

# TSS 500 N2B

## TELECOM SURGE GENERATOR



### FOR TESTS ACCORDING TO ...

› Bellcore GR-1089-Core

### TSS 500N2B - TELECOM SURGE SIMULATOR AS PER TELCORDIA/BELLCORE GR-1089, 10/1,000US

The surge simulator type TSS 500N2B generates high voltage transients with a waveform of 10/1,000 $\mu$ s up to 2,000V as required by Tellcordia/Bellcore GR-1089 issue 6 section 4.6.2.1 First Level Lightning Surge.  
For this test application a huge energy storage capacitor bank is needed to provide the requested high-energy surge pulses.

### HIGHLIGHTS

- › Standalone Tester for Bellcore
- › Test pulse 10/1000 $\mu$ s up to 2,000V
- › Covers First Level Lightning Protection testing
- › Voltage and current monitor outputs
- › Pre-programmed Test routines
- › Manual operation
- › USB and GPIB interface

### APPLICATION AREAS

-  COMPONENTS
-  TELECOM

## TECHNICAL DETAILS

### FIRST LEVEL LIGHTNING PROTECTION, PULSE 10/1,000 S

|                                |                                       |
|--------------------------------|---------------------------------------|
| Output Voltage (open circuit)  | 100V to 2,000V -0/+15%                |
| Rise time $t_r$                | 10 $\mu$ s -4 $\mu$ s/+0 $\mu$ s      |
| Pulse duration $t_d$           | 1,000 $\mu$ s -0 $\mu$ s/+500 $\mu$ s |
| Output Current (short circuit) | 10A to 200A per wire, -0/+15%         |
| Rise time                      | 10 $\mu$ s -4 $\mu$ s/+0 $\mu$ s      |
| Pulse duration                 | 1,000 $\mu$ s -0 $\mu$ s/+500 $\mu$ s |
| Polarity                       | Positive, negative or alternating     |
| Energy storage capacitance     | 4,230 $\mu$ F                         |
| Max. stored energy             | 8,460J @ 2,000V                       |

### OUTPUTS

|               |                   |
|---------------|-------------------|
| Telecom ports | T1, T2, T3 and T4 |
|---------------|-------------------|

### MEASUREMENTS

|                    |                  |
|--------------------|------------------|
| Peak voltmeter     | 2,000V +10%/-10% |
| Peak current meter | 800A +10%/-10%   |

### TRIGGER

|             |                                    |
|-------------|------------------------------------|
| Automatic   | Automatic pulse release            |
| Manual      | Single pulse release               |
| External    | External pulse release             |
| CRO trigger | 5V trigger signal for oscilloscope |

### TEST ROUTINES

|                    |   |
|--------------------|---|
| Quick Start        | Immediate start; easy to use and fast                           |
| User Test routines | Change voltage after n pulses<br>Change Polarity after n pulses |
| Service            | Service, setup, self test                                       |

### INTERFACE

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

### SAFETY

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

### GENERAL DATA

|                    |                                   |
|--------------------|-----------------------------------|
| Dimensions, weight | 19"/25HU mini rack, approx. 120kg |
| Supply voltage     | 115V / 230V +10/-15%<br>50/ 60Hz  |
| Fuses              | 2 x 2AT                           |

# 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

AMETEK Commercial Enterprise (Shanghai) Co. Ltd. › Beijing Branch › Western Section, 2nd floor › Jing Dong Fang Building (B10) › Chaoyang District › Beijing, China, 100015  
Phone +86 10 8526 2111 › Fax +86 (0)10 82 67 62 38  
Internet: [www.ametek-cts.com](http://www.ametek-cts.com) › E-mail: [chinasales@ametek.com](mailto:chinasales@ametek.com)

### 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.