Omnivert offers a new diagnostic tool to industry, business and electric utilities who wish to perform voltage sag testing to IEC61000-3-11, 61000-3-34, 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
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

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

Voltage Sag Generator software is a powerful diagnostic tool for capturing analyzing and exporting waveforms
# Test Vector Summary Voltage Sag Generator 60A-600A 3-Phase and Options

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<td></td>
<td>A, D, E, F</td>
<td>1.25% Steps</td>
<td>277V L-N</td>
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| (B)               |       | A, D, E, F               | 1.25% Steps | 480V L-L        | Neutral Required |
| (C)               |       | A, D, E, F               | 1.25% Steps | 480V L-L        | Up to 125% |

| (D)               |       | A, D, E, F               | 1.25% Steps | 480V L-L        | Neutral Required |

| (E)               |       | A, D, E, F               | 1.25% Steps | 480V L-L        | Neutral Required |

| (F)               |       | A, D, E, F               | 1.25% Steps | 480V L-L        | Neutral Required |

## Voltage Sag Vector Cross Reference

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<th>Vector Type</th>
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<td>N/A</td>
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<tr>
<td>F</td>
<td>Balanced Three-Phase</td>
<td>Type III</td>
<td>N/A</td>
</tr>
</tbody>
</table>
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

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Specifications

Electrical

- Control voltage: 90 to 264 VAC
- Operating frequency: 50 or 60 Hz, automatic detection
- Test voltage range: 100–277 V Phase-to-Neutral, 480 V Phase-to-Phase
- Max load current: 60A rms, 200 A rms, 600A rms continuous
- 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 with Tri-Mode option
- 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: 100% to 0% in 1.25% steps (see vector summary) Y-Mode only
- Swell magnitude: +5% to +25% in 1.25% steps (see vector summary) Y-Mode only
- 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

For additional information about the Voltage Sag Generator, please contact OMNIVERTER Inc.