

## ELECTRONIC SAG PROTECTORS

The combined marketing philosophy of manufacturers of electronic sag protectors:

*"The only anomaly that causes any problems is a sag.....  
fix it and you have resolved all your problems."*

*"Outages don't matter, and a UPS can't solve that problem very well anyway."*

Whatever they were thinking; they had to be dreaming.

Sag protectors use the energy stored in small capacitive banks to fill-in the power when the voltage dips. Because capacitors must be recharged, this process cannot go on forever. The duty cycle on the average is 0.083% . When the input voltage dips, the energy from the capacitors is processed through an inverter; similar to a UPS. As a result the input window of operation is extended to -50% while rendering an output of -10%. It's very important to realize that this correction is for an extremely short period of time. This product fills in a gap. It DOES NOT regulate voltage or correct for brownout conditions. Because this topology operates in the standby mode, there is a switching gap, time to correct.

So it fills in a gap, takes time to do, only corrects to -10%, can't handle large surge currents because of the high output impedance and requires an input neutral. WOW!

What else is missing?

Voltage Regulation  
Brownout Protection  
Power Conditioning  
Proper Grounding for Isolation  
Common Mode Noise Attenuation  
The Benefit of Fault Current Limiting, the natural attribute of a good transformer  
Tight Voltage Regulation to 3%  
Continuos 100% Operation

By comparison, the Power Line Conditioner, the Power Processor by Controlled Power Company's robust system corrects in one cycle and has no time operation constraints.

If a sag problem exists, go with a proven power conditioner, the Power Processor with the extended input range option to -40%.

These benefits are standard:

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Power Conditioning  
Proper Grounding for Isolation  
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Need I say more...