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TSS 500M10

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 500M10 - 10KV TELECOM SURGE GENERATOR FOR 10/700US TEST PULSE

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 500 series are used to proof the immunity of telecommunications equipment.
The TSS 500M10 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**
› **TEST VOLTAGE UP TO 10KV**
› **COMPLIES TO ITU-T FOR ENHANCED LEVEL TESTING**
› **COMPLIES TO FCC PART 68 (SURGE B PULSES)**
› **BUILT-IN CDNS FOR 2-WIRE AND 4-WIRE APPLICATIONS**

APPLICATION AREAS

INDUSTRY
TELECOM
COMPONENTS
RESIDENTIAL
MEDICAL
BROADCAST

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TECHNICAL DETAILS

AS PER ITU AND ETS RECOMMENDATIONS	
	Pulse 1.2/50us
Voltage (o.c.)	500V - 10,000V ± 10%
Rise time*)	1us ± 30%
Pulse duration*)	50us ± 20%
Energy storage capacitor	1uF
	Pulse 10/700us
Voltage (o.c.)	500V - 10,000V ± 10%
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	
	Surge Pulse B
Voltage (o.c.)	500V - 10,000V ±10%
Front time	9us ± 30%
Pulse duration	720us ± 20%
Current (s.c.)	12.5 - 250A for T1 to Com or T2 to Com
Rise time	5us ± 30%
Pulse duration	320us ± 20%
Energy storage capacitor	20uF
Polarity	Positive, negative or alternating
Counter	1 - 30,000 or endless

AS PER IEC 61000-4-5	
Pulse 10/700 s	Pulse 10/700 s
Voltage (o.c.)	500V - 10,000V ±10%
Rise time*)	6.5us ± 30%
Pulse duration*)	700us ± 20%
Current (s.c.)	12.5 - 250A for T1 to Com or T2 to Com
Rise time*)	4us ± 20%
Pulse duration*)	300us ± 20%
Energy storage capacitor	20uF
Source impedance	40ohm
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.

COUPLINGS AS PER	
ITU-T	2-wire: T1 and T2 with 25ohm each 4-wire: T1, T2, T3, T4 with 25ohm 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

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TECHNICAL DETAILS

TEST ROUTINES	
Quick Start	Immediate start; easy-to-use and fast
User Test routines	Change Polarity after n pulses Change voltage after n pulses by V
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

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

ALTERNATIVE CONFIGURATIONS	
T1-M10	0.5/700us up to 10kV
T2-M10	100/700us up to 10kV
	to replace one of the standard pulses

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

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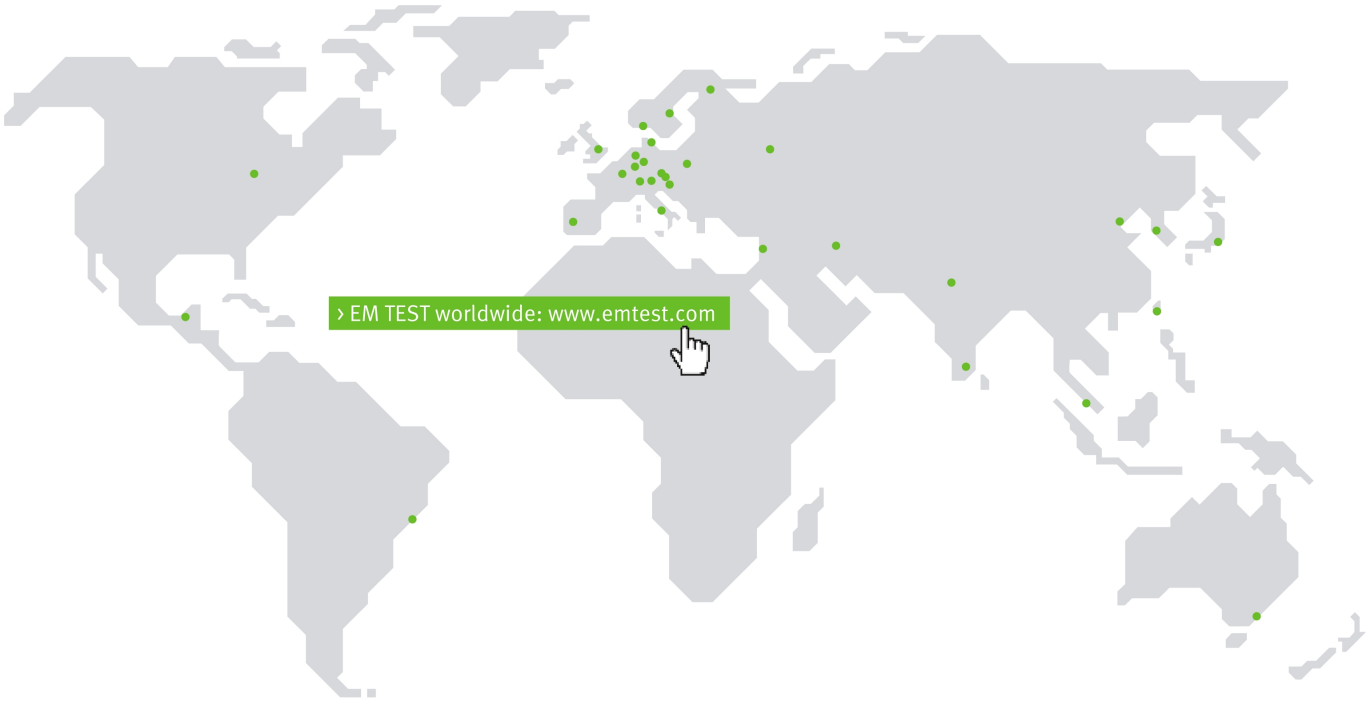
COMPETENCE WHEREEVER YOU ARE



CONTACT EM TEST DIRECTLY

Switzerland
EM TEST AG › Sternenhofstraße 15 › 4153 Reinach › Switzerland
Phone +41 (0)61/7179191 › Fax +41 (0)61/7179199
Internet: www.emtest.ch › E-mail: sales@emtest.ch

Germany
EM TEST GmbH › Lünener Straße 211 › 59174 Kamen › Deutschland
Phone +49 (0)2307/26070-0 › Fax +49 (0)2307/17050
Internet: www.emtest.com › E-mail: info@emtest.de

France
EM TEST FRANCE › Le Trident - Parc des Collines › Immeuble B1 - Etage 3 ›
36, rue Paul Cézanne › 68200 Mulhouse › France
Phone +33 (0)389 31 23 50 › Fax +33 (0)389 31 23 55
Internet: www.emtest.fr › E-mail: info@emtest.fr

P.R. China
EM TEST Representative Office Beijing › 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: emtestbj@public.bta.net.cn

Malaysia
EM TEST (M) SDN BHD › Unit B2-6, Jalan Dataran SD2 › Dataran SD2, PJU9 ›
Bandar Sri Damansara › 52200 Kuala Lumpur › Malaysia
Phone +60 (03)62 73 22 01 › Fax +60 (03)62 74 22 01
Internet: www.emtest.com › E-mail: sales@emtest.com.my

Poland
EM TEST Polska › ul. Lema 33, 26-613 Radom › Polska
Phone +48 518 64 35 12 › E-mail: info.polska@emtest.de