

UCS 500N5

SIMULATEUR ULTRA COMPACT



SELON LES NORMES SUIVANTES ...

- > 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 61000-4-11
- > EN 61000-4-29
- > EN 61000-4-4
- > EN 61000-4-5
- > EN 61000-4-8
- > EN 61000-4-9
- > EN 61000-6-1
- > EN 61000-6-2
- > FCC 97-270 (part 68)
- > IEC 60255-22-5
- > IEC 61000-4-11
- > ...

UCS 500N5 - TESTEUR COMPACT POUR EFT/BURST, SURGE ET POWER FAIL

Le simulateur ultra compact UCS 500N5 est conçu pour couvrir les exigences des tests des transitoires en salves, des ondes de choc et des micro-coupures selon les normes internationales (normes basiques et génériques) et les normes produit. L'UCS 500N5 est la solution d'essai la plus économique pour la réalisation de tests d'immunité entièrement normatifs et demandé par le marquage CE. Possédant un CDN intégré pour les EUTs (instruments sous test) monophasés, il peut être étendu pour des essais sur EUTs (instruments sous test) triphasés au moyen d'un réseau de couplage externe contrôlé automatiquement et pouvant monté jusqu'à 100A.

EM TEST propose une large gamme d'accessoires pour de nombreuses applications.

POINTS FORTS

- > **Module Burst (IEC 61000-4-4) jusqu'à 5.5kV**
- > **Module Surge (IEC 61000-4-5) jusqu'à 5kV**
- > **Module TSurge (IEC 61000-4-5); en option**
- > **Module PowerFail (IEC 61000-4-11)**
- > **Tests au champ magnétique avec accessoires en option**

DOMAINES D'APPLICATION

- | | |
|---|--|
|  INDUSTRIE |  COMPOSANTS |
|  MÉDICAL |  EMISSION |
|  RÉSIDENTIEL |  ENERGIES RENOUVELABLES |
|  TÉLÉCOMMUNICATION | |

DÉTAILS TECHNIQUES

ELECTRICAL FAST TRANSIENTS

BURST MODULE, EFT/N5

	As per EN/IEC 61000-4-4 and EN 61000-6-1, -6-2
Test voltage	200V - 5,500V $\pm$ 10%; 100V - 2,750V $\pm$ 10% into 50ohm
Pulse shape	5/50ns into 50ohm and 1,000ohm
Rise time tr	5ns $\pm$ 30% into 50ohm; 5ns $\pm$ 30% into 1,000ohm
Pulse width td	50ns $\pm$ 30% into 50ohm; 50ns -15/+100ns into 1,000ohm
Source impedance	50ohm
Polarity	Positive/negative

TRIGGER CIRCUIT

Trigger of bursts	Automatic, manual, external
Synchronization	0° - 360°, resolution 1° (16 - 500Hz)
Burst duration	td = 0.10ms - 999ms
Repetition rate	tr = 10ms - 9,999ms
Spike frequency	f = 0.1kHz - 1,000kHz
Test duration	T = 0:01min - 99:59min T > 99:59min --> endless

OUTPUTS

Direct	Via 50ohm coaxial connector
Coupling mode	L, N, PE; all combinations
DUT supply	AC: 300V/16A; 50/60Hz DC: 300V/10A
CRO trigger	5V trigger signal for oscilloscope

TEST ROUTINES

Quick Start	On-line adjustable parameters, easy-to-use
Standard Test routines	As per IEC 61000-4-4, Levels 1 - 4 As per EN 61000-6-1, -6-2 Manual Standard Test routine
User Test routines	Synchronous burst release Random burst release Change voltage after T Frequency sweep within one burst Frequency sweep with constant number of pulses Frequency sweep with constant burst duration Change polarity after T

OPTIONS

HFK	Capacitive coupling clamp as per IEC 61000-4-4
KW50	100:1 divider, 50ohm
KW1000	500:1 divider, 1,000ohm
CA EFT kit	Kit for burst pulse verification consisting of KW50, KW1000 and adapter for DUT port in a plastic case for storage
A6dB	6dB attenuator, 50ohm
ITP	Immunity test probes (electrical field generation)
ITP/H	Immunity test probe (magnetic field generation)

DÉTAILS TECHNIQUES

COMBINATION WAVE / SURGE

SURGE MODULE, VCS/N5

	As per EN/IEC 61000-4-5 and EN 61000-6-1, -6-2
Voltage (o.c.)	160V - 5,000V $\pm$ 10%
Pulse front time	1.2 μ s $\pm$ 30%
Pulse time to half value	50 μ s $\pm$ 20%
Current (s.c.)	Max. 2,500A $\pm$ 10%
Pulse front time	8 μ s $\pm$ 20%
Pulse time to half value	20 μ s $\pm$ 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 connector, Zi = 2ohm
Coupling mode	Line to line Line(s) to ground
DUT supply	AC: 300V/16A; 50/60Hz DC: 300V/10A
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

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

OPTIONS

CNV504N	Coupling network for 4 signal/data lines as per IEC 61000-4-5
CNV508N	Coupling network for 8 signal/data lines as per IEC 61000-4-5

DÉTAILS TECHNIQUES

POWER FAIL, DIPS & INTERRUPTIONS, VOLTAGE VARIATIONS

POWER FAIL MODULE, PFS/N5

	As per EN/IEC 61000-4-11 and EN 61000-6-1, -6-2
Channel PF1/PF2	AC voltage: max. 300V AC current: max. 16A
Frequency	16Hz - 500Hz
Switching time	< 5us into a 100ohm resistive load
Inrush current	> 500A
Protection	Both channels are protected against short-circuit conditions.

TRIGGER CIRCUIT

Trigger of events	Automatic, manual, external
Synchronization	0° - 360°, resolution 1° (16 - 500Hz)
Repetition rate	10ms - 9,999s
Event duration	20us - 9,999s

OUTPUTS

DUT terminals	L, N and PE
CRO trigger	5V trigger signal for oscilloscope

MEASUREMENTS

DUT voltage	In the LCD display
DUT current	In the LCD display
MON V	Measurement of the DUT voltage; built-in 100:1 divider
MON I	Measurement of the DUT current; 10mV/A; max. 1,000A

TEST ROUTINES

Quick Start	On-line adjustable parameters, easy-to-use
Standard Test routines	As per EN/IEC 61000-4-11 for AC supplies As per EN/IEC 61000-4-29 for DC supplies As per EN 61000-6-1, -6-2 Manual Standard Test routine
User Test routines	Voltage variation, control of an external variac Change phase angle after n events Change event duration after n events Inverse mode
50/60Hz magnetic field	As per EN/IEC 61000-4-8 Test levels 1, 3, 10 and 30A/m with external current transformer MC2630 Test levels 100, 300 and 1,000A/m with external current transformer MC26100

OPTIONS

V4780	Tapped autotransformer as per IEC 61000-4-11 Ed.2
V4780 S2	Tapped autotransformer as per IEC 61000-4-11 Ed.2 with automatic change of tap
MV2616	Motorised variac (0 - 250V, 16A)
MS100	Magnetic field coil, 1m x 1m
MC2630	Current transformer for magnetic fields up to 30A/m
MC26100	Current transformer for magnetic fields up to 1,000A/m
CA PFS	Calibration box for inrush current verification as per IEC 61000-4-11

DÉTAILS TECHNIQUES

TELECOM SURGE

TSURGE MODULE, TSURGE5 (OPTIONAL)	
Test voltage	160V - 5,000V $\pm$ 10%
Energy storage capacitor	20uF
Polarity	Positive, negative, alternating
Counter	1 - 30,000 or endless, selctable
	As per ITU and ETSI recommendations
Front time	10us $\pm$ 30%
Pulse duration	700us $\pm$ 20%
	As per FCC part 68, Pulse B
Front time	9us $\pm$ 30%
Pulse duration	720us $\pm$ 20%
Output current	4 - 125A (short-circuit)
Rise time	5us $\pm$ 30%
Pulse duration	320us $\pm$ 20%
	As per IEC 61000-4-5
Rise time	6.5us $\pm$ 30%
Pulse duration	700us $\pm$ 20%
Output current	4A - 125A (short-circuit)
Rise time	4us $\pm$ 20%
Pulse duration	300us $\pm$ 20%

TRIGGER CIRCUIT

Trigger of events	Automatic, manual, external
Repetition rate	max. 0.5Hz (2s - 999s)

OUTPUTS

As per ITU	For 2-wire T1/T2 with 25ohm each, For 4-wire T1,T2,T3,T4 with 100ohm each
As per FCC part 68	For 2-wire T1/T2 with 25ohm each
As per IEC 61000-4-5	An external network is required (optional)

OPTIONS

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

GENERAL DATA

INTERFACES

Serial interface	USB
Parallel interface	IEEE 488, addresses 1 - 30
Analog output	0 - 10VDC to control an external transformer
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, 19", 6HU, (with TSurge5 module)
Weight	approx. 25kg

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)

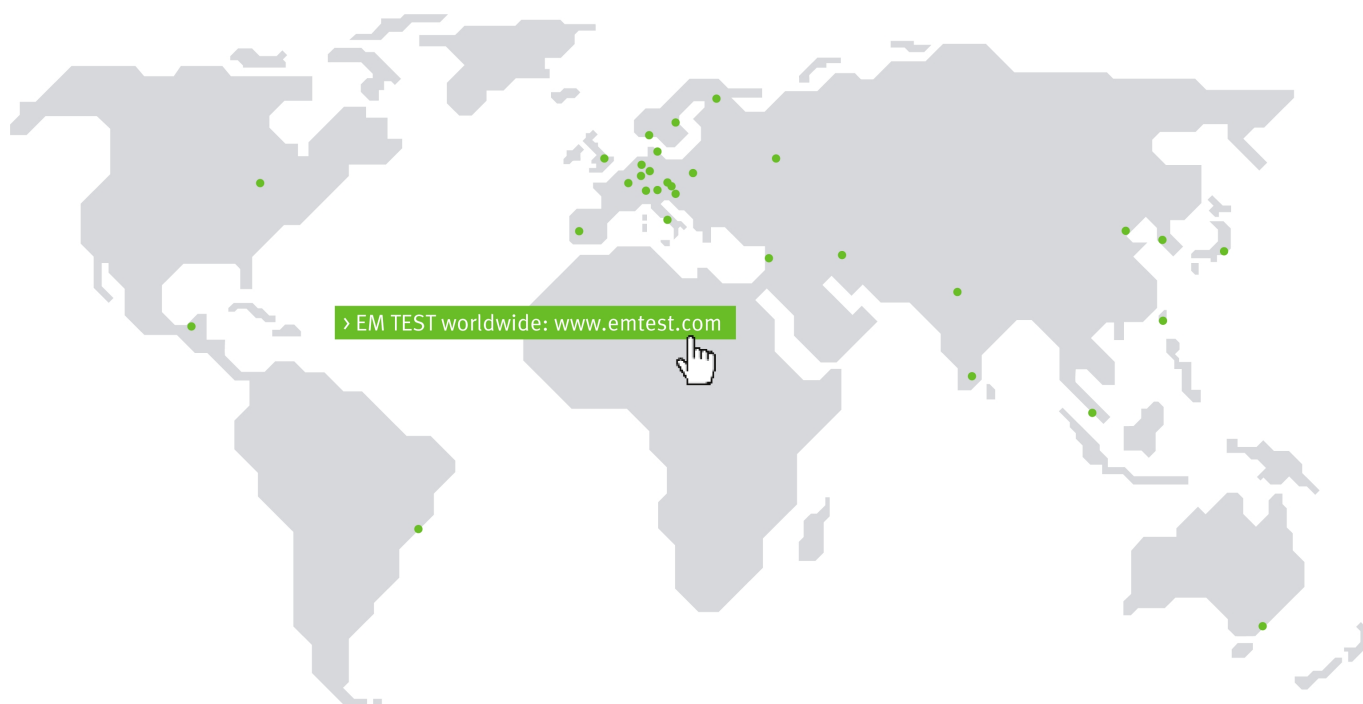
ACCESSORIES INCLUDED

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

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.

COMPÉTENCE DANS TOUS LES DOMAINES



CONTACTEZ DIRECTEMENT EM TEST

Suisse

EM TEST AG › Sternenhofstraße 15 › 4153 Reinach › Switzerland
Téléphone +41 (0)61/7179191 › Fax +41 (0)61/7179199
Internet: www.emtest.ch › E-mail: sales@emtest.ch

Allemagne

EM TEST GmbH › Lünener Straße 211 › 59174 Kamen › Deutschland
Téléphone +49 (0)2307/26070-0 › Fax +49 (0)2307/17050
Internet: www.emtest.com › E-mail: info@emtest.de

France

EM TEST FRANCE › Le Trident - Parc des Collines › Immeuble B1 - Etage 3 ›
36, rue Paul Cézanne › 68200 Mulhouse › France
Téléphone +33 (0)389 31 23 50 › Fax +33 (0)389 31 23 55
Internet: www.emtest.fr › E-mail: info@emtest.fr

Pologne

EM TEST Polska › ul. Ogrodowa 31/35, 00-893 Warszawa › Polska
Téléphone +48 (0)518 64 35 12
Internet: www.emtest.com/pl › E-mail: info.polska@emtest.de

USA / Canada

EM TEST USA Inc. › 3 Northern Blvd. Unit A-4 › Amherst › NH 03031
Téléphone +1 (603) 769 3477 › Fax +1 (603) 769 3499
Internet: www.emtest.com › E-mail: sales@emtest.com

Chine

EM TEST Representative Office Beijing › Rm 913, Leftbank ›
No. 68 Bei Si Huan Xi Lu › Haidian District › Beijing 100080 › P.R. China
Téléphone +86 (0)10 82 67 60 27 › Fax +86 (0)10 82 67 62 38
Internet: www.emtest.com › E-mail: emtestbj@public.bta.net.cn

Malaisie

EM TEST (M) SDN BHD › Unit B2-6, Jalan Dataran SD2 › Dataran SD2, PJU9 ›
Bandar Sri Damansara › 52200 Kuala Lumpur › Malaysia
Téléphone +60 (03)62 73 22 01 › Fax +60 (03)62 74 22 01
Internet: www.emtest.com › E-mail: sales@emtest.com.my

Les informations sur l'étendue de la livraison, la présentation visuelle et les données techniques correspondent à l'état de développement du produit au moment de la mise en circulation de la fiche technique. Les données techniques sont susceptibles de changement sans préavis.