

ABB Advanced VFD Course Syllabus

Instructor: Dave McDonald

Day 1 (3) Morning Session:

- Reference Types and Control Chains:
 - Example (and Evaluation) of Detailed Block Diagram

- ABB's Direct Torque Control (DTC):
 - Theory/Structure
 - Survey of Detailed Block Diagrams

- ACS880 Options:
 - Analog Extension Module – FAIO-01
 - Description
 - Layout
 - Setting the Switches
 - Status LED
 - Galvanic Isolation Benefit
 - Wiring/Connections
 - Setup - Parameters
 - Digital Extension Module – FDIO-01
 - Description
 - Layout
 - Setting the Switches
 - Status LED
 - Wiring/Connections
 - Setup - Parameters
 - HTL Encoder Module – FEN-31
 - Description
 - Layout
 - Setting the Switches
 - Wiring/Connections
 - Status LEDs
 - Setup - Parameters
 - EtherNet/IP Communication Module – FEIP-21
 - Description
 - Emulation of Previous Modules
 - Layout
 - Status LEDs
 - Setup - Parameters

- Dynamic Braking/Brake Chopper:
 - General Dynamic Braking Theory
 - Frames R1-R4 Internal Braking Chopper IGBTs
 - Resistor Overtemperature Switch and Contactor
 - Setup - Parameters

Day 1 (3) Afternoon Session:

- Drive Composer Entry Software LAB
- Adaptive Program Lab
- Master/Follower LAB

Day 2 (4) Morning Session:

- Four-Speed Drill Application LAB (group activity)
- Intake Fan Application LAB (individual activity)

Day 2 (4) Afternoon Session:

- Pallet Conveyor Application Lab (individual activity)
- Fan Application LAB (time permitting)
- Award Certificates

Note: Days (3) and (4) apply when both basic and advanced training are taken in the same week.