

# VARIABLE FREQUENCY DRIVE (VFD) BASICS

*eLearning courses designed to increase productivity and profits*



## Learning made Simple, Visual, and Interactive

The THORS Variable Frequency Drive (VFD) Basics course is relevant for learners who are new to the industry, as well as experienced learners that require a deeper knowledge of the VFDs. The course explores the major components and types of VFDs and examines how the VFDs control the speed and directional movement of the motor effortlessly.

Credit Hours **2**

## Learning Objectives

- Identify the major components of VFDs.
- Examine the working principle of the major components in a VFD.
- Understand how the VFD functions.
- Recognize the electrical concepts related to a VFD.
- Elaborate on the different types of VFDs.

## Table of Contents

### I. VFD Components

- **Functional Components**
  - Input Rectifier
  - DC Bus
  - Inverter
- **Control Unit Components**
  - Human Machine Interface (HMI)
  - Thermal Cooling System
  - Power Input and Output (I/O) Terminals
  - Control Board Terminals
  - Option Boards
  - VFD Nameplate

### II. VFD Operation and Types

- **Input Power Supply**
- **VFD Working Principle**
- **Types of VFDs**
  - Classification by Input and Output Power
  - Classification by Design
  - Classification by Size
  - Classification by Performance
  - Classification by Environment

