

VSURGE NX15

VOLTAGE SURGE GENERATOR FOR INSULATION TESTS



FOR TESTS ACCORDING TO ...

- > IEC 60060
- > IEC 61180-1

INSULATING TESTING - VOLTAGE SURGE GENERATOR AS PER IEC 61180-1 / IEC 60060-1 / IEC 60335-1 AND IEC 60664-1

The voltage surge generator vsurge NX15 is specifically designed to generate high voltage transients as required by IEC 61180-1, IEC 60060-1, IEC 60335-1 and IEC 60664-1 for insulating testing. The purpose of these tests is to verify that clearances will withstand transient overvoltages. The impulse withstand test is carried out with a voltage having a 1,2/50 μ s waveform.

The requirements of the tests are satisfied if no indication of disruptive discharge or partial breakdown is obtained.

HIGHLIGHTS

- > Voltage surge impulses up to 15 kV
- > Specified tolerance +/- 3 %
- > Compliant to IEC 60335-1, IEC 60060-1, IEC 61180/61180-1 and IEC 60664-1
- > Peak voltage and peak current measurement
- > External synchronization up to 690 V
- > Interlock and Warning lamp control
- > USB, Opto Link and Ethernet interface

APPLICATION AREAS

-  INDUSTRY
-  COMPONENTS
-  RESIDENTIAL

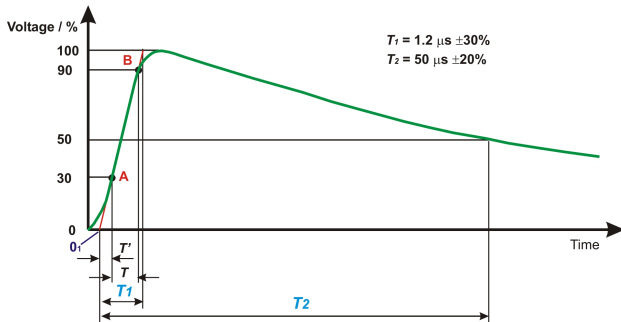
TECHNICAL DETAILS

OPERATION

SPECIFICATION OF WAVE SHAPE

The specification is in accordance with IEC 61180 / IEC 61180-1 and is different to the surge impulse definition as per IEC 61000-4-5.

Definition of front time T1: Virtual parameter defined as 1/0.6 times (or multiply by 1.67) the interval T between the instants when the impulse is 30 % and 90 % of the peak value on the test voltage curve (points A and B)



SOFTWARE

IEC.CONTROL-NX SOFTWARE FOR CONTROL AND DOCUMENTATION

Outstanding user convenience, clearly structured windows and operation features and the EM TEST standards library along with the flexibility to generate user specific test sequences very easily are the main features of iec,control-NX software. The software is automatically configured according to the connected EM TEST generators. Extensive reporting capabilities help the user to create test reports that meet international requirements.

iec.control is supported by Windows 7, Windows 8 (64 Bit) and Windows 10. Remote control is achieved either via Ethernet or opto link with USB at the computer. The iec.control-NX supports various interfaces for control external measuring instruments.



VSURGE NX15 - VOLTAGE SURGE GENERATOR

VOLTAGE PULSE

Voltage (open circuit)	500 V to 15,000 V +/- 3 %
Front time	1.2 μs +/- 30 %
Time to half value	50 μs +/-20 %
Wave Shape	As per IEC 60060-1, IEC 61180-1
Output impedance	40, 50 and 500 Ohm, selectable
Synchronization	0° - 360° (16 - 500 Hz), resolution 1°
Sync input	10 V - 690 V, 15 Hz - 500 Hz, potential free
Polarity	Positive, negative, alternate
Event counter	1 to 99,999, selectable

TRIGGER

Automatic	Automatic pulse release
Manual	Single pulse release
External	External pulse release
CRO trigger	5V trigger signal for oscilloscope
Pulse repetition rate	3 s to 9,999 s depending on the voltage 12 s @ 15 kV

OUTPUT

Direct	Coaxial output at the front panel
Connector	HIVOLT HC52RB

TECHNICAL DETAILS

MEASUREMENTS

CRO \hat{U} -monitor	10 Vp at 15,000 V
CRO \hat{I} -monitor	10 Vp at 375 A +/- 10 %, @Z = 40 Ohm 10 Vp at 300 A +/- 10 %, @Z = 50 Ohm 10 Vp at 30 A +/- 10 %, @Z = 500 Ohm
Peak voltage	15,000 V, in the touch display
Peak current	375 A, in the touch display
Overcurrent protection	Breaks the Surge test when the surge current is over the limit, Range: 0 - 375 A
Undervoltage protection	Breaks the Surge test when the surge impulse voltage is lower than the limit, Range, 0 - 15,000 V
Charging	Bar display LED 0 - 100 % of settet voltage

TEST ROUTINES

Quick Start	Immediate start; easy to use and fast
Standard Test Routines	IEC 60335-1 IEC 60060-1 IEC 61180 IEC 60664-1
Extended Test Routines	Change polarity Change voltage

GENERAL DATA

INTERFACE

Serial interface	2 x USB A for memory stick, 1 x USB B for service only, Opto - Link to USB for remote
LAN	Ethernet for remote
Sys.link	26 pin high density connector to control an external coupling network
Fail inputs	EUT monitoring via input (one each) EUT Monitor 1 EUT Monitor 2

SAFETY

Safety standard	IEC/EN 61010
Security circuit	Control input (24 VDC)
Warning lamp	Floating contact (max. 60 V/2 A)

GENERAL DATA

Dimensions, weight	19"/6 HU, 448 mm x 289 mm x 550 mm, approx. 22 kg
Supply voltage	85 V - 264 VAC
Fuses	115 V: 2 x 4 A slow blow, 230 V: 2 x 2 A slow blow
Power	max. 95 W, 0.42 A, avg. 35 W, 0.15 A

ENVIRONMENT

Temperature	10 °C to 35 °C
Humidity	30 % to 75 %, non condensing
Atmospheric pressure	86 kPa (860 mbar) to 106 kPa (1,060 mbar)

ACCESSORIES AND OPTIONS

ACCESSORIES

Scope of delivery	vsurge NX15 generator, 2 pcs connection cable, one side open end Safety circuit und warning lamp adapter, Mains supply cable (depends on country), Operation manual
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OPTIONS

iec.control 1-NX	Remote control and documentation software, including standard test routines and reporting capabilities. UOC included
UOC	USB-Optolink Converter, Optical Fibre cable, 5 m
ESS 1	Interlock for NX system, switches OFF High voltage and EUT power supply

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.