

# The Leading Edge in Industrial Controls Training

ELECTRIC MOTOR CONTROL • HVAC CONTROLS • FLUID POWER CONTROLS • MECHANICAL CONTROLS • AUTOMATION & DIGITAL CONTROLS

# POWER SWITCHBOARD, POWER DISTRIBUTION, AND MOTOR CONTROL CENTER



The TSI Electric Power Distribution and Motor Control Center for Motor Control Technicians course provides competency-based, hands-on training for installing, adjusting, testing, and troubleshooting the electrical and electronic controls for electrical power distribution, monitoring, electric motor control, and programmable logic controllers.

## THE TSI LEADING EDGE ADVANTAGES

- 1. TSI is the leader in providing authentic training solutions. TSI training hardware is authentic and exactly duplicates the equipment, tools, and technical job requirements the student will encounter on the job. This didactic ensures the student transitions smoothly from the classroom to the work place.
- 2. TSI E-learning courseware presents technical information including; operating theory, installation, testing, and troubleshooting a plant power distribution and motor control center. Connecting, testing, and troubleshooting procedures are driven by authentic Job Work Orders. TSI E-learning content is deliverable via print media, standard school/industrial computer networks, and all current tablet formats.

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- 3. TSI training hardware, using component drawout panels is flexible and easily updated and upgraded as new motor control technology emerges.
- 4. TSI training hardware provides a safe learning environment for the student. TSI training systems are UL Listed and meet the requirements of:
  - UL 508A NEC 409 NFPA 70 OSHA

## TRAINING SYSTEM

The training system consists of NEMA 1 equipment enclosures and removable control component draw-out panels.



#### 3-phase Power Switchboard

- voltage & current instrumentation
- · 3-phase line monitor & failure relay
- · main circuit breaker
- lock/tagout interlock on cabinet



#### **Power Distribution & Control**

- · low voltage instrumentation
- · AC and DC power supplies
- 3-phase transformer buck/boost connections
- 3-phase branch circuit breakers



#### **E-LEARNING COURSE CONTENT**

- Fusible Disconnects
- HV Distribution & Circuit Protection
- HV Electrical Safety
- HV Electrical Test Equipment
- HV Wire Ways
- HV Transformers & Connections
- Power Monitoring, Analysis & Quality
- Branch Circuits & Load Balancing
- Installation & Testing Motor Controls
- Installation & Testing PLC Systems
- Installation Testing Motor Drives



#### **Motor Starters & Controls**

- drawout units include; single starter, reversing starter, and soft starter
- 120 & 24 control voltages



#### **Logic Controllers**

 drawout units include; Allen Bradley, Seimens, Modicon, Mitsubishi, GE, and Direct Logic



#### **Electronic Motor Drives**

- AC variable frequency driveDC pulse-width
- DC pulse-width modulation drive
- DC 4-quad regenerative drive