

# US356

## S4C Electrical Service (In Plant Only)

The course is designed to teach students how to identify the electrical components, theory of operation, and introduce proper troubleshooting procedures on the S4C robot controller. Approximately 35% of the course is hands-on troubleshooting of actual robot system and controller.



### Topics Include

- Theory of operation of the S4C robot controller
- Safety precautions used while troubleshooting the S4C robot controller electrical system
- Description of components in the S4C robot controller
- Principles of logical troubleshooting from power up through emergency stop loop and servo system
- Input/Output interfacing between the S4C robot controller and peripheral equipment

### Course objectives

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

- Operate the S4C control panel and programming unit
- Read and interpret ABB circuit diagrams on the S4C robot controller
- Set calibration, revolution counters
- 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 replace system components
- Perform "Cold-Boot" procedure

### Student profile

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

### Prerequisites

- Familiarity with use of electronic test equipment (voltmeter)
- Basic understanding of digital electronics is helpful
- S4 robot programming US312 is recommended

### Duration

The course duration is 4.5 days.

### Customer Service – Robotics

1250 Brown Road

Auburn Hills, MI 48326, USA

Tel: 1 800 HELP 365 (1 800 435 7365) option 1, option 4

Outside USA/Canada: +1 440 585 7804

Fax: +1 860.298.3856

E-mail: [abbuniversity@us.abb.com](mailto:abbuniversity@us.abb.com)

[www.abb.us/abbuniversity](http://www.abb.us/abbuniversity)

© 2010 ABB Inc. 3BUS095264 SM2010-027

ABB reserves the right to change specifications without notice.