TROUBLESHOOTING

INDUSTRIAL SENSORS

Learn how to safely and efficiently identify and solve issues in a variety of industrial sensors, PLCs and other electronic controls.

Troubleshooting Industrial Sensors (TIS) is our third and most advanced simulation-based training module involving PLC controls. The all new 3D format (*no 3D glasses required*) builds on the previous PLC modules by introducing analog sensor inputs and the 4 – 20 million loop concept. Set in a greenhouse environment, these sensors are used to monitor temperature, humidity and light in real time.

Analog sensor troubleshooting will include: the 4 – 20 mA current loop, transducer and sensor failure scenarios as well as calibration. PLC troubleshooting will include the physical modules as well as settings, programming and wiring issues.

Your team will also be exposed to mechanical and electrical troubleshooting involving: defective components, loose wires, broken connections and open and short devices.

Develop problem-solving skills used in a wide variety of industrial applications where sensors and environmental controls must be maintained, i.e. food processing, clean rooms, etc… The critical skills developed through this tool are also utilized in almost any type of processing operation where sensors/ transducers are used.

FULLY IMMERSIVE TRAINING SIMULATION

The new immersive 3D environment ensures that navigating through the greenhouse and electrical room will provide a realistic environment in which to troubleshoot problems. The meter and screwdriver have been expanded and improved.

Real-time greenhouse conditions are provided on the screen at all times in the form of independent humidity, temperature and light measurements. All three measurements include a slider bar, which is adjustable by the user for testing purposes.

With a simple right click on any device, the user will be able to replace a faulty device or view specification sheets for that device. Detailed Inspection Reports are also available for some devices.

LEARNING OBJECTIVES

Your staff will:

- Learn new concepts such as processing measurement values in real time and how that information is used to provide digital control of heaters, foggers, exhaust fans and lights
- Learn how to diagnose sensor and transducer errors and when to calibrate or replace these devices
- Learn how to configure PLC analog modules for different sensor types and how to set alarms and alarm deadband
- More realistic logout/tag out
- Troubleshooting scenes across multiple rooms
- Learn how to troubleshoot effectively and methodically
- Have the skills acquired from our previous troubleshooting modules reinforced

DESIGNED TO

- Help those who work in a PLC-based environment understand analog information and how to monitor, process and troubleshoot in real time
- Increase troubleshooting efficiency by exposing your team to a wide range of fault scenarios in a process controlled system
- Decrease downtime by providing feedback and testing methods to further improve troubleshooting skills

THE SIMULATIONS

Our Troubleshooting Industrial Sensors Module includes the following greenhouse specific components:

- PLC CPU with internal power supply
- 8-input Digital Input Sourcing Module
- 16-output Digital Output Relay Module
- 4-input Analog Input Module configured for 4 – 20 mA current loops
- RTD Sensor and Input Modules
- Quantum Light Transducer
- Capacitive Type Humidity Transducer
- Exhaust Fans, HPS Lights, Infrared Heaters, Solenoid controlled Foggers
- Manual/Off/Auto selector switch

Also included:

6 Unique ladder programs are included covering different concepts involved in process control including: Basic control, Latching, General Compare instructions such as GEQ (greater than or equal to), LEQ (Less than or equal to), COM (Compare), Alarms and Timers.

SKILL-ASSESSMENT FEATURES

Managers can:

- Track skills development with comprehensive evaluations for each fault and overall individual performance
- Measure and record your teams' 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

TRUSTED BY OVER 500 COMPANIES AND 200 SCHOOLS GLOBALLY

amazon Barilla Coca-Cola Ford Ingredion NISSAN TOYOTA