

Variable Frequency Drives [VFD]



The course starts at a basic level and builds, avoiding the need for any technical prerequisite, other than the desire to increase your knowledge and understanding of variable speed drives.

Learn proper design recommendations to ensure that your equipment is as energy efficient and safe as possible. Discover the best practices for frequency drives in HVAC, pumping, and facility applications. Whether in facility maintenance, chilled water systems, waste water systems or manufacturing, this course unlocks the secrets of VFDs to maintain your equipment.

In the hands-on lab, you will use scopemeters to see how improper designs can lead to motor deterioration and other problems. You will program and troubleshoot newly upgraded equipment that includes Allen-Bradley Powerflex4 and ABB ACS-350 variable frequency flux vector drives. Learn to manipulate external drive control wiring.

Gain troubleshooting skills by deciphering fault diagnostics and correcting problems

WHAT THIS COURSE COVERS

- Electrical and Power Transmission Basics
- AC Induction Motors
- Operation, Setup and Maintenance of VFD
- Bypass Systems
- Program Drive Parameters
- Speed, Torque and Horsepower Relationships Related to Variable Frequency Drives
- Troubleshooting and Fault Handling
- Improve Reliability and Extend the Life of your Motors and Drives with Proper Installation

WHO SHOULD TAKE THIS

- Energy Management Personnel
- Apprentice and Experienced HVAC Technicians
- IT Technicians
- Electricians
- Multi-Craft Personnel
- Plant and Facility Maintenance Technicians
- Building Engineers
- Building Managers and Superintendents
- Plant and Facility Managers

COURSE OUTCOMES

- Learn Proper Design Recommendations to Ensure that your Equipment is as Energy Efficient and Safe as Possible.
- Discover the Best Practices for Frequency Drives in HVAC, Pumping, and Facility Applications.

COURSE AGENDA

- Motor/Drive/Control System Design and Overview
- Power Transmission, Relationship and Formulas
- Maintenance Recommendations and Special Considerations
- AC Induction Motors
- Operating on Variable Frequency
- Variable Speed Drives
- Selection and Application for Drives
- Enclosure Sizing for Heat Dissipation
- Operation, Set Up and Maintenance of VSD

Lecture Hands-on • **ONSITE:** 3-days (24 hours) • **LIVE ONLINE:** N/A



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