

# OCS 500N6 SERIES

## OSCILLATORY WAVE SIMULATOR



### FOR TESTS ACCORDING TO ...

- > ANSI/IEEE C37.90
- > ANSI/IEEE C62.41
- > EN 61000-4-10
- > EN 61000-4-12
- > EN 61000-4-18
- > IEC 60255-22-1
- > IEC 61000-4-10
- > IEC 61000-4-12
- > IEC 61000-4-18
- > IEC 61850-3

### OCS 500N6 - COMPACT TESTER FOR RINGWAVE AND DAMPED OSCILLATORY WAVES

The OCS 500N6 includes test capabilities for ringwave up to 6kV (as per EN/IEC 61000-4-12) and the damped oscillatory waves at 100 kHz and 1 MHz up to 3 kV (as per EN/IEC 61000-4-18).

The Ringwave is a non-repetitive damped oscillatory transient occurring in low-voltage power, control and signal lines supplied by public and non-public networks. Damped Oscillatory Waves are repetitive transients mainly occurring in power, control and signal cables installed in high voltage and medium voltage stations.

The OCS 500N6 can also be used to perform magnetic field tests as required in EN/IEC 61000-4-10 using a magnetic field coil such as the MS 100N.

### HIGHLIGHTS

- > Standalone test generator
- > Includes Ringwave up to 6 kV
- > Includes Damped Oscillator Waves up to 3 kV
- > Built-in CDN, single phase or three-phase up to 100 A
- > Front panel operation

### APPLICATION AREAS

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

## TECHNICAL DETAILS

## OCS 500N6 SERIES

## OCS 500N6 MODELS

OCS 500N6.5	With built-in CDN 250V / 16 A
OCS 500N6.6	With built-in CDN 250 V / 32 A
OCS 500N6.7	With built-in CDN 3x440 V / 16 A
OCS 500N6.8	With built-in CDN 3x440 V / 32 A
OCS 500N6.20	With built-in CDN 3x690 V / 100 A

## OCS 500N6 MODELS FOR RCCB TESTING

OCS 500N6.17	With built-in CDN 3x440 V / 32 A, calibrated acc. IEC 61008-1 and IEC 61009-1
--------------	---

## RINGWAVE AS PER EN/IEC 61000-4-12 AND ANSI/IEEE C62.41

Voltage (o.c.)	250 V - 6,000 V $\pm$ 10 %
Rise time	0.5 $\mu$ s $\pm$ 30 %
Oscillation frequency	100 kHz $\pm$ 10 %
Decaying	Ratio of peak 2 to peak 1: 0.4 - 1.1 Ratio of peak 3 to peak 2: 0.4 - 0.8 Ratio of peak 4 to peak 3: 0.4 - 0.8
Source impedance	12 ohm and 30 ohm $\pm$ 20 %
Peak current (s.c.)	Max. 500 A @ 12 ohm or Max. 200 A @ 30 ohm internally;
Rise time	0.2 $\mu$ s to 1.0 $\mu$ s
Oscillation frequency	100 kHz $\pm$ 10 %
Polarity	Positive, negative
Repetition rate	1 / min or faster

## OCS 500N6 SERIES

## SLOW DAMPED OSCILLATORY WAVES AS PER EN/IEC 61000-4-18

Voltage (o.c.) at HV output	250 V - 3,000 V $\pm$ 10 %
Voltage (o.c.) at line output	250 V - 2,500 V $\pm$ 10 %
Rise time	75 ns $\pm$ 20 %
Oscillation frequency	100 kHz and 1 MHz $\pm$ 10 %
Decaying	Peak 5 to be $>$ 50% of peak 1 value Peak 10 to be $<$ 50% of peak 1 value
Source impedance	200 ohm $\pm$ 20 %
Polarity	Positive, negative
Repetition rate	Max. 50 /s for 100 kHz and Max. 500 /s for 1 MHz
Burst duration	At least 2 s

## TECHNICAL DETAILS

## GENERAL DATA

## TRIGGER CIRCUIT

Release of pulses	Automatic, manual, external
Synchronization	0° - 360°, resolution 1°

## OUTPUT

Direct	Via HV-safety lab connectors
Coupling mode	Line to line Line(s) to ground (PE)
DUT supply 1ph-16 A	AC: 250 V/16 A; 50/60 Hz DC: 250 V/16 A
DUT supply 1ph-32 A	AC: 250 V/32 A; 50/60 Hz DC: 250 V/32 A
DUT supply 3ph-16 A	AC: 3x440 V/16 A; 50/60 Hz DC: 250 V/16 A
DUT supply 3ph-32 A	AC: 3x440 V/32 A; 50/60 Hz DC: 250 V/32 A
DUT supply 3ph-100 A	AC: 3x690 V/100 A; 50/60 Hz DC: 250 V/100 A
CRO trigger	5 V trigger signal for oscilloscope

## MEASUREMENTS

Ring wave	Peak voltage and peak current in LCD
-----------	--------------------------------------

## TEST ROUTINES

Quick Start	Immediate start; easy-to-use and fast
Standard Test routines	As per IEC 61000-4-12, Level 1 - 4 Manual Standard Test routine As per ANSI/IEEE C62.41 As per IEC 61000-4-10, Level 1 - 5
User Test routines	Change polarity after n pulses Change coupling after n pulses Change voltage after n pulses Change phase angle after n pulses

## INTERFACE

Serial interface	USB
Parallel interface	IEEE 488, addresses 1 - 30

## GENERAL DATA

## GENERAL DATA

Dimensions, weight	19"/6 HU, approx. 28 kg (1-phase) 19"/6 HU, approx. 41 kg (3-phase)
OCS 500N6.20	19"/ 25 HU, approx. 210 kg, 550 mm x 800 mm x 1320 mm
Supply voltage	115/230 V +10/-15%
Fuses	2 x T 2 AT (230 V); 2 x T 4 AT (115 V)

## ENVIRONMENT

Temperature	10 °C to 35 °C
Humidity	25 % to 75 %, non condensing
Atmospheric pressure	86 kPa (860 mbar) to 106 kPa (1 060 mbar)

## OPTIONS

## OPTIONS

CNV 504N5.1	Coupler for 4 signal/datalines for damped oscillatory waves 100 kHz and 1 MHz as per IEC 61000-4-18, 50 V/4 A
CNV 504N5.3	Coupler for 4 signal/datalines for damped oscillatory waves 100 kHz and 1 MHz as per IEC 61000-4-18, 250 V/4 A
CNV 508N4	Coupler for 4 pairs (8 wires) as per IEC 60255-26, 250 V/4 A
CNV 508N4.1	Coupler for 4 pairs (8 wires) as per IEC 60255-26, 250 V/16 A
MS 100N	Magnetic Field coil for EN/IEC 61000-4-10 application
iec.control	Remote control and documentation software with library of standards

# COMPETENCE WHEREVER YOU ARE



## CONTACT EM TEST DIRECTLY

### Switzerland

AMETEK CTS GmbH › Sternenhofstraße 15 › 4153 Reinach › Switzerland  
Phone +41 (0)61 204 41 11 › Fax +41 (0)61 204 41 00  
Internet: [www.ametek-cts.com](http://www.ametek-cts.com) › E-mail: [sales.conducted.cts@ametek.com](mailto:sales.conducted.cts@ametek.com)

### Germany

AMETEK CTS Europe GmbH › Customer Care Center EMEA › Lünener Straße 211  
› 59174 Kamen › Germany  
Phone +49 (0) 2307 26070-0 › Fax +49 (0) 2307 17050  
Internet: [www.ametek-cts.com](http://www.ametek-cts.com) › E-mail: [info.cts.de@ametek.com](mailto:info.cts.de@ametek.com)

### Poland

AMETEK CTS Europe GmbH › Biuro w Polsce › ul. Twarda 44 › 00-831 Warsaw › Poland  
Phone +48 (0) 518 643 12  
Internet: [www.ametek-cts.com](http://www.ametek-cts.com) › E-mail: [Infopolska.cts@ametek.com](mailto:Infopolska.cts@ametek.com)

### USA / Canada

AMETEK CTS US › 52 Mayfield Ave › Edison › NJ 08837 › USA  
Phone +1 732 417 0501  
Internet: [www.ametek-cts.com](http://www.ametek-cts.com) › E-mail: [usasales.cts@ametek.com](mailto:usasales.cts@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)

### Singapore

AMETEK Singapore Pte. Ltd › No. 43 Changi South Avenue 2 › 04-01 Singapore  
48164  
Internet: [www.ametek-cts.com](http://www.ametek-cts.com) › E-mail: [singaporesales.cts@ametek.com](mailto:singaporesales.cts@ametek.com)

### Great Britain

AMETEK GB › 5 Ashville Way › Molly Millars Lane › Wokingham › Berkshire  
RG41 2 PL › Great Britain  
Phone +44 845 074 0660  
Internet: [www.ametek-cts.com](http://www.ametek-cts.com)

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