



## Variable Frequency Drives

Course Number 330

### Course Description

This course covers the fundamentals of VFD's, electrical safety, AC to DC conversion and PWM for motor controls, the types of motors and how they are affected by VFD's. Students will troubleshoot a VFD hands-on trainer using parameters, programming, fault recognition, and fault codes.

Prerequisites: Basic Electrical Fundamentals and AC motor controls

Course Length: 3 Days

Text Books: TBD

Course Outline	Learning Objectives
<p>Safety Guidelines</p> <ul style="list-style-type: none"><li>- PPE</li><li>- Review General electrical safety</li><li>- Lock out/Tag out</li></ul> <p>Variable Frequency Drives</p> <ul style="list-style-type: none"><li>- Review AC induction motors</li><li>- Inverter duty and standard duty motors</li><li>- Power requirements</li><li>- Converter section</li><li>- DC bus section</li><li>- Inverter section</li><li>- PWM speed control</li><li>- Basic setup parameters</li><li>- Operating requirements</li><li>- Electrical safety precautions</li><li>- Fault codes</li><li>- Common failures</li><li>- Troubleshooting drives</li><li>- Troubleshooting motors</li></ul>	<ul style="list-style-type: none"><li>• Describe AC induction motors</li><li>• Evaluate inverter duty vs. standard duty motors</li><li>• Identify basic setup parameters</li><li>• Examine operating requirements</li><li>• Define safety precautions</li><li>• Analyze fault codes</li><li>• Discuss common causes of failure</li><li>• Troubleshoot drives</li><li>• Troubleshoot motors</li></ul>

