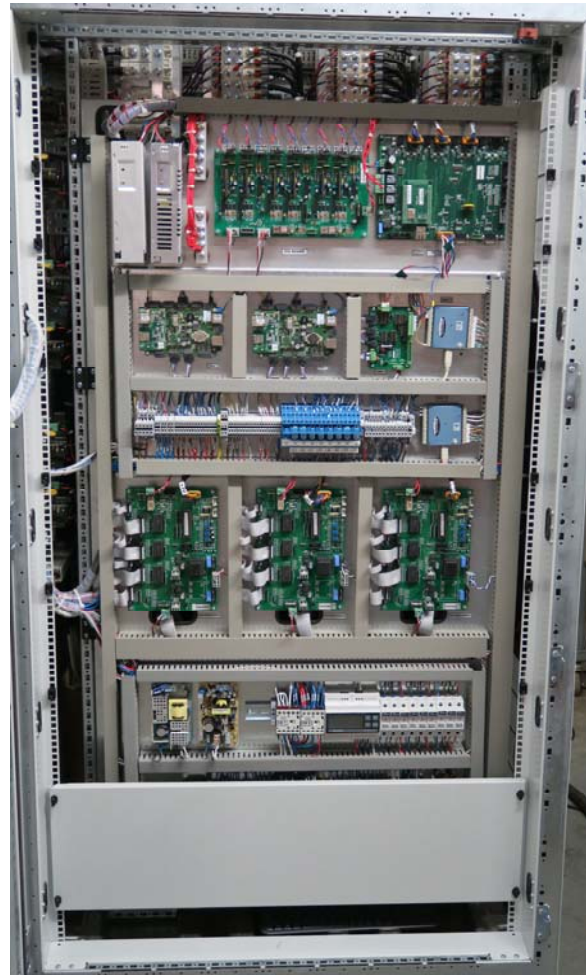


# Voltage Sag Generator

3-Phase 60A-600A up to 277/480V



## 3-Phase Voltage Sag Generator

**Omniverter offers a new diagnostic tool to industry, business and electric utilities who wish to perform voltage sag testing to IEC6100-4-11, 61000-4-34, 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.

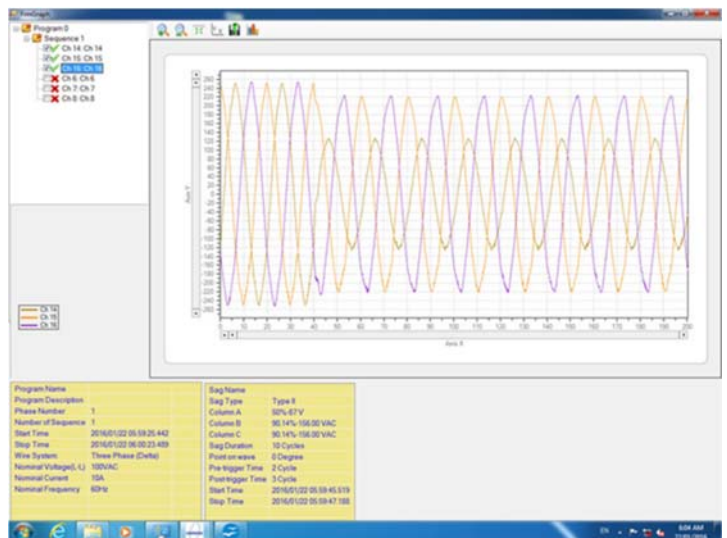
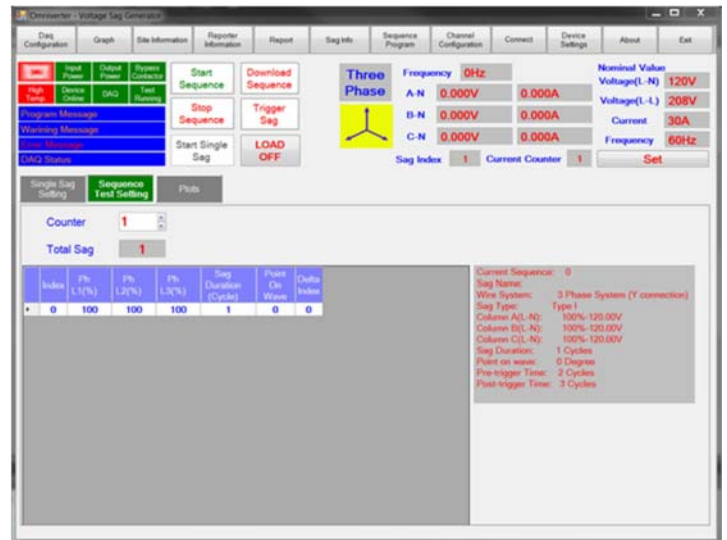
**Capable of performing all tests listed in Standard**



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## Features

- Connects in series between the utility supply and load using simple input and output connections
- Wide range of test voltages (100–277V L-N, 50 or 60 Hz)
- 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 0% 1.25% steps in Y-Mode only
- Swells up to 125% in 1.25% 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.
- Software runs under Microsoft®
- Windows™ 7 or Windows™ 10 - 64 bit systems


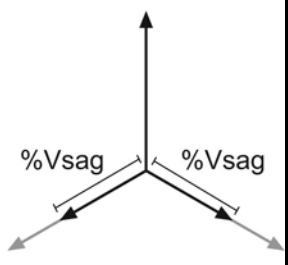
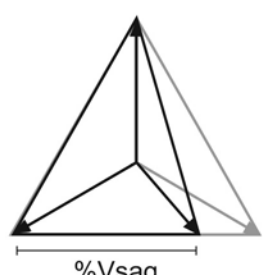
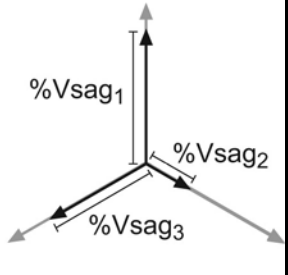

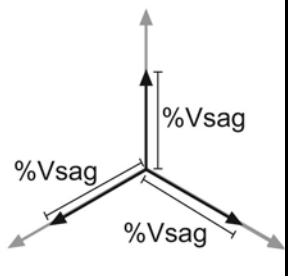


**Voltage Sag Generator software is a powerful diagnostic tool for capturing analyzing and exporting waveforms**

## Includes

- Main unit and all necessary interconnecting cables
- Three built-in multi-tapped transformers for controlling sag magnitude
- Built-in 16-channel data acquisition system
- Voltage probe accessory kit
- User manual and Voltage Sag Generator software

**Test Vector Summary Voltage Sag Generator 60A-600A 3-Phase and Options**

Test Vector Types	Model	Voltage Sag Test Vectors	Resolution	Maximum Voltage	Swell
 <p align="center">(A)</p>	Base Model VSGxxY	A,D,E,F	1.25% Steps	277V L-N 480V L-L Requires Neutral	Up to 125%
 <p align="center">(D)</p>					
 <p align="center">(B)</p>	Delta Mode Option VSGxxD	B,C	Fixed steps 50%, 70% & 80% only Type C	480V L-L Maximum Neutral not required	100% Max.
 <p align="center">(E)</p>					
 <p align="center">(C)</p>	A,D,E,F	1.25% Steps	Neutral Required	Up to 125%	
 <p align="center">(F)</p>					

**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



## 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.
- Notebook computer pre-loaded and tested with Voltage Sag Generator software; on larger units 200A and 600A computer is included in front panel.

## Specifications

### Electrical

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

### Data Acquisition

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

### Sag Control

<i>Sag duration</i>	¼ cycle to 10sec. in ¼-cycle steps
<i>Sag magnitude</i>	100% to 0% in 1.25% steps (see vector summary) Y-Mode only
<i>Swell magnitude</i>	+5% to +25% in 1.25% steps (see vector summary) Y-Mode only
<i>Point-on-wave</i>	360° in 1° increments
<i>Trigger output</i>	TTL compatible



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**For additional information about the  
Voltage Sag Generator, please contact  
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