

Voltage Sag Generator

3-Phase 60A - 1000A up to 277/480V 50/60Hz



60 Amp VSG

Omniverter offers a new diagnostic tool to industry, business and electric utilities who wish to perform voltage sag testing to IEC61000-4-11, IEC61000-4-34, IEEE1668 and to SEMI F47

The Voltage Sag Generator provides investigators a quick way to identify weak links in a process by injecting voltage sags of known, controlled magnitude and duration, while monitoring the response of the process. The Voltage Sag Generator helps engineers quickly characterize process components from a simple relay to complex programmable logic controllers and equipment in industrial facilities such as HVAC, semiconductor tools, machine tools, lighting or even entire process lines. Its built-in data acquisition system automatically captures voltages, currents and other user connected signals during induced sag events.



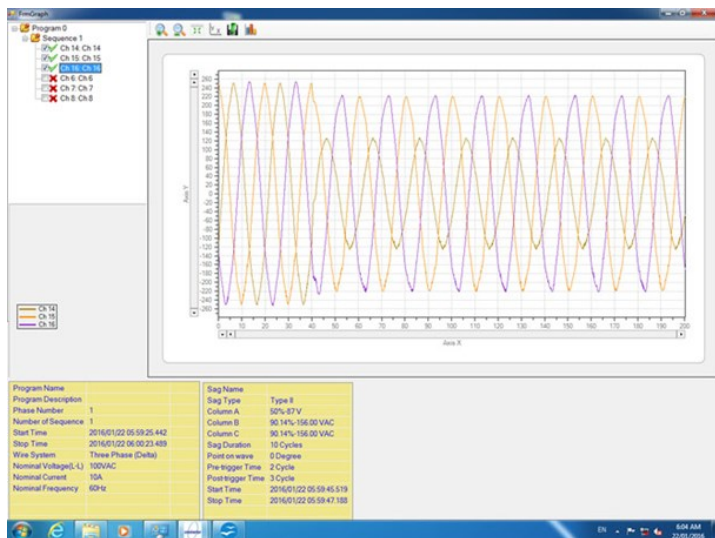
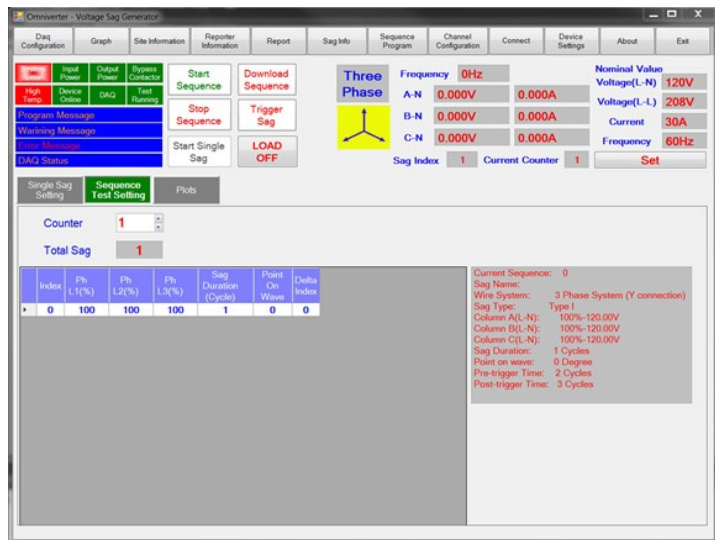
1000 Amp VSG

Voltage Sag Generator

3-Phase 200A - 1000A up to 277/480V

Features

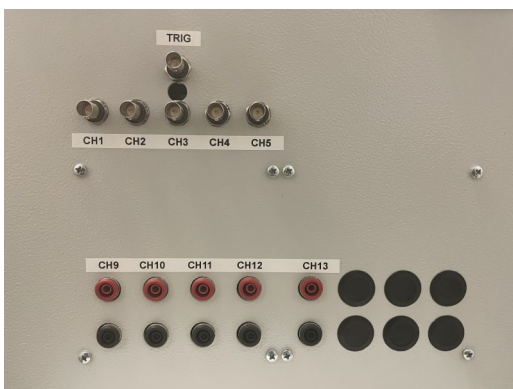
- Connects in series between the utility supply and load using simple input and output connections
- Wide range of test voltages
- Creates sags by switching momentarily to three adjustable transformers
- Easy setup for single-, split- and three-phase loads
- Solid-state switch design for seamless transitions
- Sag depth 100% to 30% in 2.5% steps and 0% in Y-Mode only
- Swells up to 125% in 2.5% steps Y only
- Three phases are independently variable, allowing unbalanced sags to be generated
- Voltage sag durations ranging from ¼ cycle to 10 seconds in ¼ cycle increments
- 360-degree point-on-wave control
- Built-in start/stop circuit
- Built-in current transformers to monitor three-phase load current
- Captured waveforms can be saved in any of several formats including csv and jpg.
- Advanced data acquisition system, software and reporting.



Voltage Sag Generator software is a powerful diagnostic tool for capturing analyzing and exporting waveforms

Includes

- Main unit and all necessary interconnecting cables and voltage probe accessory kit.
- Built-in multi-tapped transformer(s) for controlling sag magnitude
- Built-in 10 external channel data acquisition system
- User manual and Voltage Sag Generator software

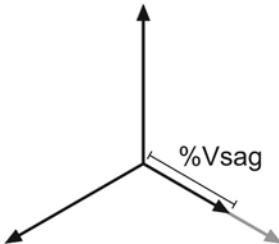
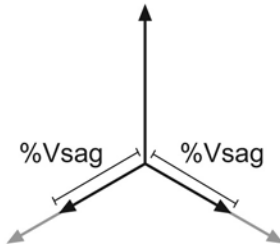
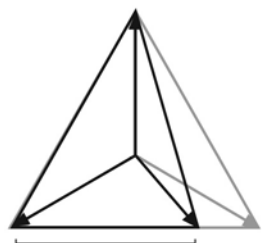
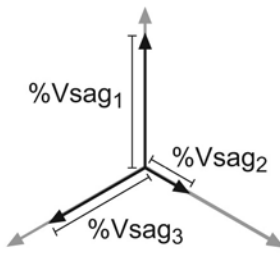
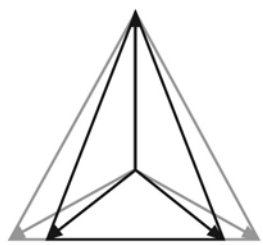
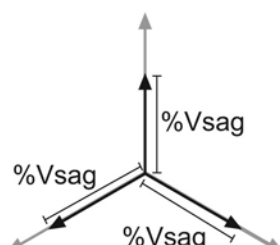


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3-Phase 60A - 1000A up to 277/480V 50/60Hz



Test Vector Summary Voltage Sag Generator 3-Phase VSG 3P XXX

Test Vector Types	Voltage Sag Test Vectors	Resolution	Maximum Voltage	Swell
 <p>(A)</p>  <p>(D)</p>	A,D,E,F	2.5% Steps	277V L-N 480V L-L Requires Neutral	Up to 125%
 <p>(B)</p>  <p>(E)</p>	B,C	Fixed steps 50%, 70% & 80% only Type C	480V L-L Maximum Neutral not required	100% Max.
 <p>(C)</p>  <p>(F)</p>	A,D,E,F	2.5% Steps	Neutral Required	Up to 125%

Voltage Sag Vector Cross Reference

Vector Type	Voltage Sag Description	Other Common Designators	IEC 61000-4-34 Reference Figure
A	Single-Phase	Type I	Figure 3A
B	Phase to Phase Alternative 1	Type II A1	Figure 3B
C	Phase-to-Phase	Type II	Figure 3C
D	Phase to Phase Alternative 2	Type II A2	Figure 3D
E	Unbalanced Three-Phase	N/A	N/A
F	Balanced Three-Phase	Type III	N/A

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Available Options

- Delta configuration allows for two additional test configurations to meet requirements of IEC61000-4-34.
- The Voltage Sag Generator is remarkable in that it can enable testing for all three phase-to-phase test modes as noted in the new SEMI F47-0706 and IEC 61000-4-34.
- Phase-to-Phase Test voltages up to 480 V AC allowed.
- Optional lap top computer loaded with Omniverter VSG software
- User training is available at manufacturing plant.

Specifications

Electrical: 3-Phase Sag Generator

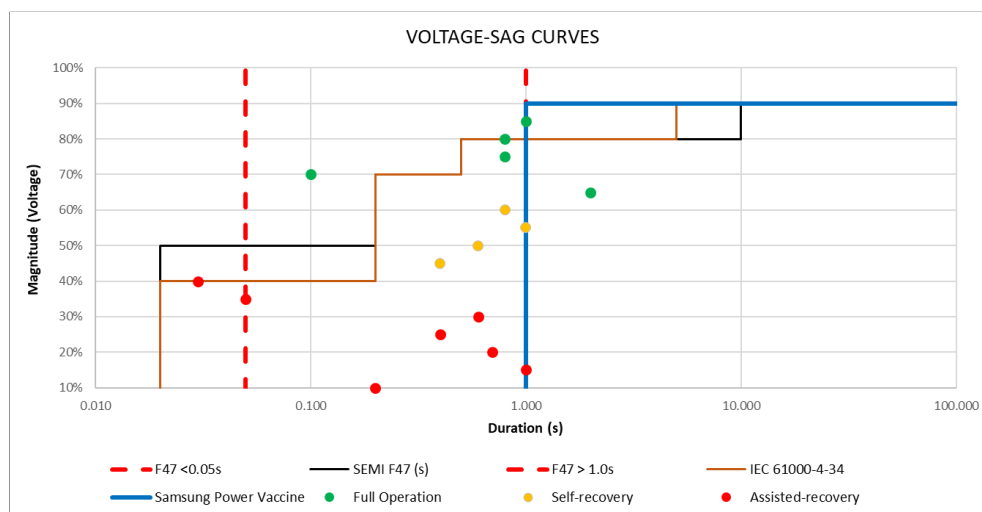
Control voltage	90 to 264 VAC
Operating frequency	50 or 60 Hz
Test voltage range	100–277 V Phase-to-Neutral, 480 V Phase-to-Phase
Max load current continuous	60 A _{rms} , 200 A _{rms} , 600 A _{rms} , 1000 A _{rms}
Max load inrush current	9 x FLC A _{peak} for ½ cycle
Input configuration	3-phase Y (requires Neutral for base mode) 3-Phase Y or Delta
Output configuration	3-phase Y or delta
Power consumption	6A @ 120V (controls) with 10 A fuse
Monitoring points	Phase A, B, C (fused at 1A 600V), N

Sag Control

Sag duration	¼ cycle to 10 sec. in ¼-cycle steps
Sag magnitude	0, 30% to 100% in 2.5% steps
Swell magnitude	105% to 125% in 2.5% steps
Point-on-wave	360° in 1° increments
Trigger output	TTL compatible

Data Acquisition

Sampling rate	10 kHz
Resolution	16 bits
Max input voltage	Ch 1-5: ±10 V _{peak} AC or DC Ch 9-13: ±700 V _{peak} AC or DC (approx. 480 V _{rms}) Ch 6-8 & 14-16 are internal only



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