

## ELC300 Electrical Controls, Connections & Ladder Logic Training Program

Practical Knowledge & Hands-On Experience

### ◆ Program Description

This in-depth program provides knowledge and skills on electrical safety, control circuits, AC motors, ladder logic and troubleshooting. The information presented will enable you to construct and troubleshoot electrical control circuits. More than 300 topics are covered in 12 units of study. 30 job activities provide "hands-on" experience using the Hale ELCON Drill Station Trainer.

Online web based lessons allow you to learn at your own pace and convenience. Over 1000 images illustrate electrical components and circuit operation.

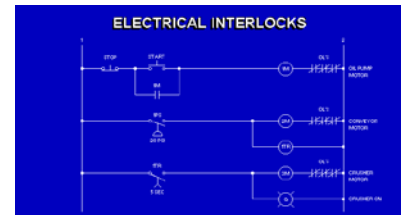
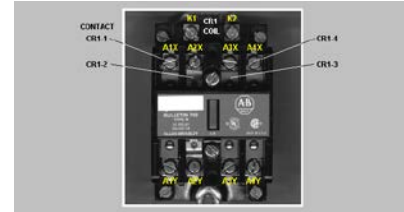
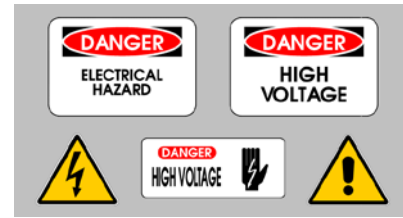
Optional computer based training simulations reinforce electrical safety and demonstrate the operation of a variety of control circuits including pushbutton stations, motor starters and interlocks.

### ◆ Prerequisites

- Familiar with site specific safety protocols
- Experience using Microsoft Windows™

### ◆ Availability

- Web based training available 24/7 🕒 ~42 Hours
- Training hardware used for hands on activities are available for purchase 👤🕒 ~54 Hours



Images from Hale online training program

### ◆ What you will be able to do

1. Explain and follow appropriate safety procedures for working on electrical circuits.
2. Effectively troubleshoot and repair electrical control circuits.
3. Identify and test control components for proper operation.
4. Draw and interpret wiring and schematic (ladder) diagrams.
5. Connect, test and troubleshoot control circuits.

### 👤 Hands-On Job Activities

- |                                    |                                 |
|------------------------------------|---------------------------------|
| 1. Working Safely with Electricity | 16. Plug In Relays              |
| 2. ECT Trainer Familiarization     | 17. Timers                      |
| 3. Voltage Measurement             | 18. Three Phase AC Motors       |
| 4. Control Transformers            | 19. Non-Reversing Motor Starter |
| 5. Overcurrent Protection          | 20. Reversing Motor Starter     |
| 6. Continuity Testers              | 21. Wiring Diagrams             |
| 7. Pushbutton Controls             | 22. Ladder Diagrams             |
| 8. Pilot Lights                    | 23. Two Wire Control            |
| 9. Mechanical Limit Switches       | 24. Multiple Pushbuttons        |
| 10. Proximity Switches             | 25. Man-Off-Auto Operation      |
| 11. Photoelectric Switches         | 26. Manual Sequencing           |
| 12. Solenoids                      | 27. Automatic Sequencing        |
| 13. Control Relays                 | 28. Electrical Interlocks       |
| 14. Latching Relays                | 29. Jogging                     |
| 15. Time Delay Relays              | 30. Drill Station               |



Hands-on job activities are performed on the Hale ELCON trainer

For more information, contact

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