

TROUBLESHOOTING INDUSTRIAL CONTROLS 2

Troubleshooting Industrial Controls 2 (TIC2) helps users develop effective testing methods and techniques to safely troubleshoot industrial systems with PLCs. In this module, your professionals will diagnose and repair over 50 faults in a simulated fluid processing system. This system, used to mix, heat, and pump two types of fluids, contains a 16-channel PLC controls, motors, contactors, overloads, fuses, a pump, solenoid valves, heaters, circuit breaker, temperature switches, float and selector switches, pushbuttons, and control transformers.

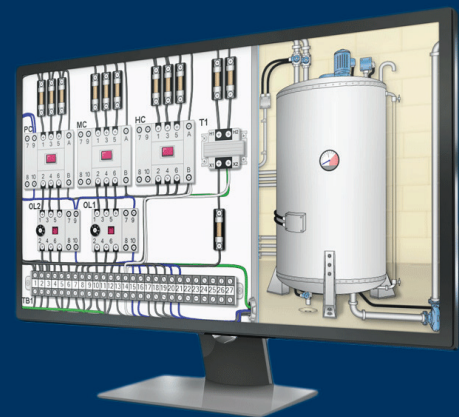
This module brings together the techniques learned in the PLC module and is designed to teach professionals to troubleshoot complex electrical equipment containing industrial control systems, frequently found in industrial and fluid processing applications, typically in food, beverage, and chemical manufacturing.

REALISTIC TOOLS AND REACTIONS

The simulation includes all the tools and information normally used to troubleshoot malfunctions in industrial controls featuring PLCs.

In addition to the standard tools found in other Simutech Multimedia troubleshooting simulations, students can use the virtual laptop to:

- Go online and change modes
- Select and adjust the PLC program to provide the required behavior
- Monitor the operation of the ladder program in real time
- Change settings in the ladder program



LEARNING OBJECTIVES

Your staff will:

- Learn how PLCs are used to provide a variety of processes including start, stop, level control, temperature control, mixture ratio control, and more
- Safely develop effective testing methods and techniques for safely troubleshooting industrial systems with PLCs
- Perfect their advanced PLC troubleshooting skills by practicing on over 50 system malfunctions

DESIGNED FOR

- All trades professionals who need to develop and advance their skills for analyzing and correcting malfunctions in industrial processing systems controlled by PLCs
- Learning skills that are directly transferable to the workplace
- Worldwide use: simulations on resources provided for NEMA and IEC electrical standards

ADDED BENEFITS

- Multiple levels of difficulty mean the software will challenge all levels of expertise
- Real-time feedback on safe practices and testing methods to improve performance
- Step-by-step guides help users apply new problem-solving techniques to solve typical faults related to PLCs in industrial processing systems
- Printable resources including wiring and ladder diagrams, schematics, datasheets, worksheets, flowchart, and system operation manual
- Extra and Genius Faults available for skill maintenance

THE SIMULATIONS

This PLC controlled industrial process simulation contains a wide variety of power and control components:

- A generic PLC with 16 digital inputs and 16 relay outputs
- A 24-volt DC power supply powering the inputs
- Temperature, float, and selector switches
- Solenoid valves, fuses, indicators, pushbuttons
- Pump, agitator, and heaters
- Motors and transformers
- Contactors and overloads
- Wiring, terminal blocks, and wire connectors
- **20 unique ladder programs** are included, supplying a variety of operational behavior for troubleshooting exercises.

FEATURES

Realistic simulation of a PLC controlled industry process offers many hours of safe, hands-on learning

Practice faults (core)	6
Guided faults (core)	3
Skill Test faults (core)	18
Extra faults	16
Genius faults	8
Practice	Limitless

EVALUATING SKILLS

Managers can:

- Track skills development with comprehensive evaluations for each fault and overall individual performance
- Measure and record users' achievements in safety, accuracy, and efficiency
- Use all-inclusive reports to monitor professionals' progress, achievements, and areas that need improvement
- Print certificates when a professional finishes all skill test faults

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