IMPULSE GENERATOR - SYSTEM

EMC 2004

Plug-in system

Different wave forms

Compact

Portable

EMI-Simulator

The impulse generator system EMC 2004 has been designed for dielectric testing of electric components, over-voltage protectors and electronic circuits acc. IEC, VDE etc. The basic version generates impulse currents with waveform 8/20 µs and a peak value up to 25 kA.
In addition, various other plug-ins are also available.

PFN plug-in's:	Peak value	Wave form
Impulse current	**25 kA** **5 kA** **600 A** **300 A** **200 A**	**8 / 20 µs** **10 / 50 µs** **10 / 350 µs** **10 / 700 µs** **10/1000 µs**
Impulse voltage	**10 kV**	**10 / 700 µs**
Combination wave	**2 * 10 kV** **2 * 10 kA**	**1.2 / 50 µs** **8 / 20 µs**

Dependent upon type, pulse forming plug-ins contain high pulse-fidelity current viewing resistors, or voltage dividers, for measurement of the output parameters. The impulse output is located on the top of the equipment and provides high-current connectors for a plug-in test adapter.

The EMC 2004 features a microprocessor controlled user interface and display unit for ease of use. The microprocessor allows the user to either execute standard test routines, or a ´user defined´ test sequence. The test parameters, which are shown on the built in display, are easily adjusted by means of the rotary encoder. A standard parallel interface provides the ability to print a summary of the test parameters whilst testing is being carried out.

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Technical specification:	**EMC 2004**

Mainframe:

Microprocessor controlled LCD module	8*40 characters
Parallel printer interface for on-line documentation	25-way ´D´ connector
Optical-interface for remote control of the generator	built-in
External Trigger input	10 V at 1 kΩ
External Trigger output	10 V at 1 kΩ
Peak value of charging voltage, adjustable,	0 - 10 000 V, ± 2%
Output pulse polarity, switch able	POS/NEG/ALT
max. stored energy	1500 J
Energy storage capacitor, standard version	30µF / 10 kV
Charging time	< 20 sec
Waveform and amplitude of impulse output quantities according to the PFN-network selected	
Connector for external safety interlock loop and external red and green warning lamps acc. to VDE 0104	24 V = 230 V, 60W
Mains power	230 V, 50/60 Hz
Dimensions: desk top case W * H * D	556*470*600 mm^3
Weight	65 kg

Safety test cover:

mounted on the top of the equipment, safety interlock loop connected to the limit switch, red an green warning lamps installed		
Dimensions:	W * H * D	440*180*300 mm^3

OPTION 1: EMC 2004c software test package, for the external control of the device includes 5 m long fibre optic cable and PC Interface.

Impulse current plug-in:	**8 / 20 µs, 25 kA**
Impulse output current, adjustable via charging voltage	2 - 25 kA ± 5 %
Waveform of impulse output current, acc. to IEC 60	8 / 20 µs ±20 %
Ringing	< 30 %
Current viewing resistor, built-in	1 mΩ, 20 MHz

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additional waveform plug-in´s:

Impulse current plug-in:	**10 / 50 µs, 5.0 kA**
Impulse output current, adjustable via charging voltage	0.2 - 5.0 kA ± 5 %
Waveform of impulse output current, acc. to IEC 60	10 / 50 µs ±20 %
Ringing	< 30 %
Current viewing resistor, built-in	1 mΩ, 20 MHz

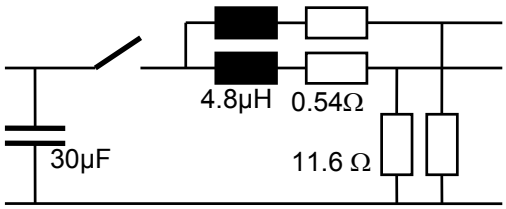
Impulse current plug-in:	**10 / 350 µs, 600 A**
Impulse output current, adjustable via charging voltage	50 - 600 A ± 5 %
Waveform of impulse output current, acc. to IEC 60	10 / 350 µs ±20 %
Ringing	< 30 %
Current viewing resistor, built-in	10 mΩ, 20 MHz

Impulse current plug-in:	**10 / 700 µs, 300 A**
Impulse output current, adjustable via charging voltage	20 - 300 A ± 5 %
Waveform of impulse output current, acc. to IEC 60	10 / 700 µs ±20 %
Ringing	< 30 %
Current viewing resistor, built-in	20 mΩ, 20 MHz

Impulse current plug-in:	**10 / 1000 µs, 200 A**
Impulse output current, adjustable via charging voltage	10 - 200 A ± 5 %
Waveform of impulse output current, acc. to IEC 60	10 / 1000 µs ±20 %
Ringing	< 30 %
Current viewing resistor, built-in	20 mΩ, 20 MHz

Impulse voltage plug-in: **special version!!**	**10 / 700 µs, 10 kV**
Energy storage capacitor, special version!!	20µF / 10 kV
Impulse output voltage, adjustable via charging voltage	1.0 - 10 kV ± 5 %
Waveform of impulse output voltage, acc. to CCITT K17/K22	10 / 700 µs ±20 %
Impulse voltage divider, built-in	ratio 1000:1±2%, 10 MHz

Combination wave plug-in:



acc. to VDE 0845-2, designed for testing two gap over-voltage protectors	
Impulse output current, adjustable via charging voltage	2 * 1 - 10 kA ± 5 %
Waveform of impulse output current, acc. to IEC 60	8 / 20 µs ±20 %
Ringing	< 30 %
Current viewing resistor, built-in	1.0 mΩ, 20 MHz
Impulse output voltage, adjustable via charging voltage	10 kV ± 5 %
Waveform of impulse output voltage, acc. to IEC 60	1.2 / 50 µs ±30 %/±20 %
Impulse voltage divider, built-in	ratio 1000:1±2 %, 10 MHz

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