

# TSS 500N2F

## TELECOM SURGE GENERATOR



**FOR TESTS ACCORDING TO ...**

- > FCC 97-270 (part 68)
- > TIA-986-B

**TSS 500N2F - TELECOM SURGE GENERATOR FOR SURGE A PULSES AS PER FCC PART 68**

Telecommunication networks are exposed to lightning events. Therefore telecommunication equipment being connected to the outside world need to have appropriate protection to show an acceptable immunity to surge transients in order not to fail in case of lightning events. Telecom Surge Simulators of the TSS 500N series are used to proof the immunity of telecommunications equipment.

The TSS 500N2F is used for Surge A pulse testing and AC power line surge testing as per TIA-968-B and FCC 97-270 (part 68).

**HIGHLIGHTS**

- > **FCC part 68 Surge A and Power line surge**
- > **Includes pulses 2/10us, 10/560us and 10/160us**
- > **Auto-setting of source impedance for each pulse**
- > **Built-in CDN for Telecom ports**
- > **Built-in CDN for AC power ports**
- > **Standard Test routines**
- > **Manual operation**
- > **USB and GPIB interface**

**APPLICATION AREAS**

-  COMPONENTS
-  TELECOM

## TECHNICAL DETAILS

### STANDARD IMPULSES

TIA-986-B (2009)	Pulse 10/160 $\mu$ s Pulse 10/560 $\mu$ s
FCC 97-270 (part 68)	Pulse 2/10 $\mu$ s Pulse 10/160 $\mu$ s Pulse 10/560 $\mu$ s

### POWER LINE SURGE, PULSE 2/10 US

Voltage (o.c.)	> 160 V - 2,500 V
Rise time	2 $\mu$ s +0/-1 $\mu$ s
Pulse duration	10 $\mu$ s +9/-0 $\mu$ s
Current (s.c.)	> 64 A - 1,000 A
Rise time	2 $\mu$ s +0/-1 $\mu$ s
Pulse duration	10 $\mu$ s +9/-0 $\mu$ s
Polarity	Positive, negative or alternating
Counter	1 - 30,000 or endless

### SURGE A LONGITUDINAL, PULSE 10/160 US

Voltage (o.c.)	160 V - 1,500 V +10/-0%
Rise time	10 $\mu$ s +0/-4 $\mu$ s
Pulse duration	160 $\mu$ s +100/-0 $\mu$ s
Current (s.c.)	20 A - 200 A per wire +15/-0%
Rise time	10 $\mu$ s +0/-5 $\mu$ s
Pulse duration	160 $\mu$ s +50/-0 $\mu$ s
Polarity	Positive, negative or alternating
Counter	1 - 30,000 or endless

### SURGE A METALLIC, PULSE 10/560 US

Output voltage open circuit	160 V - 1,000 V +10/-0%
Rise time	10 $\mu$ s +0/-4 $\mu$ s
Pulse duration	560 $\mu$ s +300/-0 $\mu$ s
Current (s.c.)	10 A - 100 A per wire +15/-0%
Rise time	10 $\mu$ s +0/-5 $\mu$ s
Pulse duration	560 $\mu$ s +200/-0 $\mu$ s
Polarity	Positive, negativ or alternating
Counter	1 - 30,000 or endless

### COUPLING

Telecom ports	Tip to Ground, Ring to Ground, Tip and Ring to Ground
Power ports 250 V/16 A	L-N, L-PE, N-PE, L+N-PE

### MEASUREMENTS

Peak voltmeter	2,500 V $\pm$ 10%
Peak current meter	1,000 A $\pm$ 10%

### TRIGGER

Automatic	Automatic pulse release
Manual	Single pulse release
External	External pulse release
CRO trigger	5V trigger signal for oscilloscope
Synchronisation	0° - 360° (for ac power ports)

### TEST ROUTINES

Quick Start	Immediate start; easy-to-use and fast
User Test routines	Manual Standard Test Routines Change Polarity after n pulses Change voltage after n pulses
Standard Test routines	Test pulses/levels as per FCC part 68
Service	Service, setup, self test

### INTERFACE

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

### SAFETY

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

### GENERAL DATA

Dimensions, weight	19 "/6 HU, approx. 35 kg
Supply voltage	115/230 V +10/-15%
Fuses	2 x 2 AT (230 V) or 2 x 4 AT (115 V)

### OPTIONS

iec.control	Software to control the test, including standard library, test report facility and data conversion generator
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# COMPETENCE WHEREVER 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. Subject to change without further notice.