

AC Motor Tests

Accurate power source to effectively and reliably test your AC motor

Advanced AC Motor Test Requirements

Electric motor manufacturers are consistently looking for ways to develop advanced AC motors that can deliver increased energy efficiency and greater reliability. The development team needs to accurately control the voltage waveform applied to the motor under test and analyze its response.

A power supply with accurate control of the voltage and frequency changes is critical to the success of these developments.



Benefits of Keysight AC6900 Series three-phase AC source

AC6900 series three-phase AC source with DC output

- Output power 3 to 18 kVA, maximum AC voltage 320 Vrms, maximum DC voltage 452 V dc, and max output frequency 5 kHz.
- Accurate output voltage and frequency programming and measurement.
- Built-in sequencer for AC line transients to simulate power interruption.
- Analyze amplitude and phase of voltage and current waveforms up to the 50th harmonic with a built-in harmonics analyzer.

PathWave BenchVue AC Source Control Software

- Harmonic and data logging functionality.
- Configure various power supply settings & monitor essential measurements.



- Simplifies output voltage and current measurement method up to the 50th order.
- Captures up to 13th different measurements simultaneously.
- Data log files can be exported to CSV format.
- Instrument states can be stored and reloaded when needed.

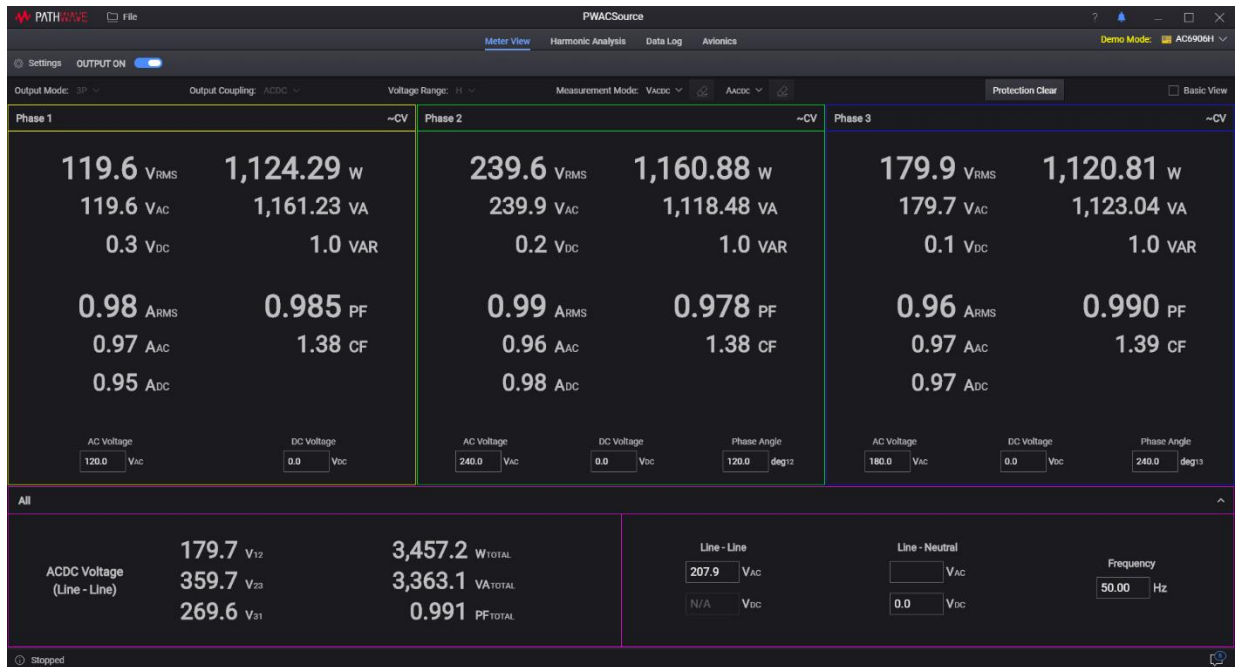


Figure 1. PathWave BenchVue AC Source Control Software

Test Challenges

AC motor manufacturers need a reliable AC power supply to accurately control the voltage waveform applied to the motor under test and analyze its response effectively. Unfortunately, several challenges exist:

- AC power supplies in the market are either less accurate, poor performing, or difficult to operate.
- The main supply from the grid can be noisy and unpredictable.
- Variac does not allow control over frequency changes. It is also time-consuming to set up, especially when tests are run multiple times.

Solution

AC6900 Series three-phase AC source provides accurate output voltage and frequency programming and measurement. The built-in power line disturbance function enables quick simulation on AC power input conditions from the intuitive front panel or remotely through LXI-LAN, USB or GPIB. The built-in sequencer and waveform generation also helps to generate accurate voltage and frequency transients that can occur under normal operation, emergency power operation, power transfers, or stress tests. The PathWave BenchVue AC Source Control Software also enables seamless test execution, data logging, and easy power measurements. Keysight's AC6900 solution accelerates the development of your advanced motor accurately, effectively, and reliably.

Resources

AC6900 series web page URL – www.keysight.com/find/acsource

Contact

Keysight Technologies: www.keysight.com/find/contactus

Learn more at: www.keysight.com

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

