

Call 1-877-978-7246



UNDERSTANDING AND TROUBLESHOOTING MOTOR CONTROLS

Course Topics Include – Fundamentals of Control Circuits, Common Control Circuits, and Troubleshooting Control Circuits

Giving you the knowledge and confidence to troubleshoot motor control circuits safely and efficiently.



Learning Objectives:

- Explore the Function the Electrical Systems Controlling your Motors
- Troubleshoot Motor Control Circuits Safely and Efficiently
- Understand Operation of Motor Control Devices: Relays, Starters, Switches, and More
- Read an Electrical Schematic and Understand Symbols and Operation®

- Reserve your space now either **online** or by calling us at **1-877-978-7246!**
- Check us out online at **live.tpctraining.com** for a complete list of all virtual and in-person seminars.
- This seminar is also available for **Virtual** or **In-Person Private Group Training**



SEMINAR OVERVIEW

This 1-day interactive course is designed for all knowledge levels of technicians and focuses on giving attendees the knowledge and confidence to troubleshoot motor control circuits safely and efficiently. Most control circuit troubleshooting is completed with the circuit in an energized state so attendees will learn proper electrical safety procedures.

This course will cover the most common motor control circuits with easy-to-understand explanations of the components that make them up including selector switches, limit switches, control relays, contactors, motor starters, and more. It also covers the variety of ways speed and motor rotation are controlled.

Attendees will learn how to read an electrical schematic, systematically troubleshooting using it, and repair equipment quickly to reduce downtime.

WHAT YOU WILL TAKE HOME

- A laminated, full-color TPC Training Reference Guide detailing all the “must know” information covered in the class. Keep this with you while on the job for immediate knowledge recall.
- Comprehensive classroom materials
- A Personalized Training Certificate with 0.8 TPC Training Continuing Education Units.
- All the information you need from asking our instructors specific questions about your own unique equipment or facility.

CONTINUING EDUCATION

Upon completion of this seminar, the student will receive a Certification of Completion and .8 TPC Training CEUs per day attended. Most employers and many government agencies accept TPC Training CEUs to fulfill their continuing education requirements. If the student needs CEUs to renew a state license, please contact us at 303-867-5039 to ensure the state licensing board has approved the seminar. If we are currently not approved by your state licensing board, we are happy to begin the process as long as we receive your request at least one month before the training date.

DISCUSSION TOPICS

Fundamentals of Control Circuits

- Understanding Electrical Symbols
- Wiring Diagrams vs. Ladder Diagrams
- Learn to Read Motor Control Schematic and Ladder Diagrams
- Component Voltage and Current Ratings
- Pushbuttons and Selector Switches
- Limit, Pressure, Temperature, and Flow Switches
- Control and Timing Relays
- Contactors and Motor Starters
- NEMA vs. IEC

Common Control Circuits

- Two Wire Controls
- Three Wire Controls
- Hand-Off-Automatic Controls
- Jogging Controls
- Timing Relay Circuits
- Forward-Reverse Motor Controls

Troubleshooting Control Circuits

- Reading & Interpreting Your Multimeter Readings
- How to Troubleshoot Individual Components
- Establishing Safe Work Conditions
- Personal Protective Equipment (PPE)
- Working On or Near Energized Parts
- Electrical Lockout / Tagout
- Developing a Logical, Systematic Approach to Troubleshooting Controls
- Typical Control Circuit Problems and How to Find and Fix Them

JOIN OUR CLASSROOM SEMINARS FROM VIRTUALLY ANYWHERE

Our virtual instructor-led training option allows students to connect to a live classroom seminar via a web link, with the ability to participate full in the classroom dialogue, exercises, and Q&A. Online participants get all the benefits of the full classroom experience, plus the convenience of remote access.

Features include

- One full day of live, interactive instruction from a TPC Training instructor
- All classroom materials in PDF format
- Certificate of completion for 8 hours of live training
- Full technical support to ensure your online experience is a rewarding one

SEMINAR FEE & AGENDA

This 1-day course is just \$595 (Earn 0.8 CEUs)

7:30 am	Registration
8:00 am	Class Begins
12:00 -1:00 pm	Lunch (on your own)
4:30 pm	Class Ends

NO RISK REGISTRATION & MONEY-BACK GUARANTEE

You can reserve your space in the class at any time and cancel without penalty. Cancellations made more than 14 days prior to the seminar may be refunded or rescheduled. Cancellations made within 14 days may be rescheduled for any future topic and/or date. If you're not satisfied with the course, we'll promptly refund your payment.

BRING THE TRAINING TO YOUR FACILITY VIRTUALLY OR IN-PERSON

Every public seminar class in our Course Catalog can be conducted virtually or on-site at your facility, with the same expert instructors. To arrange an in-person private group training, call or email us at virtual@tpctraining.com.

Some Advantages of In-Person Private Group Training

- Cost Savings — Save time and travel costs by keeping workers on-site
- Customized Content — Tailor the seminar to your facility and equipment
- Flexibility — Accommodate multiple shifts and different start and end times