

## US471 Robotic Washer, Electrical Maintenance

The course goal is to provide skilled trades personnel an overview of the ABB Robotic Washer, and instruction on how to troubleshoot and repair the ABB Robotic Washer. The training will also include diagram overview and system component interfaces. This course provides instruction to personnel involved with the operations of the ABB Robotic Washer and is structured to provide a combination of classroom lecture and hands-on training. Task certification sheets will be documented to ensure understanding course content.

### Topics:

- Safety precautions used while operating the ABB Robotic Washer
- ABB Robotic Washer component location and description
- Operating procedures (start-up, shut-down, e-stop, etc.)
- Preventive maintenance requirements
- Basic troubleshooting & fault recovery
- Electrical architecture (PLC) and PLC/robot interface of the cells
- Review cell electrical diagrams
- Review HMI screens
- Electrical troubleshooting techniques
- Fault recovery techniques

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

- State the purpose, function, location, and operating characteristics of major electrical and controls components associated with the ABB Robotic Washer
- Demonstrate the ability to identify and locate safety devices on the cell
- Recognize requirements for safe operation and maintenance
- Demonstrate the ability to read and interpret the system electrical schematics
- Identify control devices and process screens in HMI operator panels
- Identify PLC/robot interface used in the cell
- Demonstrate the ability to interpret fault messages and repair the fault
- Identify electrical failures and possible cell failures

**Student Profile:** This course is intended for personnel responsible for starting, operating and electrically maintaining the ABB Robotic Washer.

- Skilled Trades Electricians
- Supervisors

### Prerequisites

- ABB Robotic Washer, On-Line Operator Course
- Robot programming and electrical training, e.g., IRC5 Programming I (US420) and Electrical Service (US421), OR Programming and Electrical Maintenance (US450)
- Electrical schematic reading
- Basic knowledge of automated assembly equipment
- Basic understanding of Windows operating systems and computer skills (identification of hardware and terminology)
- Electrical Journeymen Status

**Duration:** 1 day