

Uninterruptible Power Supply (UPS)

Brussels

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UK Training

PARTNER



Uninterruptible Power Supply (UPS)

Code: IT28 From: 26 - 30 January 2026 City: Brussels Fees: 5100 Pound

Introduction

An Uninterruptible Power Supply UPS is a crucial electronic device designed to ensure continuous power supply during utility failures or fluctuations in line voltage. Beyond backup power, modern UPS systems provide surge protection, making them indispensable in environments requiring reliable and uninterrupted operations.

This training course delves into the definition of UPS systems, their types, and the benefits of implementing them across various applications. It highlights power quality challenges, mitigation techniques, and the role of emergency power supplies in critical scenarios. Participants will gain insights into UPS components, including battery systems, their construction, advantages, and limitations. Additionally, cutting-edge systems such as Diesel Rotary Uninterruptible Power Supply DRUPS will be explored in detail.

Course Objectives

By the end of the course, participants will:

- Define Uninterruptible Power Supply UPS and its importance in protecting critical loads.
- Differentiate between types of UPS systems and identify the most suitable for specific needs.
- Understand the advantages of continuous power supply and methods to enhance system efficiency.
- Learn about the construction, maintenance, and monitoring of batteries used in UPS systems.
- Familiarize themselves with key UPS components and their functionalities.
- Develop competence in troubleshooting and interpreting alarms in UPS systems.
- Acquire skills to select, install, and maintain effective emergency power supply solutions.

Course Outlines

Day 1: Fundamentals of Uninterruptible Power Supply UPS

- Introduction to UPS systems and resilient design principles.
- Comparison between single-input and double-input UPS systems.
- Benefits of installing a UPS uninterruptible power supply to resolve power quality issues.
- Simplified UPS design strategies and comparison with standby generators.
- Overview of data center power solutions and their applications.

Day 2: Battery Technologies and Chargers

- Overview of battery technologies used in UPS systems.
- Construction, features, and maintenance of lead-acid and nickel-cadmium batteries.
- Insights into automated battery monitoring systems.
- Types and construction of battery chargers and their role in UPS efficiency.



Day 3: Characteristics and Functions of UPS Systems

- Differences between online and offline UPS systems.
- Key components and functions of UPS filters.
- Overview of double conversion UPS systems and their operations.
- Transformer-based vs. transformer-less UPS systems.
- Understanding parallel systems and redundancy in UPS.

Day 4: Diesel Rotary Uninterruptible Power Systems DRUPS

- Introduction to Diesel Rotary Uninterruptible Power Systems DRUPS.
- Construction, features, and functionality of DRUPS.
- Types and characteristics of DRUPS.
- Advantages and challenges of using DRUPS in critical applications.

Day 5: Installation, Applications, Protection, and Maintenance

- Safety protocols for installing and maintaining UPS systems.
- Best practices for battery maintenance and system protection.
- Troubleshooting common issues in electric backup power supplies.
- Condition monitoring and diagnostics for uninterruptible power supply solutions.
- Real-world case studies, system design considerations, and selection criteria.

Why Attend this Course: Wins & Losses

- Gain an in-depth understanding of UPS systems and their essential role in maintaining continuous operations.
- Learn how to select the best uninterruptible power supply for specific applications.
- Develop practical skills to maintain, monitor, and troubleshoot emergency power supply systems.
- Understand how UPS solutions can address power quality issues and ensure reliability.
- Enhance operational efficiency and safeguard critical equipment from unexpected power failures.

Conclusion

In an era where uninterrupted power is critical, understanding and managing UPS systems is a necessity. This course equips participants with the knowledge and skills to implement effective uninterruptible power supply solutions, ensuring operational continuity and protection against power-related challenges.

Join us to master the essentials of UPS systems, develop expertise in emergency power supplies, and stay prepared for any power-related disruptions!

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