

# VCS 500M10

## COMBINATION WAVE SIMULATOR



### FOR TESTS ACCORDING TO ...

- › IEC 61000-4-5
- › IEC 61000-4-9
- › IEC 61326
- › IEC 61850-3
- › ITU-T K.12
- › ITU-T K.20
- › ITU-T K.21
- › ITU-T K.45

### COMBINATION WAVE SIMULATOR







Surge pulses occur due to direct or indirect lightning strokes to an external (outdoor) circuit. This leads to currents or electromagnetic fields causing high voltage or current transients. Another source for surge pulses are switching transients originating from switching disturbances and systems faults.

Due to the characteristic of the phenomenon nearly every electrical and electronic device may suffer from such lightning events which justifies the necessity of surge tests being widely performed. Surge voltage can reach several thousands of volts and surge current is seen to reach several thousands of amps.

### HIGHLIGHTS

- › SURGE PULSES UP TO 10KV/5KA
- › SINGLE PHASE OR THREE-PHASE COUPLER UP TO 100A (EXTERNAL OPTIONS)
- › FAIL INPUTS
- › WARNING LAMP CONTROL
- › EMERGENCY INTERLOCK
- › STANDARD TEST ROUTINES

### APPLICATION AREAS

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

## TECHNICAL DETAILS

### COMBINATION WAVE 1.2/50US - 8/20US

Voltage (o.c.)	500V - 10,000V ± 10%
Pulse front time	1.2us ± 30%
Pulse time to half value	50us ± 20%
Current (s.c.)	max. 5,000A ± 10%
Pulse front time	8us ± 20%
Pulse time to half value	20us ± 20%
Polarity	Positive/negative/alternating
Event counter	1 - 30,000 or endless

### TRIGGER

Trigger of events	Automatic, manual, extern
CRO trigger	5V trigger signal for oscilloscope
Synchronization	0° - 360°, resolution 1°
Repetition rate	6s - 999s, depending on the voltage

### OUTPUT

Direct	Via HV-connector; Zi = 2ohm To connect external surge coupler
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### MEASUREMENTS

Peak voltage	10,000V in the LCD display
Peak current	5,000A in the LCD display

### TEST ROUTINES

Quick Start	Immediate start, easy-to-use and fast
User Test routines	Change Polarity after n pulses Change voltage after n pulses
Standard Test routines	As per IEC 61000-4-5, Level 1,000V As per IEC 61000-4-5, Level 2,000V As per IEC 61000-4-5, Level 4,000V Manual Standard Test routine
Service	Service, setup, self test

### INTERFACE

Serial interface	USB
Parallel interface	IEEE 488, addresses 1 - 30
CN interface	To control external coupling matrix

### SAFETY

Safety circuit	Control input (24Vdc)
Warning lamp	Floating output contact

### GENERAL DATA

Dimensions, weight	19"/6HU, approx. 35kg
Supply voltage	115/230V +10/-15%
Fuses	2 x T 2AT (230V) or 2 x T4AT (115V)

### COUPLING/DECOUPLING NETWORKS FOR POWER LINES

CNI 503A16	3phase coupling/decoupling network for EFT and Surge; 3x440V/16A
CNI 503A18	3phase coupling/decoupling network for EFT and Surge; 3x440V/32A
CNI 503A19	3phase coupling/decoupling network for EFT and Surge; 3x440V/63A
CNI 503A20	3phase coupling/decoupling network for EFT and Surge; 3x440V/100A
CNV 501S4	1phase coupling/decoupling network for Surge; 250V/16A
CNV 503S9	3phase coupling/decoupling network for Surge; 3x440V/16A
CNV 503S10	3phase coupling/decoupling network for Surge; 3x440V/32A
CNV 503S11	3phase coupling/decoupling network for Surge; 3x440V/63A
CNV 503S12	3phase coupling/decoupling network for Surge; 3x440V/100A

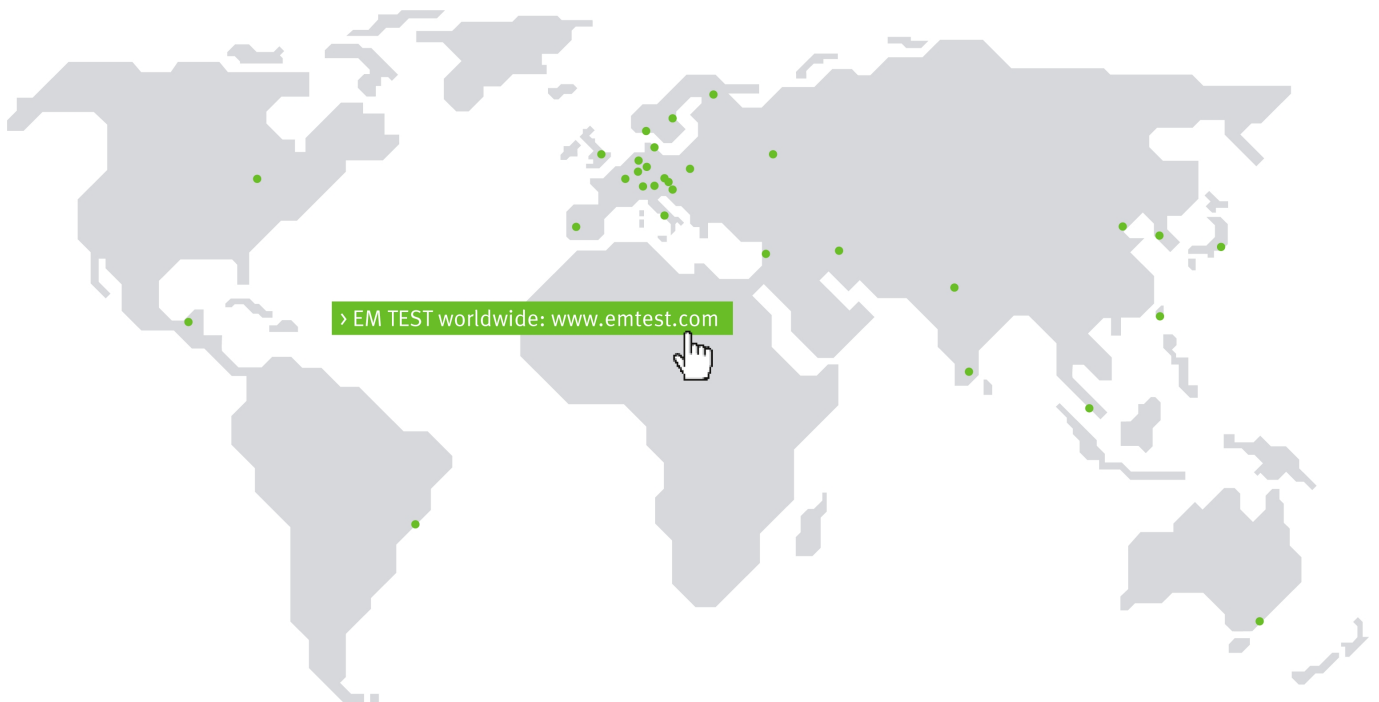
### COUPLING/DECOUPLING NETWORKS FOR SIGNAL/TELECOM LINES

CNV 504N	4 signal lines as per fig. 11 & 12, IEC 61000-4-5
CNV 504S1	4 telecom lines as per fig. 14, IEC 61000-4-5
CNV 508N	8 signal lines as per fig. 11 & 12, IEC 61000-4-5
CNV 508S1	8 telecom lines as per fig. 14, IEC 61000-4-5

### PULSED MAGNETIC FIELD AS PER IEC 61000-4-9

Antenna	MS 100 for up to 5,000A/m
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# COMPETENCE WHEREEVER 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.