

# US361-S4C Plus Electrical Update

IRB 140, 1400, 2400, 4400, 6400R,  
6600, 7600



Available for the S4C+ generation of robots, the class is designed to teach students how to identify the differences between the S4C and the newer S4C+ controller. It is assumed that the student already has had S4C Electrical training or is very knowledgeable on the S4C system. Approximately 30% of the course is hands-on labs and troubleshooting of the actual robot system and S4C+ controller.

**Course Duration:** 2 days

## **Topics Include:**

- Direct comparison of the differences S4C to S4C+
- Software loading procedures
- 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:*

- Describe the differences between the S4C and S4C+ controllers
- Read ABB S4C+ circuit diagrams
- Analyze and interpret system fault codes
- Diagnose and repair basic electrical faults
- Diagnose and rectify emergency stop conditions
- Make I/O connections to peripheral equipment and safety devices
- Repair and replacement of systems components
- Perform “Cold-Boot” procedure

## **Student Profile**

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

## **Prerequisites**

- S4C electrical training or experience
- Familiarity with use of electronic test equipment (voltmeter and oscilloscope)
- Basic understanding of digital electronics is helpful
- S4 robot programming US312 is recommended