

UCS 500N5V

COMBINATION WAVE (SURGE) GENERATOR UP TO 5KV AS PER IEC/EN 61000-4-5



FOR TESTS ACCORDING TO ...

- > EN 300329
- > EN 300340
- > EN 300342-1
- > EN 300386 V1.3.2
- > EN 301489-1
- > EN 301489-17
- > EN 301489-24
- > EN 301489-7
- > EN 50121
- > EN 55024
- > EN 61000-4-5
- > EN 61000-4-9
- > EN 61000-6-1
- > EN 61000-6-2
- > IEC 61000-4-5
- > IEC 61000-4-9
- > IEC 61326
- > IEC 61850-3
- > ITU-T K.20
- > ITU-T K.21
- > ITU-T K.41
- > ITU-T K.45

UCS 500N5V - THE STAND-ALONE COMBINATION WAVE (SURGE) GENERATOR








The UCS 500N5V is a new dedicated Surge generator based on the successful UCS 500N series of ultra-compact simulators. Offering all the benefits of the well-known UCS 500N5 it is designed as a Surge generator only. This makes it the full performing Surge tester as per IEC/EN 61000-4-5 with the best benefit-to-cost ratio yet upgradeable to include other test abilities such as EFT/Burst and PowerFail.

Apart from its built-in single phase test capability it is extendable for testing three-phase DUTs by means of automatically controlled external coupling networks up to 100A. EM TEST supplies a large range of accessories for various applications.

HIGHLIGHTS

- > Fully compliant to IEC 61000-4-5
- > Surge voltage up to 5kV
- > Surge current up to 2.5kA
- > Built-in single phase coupler 300V/16A
- > Programmable current limiters
- > Monitor outputs for peak voltage and peak current

APPLICATION AREAS

- | | |
|---|--|
|  INDUSTRY |  COMPONENTS |
|  MEDICAL |  BROADCAST |
|  RESIDENTIAL |  RENEWABLE ENERGY |
|  TELECOM | |

TECHNICAL DETAILS

COMBINATION WAVE / SURGE GENERATOR

UCS 500N5V	
	As per EN/IEC 61000-4-5 and EN 61000-6-1, -6-2
Voltage (o.c.)	160V - 5,000V ± 10%
Pulse front time	1.2us ± 30%
Time to half value	50us ± 20%
Current (s.c.)	Max. 2,500A ± 10%
Pulse front time	8us ± 20%
Time to half value	20us ± 20%
Polarity	Positive/negative/alternating
Event counter	1 - 30,000 or endless, selectable

TRIGGER CIRCUIT

Release of pulses	Automatic, manual, external
Synchronization	0° - 360°, resolution 1°
Repetition rate	max. 1Hz (1s - 999s)

OUTPUTS

Direct	Via HV connectors for external coupling networks ($Z_i = 2\text{ohm}$ with optional adapter IMN 2)
Coupling mode	Line to line Line(s) to ground
DUT supply	AC: 300V/16A; 50/60Hz DC: 300V/16A
CRO trigger	5V trigger signal for oscilloscope

MEASUREMENTS

CRO \hat{U} -monitor	10Vp at 5,000V
CRO \hat{I} -monitor	10Vp at 2,500A
Peak voltage	5,000V in the LCD display
Peak current	2,500A in the LCD display

COMBINATION WAVE / SURGE GENERATOR

TEST ROUTINES

Quick Start	One-line adjustable parameters, easy-to-use
Standard Test routines	As per IEC 61000-4-5, Levels 1 - 4 As per EN 61000-6-1, -6-2 Manual Standard Test routine
User Test routines	Change polarity after n pulses Change coupling after n pulses Change voltage after n pulses Change phase angle after n pulses
Pulsed Magnetic Field	as per IEC 61000-4-9 Test levels 100, 300 and 1,000A/m Test level steplessly adjustable under Quick Start

TECHNICAL DETAILS

GENERAL DATA

INTERFACES

Serial interface	USB
Parallel interface	IEEE 488, addresses 1 - 30
CN interface	15pin SubD connector to control an external coupling network
Fail inputs	DUT monitoring via Fail1 and Fail2 input (one each)

DIMENSIONS

Dimensions	19", 3HU
Weight	approx. 15kg

MAINS

Supply voltage	115V/230VAC +10%/-15%
Power	approx. 75W
Frequency	50/60Hz
Fuses	2 x T 2AT (230V) or 2 x T 4AT (115V)

SAFETY

Safety standard	EN/IEC 61010
Security circuit	Control input (24VDC)
Warning lamp	Floating contact (max. 230V/6A)

ACCESSORIES INCLUDED

Mains supply	Plug depends on the country of use
DUT supply	Plug depends on the country of use
DUT adapter	Socket depends on the country of use
	Operation manual, Calibration certificate, iec.control remote control software

OPTIONS

OPTIONAL ACCESSORIES

CNV504Nx	Coupling network for 4 signal/data lines as per IEC 61000-4-5
CNV508Nx	Coupling network for 8 signal/data lines as per IEC 61000-4-5
CNI 508N1 Assembly	Set of coupling/decoupling and protection networks for testing unshielded and shielded high-speed communication lines (Ethernet lines)
CNV 504S1	Coupling network for 4 telecom lines as per IEC 61000-4-5
CNV 508S1	Coupling network for 8 telecom lines as per IEC 61000-4-5
IMN 2	Impedance matching adapter to match direct output to 2ohm source impedance

OPTIONAL EQUIPMENT

CNV 503Ax	3-phase coupling/decoupling networks as per IEC 61000-4-5 up to 100A per phase
CNI 503Ax	3-phase coupling/decoupling networks as per IEC 61000-4-4 and -4-5 up to 100A per phase
iec.control 1	Remote control and documentation software, including standard test routines and reporting capabilities.

COMPETENCE WHEREVER YOU ARE



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Information about scope of delivery, visual design and technical data correspond with the state of development at time of release. Technical data subject to change without further notice.