

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

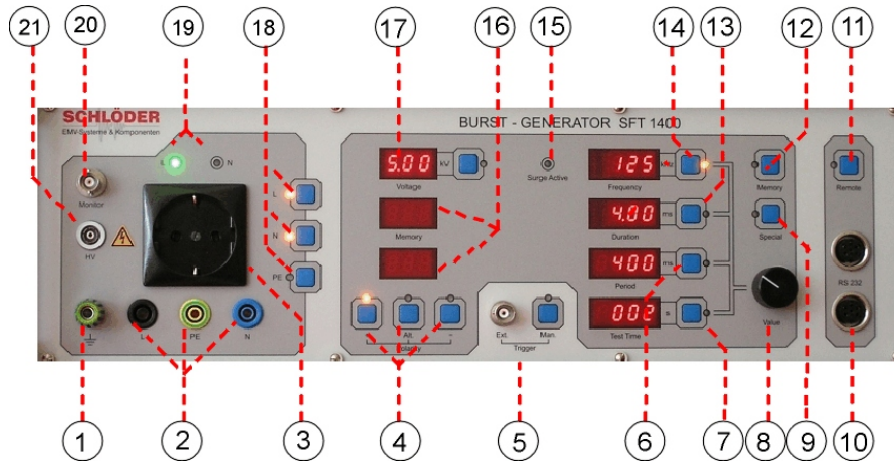
The clearly arranged front panel with the generator settings allows a time-saving and optimised testing. The standard test level 1, 2, 3 and 4 are stored in the memory function on position 1 – 4. Additional custom made setups can be stored in the memory function.

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)	t _w	50 ns ± 30 %	
pulse-width (1 kOhm)		50 ns, -15ns/+100 ns	
impedance	Z	50 Ω ± 2 %	



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 $< \pm 25$ 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 SFT 415
include HV cable
- ◆ Calibration set for coupling clamp SFT 415-CS
- ◆ 50 + 1000 Ω measurement resistor, SFT 450-Set
calibrated necessary for verification
the burst pulse on generator or clamp