

Safety Relays and Devices Maintenance and Troubleshooting

OEM: Rockwell Automation • Duration: 2 Days (16 hrs) • Code: SAF-COM101

COURSE MODULES & TOPICS

Objectives

- Monitoring Safety relays
- Operator interface devices (e-stop pushbutton and grip enabling switch)
- Electromechanical switches (interlock)
- Electronic switches (non-contact RFID interlock)
- Opto-electronic presence sensing devices (light curtain and safety sensor)
- Pressure sensing devices (safety mat)

Prerequisites

- Interpreting industrial electrical circuit schematics
- Maintaining industrial electrical circuits or machine systems

Student Materials

- Student Manual includes the key concepts, definitions, examples, and activities presented in this course
- Lab Book provides learning activities and hands-on practice. Solutions are included after each exercise for immediate feedback
- Troubleshooting Safety Systems Flowchart offers an overview of the decision-making process that can be used later on the job

Next Level Learning

- Functional Safety for Machinery Technician Certification (TÜV Rheinland) (SAF-TUV0T)

Course Agenda

Day 1

- Identifying Relay-based Machine Functional Safety Systems and Components
- Maintaining Relay-based Machine Functional Safety Systems
- Interpreting and Clearing Faults at the Safety Relay
- Interpreting and Clearing Faults for Wiring in Safety Systems

Day 2

- Interpreting and Clearing Faults for E-Stop Pushbuttons and Grip Enabling Switches
- Interpreting and Clearing Faults for Interlock and Non-Contact Switches
- Interpreting and Clearing Faults for Light Curtains and Safety Sensors
- Interpreting and Clearing Faults for Safety Mats
- Interpreting and Clearing Faults for Safety Outputs