

# 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/ $\mu$ s - 5000 V/ $\mu$ s

Insulation resistance 0.5 - 3 G $\Omega$



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/ $\mu$ s up to 5000 V/ $\mu$ s, 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.

Sales Partner:



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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                         |
|--|---------------------------------|
|  |                                 |
| <b>Software IPG-REMOTE, for remote control</b>   |                                 |
| With Impulse Recording Function (IRF)  |                                 |
| ( XP, WIN7, WIN10 ) incl. 5m long light guide and PC Ethernet interface  |                                 |
|  |                                 |
| <b>PROTECTIVE COVER ON THE EQUIPMENT TOP</b>   |                                 |
| 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 <sup>3</sup> |
| Typ PA 505, Dimensions W * H * D   | 400 * 250 * 400 mm <sup>3</sup> |

| TECHNICAL SPECIFICATION  | IPG 506                                 |
|--|---|
| <b>Mainframe</b>   |   |
| 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                           | 230V / 60 W                             |
| Mains power  | 90V – 264V / 50/60 Hz                   |
| Dimensions of desk top case W * H * D                          | 450*180*500 mm <sup>3</sup>             |
| Weight   | 18kg                                    |
| <b>Generator section</b>                                       |   |
| Output terminals   | 8HV x 4 mm Ø, connector                 |
| Switch-unit for successive testing of 8 devices                | 1GND x 4 mm connector                   |
| <b>Dc spark-over voltage</b>                                   |   |
| Test voltage, controlled by a 12 bit DAC                       | 640 V                                   |
| Rate of rise   | 100 V/sec                               |
| Measurement of spark-over voltage, accuracy                    | 12 bit                                  |
| <b>Impulse spark-over voltage</b>                              |   |
| Test voltage, amplitude of the open loop impulse voltage       | 5 kV ± 10%                              |
| Rate of rise, selectable                                       | 100/200/500 V/µs<br>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%                       |
| <b>Measurement of insulation resistance</b>                    |   |
| Measuring range of insulation resistance                       | 0.5 kΩ - 3 GΩ                           |
| Test voltage selectable  | 50 V / 100 V                            |

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