CWG 1500

Surge / Hybrid Generator

IEC / EN 61000-4-5, VDE 0847-4-5

- Voltage pulse 1.2 / 50 µs and current pulse 8 / 20 µs
- Amplitude 0.2 – 4.4 kV / 0.1 – 2.2 kA
- Control via PC with optional software

Simple and intuitive operation

Overview

The CWG 1500 test generator simulates high-energy interference pulses and is suitable for carrying out EMC tests on systems and equipment in accordance with the IEC / EN 61000-4-5 and similar standards.

The CWG 1500 is a combined surge current / surge voltage generator and generates a standard surge voltage with a waveform of 1.2 / 50 µs and a standard surge current with a waveform of 8 / 50 µs at no load.

The values for current and voltage are displayed, for evaluation with an oscilloscope BNC outputs for current and voltage are available on the rear panel.

With the built-in single-phase coupling network, the interference pulses / output variables of the hybrid generator can be coupled to the supply lines of the devices under test. The coupling is done by means of discrete coupling capacitors. According to IEC 61000-4-5, 18 µF capacitors (balanced coupling) or 9 µF / 10 Ω (unbalanced coupling) with sufficient voltage stability are installed. External coupling networks from Schlöder can also be operated or used for component testing via the HV socket.

All parameters can be set easily and clearly. Up to 32 settings can be activated directly by means of the memory key. By means of the serial interface the control by computer is possible.

Key facts

- Combined surge current / surge voltage generator
- Generates a standard surge voltage with the waveform 1.2 / 50 µs and a standard surge current with the waveform 8 / 20 µs
- BNC outputs for current and voltage measurement with an oscilloscope
- Extensive range of accessories available
- Remote control via EMV software possible
- Durable due to high-quality components

CWG 1500

Surge / Hybrid Generator

Technical data

Surge / Hybrid Generator

Pulse parameter acc. to IEC/EN 61000-4-5	
Charging voltage	0.2 – 4.4 kV
Short circuit current	0.1 - 2.2 A
Loading time	≤ 10 sec
Time functions	
Number of pulses	1 - 999
Repetition rate	10 - 990 sec
Phase angle	φ = 0° - 359°, 1° steps, net synchr. Triggering, 50 + 60 Hz
Polarity	positive, negative, alternating
Functions	
Trigger	manual or external
Memory function	call up test level 1 - 4, max. 32 memories can be selected
Discharge parameters	display effective discharge voltage and current
Stored energy	100 Ws max.
General	
Operating temperature	0 - 40 °C
Dimensions	19" housing, 3 RU
Weight	appr. 18 kg
Supply voltage	100-240 V / 47-63 Hz / 100 VA

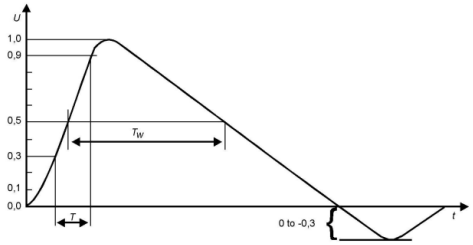
Coupling network

1-phase, integrated in the generator, coupling of the test pulses to the supply lines of the DUT	
Nominal voltage AC	max. 230 V / 16 A 50 / 60 Hz
Nominal voltage DC	max. 270 V / 16 A
Phase display	LED red LED green
Symmetrical coupling	L - N: 18 µF
Asymmetrical coupling	L-PE, N - PE: 9 µF + 10 Ω
Connections / Outputs	**Generator**
Test sample connection	safety socket additional laboratory sockets
Earth connection	on the front panel and on the rear
Interface	RS 232
HV Output	unearthed or earth-related

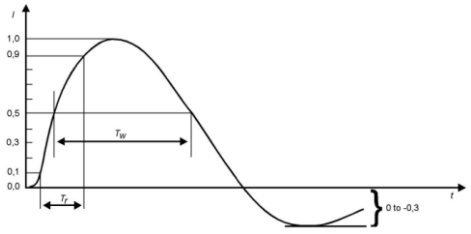
Technical data – Definition of the parameter IEC / EN 61000-4-5

	Front time T_f µs	**Duration T_d** µs
Open-circuit voltage	T_f = 1.67 x T = 1.2 ± 30 %	$T_d = T_w$ = 50 ± 20 %
Short-circuit voltage	T_f = 1.25 x T_r = 8 ± 20 %	T_d = 1.18 x T_w = 20 ± 20 %

Technical data : Open-circuit voltage / Short-circuit voltage



Open-circuit voltage

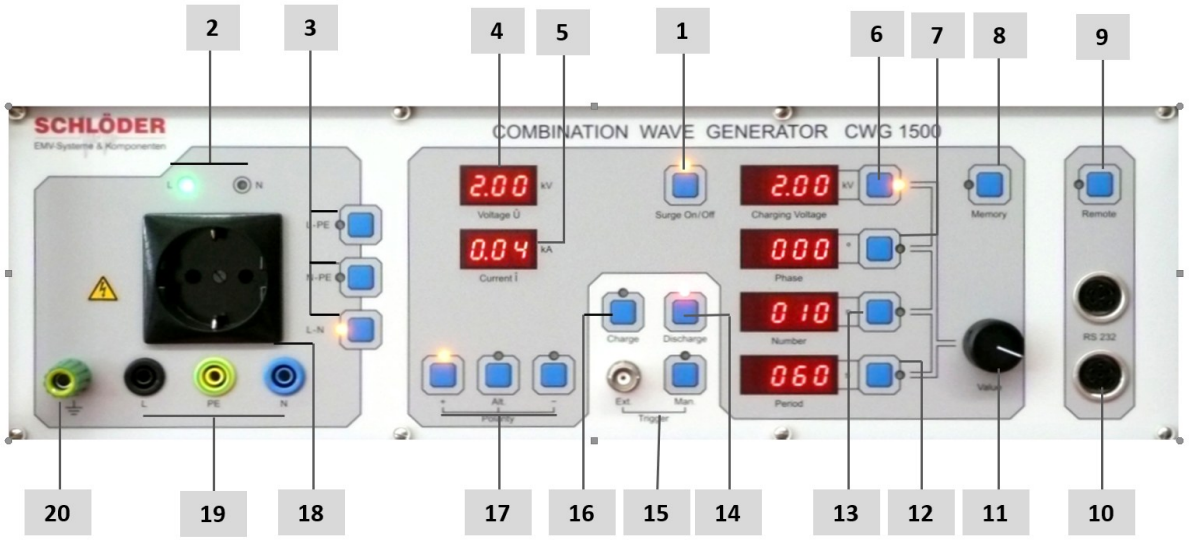


Short-circuit figure

CWG 1500

Surge / Hybrid Generator

Technical data: Functions



[1]	Surge function on / off
[2]	Phase displays
[3]	Selection keys for the coupling paths
[4]	Display for discharge / surge voltage
[5]	Display for discharge / surge current
[6]	Open circuit voltage
[7]	Phase angle
[8]	Memory function
[9]	Enable remote control via RS 232
[10]	RS 232 interface
[11]	Setting via potentiometer for several functions
[12]	Repetition rate
[13]	Number of pulses

[14]	Discharge: discharging the energy storage
[15]	Trigger: manual or external
[16]	Batch: charging the energy storage device
[17]	Polarity
[18]	EUT connection: safety socket
[19]	EUT connection: laboratory sockets
[20]	Earth connection front and rear socket
	High voltage output on the rear panel (connection for coupling pliers or 3-phase coupling network)

CWG 1500

Surge / Hybrid Generator

Options	
CWG 520	3-ph. coupling network 4 x 16 A
CWG 52x - 550	HV models up to 550 VAC L-L
CWG 1525	CDN for 2 unshielded, balanced connecting cables, 1 A
CWG 1526-4	CDN for 2 unshielded, unbalanced connection lines, 4 A
CWG 1526-10	CDN for 2 unshielded, unbalanced connection lines, 10 A
CWG 1528	CDN for 4 unshielded, unbalanced connection lines, 6 A
CWG 550	18 µF capacitor in housing
CWG 553	0.5 µF capacitor + 40 Ω Resistance in housing
CWG 554	9 µF capacitor + 10 Ω Resistance in housing
CWG 540	HV - Connection cable for external device, 1 m long, with 4 mm safety MC plug (banana plug) to Fischer plug
CWG 531	HV-cable surge, 70 cm, both sides with Fischer connector S105A039
SESD 270	HCP – Horizontal coupling plane, reference ground plane
EMV-SOFT	control software for surge, burst and mains interruption generators

222509