:	
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	3 - 1000 sec
Number of pulses, selectable	1 - 1000
Polarity of output voltage	one pos. / one 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
Safety test cover:	
Mounted on the top of the equipment, type PA 503,	
Safety interlock loop connected to the limit switch	
Dimensions: W * H * D	400*150*400 mm ³
Acc.: power cable, turn-key, instruction manual	