

EFT500 Burst (Electrical Fast Transient) Generator for EMC Immunity Testing to IEC, EN and ANSI/IEC Specifications



The EFT500 simulator tests to ANSI/IEEE C62.41, IEC 61000-4-4, EN 61000-6-1 and EN 61000-6-2 specifications for burst. Design of this simulator exceeds all current standard parameters and it has the capability to support future modifications. A built-in CDN accommodates the EUT supply and includes an output for external networks for data lines and three phase systems. The EFT500 can be operated from the front panel or remotely, via the ISM IEC Software which is included with the generator.

Test Level	
Selectable voltage range	200V - 4,400V +/- 10%
into 50 ohm load	100V - 2,200V +/- 10%
Pulse shape on 50Ω load	5/50 ns
Risetime tr	5 ns ± 30%
Pulse width td	50 ns ± 30%
Pulse shape on 1000Ω load	5/50 ns
Risetime tr	5 ns ± 30%
Pulse width td with no load	35 ns to 150 ns
Source impedance	50 Ohm ± 20%
Polarity	Positive / negative
Trigger	
Automatic	Automatic release of the bursts
Manual	Manual release of a single pulse
External	External release of a single pulse
Burst duration	Td = 0.1 ms – 999.9 ms
Burst repetition rate	Tr = 10 ms – 9999 ms/man
	Tr ≤ 9999 ms ⇒ Auto Trigger
	Tr = > 9999 ms ⇒ Man Trigger
Spike frequency	f = 0.1 kHz – 1000 kHz
Test duration	T = 0:01 min – 99:59 min
	T > 99:59 min - endless
Output	
Direct	Via HV coax connector
Coupling network 1phase	L, N and PE all combinations
EUT supply ac	250V/16A 50/60Hz
EUT supply dc	250V/10A
DUT supply	Other EUT supply data on request
CRO Trigger	15V trigger signal for oscilloscope; burst duration and pulse frequency can be checked

Test Routines	
Quick Start	Immediate start; easy to use and fast
User Test Routines	<ol style="list-style-type: none"> 1. Custom made test routines 2. Change voltage after T by ΔV 3. Change frequency after T by Δf 4. Frequency sweep within a burst 5. Change burst duration after T by Δtd 6. Randomly released bursts 7. Synchronous burst mode 8. Change polarity after T
Standard Test Routines	<ol style="list-style-type: none"> 1. Tests as per IEC 61000-4-4 Level 1-5 2. Automatic test Level X to level Y
Service	Service, setup, self test
Interface	
Serial interface	RS 232, baud rate 1200 - 19200
Parallel interface	IEEE 488, address 1 - 30
CN interface	To control external CNI 500
General data	
Dimensions, weight	19" / 3HU, approx. 15kg
Supply voltage	115/230V +10/-15%
Fuses	2 x T2AT (230V) 2 x T4AT (115V)
Options	
HKF	Coupling Clamp as per IEC 61000-4-4
KW 50	50Ω matching resistor for verification
KW 1000	1000Ω matching resistor for verification
A6dB	6dB attenuator for pulse 3a/3b
CNI 503	Coupling matrix, 3x480V/32-63-100A
ISM IEC	Software to control the test, including standard library, test report facility and data conversion generator
ITP	Immunity Test Probes (electrical field generation)
ITP/H	Immunity Test Probes (magnetic field generation)
CA EFT CAL KIT	Calibration Adapter KW 50, and KW1000 to CDN output