FRONT-CHOPPED-WAVE GENERATOR

IPG 506

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

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 637.5 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 5” 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 generator excels by its compact design, simple handling and precise reproducibility of test impulses. Moreover, all generator functions may be computer controlled via the isolated optical interface.

TECHNICAL SPECIFICATIONS	IPG 506
Mainframe:	
Microprocessor controlled touch panel	5”, 800X480, 24 bit
Optical Ethernet Interface for remote control of the generator	optional
Interface for saving reports	USB
External Trigger input	10 V at 1 kΩ
External Trigger output	10 V at 1 kΩ
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*185*500 mm^3
Weight	18 kg
Generator section:	
Output terminals Switch-unit for successive testing of 8 devices	8HV x 4 mm Ø, connector 1GND x 4 mm connector
Dc spark-over voltage:	
Test voltage, controlled by a 8 bit DAC	637.5 V
Rate of rise	100 V/sec
Measurement of spark-over voltage, accuracy	8 bit ± 2 digit
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 - 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*250 mm^3
Acc.: power cable, turn-key, instruction manual	