POWER DISTRIBUTION LEARNING SYSTEM

85-MT7-B

Amatrol's 85-MT7 Power Distribution Learning System teaches engineers and technicians a broad range of electrical advanced manufacturing skills. Installing, maintaining and troubleshooting modern power distribution systems requires skills ranging from setting up basic raceways to selecting appropriate over-current protection for sensitive equipment.

CURRICULUM IS THE KEY TO LEARNING

The 85-MT7-B includes a mobile workstation with a configurable frame and junction boxes, a bus bar with two bus plugs, lockout / tagout, two motors (5 Hp 3-Phase and 1/3 Hp 3-Phase), a conduit sample kit with five types of conduit, student learning materials for both theory and lab, and teacher's assessment guide.

Students will learn industry-relevant skills including how to prepare, cut and connect conduit, bend conduit, handle advanced raceways, select wire sizing and types as well as circuit protection for an application, and size electrical boxes. This system uses industrial quality components to help students become better prepared for what they will encounter on the job as well as to withstand frequent student use.

Learning Topics:

- Introduction to Raceways
- Basic Conduit Bending
- Advanced Raceways
- Conductors, Disconnects, and Over-current Protection
- Conduit Sizing and Wire Pulling Techniques

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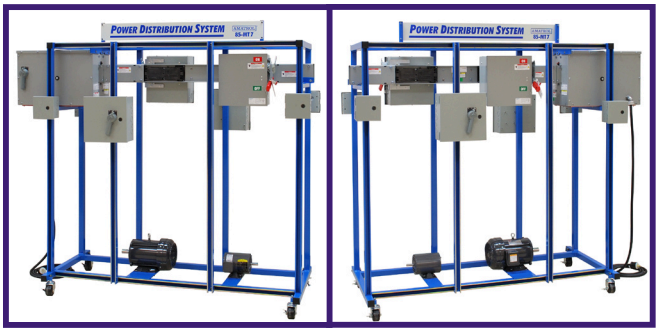
DESIGNED FOR LEARNING

Industrial Components - Industrial components are used throughout so students learn how to install and evaluate the types of power distribution components seen in modern industry. The 3-phase bus bar and two electric motors shown here represent the high component quality on the 85-MT7-B.

Real World Design and Troubleshooting - The 85-MT7-B is arranged so that students can be presented with a wide array of real-world installation problems found in industrial situations. Students install a variety of conduit types, size fuses, install bus plugs, and connect motors.

Conduit Types: EMT, IMC, PVC, Rigid, & Water Resistant

Flexible Structure - The workstation is designed so that the components can be moved vertically and horizontally. This allows students to experience a wide variety of applications and configurations. Additionally, the workstation is double-sided with components located on both sides of the workstation for classroom flexibility.



Double-Sided Workstation

Industrial Safety - Teaching students how to safely handle 3-phase power is a key part of the design of the 85-MT7. Safety devices, such as safety switches and lock out-tagout locks, help students develop the safety skills needed to assure safe operation in an industrial environment.

Lockout/Tagout & Safety Switches

TECHNICAL DATA

Mobile Workstation
- Welded steel unit with 1.5 in. square steel tubing
- 66 in. L x 72 in. H x 36 in. W
- Vertical tubing lengths with movable mounts (4)
- Moveable junction boxes (4)
- Moveable fusible disconnects (2)
- Double-sided design

Bus Bar Unit
- 3-Phase safety switch
- Padlocks (2)
- Safety tags (3)
- Pre-attached power cord (4 pole, 5 wire)
- Lockout/Tagout mechanism
- Bus bar with enclosure, 87in length, 250 volt, 3-phase
- Bus plug with fuses (2)
- Support by combination of crossbars and brackets

Electrical Junction Box Assembly Set
Includes adjustable mounts and NEMA 1 enclosures.

Electrical Control Box Assembly
- Terminal strips (2)
- Adjustable mounts (2)
- NEMA 1 enclosure, 12in x 12in x 6in, hinged (2)
- 3 phase safety switch, 30 amp (2)
- 3 fuse block, 3-phase (2)
- Fuse set with (2)
- 1/4A fuse, 3A fuse, (2)
- 20A fuse (2)

Conduit Sample Kit
- ½" EMT conduit (5)
- ½" IMC conduit (5)
- ½" PVC conduit (5)
- ½" rigid conduit (5)
- ½" water resistant flexible conduit (5)

Small 3-Phase Induction Motor
- 1/3 HP, NEMA 56 frame machine rated at 208-230/460 volts, 3 phase

Large 3-Phase Induction Motor
- 5 HP machine rated at 208-230/460 volts, 3 phase

17471 Student Learning Activity Packet Set
17470 Instructor's Assessment Guide

Additional Requirements
- 3-Phase, 208 VAC, 12 A, 60 Hz or 3-Phase, 230 VAC, 14A, 50 Hz
- 82-612E Workstation with vise
- 41204 Hand Tool Package
- 17473 Reusable Components Package
- 17475 Consumable Package
- 17477 Conduit Bending Machine Unit

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