

EA12: Electric Motor Drives

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| Catalogue Number | 77-EA12-0000 |
| Category | JobMaster |
| Duration | 15 Hours |

Introduction to Variable Frequency Drives

Safety

Electrical Test Equipment Safety

Motor Safety

Personal Protective Equipment (PPE)

Working Conditions & Practices

Skill 1: Applying VFD Principles

AC Induction Motors

Synchronous Speed

Variable Frequency Drives

VFD Output

VFD Applications

VFD Types

PWM VFDs

SCR Input VFDs

Chopper VFDs

Skill Overview

Skill Drill

Answer the Following Questions

Authentic Skill Assessment

Skill 2: Connecting and Operating a Variable Frequency Drive

- VFD Operation
- Skill Overview
- Skill Drill
- Circuit Description and Schematic
- Connecting the Circuit
- Operating the Circuit
- Authentic Skill Assessment

Skill 3: Adjusting VFD Operating Parameters

- VFD Functions
- VFD Applications
- VFDs As Motor Starters
- Motor Braking
- Motor Reversing
- Setting Parameters
- Circuit Description and Schematic
- Connecting the Circuit
- Changing VFD Parameters
- Adjusting Acceleration and Deceleration
- Using External Input to Start, Stop, and Change Rotational Direction of the Drive
- Authentic Skill Assessment

Skill 4: VFD Protection Parameters and Inputs/Outputs

- Protection Parameters
- VFD Protection Parameters
- Skill Overview
- Skill Drill
- Authentic Skill Assessment

Skill 5: Troubleshooting the VFD

- Testing VFD Resistance, Voltage, and Current
- Skill Overview
- Circuit Description and Schematic
- Authentic Skill Assessment

Skill 6: Understanding Additional VFD Features

Troubleshooting Variable Frequency Drives

Additional VFD Features and Parameters

Ramp Parameters

Volts/Hertz Parameters

Digital Parameters

PID Parameters

Communication Parameters

Skill Overview

Skill Drill

Authentic Skill Assessment

Comprehensive Post-Test