

Course description

G108

Advanced service for ACS800 & ACH550/ACS550 drives

Course type and description

The advanced service for ACS800 & ACH550/ACS550 drives learning event comprises of two parts: e-learning courses and classroom course.

This is the second part of the learning event: classroom course with hands-on exercises supported by an instructor.

The first part of the learning event includes the theory based e-learning courses mentioned below. Please note that the e-learning course material is not covered during the classroom course. You are required to complete the e-learning part before the classroom part, which is essential in order to be able to succeed in the hands-on lab activities during classroom days. The status of e-learning course completion is monitored.

Please see the accompanying figure of possible learning paths.

Prerequisites

- Fundamentals of ABB LV AC drives mechanics and operation
- Courses:
 - ACS550: G165e+G165 or ACH550: G166e+G166 or respective knowledge
 - ACS800 SD: G152e + G152 and
 - G106e LV AC Drives, Maintenance Basics
- 6 months experience of ACx550 or ACS800 single.

Course duration

The course duration is 2 days.

Student profile

This course is intended for ABB service and ABB service partners personnel of ABB LVAC drives.

Low voltage drives training

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Course goal

The goal of this course is to learn:

- Drive type specific maintenance according the maintenance schedule of ACS/ACH550 and ACS800 single drives,
- How to use PM-kit selection and reporting tools
- Perform correct preventive maintenance
- Capacitor reforming
- Recall how to clean the components and cabinets

Course objectives

Upon completion of this course, students will be able to:

- Explain the significance of the correct working methods (safety, ESD)
- Recognize the effects of aging of components of ACx550 and ACS800
- Interpret the maintenance schedule and maintenance notes of ACx550 and ACS800
- Select correct maintenance kits for ACx550 and ACS800
- Perform correct preventive maintenance work for ACx550 and ACS800
- Download software into ACx550 and ACS800
- Handle, activate and install spare parts

Main topics

- Safety and ESD
- Fundamentals of preventive maintenance for ACx550 and ACS800
- Site survey and audit
- ACx550 and ACS800 operation on preventive maintenance
- Preventive maintenance tools for ACx550 and ACS800
- Preventive maintenance kits for ACx550 and ACS800

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Day 1

09:00	Welcome and introduction	14:00	Coffee break
09:05	Safety and ESD <ul style="list-style-type: none">■ ESD on site<ul style="list-style-type: none">- Working clothes, ESD kit,- Special tools- Spare part and PM kit handling■ Safety<ul style="list-style-type: none">- Electrical safety generally on site- Product specific safety issues- Permanent magnetic motor- Inhibition of False Start- Safety Torque Off	14:15	Spare part operation on site <ul style="list-style-type: none">■ Backup/Restore■ Commissioning of spare unit■ Software downloading (ACS550&ACS800)■ Spare part suitcase <p>Spare part operation on site exercises:</p> <ul style="list-style-type: none">■ create and download backup■ download xMIO-software (ACS550&ACS800)
10:00	Coffee break		
10:15	Fundamentals of ACx550 & ACS800 Preventive Maintenance <ul style="list-style-type: none">■ Drives Lifecycle plan■ Maintenance schedules and subjects■ Maintenance notes (what are those, meaning of them, location of them)■ Preventive Maintenance project■ Site survey and audit■ Preventive Maintenance tools<ul style="list-style-type: none">- Kit selection tool (Excel-macro)- Maintenance reporting template (Excel-macro)- Fibre optic measurement equipment- Hand tool –set	16:00	End of the day 1
12:00	Lunch		
13:00	Fundamentals of ACx550 & ACS800 preventive... <ul style="list-style-type: none">■ Exercise<ul style="list-style-type: none">- Determining desired PM kits for a drive- Connectors to a fiber optic cable and measurement		

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Day 2

08:30 ACx550 & ACS800 PM kits

- PM kit contents
 - ACS800 insulator plates for DC capacitors
 - Discharges resistors
 - Series resistor (hybrid/690V-units)
- PM kit assembly
 - Drive HW specific instructions:
 - ACS800 : ready made capacitor kits

- Electrolytic capacitor reforming

09 :15 PM exercises according instructions

10:00 Coffee break

10 :15 Exercises continue

12:00 Lunch

13:00 Exercises continue

14:00 Coffee break

14:15 Exercises continue

15:30 Summary and course evolution

16:00 End of the course

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