Industrial Motor Control Sensors (IMC-3)

Industrial Motor Control Sensors is a stand-alone benchtop training station providing students with the essential skills for working with industrial motor control circuits. From wiring motor control circuits to troubleshooting, students gain practical experience in all aspects of sensors in motor control applications.

Industrial Motor Control Sensors presents the working principles of motor control the most effective way: using the same industrial-strength components used in industry. Students learn the principles of sensors in motor control via hands on activities building motor control circuits and working with industrial limit switches, proximity sensors and photoelectric sensors.

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.

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!

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
Industrial Motor Control Sensors

Materials Included

Order # 10-IMC3-0000

IMC-3 Trainer

- Frame size: 34"h x 27"w x 14.25"d
  864mm x 686mm x 362mm
- Trainer weight (approximate): 30 lbs (14 kg)
- Construction: Anodized aluminum U-shaped frame with environmentally stabilized, non-conductive polymer panels.
- Power Requirements: 120V AC 15A single-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)

Course Outline

Safety
Activity 1: The IMC-3 Trainer
Activity 2: Introduction to Sensors
Activity 3: Limit Switches
Activity 4: Inductive Proximity Sensors
Activity 5: Capacitive Proximity Sensors
Activity 6: Photoelectric Sensors
Activity 7: Magnetic Reed Sensors
Activity 8: Pressure Switches

Components

- Fiber optic sensor
- Fiber optic sensor emitter
- Fiber optic sensor receiver
- Inductive proximity switch
- Capacitive proximity switch
- Magnetic proximity switch
- Permanent magnet
- Limit switch
- Vertical float switch
- Horizontal float switch
- Pressure switch
- Air supply input
- 120V single phase power ON/OFF switch
- 120V single phase 5A circuit breaker
- 24V DC power supply
- 24V DC indication lamp, red
- 120V AC indication lamp, amber
- 120V AC indication lamp, green
- 120V AC relay
- 24V DC relay
- Photo-electric sensor
- Photo-electric sensor reflector

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.