

## Course description

# Fi202

# SAMI MEGASTAR User, Maintenance and Service

## Course Duration

The course duration is 4 days.

## Course type

Classroom course with focus on hands-on activities led by an instructor in the HV-test field

## Course Goal

The goal of this course is to teach students to operate, maintain and trouble-shoot Megastar W. The training covers the following types and constructions:

- SAMI Megastar W – single drive
- SAMI Megastar W – parallel drive
- SAMI Megastar W – common DC-bus drive
- Drives with APC-controller and LRU

## Student Profile

This course is intended for electricians, technicians and engineers who perform preventive maintenance and normal trouble-shooting on SAMI Megastar W - drives.

## Prerequisites

- Basic knowledge of electronics and power electronics
- Basic knowledge of AC-motor and drive engineering
- Experience in using a DOS / Windows PC

## Description

This course contains theoretical teaching and hands-on exercises and fault tracing with SAMI Megastar W.

ABB internal info: This course is not equivalent with **Megastar Expert Days**, which is one of the requirements when applying for Megastar Expert - Certificate (PCS).

## Course Objectives

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

- Perform Preventive Maintenance on SAMI Megastar W
- Trace and correct simple faults
- Operate and test SAMI Megastar W –drives using PC-tools

## Main Topics

- Hardware and software overview
- Component and board functions
- Reading and interpreting circuit diagrams and part lists
- Control panel functions
- Preventive Maintenance
- Fault tracing
- Replacing HV – components
- Using the PC-tools (DMS / DriveMS / DDCTool)

## Low voltage drives training

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## Agenda

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## Day 1

- 8:00 Introduction of the course
- 8.30 Megastar product presentation, Drawings and part lists
- 11.00 Lunch Break
- 11:45 Safety, Grounding of Megastar, Start/stop sequence
- 13:30 Test site visit
- Megastar presentation
  - operation of the drive
  - annual water cooling unit maintenance
- 16:00 End of the day

## Day 2

- 8:00 Control unit
- control boards
  - parameters, trends, fault buffer
- 9:30 Control panels, monitoring SW-tools, APC2
- 11:00 Lunch Break
- 11:45 Maintenance schedule, PM – kits, Replacement instructions, Upgrades, Insulation resistance measurement
- 13:00 Hands on training at the test site
- removing modules from the drive
  - GTO-/diode replacement rehearsal
  - Snubber capacitor replacement induction

16:00 End of the day

## Day 3

- 8:00 Hands-on training at the test site
- Replacing of snubber capacitors (+pipes)
  - Pressure testing of the modules
- 11:00 Lunch Break
- 11:45 Hands-on training continues
- Filling in the Inspection records
  - Inserting the modules into the drive
  - Optic Fiber /Simulation test / No load – test
  - Insulation Resistance Measurement
- 16:00 End of the day

## Day 4

- 8:00 Trouble-shooting rehearsals at test site
- 10.00 Final discussion
- 11:00 Lunch Break
- 11:45 Course Certificates & End of training

After mutual agreement changes in course program are possible.

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