

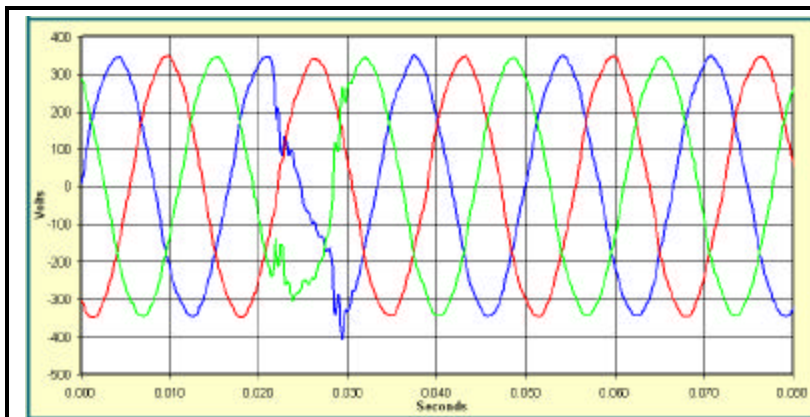
Phase A
Phase B
Phase C

Waveform: Start of Event

Analysis

Short voltage sags can be seen on a single TEALwatch® waveform snapshot. These can be related to utility faults, faults within the facility, or the inrush current drawn by a nearby load.

Event	Date and Time	Type	Severity	Minimum	Maximum	Duration
9A	10/12/05 8:10:55	Voltage Sag	Severe	135.2	241.7	0.05



Phase A
Phase B
Phase C

Waveform: Start of Event

Analysis

Short voltage sags may not cause significant problems for equipment, since internal power supplies may have sufficient energy-storage (or "ride-through") to support the load or process until the voltage returns.

Event	Date and Time	Type	Severity	Minimum	Maximum	Duration
9B	10/27/05 10:17:04	Voltage Sag	Severe	131.5	234.2	0.117

Technical Analysis

Voltage sags and swells are described by two parameters. The severity of the disturbance, often measured as a percentage above or below nominal, and the duration of the disturbance, measured in seconds, or perhaps, in cycles.

Long term, or steady-state voltage fluctuations can cause thermal type problems. Short-term fluctuations rarely cause thermal problems, so a wider range of fluctuation is often accepted.

Equipment may be able to withstand a complete loss of voltage for a short period (~ 1 cycle) depending upon internal energy storage and ride-through capability.

The power quality industry has attempted to quantify acceptable levels of sags and swells through curves, such as the CBEMA curve, or the succeeding ITIC Curve, seen at right. These curves define typical equipment susceptibility. Device manufacturers may publish proprietary curves for their equipment.

