

US353-S3 M93 Electrical Service

IRB 1500, 2000, 3000, 3200, 6000



This course is for the **M93** generation of robot, the goals of this class is to teach students how to identify the electrical components, theory of operation, and proper troubleshooting procedures. Approximately 50% of the course is hands-on troubleshooting of actual robot systems.

Course Duration: 4.5 days

Topics Include:

- Operation of robot control and mechanical unit
- Safety precautions used while troubleshooting electrical system
- Description of components in the robot controller
- Principles of logical troubleshooting from power up, through emergency stop loop and servo system
- Input / Output interfacing between robot controller and peripheral equipment

Course Objectives

After successfully completing the course, the participant should be able to:

- Operate the control panel and programming unit
- Read ABB circuit diagrams
- Set up resolvers, limit and sync switches
- Analyze and interpret system fault codes
- Diagnose and repair basic electrical faults
- Analyze servo-system data and make basic adjustments
- Diagnose and rectify emergency stop conditions
- Make I/O connections to peripheral equipment and safety devices
- Repair and replacement of systems components

Student Profile

- Industrial electricians
- Electrical service technicians
- Engineers
- Supervisory personnel

Prerequisites

- Familiarity with use of electronic test equipment (voltmeter and oscilloscope)
- Basic understanding of digital electronics is helpful
- S3 robot programming US311 is recommended