

TSS 500M4

TELECOM SURGE GENERATOR



FOR TESTS ACCORDING TO ...

- › FCC 97-270 (part 68)
- › IEC 61000-4-5
- › ITU-T K.17
- › ITU-T K.20
- › ITU-T K.21
- › ITU-T K.28
- › ITU-T K.45

TSS 500M4 - COMPACT TELECOM SURGE GENERATOR WITH 10/700US TEST PULSE







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. Telecom Surge simulators of the TSS 500 series are used to proof the immunity of telecommunications equipment.

The TSS 500M4 is used to perform tests as per IEC 61000-4-5 and related standards and complies with the requirements of ITU-T and FCC 97-270 (part 68) for Surge B pulse.

HIGHLIGHTS

- › **STANDALONE TESTER FOR 10/700US PULSE AS PER IEC 61000-4-5**
- › **COMPLIES TO ITU-T**
- › **COMPLIES TO FCC PART 68 (SURGE B PULSES)**
- › **BUILT-IN CDNS FOR 2-WIRE AND 4-WIRE APPLICATIONS**
- › **MANUAL OPERATION**

APPLICATION AREAS

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

TECHNICAL DETAILS

AS PER ITU AND ETS RECOMMENDATIONS	
	Pulse 1.2/50us
Voltage (o.c.)	160V - 4,000V ±10%
Rise time*)	1.0us ± 30%
Pulse duration*)	50us ± 20%
Energy storage capacitor	1uF
	Pulse 10/700us
Rise time*)	6.5us ± 30%
Pulse duration*)	700us ± 20%
Energy storage capacitor	20uF
Polarity	Positive, negative or alternating
Counter	1 - 30,000 or endless
	*) definition of waveform parameters as per IEC 469-1. As per IEC 61000-4-5 this is considered to be equal to the waveform parameter definition as per IEC 60-1 for the 1.2/50us pulse and CCITT for the 10/700us pulse.

AS PER FCC PART 68, PULSE B	
Voltage (o.c.)	160V - 4,000V ±10%
Front time	9us ± 30%
Decay time	720us ± 20%
Current (s.c.)	4A - 100A
Front time	5us ± 30%
Decay time	320us ± 20%
Energy storage capacitor	20uF
Polarity	Positive, negative or alternating
Counter	1 - 30,000 or endless

AS PER IEC 61000-4-5	
	Pulse 10/700us
Voltage (o.c.)	160V - 4,000V ±10%
Rise time*)	6.5us ± 30%
Pulse duration*)	700us ± 20%
Current (s.c.)	4A - 100A
Rise time*)	4us ± 20%
Pulse duration*)	300us ± 20%
Energy storage capacitor	20uF
Polarity	Positive, negative or alternating
Counter	1 - 30,000 or endless
	*) definition of waveform parameters as per IEC 469-1. As per IEC 61000-4-5 this is considered to be equal to the waveform parameter definition as per IEC 60-1 for the 1.2/50us pulse and CCITT for the 10/700us pulse.

COUPLING AS PER	
ITU-T	2-wire: T1 and T2 with 25ohm each 4-wire: T1,T2,T3,T4 with 100ohm each
FCC part 68	2 wire: T1 and T2 with 25ohm each
IEC 61000-4-5	External networks are required (options)

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 Polarity after n pulses Change voltage after n pulses
Standard Test routines	IEC 61000-4-5 Level 1,000V IEC 61000-4-5 Level 2,000V IEC 61000-4-5 Level 4,000V FCC part 68, Pulse B Metallic 1,000V FCC part 68, Pulse B Longitudinal 1,500V
Service	Service, setup, self test

TECHNICAL DETAILS

INTERFACE

Serial interface	RS 232, baud rate 1,200 - 19,200
Parallel interface	IEEE 488, address 1 - 30

SAFETY

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

GENERAL DATA

Dimensions, weight	19"/3HU, approx. 20kg
Supply voltage	115/230V +10/-15%
Fuses	2xT 2AT (230V) or 2xT4AT (115V)

OPTIONS

CNV 504S1	4 telecom lines as per fig. 12, IEC 61000-4-5
CNV 508S1	8 telecom lines as per fig. 12, IEC 61000-4-5
CNV 504S5	Coupling network providing 4x100ohm and 2x25ohm
iec.control	Software to control the test, including standard library, test report facility and data conversion generator

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.