MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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FUNDAMENTALS OF ABB DRIVES: MAINTENANCE & TROUBLESHOOTING – ELECTRICAL DEPARTMENT

"Ensuring Reliable Operation and Efficiency of ABB Variable Speed Drives through Expert Maintenance and Diagnostics"

Schedule

Date	Venue	Fees
03 – 05 Aug 2026	Dubai, UAE	USD 2495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

ABB variable speed drives are widely used in industrial facilities for motor control, energy efficiency, and process optimization. However, to ensure long-term reliability and minimize downtime, electrical professionals must understand drive operation, configuration, preventive maintenance, and fault diagnostics.

This hands-on technical course provides participants with the practical knowledge and skills required to install, maintain, and troubleshoot ABB drives. Through real-world case studies, simulator-based exercises, and parameter configuration walkthroughs, participants will gain the confidence to handle common drive issues in electrical departments across industrial settings.

Objectives

By the end of this course, participants will be able to:

- Understand the operational principles and architecture of ABB variable speed drives
- Perform basic drive setup, parameterization, and commissioning
- Execute preventive maintenance routines for drive systems
- Troubleshoot common alarms and faults using diagnostic tools
- Interpret drive manuals, wiring diagrams, and control interface configurations

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Why Attend

- Reduce drive-related downtime through timely maintenance and repair
- Increase energy efficiency by optimizing drive performance
- Develop in-house troubleshooting capabilities and reduce reliance on external support
- Learn from technical experts with practical ABB drive experience
- Gain hands-on training to reinforce theoretical knowledge

Target Audience

This program is designed for:

- Electrical maintenance technicians and supervisors
- Plant electricians and instrumentation technicians
- Control and automation engineers
- Facility and utility managers
- Anyone involved in the maintenance or operation of ABB drive systems

Individual Benefits

Key competencies that will be developed include:

- Familiarity with drive topologies and ABB hardware components
- Skills in drive parameter tuning and interface navigation
- Ability to recognize and respond to alarms and system faults
- Knowledge of maintenance best practices for prolonged drive life
- Effective use of ABB diagnostic tools and support documentation

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved uptime and reliability of drive-controlled systems
- Better coordination between electrical and control departments
- More efficient energy usage and reduced operational costs
- Enhanced workforce competency in industrial automation support
- Reduced frequency and duration of equipment failure incidents

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – ABB drive applications, system components, and control logic
- Case Studies – Drive fault incidents and resolution practices from industrial sites
- Workshops – Drive configuration, fault simulation, and alarm resolution
- Peer Exchange – Group-based troubleshooting and parameter tuning sessions
- Tools – ABB drive software, I/O simulation panels, fault diagnostic charts

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Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: ABB Drive System Overview and Operation

- Module 1: Introduction to ABB Drive Families and Applications (07:30 – 09:30) • ACS series overview, drive classifications, motor control basics
- Module 2: Drive Architecture and Key Components (09:45 – 11:15) • Power modules, control units, cooling systems
- Module 3: Drive Interface and Parameter Navigation (11:30 – 01:00) • Startup wizard, keypad navigation, basic settings
- Module 4: Workshop – Drive Initialization and Parameter Setup (02:00 – 03:30) • Practical exercise on drive commissioning

Day 2: Maintenance Practices and Diagnostics

- Module 1: Preventive Maintenance Routines (07:30 – 09:30) • Inspection intervals, cooling fans, capacitor aging
- Module 2: Troubleshooting Common Faults and Alarms (09:45 – 11:15) • Overcurrent, overvoltage, earth faults, internal errors
- Module 3: Wiring, Signal Checks, and Communication Protocols (11:30 – 01:00) • I/O terminals, Modbus, Profibus, analog inputs
- Module 4: Workshop – Simulate and Resolve Faults (02:00 – 03:30) • Troubleshooting using real or simulated drive faults

Day 3: Optimization, Integration, and Safety

- Module 1: Tuning Drive Parameters for System Efficiency (07:30 – 09:30) • Load matching, ramp-up/down, PID loop basics
- Module 2: Integration with PLCs and External Control Systems (09:45 – 11:15) • Drive control wiring, start/stop sequences, remote monitoring
- Module 3: Electrical Safety and Lockout Procedures (11:30 – 01:00) • Drive-specific LOTO protocols and safety interlocks
- Module 4: Final Workshop – Drive Health Check and Documentation (02:00 – 03:30) • Final assessment of drive performance and reporting

Certification

Participants will receive a Certificate of Completion in ABB Drives: Maintenance & Troubleshooting, validating their ability to safely maintain, operate, and diagnose issues in ABB variable speed drive systems within industrial electrical departments.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**

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