

SURGE GENERATOR TESTER

SPECIFICATION

1. Description

The T2T3-Series Double Waveform Surge Generators are intended for testing Surge Protective Devices (SPDs), Varistors, and the like, according to IEC61643-1. The generators are able to deliver two types of surge waveforms—8/20 current wave and 1.2/50-8/20 combination wave.

The generators were constructed on the principles of the Patent ZL00240589X owned by our company which conferred many benefits such as only half charge voltages of ordinary technology is needed for the same output current that means high efficiency, safety, and low operation and maintenance costs.

Each generator has three Pulse Forming Networks (PFNs)—PFN/A, PFN/B, and PFN/C that will output 8/20-low currents, 8/20-high currents, and 1.2/50-8/20 combination wave respectively, so that a wide range of 8/20-surge currents can be obtained.

In connection with the maximum output current of 8/20-wave, the T2T3-Series Generators have five grades—20kA, 40kA, 60kA, 80kA and 100kA.

In connection with the operational function, the T2T3-Series Generators have two variants, the “Variant H” is a simplified version operated by hand, while the “Variant A” is a computer-aided version that is capable of performing the operating duty test automatically according to IEC61643-1.

The T2T3-Series Generators are special test equipments of high voltage, high current and high energy, therefore absolute safety of both people and equipment will be the first consideration. The significant safety measures adopted are as below:

- 1) The chassis and all dead metal parts of the generator reliably earthed.
- 2) The interlockers will immediately break the power and discharge the capacitors of PFNs during the period of charging in case of either any opening of the doors in the generator and test chamber or power supply accidentally OFF.
- 3) The “ Emergent Discharge” button allows immediate breaking the power and discharging the capacitors of PFNs through a special resistor at any time.
- 4) A special protective device allows discharging of the generator in case that the tested unit being connected not properly or being short-circuited.

2, Designation

T2T3- * *- \$***-- Maximum output current of 8/20-wave, kA, 20, 40,60,80 and 100;
 \$--- “H” simplified version operated by hand, or
 “A” computer-aided version that is capable of performing the operating duty test automatically according to IEC61643-1.

3, Specifications for “H” version

Performance	T2T3-20H	T2T3-40H	T2T3-60H	T2T3-80H	T2T3-100H
Peak current range of 8/20 kA	1-20	1-40	1-60	5-80	5-100
Uoc of combination wave kV	2-10	2-20	2-30	2-30	2-30
Isc of combination wave kA	1-5	1-10	1-15	1-15	1-15
Charging voltage range kV	2-11	2-21	2-31	2-35	2-45
Capacitors for PFN/A Capacitors for PFN/C	8μF35μF8μF	8μF35μF8μF	8μF35μF8μF	8μF40μF8μF	8μF40μF8μF
Power electricity(50 or 60Hz) Compressed air	220V2kVA	220V2kVA	220V3kVA	220V3kVA	220V4kVA
Max, charging time ≤	20S	30S	30S	40S	50S
Tolerance of waveform 8/20	8μS±10%, 20μS±10%,Amplitude of polarity reversal ≤20% Peak				
Tolerance of combination waveform Uoc IscFictive impedance Zf=Uoc/Isc	1.2μS±30%, 50μS±20%,8μS±10%, 20μS±10%,Amplitude of polarity reversal ≤20% Peak 2±0.5Ω				
Switch for discharge	Triggered air-gap with the gap length auto-adjusted by the charge volt setting.				
Surge current and clamping voltage Measurement:Current converterVoltage dividerOscilloscope	From PearsonFrom Tektronix(equipped by customer)				





100KA-8X20-Surge-Generator



2ms-Surge-generator



60kA-Surge-generator



65kA-8x20-Surge-Generator



8x20-10x1000us-Surge-genera



8X20-10X350-10X1000-Surge