

Maintenance and Troubleshooting Of UPS Systems and Battery Power Supplies Training

Description

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A sudden loss of power will disrupt most business operations and could lead to a company being unable to trade. Where a company regards electrical power as critical then there will be a need for a continuous or back up power system. The installation of a UPS will provide the necessary continuity.There are however problems with these installations when there is a need for maintenance especially the use of by-pass. Power Quality compatibility problems may cause failure, which was the reason for the original UPS installation.

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Course Objective

The course is intended to develop knowledge of the need for a UPS, types available, UPS components, batteries, generators and maintenance.

Course Outline

Introduction to the Resilient System

- Introduction
- Regulations
- Critical loads
- Purpose of an Installation
- Compatibility
- Protection and Devices
- UPS or Generator
- Maintenance

What is a UPS?

- UPS Rating
- Parallel systems
- What is available
- Maintenance by-pass
- Off Line systems
- Redundancy
- On Line systems
- Interactive systems

UPS Components

- Transformer methods
- Harmonics
- Invertors
- Twelve pulse rectifier
- Phase control
- Power factor
- Six pulse rectifier
- Static switch

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Batteries

- What is a battery?
- Storage and Care
- VLRA
- Choosing a battery size
- Size and location
- Charging
- Configuration
- Battery safety

Generators and Site Planning

If a power failure exceeds the reserve battery capacity the system will fail but using a generator will ensure continuous power. Planning the site and considering the load will ensure a successful installation and careful maintenance planning will ensure reliability.

- Do I need a Generator?
- Environmental Constraints
- Mains failure
- Monitoring power
- UPS Compatibility

- Installing the UPS
- Generator size considerations
- Maintaining the UPS

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