



Ron Beaufort Training, LLC

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Hands-On Technical Workshops

by Ron Beaufort

Course Specifications: **W3904**

Alarm Handling for COOLANT.RSP program - Four hours

This **advanced-level, four-hour, hands-on** technical workshop is custom designed to:

- cover the alarm handling algorithms used in the COOLANT.RSP program
- briefly discuss certain obvious inconsistencies in the application of PID control being used in this same program

The following topics will be presented through hands-on exercises and demonstrations:

- Ladder execution methods; JSR, STI, PII, and MCP
- Basic file handling concepts and indexed addressing
- Advanced file handling instructions; FSC, and using FAL to perform logical AND, OR, and NOT operations
- Alarm handling algorithms used in Ladder File #3
- Mapping memory allocations for data files used in alarm handling

The following topics will be presented through discussions and question/answer periods:

- Overview of the PID instruction
- Selecting the PID equation; Independent or Dependent
- Input and output scaling issues related to PID control
- Timing issues related to consistent PID execution

This course will be conducted as a laboratory workshop using the **Problem/Solution** method of instruction. There are absolutely no transparency projectors and no PowerPoint slide shows involved. Instead, all of the course material is presented through a series of hands-on exercises (except as noted in the objectives above) which each student performs on **real-world equipment**. By working through the same types of tasks which are commonly encountered in the field, students not only master the material more rapidly but also improve their **problem-solving** skills and develop the **confidence** required to apply their new abilities on the job. Most students, particularly those with a maintenance technician background, respond enthusiastically to the challenges of this dynamic style of instruction.

Students successfully completing this course will be awarded 0.4 Continuing Education units.

In order to provide each student with an **individual workstation** and with adequate instructor attention, the class size is normally limited to six students.

It is **required** that each student have a good working knowledge of the Allen-Bradley PLC-5 hardware system and of the RSLogix5 software package. Existing skills **must** include the processing of analog input and output signals. Please note that this is **not** an entry-level class and students who do not have the prerequisite skills should not attend this workshop.

It is **required** that each student have a good working knowledge of Microsoft Windows and also adequate mouse and keyboard skills to enable active participation in the lab exercises. Although the pace of this workshop will **not** accommodate students who lack these skills, we offer a separate one-day hands-on computer workshop to provide these prerequisites.

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