

Electrical Troubleshooting (Paint Robots)

IRC5P – 4½ days – Course Code: US344

S4P+ – 4½ days – Course Code: US362

This course is designed to teach students how to identify the electrical components, theory of operation, and introduce proper troubleshooting procedures on the robot controller. Approximately 50% of the course is hands-on troubleshooting of actual robot system and controller.



Topics include

- Theory of operation of the robot controller
- Safety precautions used while troubleshooting the robot controller 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 the robot controller and peripheral equipment

Course objectives

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

- Practice safety as it pertains to the robot system
- Identify different parts of the robot controller and manipulator
- Troubleshoot computer and drive system to a board level
- Load system software and system operating parameters
- Interface an input and an output device to the robot controller
- Interpret and respond to event message – use event logs
- Troubleshoot power ON circuits
- Troubleshoot purge circuits
- Troubleshoot Motors ON / run chains circuits
- Troubleshoot the motors, brakes, and resolvers

Student profile

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

Prerequisites

- Familiarity with use of electronic test equipment (voltmeter and oscilloscope)
- Basic understanding of digital electronics is helpful
- Programming I for Paint (US340 or US341) is strongly recommended

Duration

The course duration is 4.5 days.

Customer Service – Robotics

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