# HILO TEST

# HV - IMPULSE GENERATOR IPG 1272

**1.2 / 50 µs**
**0.3 kV - 12 kV**

**Surge testing acc. to CCITT, ITU-T**



HV - Impulse generators IPG 1272 create standard impulse voltages with waveform 1.2 / 50 µs acc. to IEC 60. The generators simulate surges caused by switching of inductive loads, power system switching, lightning strokes etc.

They are designed for testing of impulse dielectric strength of components, insulation, air-and surface flash-over gaps as well as for testing surge immunity of devices and systems acc. to CCITT - K22, ITU-T-K44.

The peak value of the test voltage is continuously adjustable from 0.3 kV to 12 kV respectively. Positive, negative and alternat polarity of output voltage can be selected. A built-in voltage divider 1000:1 allows monitoring of the impulse output waveform during testing.

The generator output possesses a current monitor detecting breakdown or flashover of the test object. The threshold of the current monitor is adjustable.

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 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.

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| TECHNICAL SPECIFICATIONS | | IPG 1272 |
|---|---|---|
| | | |
| **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*185*500 mm$^3$ |
| Weight | | 18 kg |
| | | |
| **Generator section** | | |
| Peak value of impulse output voltage, adjustable | | 0.3 - 12 kV |
| Tolerance of output voltage amplitude | | |
| Waveform of impulse output voltage, acc. to IEC 60060 | | 1.2/50 µs ± 30 % / 20 % |
| | | |
| Max. stored energy | | 72 Joule |
| Energy storage capacitor | Cs | 1 µF |
| Discharging resistor | $R_E$ | 76 Ω |
| Series resistor | $R_S$ | 13 Ω |
| Load capacitance | $C_B$ | 0.03 µF |
| Resistor in series to the output | $R_O$ | 25 Ω |
| Output polarity, selectable | | pos  / neg / alt |
| Loading time | | 3 sec |
| | | |
| Trigger: a) manual | | push button |
| b) external Trigger input | | 10 V / 1 kΩ |
| c) internal, automatic, adjustable via test procedure | | 1 – 1000 Impulse |
| Repetition time, selectable | | 3–1000 sec |
| | | |
| **Current Sense** | | build in |
| Threshold value, selectable | | 1 - 5000 µAs |
| Current sense working range | | 1 kV - V-max |
| Impulse voltage divider, built-in | | 1000:1 ± 2 % |
| HV output, isolated from ground, HV-OUT | | 0  - 359°, step 1° |
| Mains synchronous triggering, phase shifting, digitally selectable | | HV Stecker |
| | | |
| Accessories: power cable, turn key, instruction manual | | |
| | | |
| **Option :** | | |
| **Protective cover on the equipment top** | | see figure on page 1 |
| With safety interlock switch connected to the safety interlock loop, red and green warning lamps installed | | see figure on page 1 |
| PA 503, Dimensions: | | 400 * 150 * 250 mm³ |
| PA 505, Dimensions: | | 400 * 250 * 400 mm³ |
| | | |
| **Option :** | | |
| **Software IPG-REMOTE,  for remote control** | | |
| With Impulse Recording Function (IRF) | | |
| ( XP, WIN7 ) incl. 5m long light guide and PC Ethernet interface | | |
| | | |
| **Option :** | | |
| **Description of Remote control commands** | | |
| Incl. Ethernet PC-interface and 5m long light-guide | | |