

INDUSTRIAL MOTORS TRAINING SYSTEM

243S

Industrial Motors Trainer was Developed as a direct response to Industry's Request for a hands-on approach to motor maintenance and troubleshooting. The trainer provides students with the skills and competence to analyze and maintain electrical motors, which are the heart of most industrial systems. AC, DC, single, and three-phase motors require systematic maintenance and diagnostic troubleshooting by the technician. Thru a comprehensive series of experiments and troubleshooting exercises, the student will acquire the skills most often identified by advisory committees. The "Industrial Motors" training system has all of the necessary equipment and courseware to assure that the teacher has the most complete and practical instructional program available.



Tool Assortment



Accessory Package

INDUSTRIAL MOTORS COURSEWARE

ECI's competency-based lab manuals are easy-to-read with a two color format, which is complemented by large illustrations. It is divided into eleven chapters with 29 experiments in a loose-leaf binder.

- System Familiarization
- AC Motor Familiarization
- Motor Mounting, Load Coupling and Shaft Alignment
- AC Three-Phase Induction Motors
- AC Single-Phase Induction Motors, Two Speed Split-Phase
- Single-Phase, Capacitor-Start Motors
- DC Motor Familiarization
- DC Motor Types
- Universal Motors
- Maintaining AC and DC Motors
- Troubleshooting AC and DC Motors
- Glossary and Index

Each motor is equipped with a standard male Cinch Jones connector which plugs into either end of the base. Color coded jacks on the motor base provide final circuit hook-up.

The steel Motor Base is designed for flexibility in motor mounting and coupling. A special cable provides direct connection to the power supply to allow a variety of motor circuit configurations.



9 Troubleshooting Fault Blocks

TRAINER INVENTORY

- Industrial Power Supply (24300)
- Three-Phase AC Motor
- Split-Phase, Dual-Voltage, Capacitor-Start Motor
- Compound Wound DC Motor
- AC/DC Universal Motor
- Motor Base
- Industrial Training Panel
- Resistor Modules (2)
- Rheostat Module Capacitor Module
- Patchcord Assortment
- Accessory Package
- Coupling Guard Assembly
- Belt Guard Assembly
- Tool Assortment
- Fault Plugs
- Tachometers
- Clamp-On Ammeter
- Digital Multimeter



ECI MODEL 24300 Power Supply

features:

- Dual Digital Meters
- Electronic Overload Shut Down
- Key Start Switch
- Lighted Emergency Disconnect
- Three Year Warranty

OUTPUT VOLTAGES:

Three-Phase, 230 VAC Fixed 0-120 VAC Variable, Unregulated
0-120 VDC Variable, Unregulated
120 VDC Fixed, Unregulated 120 VAC Fixed

OUTPUT CURRENT:

Three-Phase, 230 VAC, 0 - 15 Amps
0- 120 VAC, 0-10 Amps 0- 120 VDC,
0 - 10 Amps 120 VDC, 0- 10 Amps
120 VAC, 0- 10 Amps

METERING:

(2) Three-digit, 7-Segment LED Display Three-Phase: (3) Pushbuttons interlocked; L1-L2, L2-L3, L3-L1.
(1) Pushbutton alternate action VOLTS/AMPS AC/DC: (3) Pushbuttons interlocked; 0 - 120 VAC, 0 - 120 VDC, 120 VDC (1) Pushbutton alternate action VOLTS/AMPS

INDICATORS:

Power

Three-Phase 230 VAC: single green LED indicator for all three phases.
All other outputs have individual green LED indicators.

Overload

Three-Phase 230 VAC: single red flashing LED indicator for all phases.
All other outputs have individual red flashing LED indicators.

CONTROLS / SWITCHES:

Master Power: Momentary "KEY-ON"
Single-Course Adjust Control for all variable outputs.

Three-Phase Power: Lighted, alternate action, with green lens AC/DC Power: Lighted, alternate action, with green lens.

Emergency Stop: Lighted, red mushroom head, momentary.

OUTPUT CONNECTORS:

Banana Jacks:

Three-Phase, 230 VAC, 0 - 15 Amps
0-120 VAC, 0-10 Amps
0- 120 VDC, 0- 10 Amps
120 VDC, 0- 10 Amps
120 VAC, 0- 10 Amps

Cinch-Jones 10-Pin Female Connector

Three-Phase, 230 VAC
0- 120 VAC, 0-10 Amps
0- 120 VDC, 0- 10 Amps
120 VDC, 0- 10 Amps

Grounding Type AC Outlet

120 VAC Grounding type AC outlet
0-10 Amps

OVERLOAD PROTECTION:

Three-Phase 230 VAC: ganged, thermal circuit breaker protected, with external reset.
All other outputs have individual thermal circuit breakers, with external reset.

OPTIONAL SYSTEMS AND EQUIPMENT

ADDITIONAL INDUSTRIAL TRAINING SYSTEMS

ECI Offers numerous special Industrial Training systems for program expansion.

- Applied Physics
- Electrical Circuits
- Solid-State Fundamentals
- Digital Electronics
- Industrial Controls
- Electronic Instrumentation
- Programmable Controllers
- Industrial Fluid Power



STORAGE CABINET

Storage cabinet securely holds training panel and provides an ideal working height. Doors lock to secure motors when not in use. All wood, protected by high-pressure plastic laminate finish. The cabinets have master key locks and industrial-type hinges.



INSULATION TESTER

A Digital Insulation Tester is recommended for additional system troubleshooting. The tester features LSI circuit reliability, overload protection, and battery operation.
Measurement Range: 200 MΩ / 500V, 1000 MΩ / 1000V, and 200Ω/OHMS

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