Industrial Motor Control (IMC-2)

Industrial Maintenance

The Greystone line of training systems offers an all-in-one solution for your mechatronics and industrial maintenance lab! Durable lab equipment and rigorous courseware combine to deliver all you need for your secondary or post-secondary career and technology education program.

These robust, versatile training stations allow for in-depth training in small spaces. From desktop trainers to mobile training stations, Greystone stations feature industrial-grade components incorporated into rugged aluminum framework. All trainers include competency-based curriculum with emphasis on operating theory, installation, maintenance, and troubleshooting.

Give your trainees and students the advantage of working with the same equipment they will encounter in industry. Choose Greystone training systems!

Industrial Motor Control is a stand-alone benchtop training station providing students with the essential skills for working with industrial motor controls. From wiring motor control circuits to troubleshooting, students gain practical experience in all aspects of industrial motor control, including testing and resetting overload protection, operating a three-phase reversing starter and troubleshooting a three-phase motor control circuit.

Industrial Motor Control presents the working principles of electricity the most effective way: using the same industrial-strength components used in industry. Students learn the principles of motor control via hands on activities building motor control circuits and working with industrial magnetic starters, relays, and START-STOP motor control components.

The included Student Study Guide lays a solid foundation in the theory and concepts involved in industrial power as well as guiding students step by step through hands-on lab activities with the trainer equipment.

Expand Your Industrial Training Program

Increase the versatility of your training program with the following additional options and related hardware:

- Electrical Control Training: Industrial Power Control, PLCs
- Electrical Wiring
- HVAC Control Training
- Mechanical Training: Machine Shaft Alignment, Vibration Analysis

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**Materials Included**

**Order # 10-IMC2-0000**

**IMC-2 Trainer**
- Frame size: 34"h x 27"w x 14.25"d
  - 864mm x 686mm x 362mm
- Trainer weight (approximate): 75 lbs (34 kg)
- Construction: Anodized aluminum U-shaped frame with environmentally stabilized, non-conductive polymer panels.
- Power Requirements: 220V AC 20A three-phase
- Electrical connections:
  - All electrical components are permanently mounted to the panels
  - Electrical components are wired through industry-standard terminal strips rated at 50-amps @ 600-volts
  - Terminal strips feature recessed and insulated fasteners and are field-serviceable
  - Electrical connections are completed through color-coded 16-gauge insulated and stranded lead wires
  - Each connecting lead wire is terminated on each end with metal uninsulated, crimped ferrules

**Included Accessories**
- Hook-up lead kit
- Student study guide
- Installation guide

**Materials Required (sold separately)**
- Digital Multimeter (Fluke Model 115 or equivalent)

**Optional Curriculum Supplements**
- Industrial Motor Control - Textbook #10-IMC2-TB01

**Course Outline**

**Safety**
- Activity 1: The IMC-2 Trainer
- Activity 2: General Principles of Electric Motor Control
- Activity 3: Schematics & Wiring Diagrams
- Activity 4: Manual Motor Starters
- Activity 5: Contactors, Motor Starters, Relays, & Overload Relays
- Activity 6: The Control Transformer
- Activity 7: Basic Control Circuits
- Activity 8: Developing Wiring Diagrams
- Activity 9: Installing Control Systems
- Activity 10: Hand-Off-Automatic Controls
- Activity 11: Multiple Push-Button Stations
- Activity 12: Interlocking Methods for Reversing Control
- Activity 13: Sequential Control
- Activity 14: Jogging & Inching Control Circuits
- Activity 15: Braking & Plugging
- Activity 16: Timing Relays

**Components**
- 240V AC 3-phase power ON/OFF switch and breakers
- 240V AC single phase to 120V AC single phase control transformer
- 2A 240V fuse
- START/STOP button control station #1
- Simulated sensor control station
- Reversing 3-phase magnetic motor starter
- 3-Phase magnetic motor starter
- 120V AC solid state relay
- 120V AC control relay
- Analog timer
- Manual motor starter
- START/STOP button control station #2
- H-O-A switch control station
- Indicator lamps
- START-STOP-REVERSE control station
- 3-Phase motors, .13hp, 1725 rpm (2)

**Make Greystone Training Systems part of a comprehensive STEM program!**
Add virtual, hardware-based or blended learning labs to deliver in-depth Industrial Maintenance, Mechatronics and Advanced Manufacturing programs.