## Features

- **Compliant with ACTA (formerly FCC) Part 68, ANSI/TIA-968-B and Industry Canada CS-03 Surge Waveform Requirements**
  - → *Type A & B Surge (Metallic & Longitudinal)*
  - → *Power Line Surge (with integral CDN)*
- **Can be operated via front panel interface or via remote PC through fiber optic interface using supplied TransWare-168 software**
- **Voltage** (*1000x1*) **and Current** (*100x1*) **Monitor Ports located on front panel.**
- **Three-Year Warranty**

Description

The *SGTEL-168 Telecom Surge Generator* offers a single-box solution for Type A, Type B and power line surge simulations on telecommunications equipment per ACTA (formerly FCC) Part 68, ANSI/TIA-968-B and Industry Canada CS-03 standards.

Type A and Type B surges are applied through the appropriate A/B/G surge output terminals (4-mm safety sockets) located on the front panel. The line(s) to be tested are connected directly to these output terminals for the test, as shown to the right.
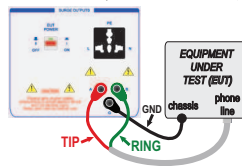
Power line surges are typically applied through the integral coupling/decoupling network (CDN), which also serves as the EUT power port. Alternatively, in cases where an external CDN is needed, the power line surge may be applied to the front panel A/B output terminals, to which the external CDN connects.
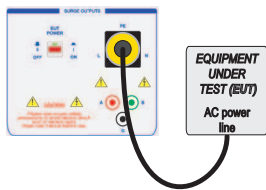
The *SGTEL-168 Telecom Surge Generator* is equipped with voltage (V_{mon} [1000x1]) and current (I_{mon} [100x1]) monitor ports and sync output port. These ports can be connected directly to an oscilloscope to verify the peak voltage (open circuit) and peak current (short circuit). The sync output port can be connected to the external trigger input of the oscilloscope.
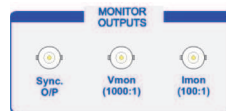
User Interfaces & Features

The *SGTEL-168* can be controlled remotely via its fiber optic interface and USB converter. Using the supplied *TransWare-168* PC software, the user can create, save and run custom test sequences, or simply apply surges on an individual basis.

Using the *TransWare* logging functions, the user can enter notes or comments while the test is running, such as EUT observations, which are automatically sorted chronologically with respect to the most recent surge event. The log can be exported after the test for inclusion within the test report.

The *SGTEL-168* is also able to be controlled locally using the control keypad and the easy-to-read backlit display on the front panel.

The safety interlock port can optionally be connected to an external switch, which will automatically disable the surge generator output when the switch contacts open.

Calibration

The *SGTEL-168 Surge Generators* are individually tuned and calibrated to meet the applicable requirements of of ANSI/TIA-968-B and Industry Canada CS-03 standards. The calibration data and certificate are provided, with NIST traceability.

Specifications

All values are typical, unless specified.
All specifications are subject to change without notice.

Surge Type	Open Circuit Voltage - V_{pk} (Volts)	Rise Time - T_r (µs)	Decay Time - T_d (µs)	Open Circuit Current - I_{pk} (Amps)	Rise Time - T_r (µs)	Decay Time - T_d (µs)
OUTPUT WAVEFORM PARAMETERS						
Type A (metallic)	±800-880	6-10	560-860	100-115	5-10	560-760
Type A (longitudinal)	±1500-1650	6-10	160-260	200-230	5-10	160-210
Type B (metallic)	±1000-1100	9 ±2.7	720 ±144	25-27.5	5 ±1.5	320 ±64
Type B (longitudinal)	±1500-1650	9 ±2.7	720 ±144	37.5-41.3	5 ±1.5	320 ±64
Powerline (Line-Neutral)	±2500-2750	1-2	10-19	1000-1250	1-2	10-19

MONITOR PORTS

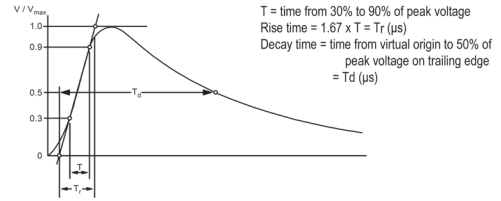|	
Voltage Monitoring Port (V_{mon})	**1000:1 ±10%** ($V_{(actual)} = V_{(measured)} * 1000$)
Current Monitoring Port (I_{mon})	**100:1 ±10%** ($I = V_{(measured)} * 100$) [0.01 Volts/Amp]
Sync Output Port	**0-5 V_{DC}**

ELECTRICAL

System Power Input	**100-250 $V_{AC\,(rms)}$, 50/60 Hz** (300 VA Max.)
Fuse Type	**5 Amps (T)**
EUT Power Input	**250 $V_{AC\,(rms)}$** (maximum), **50/60 Hz** (16A Max.) **100 V_{DC}** (maximum) 16 Amps up to 48 V_{DC}, 10 Amps up to 100 V_{DC}

INPUT/OUTPUT CONNECTORS

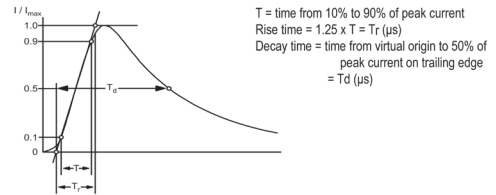|	
EUT Power Input Port	**ABB 216B6 16A IP44 Socket Inlet** (mating connector provided)
EUT Power Output Port	**Universal Multi-Configuration AC Socket**
SGTEL-168 System Power Input Port	**IEC C13 Receptacle**
Safety Interlock Port	**4-pin, 7mm Receptacle** (mating push-pull plug provided)
Fiber Optic Port	**Avago Duplex Latching POF jack**
(A/B/G) Surge Output Ports	**(3) 4mm (banana) safety sockets**
Monitor Output Ports	**(3) BNC-type** (female)

MECHANICAL

Dimensions (H)x(W)x(D)	**(4U) 7.75" x 19" x 24.25"** (19.7 x 48.3 x 61.6 cm)
Weight	**61 lbs** (27.7 kg)

ENVIRONMENTAL

Operating Temperature	**40°F to 104°F** (5°C to 40°C)
Cooling	**Forced Air** (integral fan)

Waveform Definitions

T = time from 30% to 90% of peak voltage
Rise time = 1.67 x T = Tr (µs)
Decay time = time from virtual origin to 50% of peak voltage on trailing edge = Td (µs)

OPEN CIRCUIT VOLTAGE WAVEFORM

T = time from 10% to 90% of peak current
Rise time = 1.25 x T = Tr (µs)
Decay time = time from virtual origin to 50% of peak current on trailing edge = Td (µs)

SHORT CIRCUIT CURRENT WAVEFORM

Product Dimensions