SURGE4-5

SURGE / COMBINED WAVE GENERATOR

FEATURES:

- MEETS IEC/EN 61000-4-5 EDITION 3
- PRE-PROGRAMMED TEST STANDARDS AND LEVELS
- OUTPUT UP TO 4.4V
- COLOR TOUCH SCREEN INTERFACE
- REMOTE CONTROL SOFTWARE VIA USB OR FIBER OPTIC
- CONFIGURABLE WITH EFT4-4 AND PQF4-11
- INTEGRATED 1PH/3-WIRE CDN

The SURGE4-5 is the newest combination wave/surge simulator designed to be lightweight and easy to use.

The test generator SURGE4-5 simulates high-energy interference pulses and is suitable for performing EMC tests on systems in accordance with the standards IEC / EN 61000-4-5, 2014 and VDE 0847 4-5. The SURGE4-5 is a combined surge current / surge voltage generator that generates a standard open circuit surge voltage of 1.2 / 50 µs and a standard short-circuit surge current of 8/20 µs. The values for current and voltage are shown on the display, for evaluations with an oscilloscope BNC outputs for current and voltage are available on the rear.

With the built-in single-phase coupling network, the interference pulses of the hybrid generator can be coupled to the supply lines of the devices to be tested. The coupling takes place by means of discrete coupling capacitors. According to IEC 61000-4-5, 18 µF capacitors (balanced coupling) or 9 µF / 10 Ω (unbalanced coupling) are installed with sufficient dielectric strength. External coupling networks can also be operated via the HV socket or used for component testing.

The simple operation takes place via a capacitive color touch display. All parameters are clearly displayed without nested menus and can be changed quickly by tapping and using a digital rotary encoder. The normative test levels 1, 2, 3 and 4 are preprogrammed, additional test sequences can be stored via the memory function.

DEFINITION of PARAMETER – IEC/ EN 61000-4-5

	Front time Tr µs	Duration Td µs
Open-circuit voltage	T_f = 1,67 x T = 1,2 ± 30 %	$T_d = T_w$ = 50 ± 20 %
Short-circuit current	T_f = 1,25 x T_r = 8 ± 20 %	T_d = 1,18 x T_w = 20 ± 20 %

TECHNICAL SPECIFICATIONS

GENERATOR	
Charging voltage	0,2 – 4,4 kV
Charging timet	≤ 10 sec
Number of pulses	1 – 999
Repetition rate	10 – 990 sec
Phase angle	φ = 0° - 359°, 1° steps, mains-synchronized
Polarity	positive, negative, alternating
Trigger	manually or externally
HV output	ungrounded and ground referred
Interface	USB (virtual COM Port) Optional: optical with fiber optics
Memory function	Select test levels 1 – 4 (Standard), 32 memory positions
Discharge parameters	Display of discharge Surge Voltage / Surge Current after discharge
COUPLING NETWORK	
1-Phase, inside generator for coupling on the power supply lines of the EUT	
Nominal voltage AC	max. 230V / 16A, 50 / 60 Hz
Nominal voltage DC	max. 270V / 16A
Balanced coupling	L – N: 18 µF
Unbalanced coupling	L – PE, N – PE: 9 µF + 10Ω
Phase indication	LED red / green
EUT connection	Schuko (protection earth) outlet + laboratory sockets
Ground connection	Ground jack at front and rear panel
GENERAL	
Operating temperature	0 - 40 ° C
Dimensions 19" housing	3 U
Weight	approx. 18 kg
Supply voltage	100-240V / 47-63 Hz / 100 VA

ACCESSORIES:

- **SURGE-EFT-3PH-CDN - Three Phase Coupler/32 or 60 Amps Per Line**
- **SURGE-DLC - Data line Coupling Network** (inquire for configurations)
- **SURGE-CAL-KIT - Voltage Divider and Current Probe for Surge Waveform Verification**
- **TIG.Control - Remote Control Software**