

Electrical Fast Transient Generator EFTG 4510

Output Voltage:
0.2 - 4.4 kV

Burst Frequency:
1 kHz - 1000 kHz

EMC Test acc. to

IEC 61000-4-4, Ed.2
EN 61000-4-4, Ed.2



The Electrical Fast Transient Generator EFTG 4510 is a compact EMC test unit for testing electromagnetic immunity against electrical fast transients. The generator provides burst-pulses, which are adjustable in frequency, amplitude, duration and repetition rate. It is suitable to test the susceptibility levels of electrical systems and installations full compliant to IEC/EN 61000-4-4. The generator excels by its compact design, simple handling and precise reproducibility of test impulses. The Generator comprises a One Phase Coupling-/Decoupling Network, which allows the superposition of bursts to the power supply lines of the equipment under test.

The generator EFTG 4510 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.

Moreover all generator functions, including the settings of the built-in Coupling-/Decoupling Network, may be computer controlled via the isolated optical interface. The software program EFT_TEST allows full remote control of the test generator and documentation and evaluation of test results.

Furthermore the burst generator EFTG 4510 can be integrated in the computer controlled test system EMC-TEST that allows automated tests according to IEC/EN 61000-4-4 and IEC/EN 61000-4-5.

Additional coupling-/decoupling networks for power lines and data lines and a coupling clamp can be offered.

Technical specification:
EFTG 4510
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 k Ω
Diagnostic input for monitoring of the test device	4 channels, 5 V - Level
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 471*156*520 mm ³
Weight	12 kg

BURST generator: acc. to IEC 1000-4-4, EN 61000-4-4 (Ed.2, 2004)

Waveform	5/50 ns
Source impedance	50 Ω
Polarity, selectable	pos/neg/alt
Pulse output voltage, adjustable	200 V - 4500 V
Burst frequency, adjustable	1.0 kHz - 1.0 MHz
Burst duration, adjustable	0,01 ms - 25 ms
Burst repetition rate, adjustable	10 ms - 1000 ms

Standard test levels, selectable:	LEV1	0.5 kV, 5.0 kHz
	LEV2	1.0 kV, 5.0 kHz
	LEV3	2.0 kV, 5.0 kHz
	LEV4	4.0 kV, 2.5 kHz
	LEV X	all test parameters selectable

Coupling-/Decoupling Network for power supply lines, integrated	L1, N, PE
nominal voltage, nominal current, ac/dc	250 V, 16 A \approx / 10 A =
coupling impedance	33 nF
HV output for external coupling networks or the coupling clamp	coaxial
Monitor output for pulse output voltage	ratio = 100:1 \pm 5%, 50 Ω

OPTION 1 Software for remote control of the generator **EFT_TEST**
incl. 5 m fibre-optic cable and PC-interface

OPTION 2 EFT - CLAMP **EFTC 105**
generates capacitive interference to shielded cables
Dimensions: W * H * L 140*180*1050 mm³
incl. interconnection cable 1.0 m long

OPTION 3 Continuous burst generation 1 kV/10 kHz, 4 kV/1 kHz