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TSS 500N6B

COMPACT TELECOM SURGE GENERATOR AS PER BELLCORE/TELCORDIA GR-1089-CORE

FOR TESTS ACCORDING TO ...

› Bellcore GR-1089-Core
› ITU-T K.12
› ITU-T K.28
› ITU-T K.45

TSS 500N6B - TELECOM SURGE GENERATOR FOR BELLCORE 4-WIRE APPLICATIONS

Telecommunication networks are exposed to lightning events. Therefore telecommunications 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. The TSS 500N6B is used for 4-wire applications as per Bellcore GR-1089-Core and supports 12 pair telecom port testing via the CNB 500 optional coupler. It can also be used for the 2-wire telecom port testing.

HIGHLIGHTS

- **Compact Tester for Bellcore/Telcorida GR-1089-CORE**
- **Test pulses for 4-wire telecom applications**
- **Also covers 2-wire telecom port testing**
- **Generates test pulses 10/360µs, 10/1,000µs and 2/10µs**
- **Includes all necessary matching resistors**
- **Built-in coupling network**
- **Supports testing 12 pairs (10/360µs)**

APPLICATION AREAS

COMPONENTS

TELECOM

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TECHNICAL DETAILS

FIRST LEVEL LIGHTNING FOR 4-WIRE PORTS, PULSE 10/1,000US (600V)	
Voltage (o.c.)	50V - 600V -0/+15%, positive/negative
Current (s.c.)	8A - 100A per wire
Rise time	10µs +0us/-4µs
Pulse duration	1,000µs +500µs/-0µs
Repetition rate	1 pulse every 36s at 600V/100A per wire

FIRST LEVEL LIGHTNING FOR 4-WIRE PORTS, PULSE 10/1,000US (1,000V)	
Voltage (o.c.)	50V - 1,000V -0/+15%, positive/negative
Current (s.c)	5A - 100A per wire
Rise time	10µs +0µs/-4µs
Pulse duration	1,000µs +500µs/-0µs
Repetition rate	1 pulse every 60s at 1,000V

FIRST LEVEL LIGHTNING FOR 4-WIRE PORTS, PULSE 10/360US (1,000V)	
Voltage (o.c.)	50V - 1,000V -0/+15%, positive/negative
Current (s.c.)	5A - 100A per wire
Rise time	10µs +0µs/-2.5µs
Pulse duration	360µs +108µs/-0µs
Repetition time	1 pulse every 20s at 1,000V

FIRST LEVEL LIGHTNING FOR 4-WIRE PORTS, PULSE 2/10US (2,500V)	
Voltage (o.c.)	100V - 2,500V -0/+20%, positive/negative
Current (s.c)	20A - 500A per wire
Rise time	2µs +0µs/-1µs
Pulse duration	10µs +7µs/-0µs
Repition rate	1 pulse every 5s at 2,500V

INTRA BUILDING LIGHTNING FOR 4-WIRE PORTS, PULSE 2/10US (800V)	
Voltage (o.c.)	100V - 800V -0/+20%, positive/negative
Current (s.c.)	12.5A - 100A per wire
Rise time	2µs +0µs/-1µs
Pulse duration	10µs +7µs/-0µs
Repetition rate	1 pulse every 2s at 800V/100A per wire

INTRA BUILDING LIGHTNING FOR 4-WIRE PORTS, PULSE 2/10US (1,500V)	
Voltage (o.c.)	100V - 1,500V -0/+20%, positive/negative
Current (s.c.)	6A - 100A per wire
Rise time	2µs +0µs/-1µs
Pulse duration	10µs +7µs/-0µs
Repetition rate	1 pulse every 3s at 1,500V/100A per wire

SECOND LEVEL LIGHTNING FOR 4-WIRE PORTS, PULSE 2/10US (5,000V)	
Voltage (o.c.)	100V - 5,000V -0/+20% positive/negative
Current (s.c.)	10A - 500A per wire
Rise time	2µs +0µs/-1µs
Pulse duration	10µs +7µs/-0µs
Repetition rate	1 pulse every 10s at 5,000V

MEASUREMENTS	
Peak voltmeter	5,000V ± 10%
Peak current meter	500A ± 10%

COUPLING	
Telecom ports (Tip, Ring, Tip1 and Ring1)	Each lead (T, T1, R, R1) to Generator with the other leads to Ground T and R to Generator simultaneously, T1 and R1 to Ground T1 and R1 to Generator simultaneously, T and R to Ground T, R, T1 and R1 to Generator, simultaneously

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TECHNICAL DETAILS

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	Manual Standard Test Routine Change Polarity after n pulses Change voltage after n pulses
Standard Test routines	Test levels as per GR-1089 CORE
Service	Service, setup, self test

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

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

GENERAL DATA	
Dimensions, weight	19"/9HU, approx. 45kg
Supply voltage	115/230V +10/-15%
Fuses	2xT2AT (230V) or 2xT4AT (115V)

OPTIONS	
CNB 500	12 pair CDN for 10/360 s pulse up to 1,000V/25A per wire
iec.control	Software to control the test, including standard library, test report facility and data conversion generator

ADDITIONAL MODELS FOR GR-1089-CORE	
TSS 500N2B	Telecom Surge Generator for first level lightning protection, test pulse 10/1000 µs up to 2000 V
TSS 500N4B	4kV/2kA Telecom Surge Generator as per Bellcore; Telecom Surge generator for high exposure premises, lightning surge&broadband communication, test pulse 10/250µs up to 4kV/2kA

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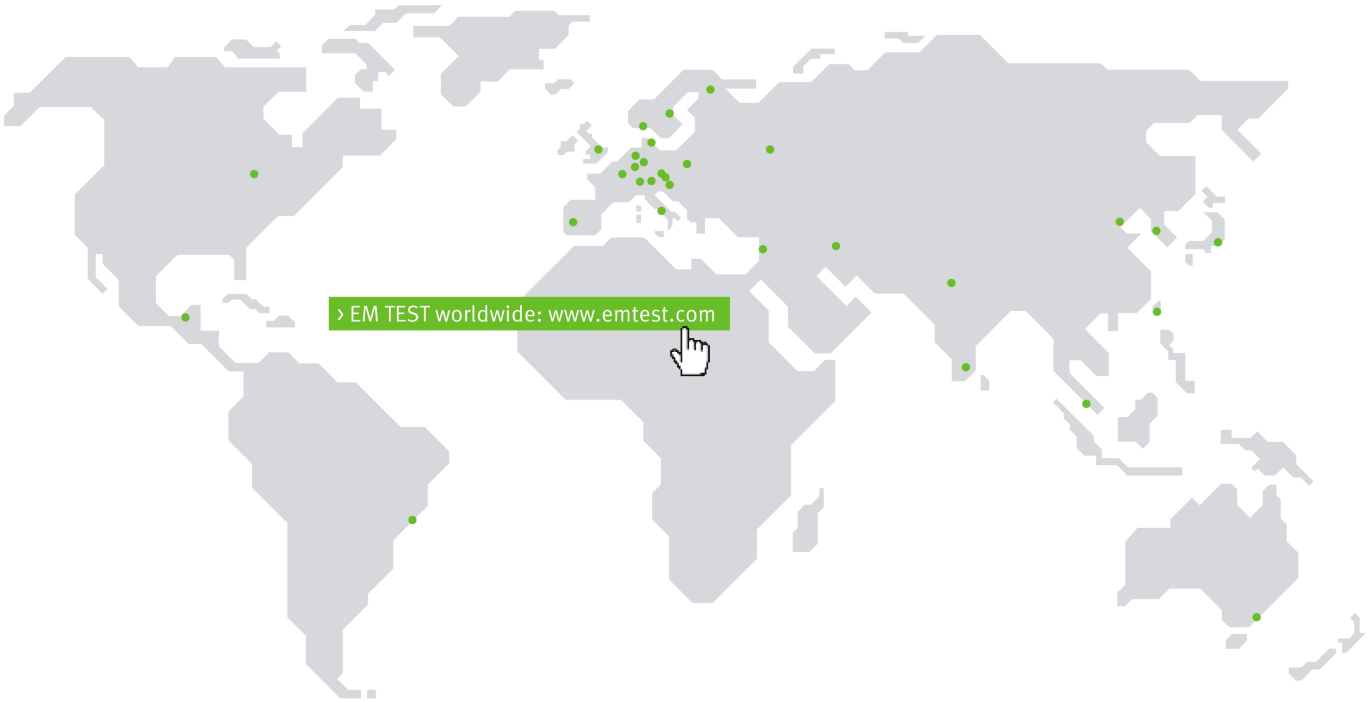
COMPETENCE WHEREVER YOU ARE



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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.