Burst generator
125 kHz

SFT 1400

- **Frequency up to 125 kHz**
- **Changing of all parameters during a burst test**
- **IEC 61000-4-4, 2012**
- **Single spike to continuous burst**
- **5000 pulses/sec – 500/package**
- **Time accurate triggering**
- **Various special function**

Introduction

The test generator simulates quick transient noise interference as they are defined in the standards IEC 61000-4-4 and EN 61000-4-4. The single pulses show a very short rise-time (5ns) and due to this a wide RF-spectrum up to 300 MHz. RF-interferences are the result.

Special function

The generator includes several special functions such as „**Real Burst**“ which simulates the natural appearance of the burst phenomena or „**Sweep**“ to simulate the bouncing of an electrical contact. The functions „**IFM**“ and „**DFM**“ (increasing and decreasing frequency) are powerful instruments to investigate resonance or saturation effects in the tested device.

Easy operation

The clearly arranged front panel with the generator settings allows a time-saving and optimised testing. The standard test level 1, 2, 3 and 4 are stored in the memory function on position 1 – 4. Additional custom made setups can be stored in the memory function.

Burst definition (see drawing 1)

designation	param.	standard definition	variable setup on SFT 1400
burst duration	a	15 ms ± 20% at 5 kHz 0,75 ms ± 20% at 100 kHz (correspond to 75 pulses /package)	0,01 - 100 ms *[1]
burst period	b	300 ms ± 20 %	10 - 1000 ms *[1]
burst frequency	c	5 kHz or 100 kHz up to 4 kV	100 Hz - 125 kHz up to 5 kV
pulse amplitude	U	0,5 / 1 / 2 / 4 kV	100 V - 5000 V (into 10 V steps)
pulse rise-time	t_r	5 ns ± 30 %	*1: the SFT 1400 automatically concerns the units. maximum power restrictions
pulse width (50 Ohm) **pulse-width (1 kOhm)**	t_w	50 ns ± 30 % 50 ns, -15ns/+100 ns	
impedance	Z	50 Ω ± 2 %	

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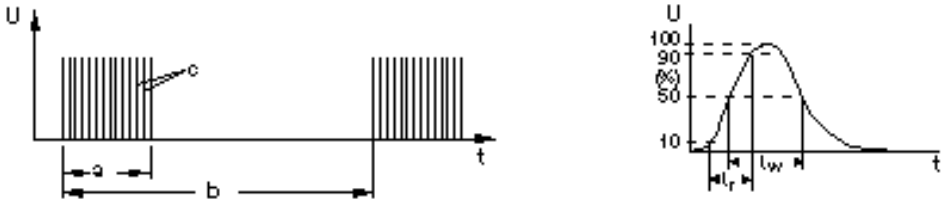
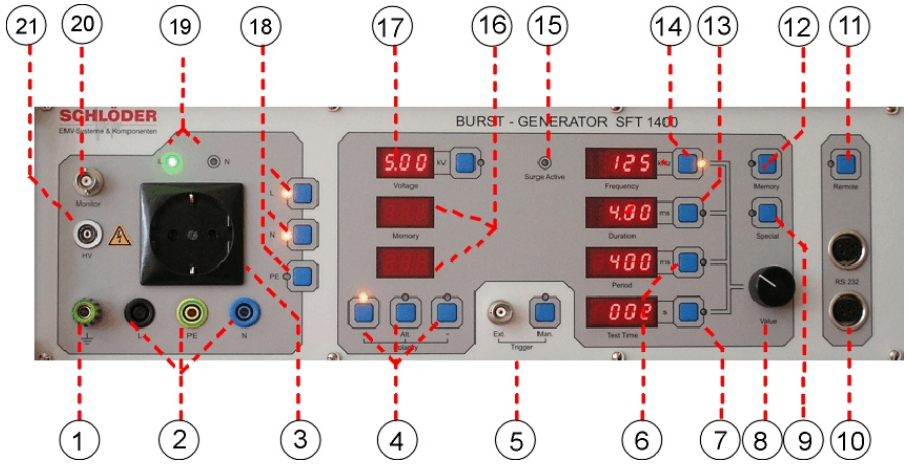


Drawing 1



[1] Earth connection
[2] Laboratory jacks for EUT connection.
[3] Protected earth outlet for EUT connection.
[4] Polarity of the burst packet.
[5] Trigger release key, external trigger input.
Time accurate triggering with jitter < ± 25 ns.
[6] Selection key for the period-time.
[7] Selection key for the test-time.
[8] Digital potentiometer.
[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.
[14] Selection key for the frequency.
[15] Indicator for surge active.
[16] Displays for the memory mode.
[17] Display for the pulse-voltage.
[18] Coupling selection for the paths L, N and PE.
[19] Phase indicators.
[20] Monitoring (TTL output)
[21] HV-output for the connection of a capacitive coupling clamp or 3-phase coupling network

Technical data

♦ Burst frequency	single up to 125 kHz
♦ Pulse amplitude	100 V - 5000 V
♦ Polarity burst package	pos., neg., alternating
♦ Pulse shape	accord. to IEC 61000-4-4
♦ Max. Pulses / sec	5000 (up to 2kV); 3000 (3kV) a. 1500 (up to 5kV)
♦ Max. Pulses / package	500
♦ Remote control	RS 232

Coupling network

♦ Integrated in the test generator, coupling of the noise pulses to the EUT's power mains	
♦ Operating volt. AC	max. 230V / 16A, 50 Hz
♦ Operating volt. DC	max. 110V / 8A
♦ Phase indicator	LED red / green
♦ Coupling capacity	33 nF
♦ Coupling selectors	L, N, PE ->E; L, N->E; a.s.o.
♦ EUT power outlets	protection earth outlet additional lab. terminals
♦ Pulse output	FISCHER coax HV-jack

Common

♦ Operation temp.	0 - 40 °C
♦ Dimensions	19″ housing. 3 HE
♦ Weight	9 kg
♦ Power supply	100-240V /47-63 Hz

Options

♦ 3-ph. Coupling network 4 x 16 A	CWG 520
♦ 3-ph. Coupling network 4 x 32 A	CWG 523
♦ 3-ph. Coupling network 4 x 60 A	CWG 524
♦ Attenuator 100:1 / 50 Ohm	SFT 450
♦ Probe set, magnetic field	SFT 470
♦ Control software, for Burst a.o.	EMV-SOFT
♦ Capacitive coupling clamp include HV cable	SFT 415
♦ Calibration set for coupling clamp	SFT 415-CS
♦ 50 + 1000 Ω measurement resistor, calibrated necessary for verification the burst pulse on generator or clamp	SFT 450-Set

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