SFT 1420

Burst Generator

IEC / EN 61000-4-4

- Burst frequency up to 2000 kHz
- Single pulse to continuous burst
- Control via PC with optional software



Time-accurate triggering
With a variety of special functions!

Overview

The SFT 1420 simulates fast transient interference pulses as defined in the standards IEC 61000-4-4 and DIN EN 61000-4-4. The individual impulses have a very short rise time in the nanosecond range and thus a broadband RF spectrum up to 300 MHz. HF interference is the result.

The burst frequency of up to 2000 kHz allows test objects to be tested far above the standard. Since the real burst pulse is located at approx. 1000 kHz, the SFT 1420 can better represent the real simulation.

The simple operation and the clearly arranged front panel with all possible settings enable time-saving and optimized tests in the areas of research and development, quality assurance and in the accredited laboratory.

By increasing the pulses within a burst packet, time-critical applications can be tested in conjunction with the very precise triggering of the SFT 1420.

Special functions: The generator also offers various special functions like **"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 to investigate 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
- All parameters such as voltage, frequency, burst duration and burst period are variably adjustable.
- Special functions, such as real burst or noise
- With high voltage output, for the connection of a coupling clamp or 3-phase coupling network
- Extensive range of accessories available

SFT 1420

Burst Generator

Technical data

Burst Generator	
Burst frequency	Single pulse up to 2 MHz
Pulse voltage	100 V - 4800 V
Polarity burst packet	pos., neg., alternating
Pulse shape	acc. to IEC 61000-4-4
Max. pulses / sec	15000
Max. pulse / packet	2000
Interface	RS 232
Monitoring Output	BNC-socket
Operating temperature	0 - 40 °C
Dimensions	19" housing (3 RU)
Weight	12,5 kg
Supply voltage	100-240 V / 47-63 Hz

Internal single-phase coupling network	
Coupling network integrated in the generator, coupling of the test pulses to supply lines of the DUT.	
Nominal voltage AC	max. 230 V / 16 A, 50 / 60 Hz
Nominal voltage DC	max. 110 V / 8 A
Phase display	LED red LED green
Coupling capacity	33 nF
Coupling switch	L, N - E, PE-E, L - E etc.
Test sample connection	Schuko socket additional laboratory sockets
High voltage output	FISCHER HV-socket

Technical data - Burstdefinition

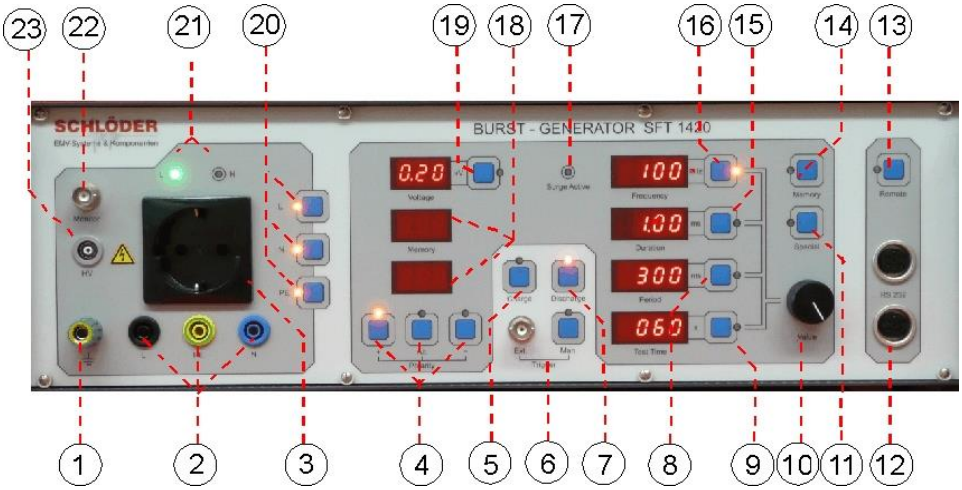
	Normdefinition	**Variable settings on the SFT 1420**
Burst duration	15 ms ± 20 % at 5 kHz 0,75 ms ± 20 % at 100 kHz (corresponds to 75 pulses each)	0,01 - 100 ms (1)
Burst period	300 ms ± 20 %	10 - 1000 ms (1)
Burst frequency	5 kHz or 100 kHz to 4 kV	100 Hz - 2000 MHz to 4,8 kV
Pulse amplitude	0,5 / 1 / 2 / 4 kV	100 V - 4800 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 1420 automatically considers the limit parameters.

SFT 1420

Burst Generator

Technical data: Functions



[1]	Earth connection
[2]	Laboratory jacks for EUT connection
[3]	Protected earth outlet for EUT connection
[4]	Polarity of the burst packet
[5]	Charge release-key
[6]	External or manual trigger release
[7]	Discharge release key
[8]	Selection key for the period-time
[9]	Selection key for the test-time
[10]	Digital potentiometer
[11]	Selection of the special functions
[12]	Jack for interface cable
[13]	Activation of the interface mode

[14]	Activation of the memory function
[15]	Selection key for the duration-time
[16]	Selection key for the frequency
[17]	LED for “CWG active”
[18]	Displays for the memory mode
[19]	Display for the pulse-voltage
[20]	Coupling selection for the paths L, N and PE
[21]	Phase indicators
[22]	Output to control the optional coupling networks
[23]	HV-output for the connection of a capacitive coupling clamp or inductive probes

SFT 1420

Burst Generator

Options	
CWG 520	3-ph. coupling network 4 x 16 A, burst and surge
CWG 523	3-ph. coupling network 4 x 32 A, burst and surge
CWG 524	3-ph. coupling network 4 x 60 A, burst and surge
CWG 524-B	3-ph. coupling network 4 x 60 A, burst
SFT 470	probe set for magnetic field
SFT 415	coupling clamp
SFT 415-1	capacitive coupling clamp with hood
SFT 430	HV cable for coupling clamp 1 m
SFT 415-CS	calibration set coupling clamp
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
EMV-SOFT	control software for burst etc.

All information regarding appearance and technical data correspond to the current state of development at the time of release of this data sheet. We reserve the right to make technical changes.
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