

Motor Control Drives (IMC-4)

INDUSTRIAL MAINTENANCE

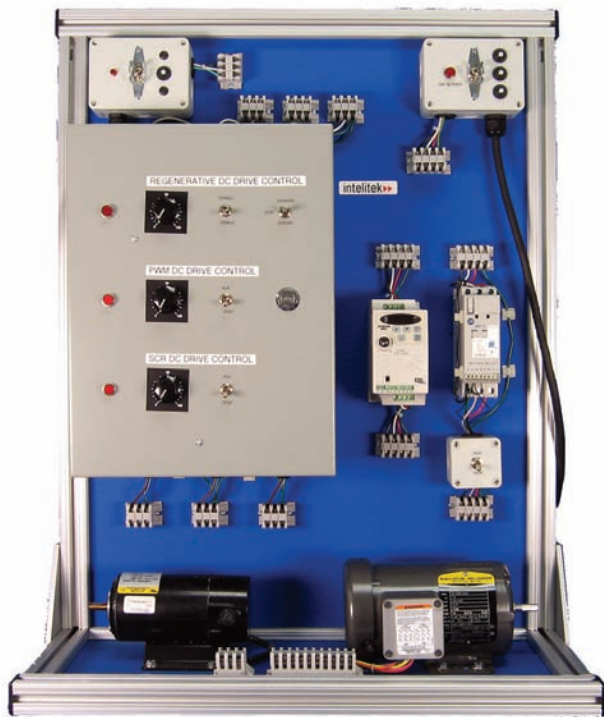


GREYSTONE

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!



Motor Control Drives is a stand-alone benchtop training station providing students with the essential skills for working with industrial motor control drives. From AC and DC motor drives and controls to braking and troubleshooting, students gain practical experience in all aspects of industrial motor drive applications.

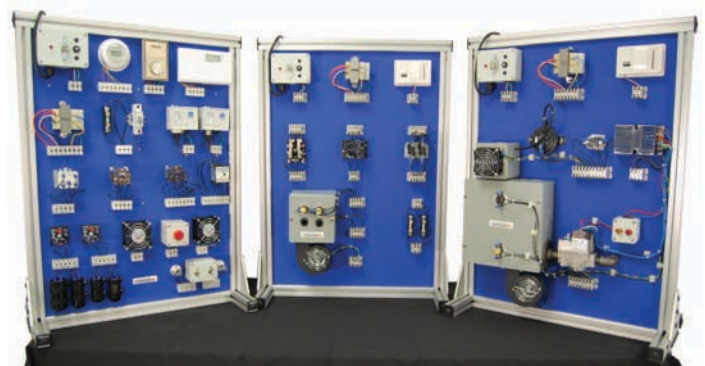
Motor Control Drives effectively presents the principles and application of motor drives by using the same industrial-strength components used in the field. Students learn via hands on activities building and troubleshooting motor drive circuits and working with industrial DC, SCR, AC and solid-state motor drives as well as controllers and inverters.

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



Motor Control Drives

Materials Included

Order # 10-IMC4-0000

IMC-4 Trainer

- Frame size: 34"h x 27"w x 14.25"d
864mm x 686mm x 362mm
- Trainer weight (approximate): 85 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 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
 - AC PWM Drive Manual
 - DC PWM Drive Manual
 - Regenerative DC Drive Manual
 - SCR DC Manual

Materials Required (sold separately)

- Digital Multimeter (Fluke Model 115 or equivalent)
- Tachometer

Optional Curriculum Supplements

- Motor Control Drives - Textbook #10-IMC3-TB01

Course Outline

Safety

- Activity 1: The IMC-4 Trainer
- Activity 2: DC Motor and Drive Fundamentals
- Activity 3: Switching Amplifier Field Current Controllers
- Activity 4: SCR Armature Voltage Controllers
- Activity 5: Brushless DC Motor Controllers
- Activity 6: Braking
- Activity 7: Chopper Circuits
- Activity 8: The Four-Quadrant Chopper
- Activity 9: Troubleshooting DC Drives
- Activity 10: AC Drive Fundamentals
- Activity 11: Variable Voltage Inverters
- Activity 12: Pulse Width Modulated Variable Voltage Inverters
- Activity 13: Current Source Inverters
- Activity 14: Flux Vector Drives
- Activity 15: Troubleshooting Inverter Drives
- Activity 16: Solid-State Drive Fundamentals

Affiliated with:

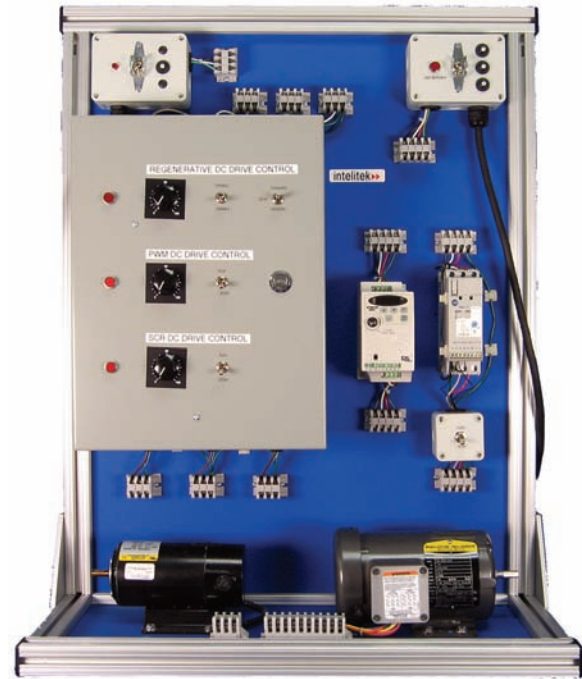


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Motor Control Drives features a stand-alone, portable training station equipped with the same components used in industrial motor drives, including a DC motor and a DC drive enclosure including PWM, SCR and regenerative drives, as well as a three-phase motor with an AC VFD and AC soft starter. .



Components

- 230V three-phase ON/OFF switch
- AC variable frequency drive
- AC soft starter
- AC three-phase motor, .13hp, 1725 rpm
- 120V single-phase ON/OFF switch
- Regenerative DC drive with speed control and FORWARD/STOP/REVERSE switch.
- PWM DC drive with speed control and RUN/STOP switch
- SCR DC drive with speed control and RUN/STOP switch
- DC motor, 90VDC, .13hp

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.



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