# Burst generator
# 125 kHz

# SFT 1400


- **Frequency up to 125 kHz**
- **Changing of all parameters during a burst test**
- **IEC 61000-4-4, July 2005, incl.**
  IEC Corrigendum 2, June 2007 a. Ed.3, 2011
- **Single spike to continuous burst**
- **5000 pulses/sec – 500/package**
- **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.

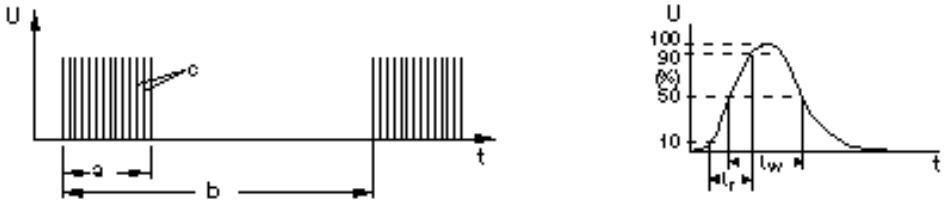
## Burst definition (see drawing 1)

| designation | param. | standard definition | variable setup on SFT 1400 |
|---|---|---|---|
| **burst duration** | a | 15 ms ± 20% at 5 kHz<br>0,75 ms ± 20% at 100 kHz<br>(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<br>up to 4 kV | 100 Hz - 125 kHz<br>up to 5 kV |
| **pulse amplitude** | U | 0,5 / 1 / 2 / 4 kV | 200 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)**<br>**pulse-width (1 kOhm)** | $t_w$ | 50 ns ± 30 %<br>50 ns, -15ns/+100 ns | |
| **impedance** | Z | 50 Ω ± 2 % | |

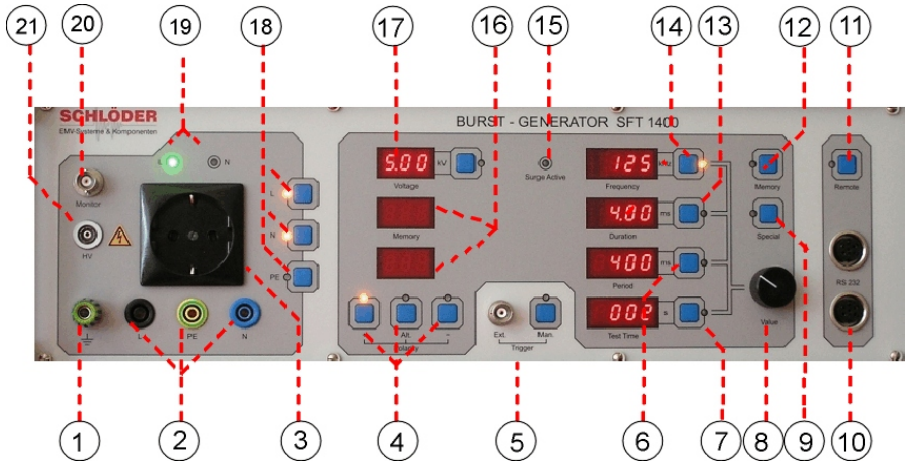


261101

**S c h l ö d e r G m b H**
**Hauptstr. 71, D - 75210 Keltern-Weiler**
☎ +49-7236/ 9396-0 • 🖷 +49-07236/ 9396-90
eMail: **info@schloeder-emv.de**
Internet: **www.schloeder-emv.de**




**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.
[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 | 200 V - 5000 V |
| ♦ Polarity burst package | pos., neg., alternating |
| ♦ Pulse shape | accord. to IEC 61000-4-4 |
| ♦ Max. Pulses / sec | 5000 (up to 2 kV);<br>3000 (up to 3 kV) and<br>1500 (up to 5 kV) |
| ♦ 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 | |
| ♦ Nominal voltage | max. 250V / 16A, 50 Hz |
| ♦ Voltage DC | max. 60V / 16A |
| ♦ Phase indicator | lamp red / green |
| ♦ Coupling capacity | 33 nF |
| ♦ Coupling selectors | L, N, PE ->E; L, N->E; a.s.o. |
| ♦ EUT power outlets | protection earth outlet<br>additional lab. terminals |
| ♦ Pulse output | FISCHER coax HV-jack |

## Common

| | |
|---|---|
| ♦ Operation temp. | 0 - 40 °C |
| ♦ Dimensions | 19″ housing. 3 HE |
| ♦ Weight | 10 kg |
| ♦ Power supply | 230V / 100VA, 50 Hz |

## Options

| | |
|---|---|
| ♦ 3-phase coupling | CWG 520 (4x16 A) |
| ♦ 3-phase coupling | CWG 523 (4x32 A) |
| ♦ 3-phase coupling | CWG 524 (4x60 A) |
| ♦ Coupling clamp | SFT 415 |
| ♦ Attenuator 100:1/50 Ohm | SFT 450 |
| ♦ Probe set | SFT 470 |
| ♦ Control software | EMV-SOFT |

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eMail: **info@schloeder-emv.de**
Internet: **www.schloeder-emv.de**