

SFT 1400

Burst Generator

IEC / EN 61000-4-4

- Burst frequency up to 125 kHz
- Single pulse to continuous burst
- Simple operation



Time-accurate triggering
With a variety of special functions!

Overview

The SFT 1400 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 clearly arranged operating elements allow time-saving and optimized tests. The memory function stores the normative test levels 1, 2, 3 and 4. In addition, own test sequences can be stored.

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
- With high voltage output, connection for coupling pliers or 3-phase coupling network
- Extensive range of accessories available



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Technical data

Burst Generator	
Switching element	semiconductor switch
Pulse voltage	100 V - 5000 V (normconform from 200 V to 5 kV) in 10V steps
Polarity burst packet	pos., neg., alternating
Burst frequency	single pulse up to 125 kHz
Step rate	0,1 - 10 kHz -> 0,1 kHz-steps
Spike frequency	10,5 - 50 kHz -> 0,5 kHz steps 51 - 100 kHz -> 1 kHz steps 105 - 125 kHz -> 5 kHz steps
Pulse form	acc. to IEC 61000-4-4, 5 ns / 50 ns
Max. pulse / sec	5000 (to 2 kV) 3000 (to 3 kV) 1500 (to 5 kV)
Burst duration	0,01 ms – 100 ms
Burst period	10 ms – 1000 ms
Max. pulse	500 / packet
Triggerung	manual or external
HV output	coaxial socket
Monitor output	BNC, TTL level
Interface	RS 232
Fan	temperature-controlled, switches on at approx. 40°, switches off again at 32° degree

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 LED green
Coupling capacity	33 nF
Coupling switch	L, N, PE -> E L, N -> E; etc.
Test sample connection	Schuko socket additional laboratory sockets
High voltage output	FISCHER HV-socket
Earth connection	via socket

General	
Operating temperature	0 - 40 °C
Dimensions	19" housing (3 RU)
Weight	9 kg
Supply voltage	100-240 V / 47-63 Hz

Technical data - Burstdefinition

	Normdefinition	Variable settings on the SFT 1400
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)	50 ns ± 30 %	
Pulse duration (1 kOhm)	50 ns, -15 ns/+100 ns	
Impedance	50 Ω ± 2 %	

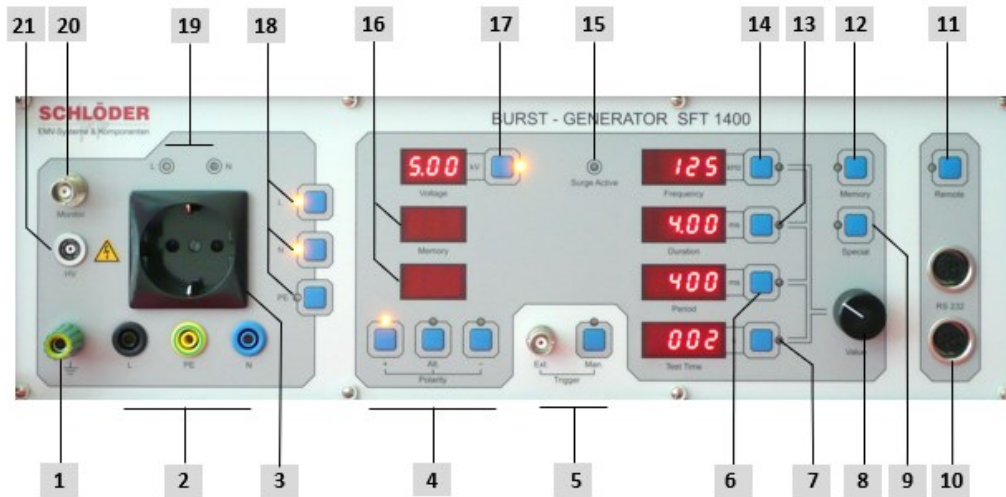
1) The SFT 1400 automatically considers the limit parameters.



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Technical data - Functions



[1]	Earth connection	[14]	Selection key for the burst frequency
[2]	Laboratory jacks for EUT connection	[15]	Indicator for "Surge active"
[3]	Protected earth outlet for EUT connection	[16]	Indicators for the memory function
[4]	Polarity of the burst packet	[17]	Indicator for pulse voltage
[5]	Trigger release key, external trigger input Time accurate triggering with jitter $< \pm 25$ ns	[18]	Selection keys for the coupling paths
[6]	Selection key for the period-time	[19]	Phase indicators
[7]	Selection key for the test-time	[20]	Monitoring (TTL output)
[8]	Digital potentiometer	[21]	High voltage output (connection for coupling clamp or 3-phase coupling network)
[9]	Selection of the special functions		
[10]	Jack for interface cable		
[11]	Remote control release		
[12]	Activation of the memory function		
[13]	Selection key for the duration-time		



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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 415-1	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
ZUB LWL OPTO	optical interface with 10 m LWL
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. 312307

