# Electronic







## **How to Select an AC Power Source**

Today's electronic products must work under all types of conditions. Therefore, AC sources used in test applications must not only supply a stable source of AC, they must also simulate power-line disturbances and other non-ideal situations.

Fortunately, today's switching AC power sources are up to the task. Some can even provide both AC and DC outputs simultaneously and make measurements as well as provide power.

**Download this white paper now from AMETEK Programmable Power** for tips on choosing an AC power source.

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## How to Select an AC Power Supply

nore easily

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ent waveforms an AC and DC outputs simultaneously and make measurements as well as provide power. This level of flexibility is making it easier to ensure that electronic products will work

When choosing an AC source, make sure to consider the

- Current requirements for your device under test
- Worst-case input current (including transient demands,
- Crest factor of your load's current
- Power factor
- Regulation and distortion
- Response time and slew rate
- User and test-system Interfaces
- Facility requirements

#### **Current Requirements**

When selecting an AC source for your test application, you must consider both much current your unit under test (UUT) will draw. Be sure to include inrush current and transient currents that may occur during intentional input voltage swings and during different modes of operation your device may use.

### Worst-Case Input Current

Rectifier-type power supplies and motors are notorious for drawing high inrush currents. These devices have inrush currents anywhere from two to ten times the nominal run current, and they will draw this current anywhere from a few

The response of the AC power source to inrush current is dependent on the method that the source uses for currentlimiting. AC power sources are designed to protect themselves from excessive loads current by either folding back the voltage (current limiting) or shutting down the output (current-limiting shutdown) and in many cases, this is user selectable.

In some instances, it may not be practical to have an AC source that can supply the full inrush current demanded by the load. If the test does not require the stress test from this current, it may be possible to use the current-limiting foldback technique for these tests. AC motors can draw up to seven times the normal operating current when first started. How long the motor will draw this current depends on the mechanical load and the

For loads such as motors and rectifier-type power supplies, an AC source that is folding back its output voltage to limit current will result in a longer start up time for the device under test. A source that is not capable of supplying the property

### Product Selector Guide

How to Spec DC Power

Sorensen SG Series

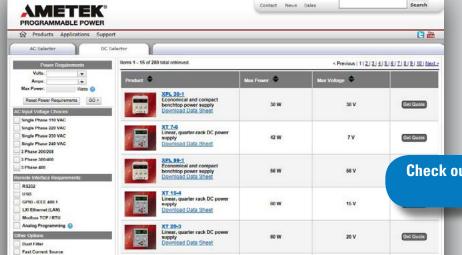
### Custom Power Solutions

higher the creek for to 30°. The narrower the pulse width the

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narrow pulses at the peaks of the voltage waveform. These pulses can be from 3 to 4 times the value of the rms current.

## **AMETEK Power Supply Online Product Selector**



Easily find just the right AC or DC Power Supply to fit your application with new online selector tool - a few clicks, a few specs and get a quote on your selection.

**Check out our Selector Guide CLICK HERE** 

# Sorensen™ XG Power Supplies







# Considerations When Specifying a DC Power Supply

Every automated test system that tests electronic circuit boards, modules or equipment needs one or more DC power supplies. DC supplies provide power to the device under test as well as test stimulus.



## Sorensen<sup>™</sup> XG 1700 Watt

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## SG Series

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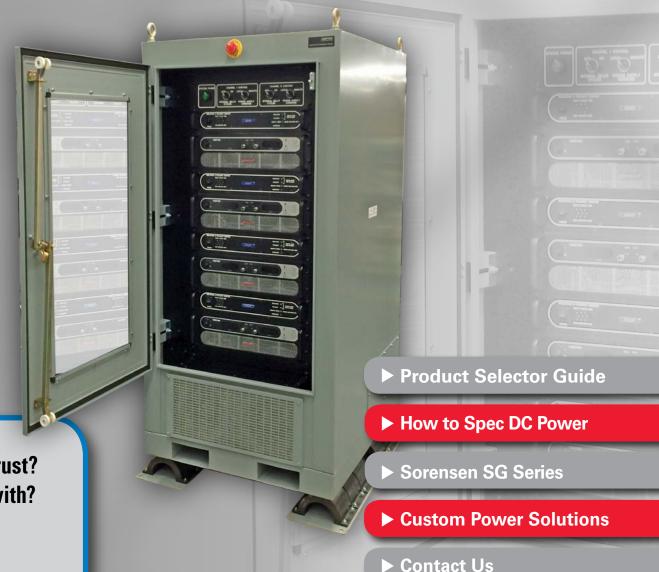


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