

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/Telcordia 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

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 +0µs/-4µs |
| Pulse duration | 1,000µs +500µs/-0µs |
| Repetition rate | 1 pulse every 36s at 600V/100A per wire |

| 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 |

| 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 |

| 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 |

| 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 |

| 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 |

| 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 |
| Repetition rate | 1 pulse every 5s at 2,500V |

| 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 |

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 |

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 › E-mail: 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 › E-mail: 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 › E-mail: 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 › E-mail: 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 › E-mail: 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 › E-mail: sales@emtest.co.kr

Singapore

AMETEK Singapore Pte. Ltd › No. 43 Changi South Avenue 2 › 04-01 Singapore
48164
Internet: www.ametek-cts.com › E-mail: 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

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