

# Surge generator

## CWG 1500



- ◆ Voltage pulse shape 1,2 / 50  $\mu$ s
- ◆ Amplitude 0,2 - 4,4 kV
- ◆ Current pulse shape 8 / 20  $\mu$ s
- ◆ Amplitude 0,1 - 2,2 kA

### Introduction

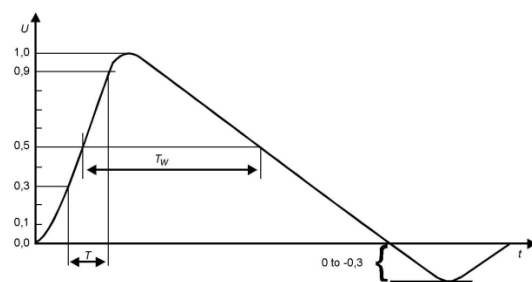
The test generator CWG 1500 simulates high energy interference impulses. It can be used for EMC tests on installations and equipment according to the standards IEC 61000-4-5, 2014 and EN 61000-4-5, 2014

The CWG 1500 is a combined surge current / voltage generator creating at idle mode a standard surge voltage with the pulse shape 1,2 / 50  $\mu$ s and a surge current with the pulse shape 8 / 20  $\mu$ s. The values for voltage and current are displayed, for oscillographic investigations BNC-jacks for voltage and current monitoring are located on the rear. With the built-in single-phase coupling network the interference impulses of the surge generator can be coupled on the mains of the connected EUT's.

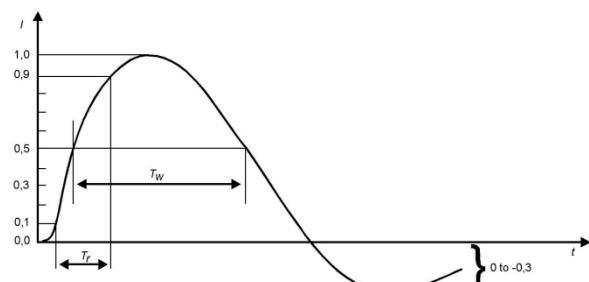
All parameters can be adjusted easily and clearly. With the aid of the memory key up to 32 adjustments can be directly activated - via serial interface the generator can also be operated by a personal computer.

### Definition of the parameter – IEC 61000-4-5

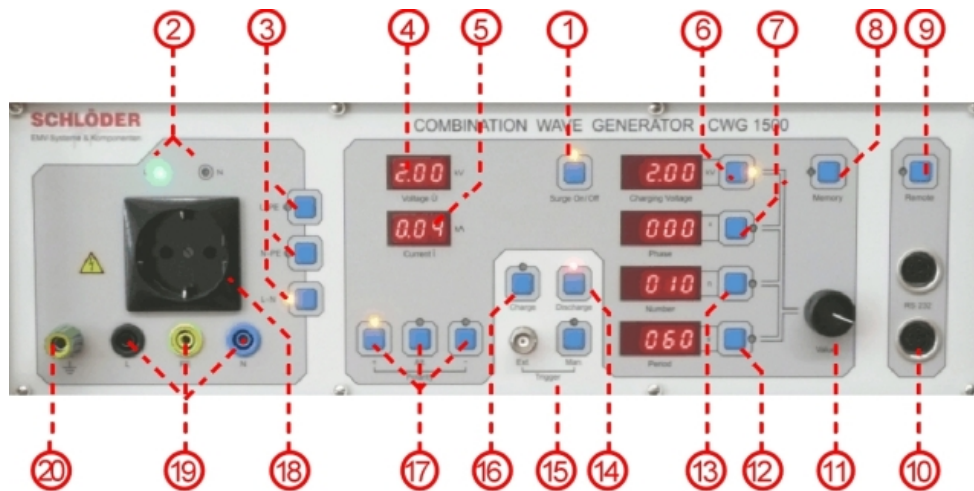
	Front time $T_f$ $\mu$ s	Duration $T_d$ $\mu$ s
Open-circuit voltage	$T_f = 1,67 \times T = 1,2 \pm 30 \%$	$T_d = T_w = 50 \pm 20 \%$
Short-circuit current	$T_f = 1,25 \times T_f = 8 \pm 20 \%$	$T_d = 1,18 \times T_w = 20 \pm 20 \%$



Open-circuit voltage



Short-circuit current



## Technical data

### Generator

[6]	Charge voltage	0,2 - 4,4 kV
[4]	Display	Surge voltage Pulse shape 1,2 / 50 $\mu$ s (IEC 61000-4-5)
[5]	Display	Surge current Pulse shape 8 / 20 $\mu$ s (IEC 61000-4-5)
[17]	Polarity	positive, negative, alternating
◆	Stored energy	100 Ws max.
◆	Charge time	≤10 sec
◆	HV output	Ground free and ground referred
◆	Common functions	[11] Adjustment via potentiometer for: <ul style="list-style-type: none"> <li>◆ [6] Idle voltage</li> <li>◆ [7] Phase angle</li> <li>◆ [13] Number of pulses</li> <li>◆ [12] Periods</li> </ul>
		[1] Surge function on / off
		[9] Remote control for personal computer, remote via interface
		[10] RS 232 - interface
[15]	Triggering	Manual or extern
[7]	Phase angle for	$\varphi = 0 - 359^\circ$ , step $1^\circ$ net sync. triggering
[13]	Amount of pulses	1 - 999
[12]	Repetition periods	10 - 990 sec
[14]	Discharge	Discharge of the storage capacitor
[16]	Charge	Charge of the storage capacitor

[8]	Memory function	Select test level 1-4; Max. 32 memory set up's possible
◆	Rear site	HV-output to connect the 3-phase coupling network
◆	Dimension	19" – housing, 3 HE
◆	Weight	app. 18 kg
◆	Electronic input	100-240 V / 47-63 Hz / 100 VA

### Coupling network

◆	Nominal voltage	230 V / 50/60 Hz or 270 V DC
◆	Nominal current	16 A AC or DC
[3]	Sym. coupling	L – N : 18 $\mu$ F
	Asym. coupling	L - PE, N – PE : 9 $\mu$ F + 10 $\Omega$
[18]	EUT connection	Protection earth outlet
[19]	EUT connection	Additional lab- terminals
[20]	Ground connection	Ground jack at front and rear panel
[2]	Phase indicator	Lamp red / green

### Options

◆	CWG 520 (4x16A)	3-phase coupling network
◆	CWG 523 (4x32A)	3-phase coupling network
◆	CWG 524 (4x60A)	3-phase coupling network
◆	CWG 1526-4 (4A)	CDN for 2 data line
◆	CWG 1526-10 (10A)	CDN for 2 data line
◆	CWG 1528 6A)	CDN for 4 data line, RS 232
◆	CWG 550	18 $\mu$ F capacitor in a housing
◆	EMC-SOFT	Control software