# POWER QUALITY AND HARMONIC ANALYSIS

## Isolate and Eliminate the Root Cause of Malfunctions In Your Data Center

Dips, spikes, surges, or outages can damage computers and other critical systems in your data center, causing them to malfunction, shut down unexpectedly or fail prematurely. Grounding errors, transient voltage and harmonic distortion are a few of the issues that may affect power system quality and reliability. Isolating these problems can help you improve your data center availability.



Emerson field technicians can isolate the root cause of power quality problems and recommend solutions to protect your mission critical data center systems.

#### Power Quality Is:

- The reliable delivery of electrical energy in a form that enables electrical equipment to operate properly.
- A multi-dimensional and complex measurement, especially as it applies to AC power circuits.
- The measurement of the sags, surges, transients, harmonic distortion, and other power problems affecting mission critical equipment.
- A process that encompasses voltage, current, power factor and frequency spectrum characteristics.
- A comparison of the actual to the ideal or desired values of each electrical power characteristic.

#### What Takes Place During This Study and Analysis:

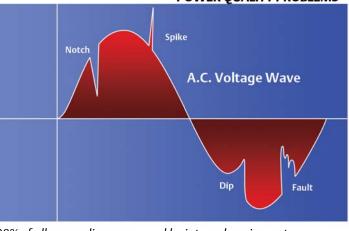
- Performance of a visual, mechanical, and electrical inspection to analyze your electrical infrastructure and identify critical points for power monitoring.
- Installation of power quality monitoring equipment at key points and collection of data over a pre-determined period, covering appropriate time windows relative to your needs.
- Determination of the integrity of your grounding systems and identification of high-threat power harmonics.
- Analysis of the power and harmonics data to provide recommendations that will isolate and eliminate the root cause of your power problems.

### THE LIEBERT SERVICES DIFFERENCE FOR POWER QUALITY AND HARMONIC ANALYSIS

### Rely on the Most Qualified Experts for Power Quality and Harmonic Analysis

Our Power Quality Studies and Harmonic Analysis are performed by experts from Emerson's Electrical Reliability Services (ERS) group. Located throughout the United States, ERS technicians are certified by the InterNational Electrical Testing Associations (NETA), ensuring ongoing education and adherence to strict standards in safety and electrical testing knowledge.

- **Expertise** We are industry leaders in electrical testing, maintenance and engineering services. With more than 40 years in electrical testing experience and state-of-the art tools, we deliver accurate analysis of your data center electrical infrastructure.
- **Resources** ERS provides a nationwide network of NETAcertified field technicians with more than 350 engineers, PEs, and field technicians in more than 30 service centers.
- **Comprehensive Reports** You'll receive a full-featured summary containing:
  - Identification of critical monitoring points.
  - Detailed data records and analysis of results.
  - Recommendations for isolating and mitigating power problems.



#### POWER QUALITY PROBLEMS

DEPLOY Service Life Cycle

80% of all anomalies are caused by internal equipment.

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