
Motion Academy Training Center United States

Educational Offering







ABB Industrial Training Handbook

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Motion Academy Training Center (U.S.)

Your gateway to an advanced training experience



ABB Drives (U.S.) offers a new learning experience designed for the current digital era. It includes live remote training, hosted remotely by qualified ABB trainers, for channel partner authorization and end user programs.

We ship our equipment, along with printed training materials, to your facility. Students complete hands-on exercises for each program to fulfill the authorization requirements.

Our learning objectives



Enhance your knowledge and improve your competence on ABB drive products.



Improve your troubleshooting skills through hands-on exercises.

Our goal



Complete all hands-on exercises required for ABB drives authorizations.



Gain expertise and learn techniques that are not found in product manuals.



Learn how to apply safe electrical practices with real-world impact.

Our team



Provides qualified, experienced, and authorized trainers



Supplies end users with knowledge enabling them to install and commission drives.



Offers hands-on experience using real equipment.

Program Offerings via Live Remote Training

ACS580 ASU/I&C	DCS880 ASU/I&C
ACH580 ASU/I&C	HMI Drive Faceplate
ACQ580 ASU/I&C	HMI Specialist
ACS880 ASU/I&C	Drive Expert CE
Connectivity Training	

ABB Industrial Training Handbook

How does our live remote training work?

Authorized Startup and Installation & Commissioning

This training is a blended solution of eLearning and hands-on exercises delivered through the Motion Academy Training Center (U.S.)



Students must complete all the e-learning prerequisites for each program before the instructor-led class.



The live remote training (hands-on portion) must be scheduled in advance. Logistic details will be coordinated with trainees.



We deliver equipment along with printed material for students to use to complete each program. Each set of equipment can be used for one or two students. They can alternate performing the exercises, just as they would in a classroom session.



The hands-on activities will be supervised by the trainer, remotely, and the interaction will be a live, open dialogue format.



Live remote training provides validation for the given authorizations. Certificates will be available to each student who has completed all the requirements for the certificate.

Live Remote Training

Details and Pricing

Product	Name	Duration (Days)	Price (USD)*
ACS580	ACS580 Authorized Startup	2	\$ 625 *
	ACS580 Install & Commissioning		\$ 625
ACQ580	ACQ580 Authorized Startup	2	\$ 625 *
	ACQ580 Install & Commissioning		\$ 625
ACS880	ACS880 Authorized Startup	1	\$ 625 *
	ACS880 Install & Commissioning		\$ 625
DCS880	DCS880 Authorized Startup	2	\$ 625 *
	DCS880 Install & Commissioning		\$ 625
HMI	HMI Drive Faceplate**	0.5	no charge
	HMI Specialist**	3.0	no charge
Drive Expert Continuing Education	Drive Specialist CE**	1.0	no charge
	Drive Expert CE**		no charge

Pricing is per program, per student. Additional costs may apply.

*Authorized Channel Partner price discounts may apply.

** Available to Channel Partners only

ABB Industrial Training Handbook

“How to” Instructions

Click link(s) below to view the “how to” instructions for creating a training account, enrolling in a program, and/or completing online training.

- [How to Create a Training Account](#)
- [How to Enroll in a Program](#)
- [How to Complete Online Training](#)

ABB Industrial Training Handbook

In-Person Classroom Training Details and Pricing

ON HOLD

We will offer face to face training when ABB deems
it is appropriate to return to in person classes

Program Descriptions

ACS580

Authorized Startup Installation & Commissioning

Program Goal

Provides participants with the necessary information, tools and training to be able to assess a LV Drive installation. They should leave being able to configure, tune, and perform complete commissioning services for the drive.

Program Objectives

Upon successful completion of this program, students will understand:

- How to apply basic safe work practices for installation and commissioning of LV Drives
- The risks associated with LV Drives
- The installation requirements for a LV AC Drive
- How to apply best wiring practices for LV Drives
- How to commission an ACS580, including fieldbus communications
- How to perform basic commissioning fault diagnostics and quickly correct installation issues on site

Program Type and Description

This curriculum is a combined eLearning and live, remote, instructor-led training, including hands-on lab exercises (1 & 2/3s) day. Students will complete prerequisite online modules before attending the live remote classroom training.

Student Profile

This training program is intended for ABB authorized channel partners who have experience working with and installing LV Drives. Students of an Authorized Startup program are responsible for installation and technical services related to maintaining LV Drives

Prerequisites

Participants must:

- Have experience working with power electrical equipment and voltage levels of up to 690Vac
- Have a basic understanding of LV AC Drives
- Understand basic motor control
- Understand LV AC Drive operation
- Have product operational knowledge of the ACS580
- Have completed product overview training program for the ACS580
- Be familiar with product commissioning PC tools
- Have completed all associated eLearning modules prior to enrolling in the instructor-led classroom training

Duration – 2 days

ACQ580

Authorized Startup Installation & Commissioning

Program Goal

The goal of this program is to provide participants with the information, skills, tools, and training necessary to be self-sufficient in assessing and properly installing the ACQ580 VFD. This includes configuring, tuning, and performing complete commissioning services for the drive.

Program Objectives

Upon successful completion of this training, participants will be able to:

- Apply basic safe work practices for installation and commissioning of LV Drives
- Define the risks associated with LV Drives
- Identify proper ACQ580 hardware mounting details for various drive frame sizes
- Apply best wiring practices for ACQ580 electrical connections for the motor voltage and for control I/O
- Commission an ACQ580 including fieldbus communications
- Perform basic commissioning fault diagnostics and quickly correct installation issues on site

Program Type and Description

This curriculum is 16 hours (2 days) using a combination of eLearning and live remote instructor-led training, including approximately 55% hands-on lab exercises.

Student Profile

The program is intended for ABB authorized channel partners that are experienced working with and installing LV Drives.

Students who complete the Authorized Start-Up program would be responsible for installation and technical services related to maintaining LV Drives.

Prerequisites

Participants must have:

- Experience working with power electrical equipment and voltage levels of up to 690Vac
- Understanding of basic motor control and LV AC Drives
- Operational knowledge of the ACQ580 product
- Competence using Microsoft Windows® computers
- Familiarity with PC-based drives commissioning tools
- Complete all associated eLearning modules prior to enrolling in the Instructor Led classroom training

Duration

2 days

ACS880

Authorized Startup

Installation & Commissioning

Program Goal

To provide students with the necessary information, tools and training to be able to assess a LV Drive installation, to configure the drive, tune the drive, and perform complete commissioning services.

Program Objectives

Upon successful completion of this program, students will obtain the following:

- Knowledge of safe work practices for installation and commissioning of LV Drives
- Understanding of the risks associated with LV Variable Frequency Drives
- Complete understanding of the installation requirements for a LV AC Drive
- Best wiring practices for LV Drives
- Experience commissioning an ACS880 utilizing the integrated control panel
- Experience diagnosing and correcting installation and programming-related faults/problems on site

Program Type and Description

This program is offered as a combo video-led on-line instruction and live remote instructor-led training, including hands-on lab exercises (1) day. Students will complete online modules before attending the classroom training.

Student Profile

This program is intended for ABB authorized channel partners with experience working with and installing LV Drives. Students of an Authorized Start-up program would be responsible for installation and technical services related to maintaining LV Drives.

Prerequisites

Participants must have:

- Experience working with power electrical equipment and voltage levels of up to 690Vac
- Basic understanding of LV AC Drives
- Understanding of basic motor control
- Understanding of LV AC Drive operation
- Product operational knowledge of the ACS880
- Attended a product overview training program for the ACS880
- Familiar with product commissioning PC tools
- Complete all associated eLearning modules prior to enrolling in the Instructor Led classroom training

Duration

1 day

DCS880

Authorized Startup

Installation & Commissioning

Program Goal

This program provides customers, end users, and trained technicians with the knowledge and capability to Start-Up DCS880 Drives. The technician can perform the drive installation and configure the drive properly for service in the application.

Program Objectives

Upon successful completion of this program, students will obtain the following:

- Gain skills to apply basic safe work practices for installation and commissioning of LV DC Drives
- Understand the risks associated with LV DC Drives
- Understanding the installation requirements for a LV DC Drive
- Apply best wiring practices for LV DC Drives
- Commission an DCS880 including fieldbus communications
- Perform basic commissioning fault diagnostics and quickly correct installation issues on site

Program Type and Description

This curriculum is 16 hours (2 days) using a combination of eLearning and live remote instructor-led training, including approximately 40% hands-on lab exercises.

Student Profile

This program is intended for ABB authorized channel partners with experience working with and installing LV DC Drives. The students are responsible for installation and technical services related to installation of LV DC Drives.

Prerequisites

Participants must have:

- Competence using Microsoft Windows®
- Basic knowledge of motors, motor control, power electronics, and electrical circuits
- Complete all associated eLearning modules prior to enrolling in the Instructor Led classroom training

Duration

2 days

HMI Drive Faceplate

Product Introduction

Program Goal

The goal of the program is to be introduced to the new CP6XX HMI range and to demonstrate the simplicity of using a drive faceplate by downloading and configuring an ACXX80 Faceplate image on an HMI and using it to control the drive.

Program Objectives

For successful completion of this program, students will:

- Identify different models of CP6XX series HMI Panels
- Configure panel communication protocols in Drive Composer
- Modify Modbus parameter settings on the CP6XX, drives, and other devices to establish proper communication between them
- Configure a static IP connection between the HMI, PC, and the drive
- Retrieve a Faceplate Image Project
- Download Faceplate Image Project to the HMI.
- Navigate through Basic faceplate features.
- Start/Stop and frequency reference an ACXX80 drive using the Faceplate image
- Customize drive I/O's using the Faceplate image
- Configure basic look and feel of Faceplate image
- Configure security options and user permissions

Program Type and Description

This program is approximately 2 hours of online program modules, followed by 3 hours of live remote online instructor-led training, which is approximately 60% hands-on lab exercises.

Student Profile

Intended for ABB authorized channel partners, OEM's, technical support professionals, application engineers, technicians, system integrators, and end users who are responsible for installing, servicing or maintaining applications with CP6XX HMI's.

Prerequisites

Participants should have:

- Prior knowledge and ability to wire up and use ABB LV Drives
- Some experience with both drives and using a touchscreen HMI

Duration

0.5 day

HMI Specialist

Product Specialist

Program Goal

This program is designed to provide training in PB610 Panel Builder software, configuring communications between the drive and a CP6XX or CP6XXX series HMI, while learning to customize and configure an HMI application such as a Faceplate.

Program Objectives

The goals of this Program are to guide participants into using the PB610 Panel Builder and the CP6XX and CP6XXX series HMI Display Panel product line for first line sales support. Also, participants will discover some features, shortcuts and practices to improve productivity when creating, testing, and debugging custom HMI applications. The student will learn to import tags of projects using ABB and third-party hardware. Finally, participants will learn how to connect to and directly control one or multiple drives using the HMI via the Modbus RTU and TCP/IP fieldbus protocols

Program Type and Duration

This program is approximately 4 hours of Video Learning course modules, followed by 3 days of live classroom Instructor Led Training, which is approximately 80% hands-on lab exercises.

Student Profile

This Program is open for anyone who works with and sells the CP6XX HMI. It is intended for ABB authorized channel partners, OEM's, technical support professionals, application engineers, technicians, and end-users who are responsible for installing and maintaining applications with CP6XX HMI's.

Prerequisites

Before enrolling in the classroom ILT, students must first complete the following courses and video learning modules:

- HMI Drive Faceplates (9TCP002144)
- CP600 Communication Protocols (F854v_a)
- CP600 Training Presentation (F854v_d)
- CP600 Trends, Alarms, and Recipes (F854v_e)
- CP600 User Management and Passwords (F854v_f)

Additionally:

- Students must have intermediate skills with using a Windows® based computer.
- Students should have at least six months experience working as Automation Systems technical professionals.

Duration

3.0 Days

Drive Specialist C.E.

Continuing Education
(now a part of Drive Expert C.E.)

Course Goal

Formally known as the Drive Specialist C.E. course focuses on connecting the start/stop, forward/reverse, and frequency reference signals from a hardwired operator control panel to a standard drive and PLC. Students will then download application programs to the PLC and the HMI to replace the operator panel for control of the drive via Modbus RTU communication protocol (serial).

Course Objectives

Upon successful completion of this course, students will obtain the following:

- Understand the basic principles, programming, and functionality behind PLC's and HMI's
- Understand the principles related to application of PLC's and HMI's as part of a simple LV drives and motor solution
- Provide recommendations and technical expertise in the basic wiring and programming of a PLC and HMI
- Complete understanding of the installation requirements and best practices for application of a PLC and an HMI with a Low Voltage AC Drive
- Configure PLC's and HMI's to respond to selected inputs and outputs
- Configure drives to receive serial communications between it and PC's, PLC's, and HMI's
- Program and utilize standard software features of the PLC's, HMI's and drives
- Operate a basic start/stop and reference capability on a drive using PLC's and HMI's
- Compare the benefits of controlling a drive and motor between a manual operator panel and an PLC

Course Type and Description

The live remote instructor-led Course spans approximately .5 day and includes numerous hands-on lab exercises. The program contains a pre-training instruction checklist that must be completed before attending the instructor-led class to ensure student lab readiness.

Student Profile

The student must be an employee of an ABB authorized distributor, responsible for pre-sales support or technical sales of LV drives products, AC 500 PLC's and CP6XX HMI's. They must also have previously been authorized as Drive Specialists.

Prerequisites

To register for this course, you must have completed the US9156 Drive Specialist program prior to May 2016.

Duration

Now a part of Drive Expert C.E.

Drive Expert C.E.

Continuing Education

Course Goal

The Drive Expert C.E. course focuses on the steps necessary to use a PLC and an HMI for control of an ACX880 drive and motor via the Modbus TCP/IP communication protocol. All Drive Experts will be required to complete the continuing education hands-on portion for additions with the PLC and HMI solution integration with a drive.

Course Objectives

The objective of is to teach students the wiring, configuration, basic programming, and first level tech support of the defined PLC, HMI, and drive products. Upon successful completion of this course, students will obtain the following:

- Apply basic, safe-work practices for installation and commissioning of Low Voltage Drives
- Support sales representatives in account
- Understand the principles related to application of PLC's and HMI's as part of a simple LV drives and motor solution
- Provide recommendations & technical expertise in the basic wiring & programming of a PLC and HMI.
- Complete understanding of the installation requirements and best practices for application of a PLC and an HMI with a Low Voltage AC Drive
- Configure PLC's and HMI's to respond to selected inputs and outputs
- Configure drives to receive communications between it and PC's, PLC's, and HMI's via Modbus TCP/IP
- Program and utilize standard software features of the PLC's, HMI's and drives
- Operate a basic start/stop and reference capability on a drive using PLC's and HMI's

Course Type and Description

The live remote instructor-led portion of the program spans approximately .5 day and includes one hands-on lab exercise. The Drive Expert C.E. Course contains a pre-training instruction hands-on lab and exam.

Student Profile

The student must be an employee of an ABB authorized distributor, responsible for pre-sales support or technical sales of LV drives products, AC 500 PLC's and CP6XX HMI's. They must also have previously been certified as Drive Experts.

Prerequisites

You must have completed the US9157 Drive Expert program prior to May 2016.

Duration

1.0 Day

Connectivity Training

Integration Education

Course Goal

The goal of this program is to provide students with the necessary information, tools and training to appreciate the value of Connectivity Program, connect an ABB drive over EtherNet/IP, recognize CIP messaging between the Drive and the PLC, and comprehend the basics of Ethernet communications and switches.

Course Objectives

Upon successful completion of this training, participants will be able to ...

- Apply basic troubleshooting of EtherNet/IP connections between ABB Drives and a Rockwell PLC.
- Insert, Modify, and list advantages of 'User defined data types' and 'Add-on Instructions' in a Rockwell PLC.
- Use Rockwell software to connect to an ABB drive.
- List basic features of managed switches, Ethernet networks, and CIP protocols.
- Explain and promote the importance of the Connectivity Program, and associated collateral, to displace sell ABB Drives into existing Rockwell drive markets.
- Use the ABB Connectivity Demo to promote the Connectivity Program to customers.

Course Type and Description

This curriculum is offered as a classroom Instructor-led hands-on lab exercises over a period of (3) days. Students will complete online prerequisites before attending the classroom training.

Student Profile

The program is intended for ABB authorized channel partners and Regional Application Engineers who purchase a Connectivity demo or who promote the Connectivity Program.

Prerequisites

Prior to enrolling in this program participants must have:

- Recommended to complete ABB's Drive Expert training.
- Proficiency with ABB's ACS880 and other drives.
- Familiarity with basic PLC terminology.
- Basic understanding of industrial communication networks.
- Competence using Microsoft Windows® computers and PC-based drive commissioning tools

Duration

2.5 Days

Terms and Conditions

Live Remote Training Offerings

Enrollments

Students should enroll in the desired Program via the Training System. If you do not have a Training Account set up, click the 'Register a New User' link within the system. Allow up to 1 business day for Channel Partner access, if needed. Once enrolled in the program, you will receive a registration confirmation e-mail. Each of the programs have online prerequisites that need to be completed prior to enrolling in the live remote instructor-led training.

Instructor-led Class

Typically, training days start at 8:00 a.m. and end at 5:00 p.m., local time, unless otherwise stated. Breaks and lunch are part of the agenda, depending on the length of the class.

eLearning

Many programs have prerequisites (eLearning courses) to complete. Students are required to complete all prerequisites prior to enrolling in live remote training class. Please note: eLearning materials are not covered during classroom programs but are required for successful participation in the hands-on exercises.

Cancellation

Student cancellations received thirteen (13) business days (3PM CST) before the start of class will not be billed (full reimbursement of tuition).

Student cancellation received twelve (12) business days or less before the start of class will be billed for full tuition (no reimbursement of tuition). Cancellation Policy

Program prices

Each program has a fixed price per student.

Included in the price

Online courses, equipment shipping, student materials, and live remote training.

Not included in the price

Meals for the students

Requirements

Customer must ensure that the students have a proper and safe room in order to use the equipment. In addition, a stable internet connection is required as well as LOTO lock and proper PPE.

Certificate of Completion

Students will be able to print a certificate of completion once the entire program has been completed.

Reserved rights

ABB has all rights reserved on all documents given to students during the program. These documents will be used only to fulfill each program's requirements and shall not be copied nor replicated.

Equipment

All equipment must be inspected upon receipt. Customer is held responsible for the condition of the equipment.

Customer must ensure that all equipment is shipped to the next location no later than one (1) business day after the live remote training has ended.

Equipment must be shipped in the same condition as received. In case any damage due to transportation is noticed, customer is responsible for notifying Motion Academy Training Center – U.S. (drivetraining@us.abb.com or 262-785-3260), immediately after the equipment is received; with supporting photographs showing the damage. Otherwise, if such damage is not notified, or the equipment is damaged under customer's responsibility, full price of the equipment will be invoiced to the customer.

Motion Academy Training Center U.S.

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