Power Source Setup

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Demartek®
Test lab specializing in real-world, hands-on research and analysis of data center technologies

- ISO 17025 accredited test lab
- EPA-recognized test lab for ENERGY STAR Data Center Storage testing
- SNIA Emerald Recognized Tester
- Website: www.demartek.com/TestLab
ENERGY STAR has always required power conditioning. SNIA Emerald has added the same requirements as ENERGY STAR to new version of their specification:

- \( \leq 1500W \pm 1\% \) Voltage Tolerance \( \pm 2.0\% \) THD
- \( \geq 1500W \pm 5\% \) Voltage Tolerance \( \pm 5.0\% \) THD
- Allowed Voltages: 100V, 115V, 200V, 208V, 230V, 400V
Typical Wall Power

- Our wall power comes in at around 239-241V. We typically work with smaller systems requiring 1% voltage tolerance. We need to be at 227-232V.

- We also see our Voltage THD vary considerably (this can depend on the equipment under test as much as the wall power.)
Harmonics and Voltage with a Source
Setting Up Source

- Currents of only 100-200mA can kill under the wrong conditions.
- Make sure personnel are qualified or hire an electrician.
- Demartek procedure: Keep wall power unplugged while you attach everything else. Have someone else check your work, put the guards in place, then plug in to wall power and start.
One cable goes from source output to power meter to storage. Make sure nothing is plugged in to wall power while you do this.
Setting Up Source
Setting Up Source

One cable goes from wall power to A/C input.
*Connect first, put on guard, then plug in, *please.*
Setting Up Source

Now, check your work!
Guards in place! Not plugged in!
Setting Up Source

Plug it in. Turn on source, set your desired voltage, and turn on output.

PAGE CHOICE = 1
1. SETUP 2. CONF 3. OUTPUT 4. MANUAL CALI
5. LIST 6. PULSE 7. STEP 8. HAR 9. SYN
10. INTERHAR
Setting Up Source

Plug it in. Turn on source, set your desired voltage, and turn on output.
Setting Up Source

Plug in your power meter, turn it on, and observe.
Questions?
Contact

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