SFT 2400

Burst Generator

IEC / EN 61000-4-4

- Burst frequency up to 125 kHz
- Single pulse to continuous burst
- Pulse amplitude up to 5.0 kV
- Capacitive color touch display

Time-accurate triggering
With a variety of special functions!

Overview

The SFT 2400 simulates fast transient interference pulses as defined in the standards IEC 61000-4-4 and DIN EN 61000-4-4. Due to the very short rise time of 5 ns, the individual impulses generate a broadband RF spectrum up to 300 MHz. RF interference is the result.

The simple operation is carried out via a capacitive colour touch display. All parameters are clearly shown on the display and can be quickly changed by touching and using a digital rotary encoder. The standard test levels 1, 2, 3 and 4 are pre-programmed, additional test sequences can be stored via the memory function.

Special functions: The generator also offers various special functions such as **"Real Burst",** which simulates the natural appearance of the burst pulse, or **"Noise".** The functions **"IFM"** and **"DFM"** (increasing or decreasing frequency within a burst packet) are important tools for investigating resonance or saturation effects in the EUT.

Key facts

- Clearly arranged control elements allow time-saving and optimized tests
- All parameters can be changed during the test
- With the memory function, the normative test levels 1, 2, 3 and 4 are stored
- Additionally, own test sequences can be stored
- Special functions, like real burst or noise
- Extensive range of accessories available
- USB, optional optical interface with fiber optic cable

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Technical data I

Burst Generator	
Burst frequency	Single pulse up to 125 kHz
Pulse voltage	100 V - 5000 V
Polarity burst packet	pos., neg., alternating
Pulse shape acc. to IEC 61000-4-4	5 ns / 50 ns
Max. pulses / sec	5000 (up to 2 kV) 3000 (up to 3 kV) 1500 (up to 5 kV)
Step size spike frequency	0.1 - 10 kHz -> 0,1 kHz steps 10.5 - 50 kHz -> 0,5 kHz steps 51.0 - 100 kHz -> 1 kHz steps 105.0 - 125 kHz -> 5 kHz steps
Max. pulse / packet	500
Trigger	manual or external
HV output	coaxial connector
Monitor output	BNC, TTL level
Interface	USB (virtual COM port) optional: optical (Toshiba LWL)
Fan (temp.-controlled)	activate by 40 °C (deactivate by 32 °C off)

Internal single-phase coupling network	
Coupling network integrated in the generator, coupling of the test pulses to supply lines of the EUT.	
Nominal voltage AC	max. 230 V / 16 A 50 Hz
Nominal voltage DC	max. 110 V / 8 A
Phase display	LED red / green
Coupling capacity	33 nF
Coupling switch	1, 2 or 3 lines at the same time
Different coupling modes adjustable via buttons	L, N, PE –> E; L -> E; N -> E; PE -> E L, N -> E; L, PE -> E; N, PE -> E
Test object connection	safety socket additional laboratory sockets
General	
Operating temperature	0 - 40 °C
Dimensions (L x D x H)	19″ housing (3 RU) 450 x 430 x 150 mm
Weight	9 kg
Power supply	100-240 V / 47-63 Hz / 160 VA

Technical data – Burst definition

	Norm definition	**Variable settings on the SFT 2400**
Burst duration	15 ms 20 % at 5 kHz 0.75 ms 20 % at 100 kHz (corresponds to 75 pulses each)	0.01 - 100 ms (1)
Burst period	300 ms ± 20 %	10 - 1000 ms (1)
Burst frequency	5 kHz or 100 kHz to 4 kV	100 Hz - 125 kHz to 5 kV
Pulse amplitude	0.5 / 1 / 2 / 4 kV	100 V - 5000 V (in 10 V steps)
Rise time	5 ns ± 30 %	
Pulse duration (50 Ohm) Pulse duration (1 kOhm)	50 ns ± 30 % 50 ns, -15 ns/+100 ns	
Impedance	50 Ω ± 2 %	

1) The SFT 2400 automatically considers the limit parameters.

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Options	
CWG 520	3-ph. coupling network 4 x 16 A, burst and surge
SFT 470	Probe set for magnetic field
SFT 415	Coupling clamp
SFT 415-CS	Calibration set coupling clamp
SFT 430	HV cable for coupling clamp 1 m
SFT 450-1	50 Ω attenuator, divider 500:1
SFT 450-2	1000 Ω attenuator, divider 1000:1
SFT 450-Set	50 + 1000 Ω attenuators, necessary for independent verification of the burst impulse at the generator or coupling clamp SFT 415
SESD 270	HCP – Horizontal coupling plane, reference ground plane
ZUB LWL OPTO-MOD	Optic interface with 2 connectors for optic fiber cables (retrofit)
ZUB LWL OPTO-MOD-N	Optic interface with 2 connectors for optic fiber cables (upon ordering a new equipment)
ZUB LWL USB-ADAPTER	Optic fiber cable, 5 m, USB to optic interface connector
ZUB LWL-100	Optic fiber cable, 1 m, optic interface connector on both sides
ZUB LWL_30	Optic fiber cable, 30 cm, optic interface connector on both sides
EMV-SOFT	Control software for burst/EFT etc.

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