



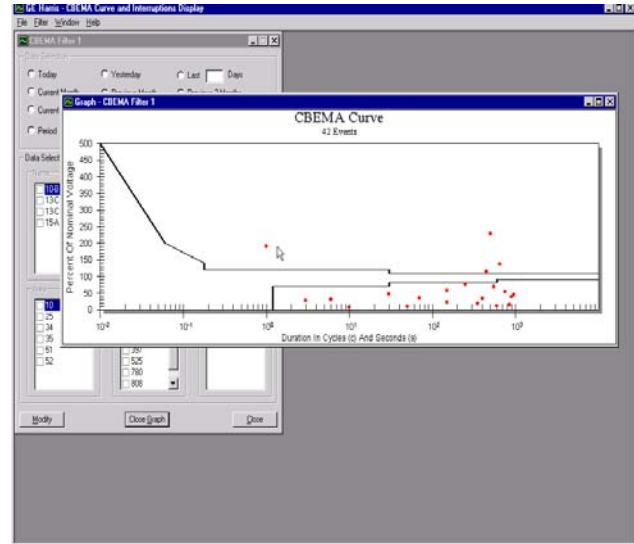
Power Quality

The Power Quality System built on the integrated Substation Control System (iSCS) platform is designed to address the power quality needs of utility companies.

Distributed throughout your substation, the D25 collects Power Quality data. This data is imported to the PowerLink workstation in real-time over the iSCS LAN. The advanced PowerLink workstation has a full suite of analysis tools to diagnose your Power Quality data. The automatic retrieval and archive feature provides historical analysis and allows post fault analysis when you need it most.

Since the GE Energy Services Power Quality System is built on the iSCS, you receive the benefits of remote and automatic control and remote monitoring.

Benefits



iSCS can improve the power quality of your system by correcting system problems, enhancing system reliability and safety, and monitoring the status of all station primary equipment, protection, and control devices.

GE Energy Services can also implement fault detection, auto sectionalizing and auto-restoration, and other advanced automation applications unique to your requirements which can help reduce outages.

The Power Quality System combines the SCADA and the Power Quality monitor systems which can reduce installation costs.

- One set of hardware
- One set of wiring
- One communication system
- One system to commission
- One system to maintain

The distributed architecture of the iSCS can provide additional savings compared to traditional centralized RTU architecture.

You can reduce operating and maintenance costs through remote access to our iSCS with predictive maintenance; volt/VAR control; a self-diagnostic program; a substation automation program; and integration of all substation data into one common database with web-enabled remote access.

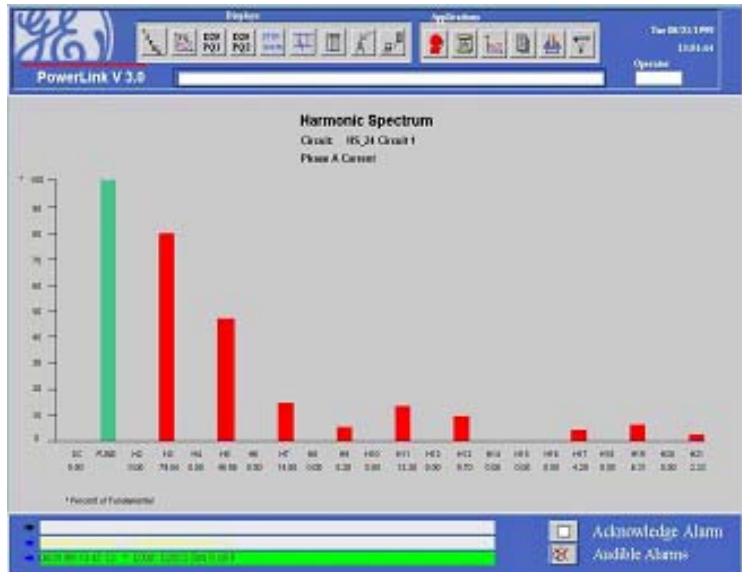
Remote access to the power quality data eliminates the need to travel to site for this information. With permanently installed equipment, you don't need to install portable power quality monitors.

With proper diagnosis of momentary power quality events, you don't need to dispatch crews for investigation.

Features

The distributed D25 intelligent electronic device (IED) collects the following data:

- Sag/Swell/Interruption Events
- RMS Profiling during Power Quality events
- Harmonic spectrum 2nd to the 21st Harmonic and DC component (voltage and current)
- Total Harmonic Distortion (THD) on Voltage and Current (per phase and total per circuit)
- Complete set of metering data kW, kVAR, kVA, kWh (import and export), kVARh (import and export), and kVAh (all on a per phase as well as total per circuit)
- Power Factor (per phase and total per circuit)
- Circuit imbalance monitoring:
 - Percent Voltage Imbalance
 - Zero, Negative, and Positive Sequence Voltage and Current



The PowerLink workstation with the ITI and COMTRADE Viewers provides the following:

- Display of Power Quality events and management with the ITI Viewer. Integrated with PowerLink, the Power Quality System provides automatic Power Quality event retrieval and archive. These features allow you to do the following:
 - Filter the display based on a Time Range, Area, Feeder, or Even Phase
 - Pan and zoom
 - Print with full color capabilities
- An industry standard COMTRADE file format with the RMS Profile. The COMTRADE Viewer is integrated with PowerLink, which provides automatic file retrieval and archive. The COMTRADE Viewer provides a full set of additional features:
 - Multiple COMTRADE file waveform comparison
 - Multiple markers and cursors with current values and difference between markers
 - Extensive set of waveform analysis tools, including Frequency, RMS, Harmonic and Phase Angle
 - Full color printing



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 GEA-13280 Printed in Canada