

## UCS 500N5E

EFT/BURST GENERATOR UP TO 5.5KV, IEC/EN 61000-4-4



### 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 61000-4-4
- > EN 61000-6-1
- > EN 61000-6-2
- > IEC 60255-22-5
- > IEC 61000-4-4
- > IEC 61326

### UCS 500N5E - EFT/BURST GENERATOR THAT GOES BEYOND STANDARD REQUIREMENTS








The UCS 500N5E is a new dedicated EFT/Burst 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 Burst generator only. This makes it the full performing Burst tester as per IEC/EN 61000-4-4 with the best benefit-to-cost ratio yet upgradeable to include other test abilities such as Combination Wave Surge 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 61000-4-4 Am1 Ed.2
- > Test voltage up to 5.5kV
- > Up to 10,000 pulses per second
- > Up to 1,000 pulses per burst
- > Built-in single phase coupler 300V/16A
- > Manual operation from front panel
- > USB and GPIB-Bus for remote control

#### APPLICATION AREAS

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

## TECHNICAL DETAILS

## EFT/BURST GENERATOR

| UCS 500N5E       |  |
|------------------|--|
|                  | As per EN/IEC 61000-4-4 and EN 61000-6-1, -6-2                 |
| Test voltage     | 200V - 5,500V $\pm$ 10%;<br>100V - 2,750V $\pm$ 10% into 50ohm |
| Pulse shape      | 5/50ns into 50ohm and 1,000ohm                                 |
| Rise time tr     | 5ns $\pm$ 30% into 50ohm;<br>5ns $\pm$ 30% into 1,000ohm       |
| Pulse width td   | 50ns $\pm$ 30% into 50ohm;<br>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<br>T > 99:59min --> endless |

## OUTPUTS

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

## EFT/BURST GENERATOR

## TEST ROUTINES

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

## TECHNICAL DETAILS

## 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     |
| Weight     | approx. 14kg |

## 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) |

## 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,<br>Calibration certificate,<br>iec.control remote control software |

## OPTIONS

## OPTIONAL ACCESSORIES

|               |  |
|---------------|--|
| 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)  |
| iec.control 1 | Remote control and documentation software, including standard test routines and reporting capabilities.            |

## OPTIONAL EQUIPMENT

|           |   |
|-----------|---|
| CNI 503Ax | 3-phase coupling/decoupling networks as per IEC 61000-4-4 and -4-5 up to 100A per phase                             |
| CNE 503x  | Coupling/decoupling networks for special EFT/Burst test applications, e.g. for energy meters, as per IEC 60255-22-5 |

# COMPETENCE WHEREVER YOU ARE



## CONTACT EM TEST DIRECTLY

### Switzerland

EM TEST (Switzerland) GmbH › Sternenhofstraße 15 › 4153 Reinach › Switzerland  
Phone +41 (0)61/7179191 › Fax +41 (0)61/7179199  
Internet: [www.emtest.ch](http://www.emtest.ch) › E-mail: [sales.emtest@ametek.com](mailto:sales.emtest@ametek.com)

### Germany

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

### France

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

### Poland

EM TEST Polska › ul. Ogrodowa 31/35, 00-893 Warszawa › Polska  
Phone +48 (0)518 64 35 12  
Internet: [www.emtest.com/pl](http://www.emtest.com/pl) › E-mail: [info\\_polska.emtest@ametek.de](mailto:info_polska.emtest@ametek.de)

### USA / Canada

EM TEST USA › 9250 Brown Deer Road › San Diego › CA 92121  
Phone +1 (858) 699 1685 › Fax +1 (858) 458 0267  
Internet: [www.emtest.com](http://www.emtest.com) › E-mail: [sales.emtest@ametek.com](mailto:sales.emtest@ametek.com)

### P.R. China

E & S Test Technology Limited › Rm 913, Leftbank › No. 68 Bei Si Huan Xi Lu › Haidian District › Beijing 100080 › P.R. China  
Phone +86 (0)10 82 67 60 27 › Fax +86 (0)10 82 67 62 38  
Internet: [www.emtest.com](http://www.emtest.com) › E-mail: [info@emtest.com.cn](mailto:info@emtest.com.cn)

### Republic of Korea

EM TEST Korea Limited › #405 › WooYeon Plaza › #986-8 › YoungDeok-dong › Giheung-gu › Yongin-si › Gyeonggi-do › Korea  
Phone +82 (31) 216 8616 › Fax +82 (31) 216 8616  
Internet: [www.emtest.co.kr](http://www.emtest.co.kr) › E-mail: [sales@emtest.co.kr](mailto:sales@emtest.co.kr)

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