



RIDE-THROUGH CAPABILITY

General

Ride-through capability is the ability of a power source to deliver usable power for a limited time during a power loss. Ride-through capability is achieved in a ferroresonant transformer because the voltage from the transformer is generated essentially by a circuit operating as a powerful oscillator with energy stored in the unit. For this reason, the output is much more immune to the input than other regulating systems. Ride-through capability is beneficial for those short power outages encountered during a storm. The short loss of power causes computers and other sensitive electrical equipment to shut down hard, damaging circuits, and increase maintenance costs.

Power Purifier

The output of the *Power Purifier* does not drop to zero with the loss of power for up to a complete cycle (16.6 milliseconds for 60 hertz). In Figure 1, the input waveform is interrupted for a half cycle and the output waveform is complete and distortion free. In Figure 2, the input waveform is interrupted for a complete cycle and the output waveform is still complete.

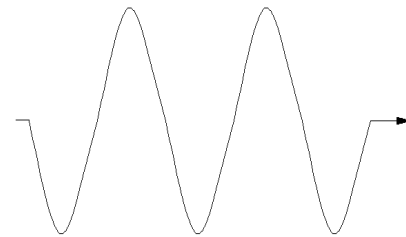
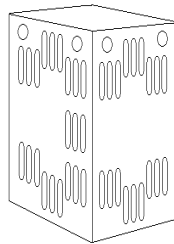
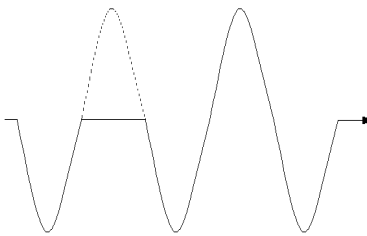


Figure 1

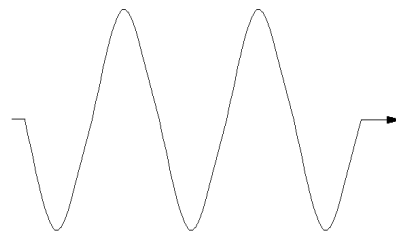
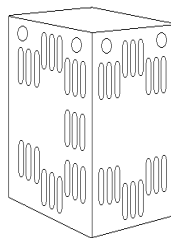
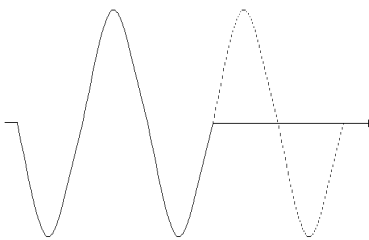


Figure 2

Other Technologies

Other company's ferroresonant transformers provide up to 3 milliseconds of ride-through time. This is less than $\frac{1}{4}$ of a cycle. These transformers would not even provide protection for a power outage that lasts for $\frac{1}{2}$ cycle.

Uninterruptible Power Systems (UPS) have battery backup which protects against lengthy (over 1 cycle) blackouts. Many applications don't need long-term battery back-up so a UPS may be overkill since these blackouts account for only .05% of all power anomalies. In addition, some UPSes (Stand-By and Line-Interactive technologies) don't provide adequate protection to equipment from electrical noise and voltage fluctuations.

M-G sets incorporate motors and deliver up to a few seconds of ride-through time. Although, with moving parts these systems need constant maintenance and have much lower efficiency and life expectancies.

Summary

The Trystar *Power Purifier* provides excellent ride-through capability with low audible noise and long life expectancy without the need for maintenance. The *Power Purifier* will also keep your missioncritical operations free from transients, voltage fluctuations, and will attenuate harmonics and line noise. In short, The *Power Purifier* will solve 99.95% of all power problems.

The Power Purifier is excellent for the following applications:

- Computerized Industrial Control Systems
 - Process-Numerical Control
 - Audio-Visual Security Systems
 - Data Acquisition
 - Programmable Logic Controllers
 - Automated Manufacturing / Robotics
 - Test And Measurement Instrumentation
 - Sensitive Electronic Equipment
- and more.

