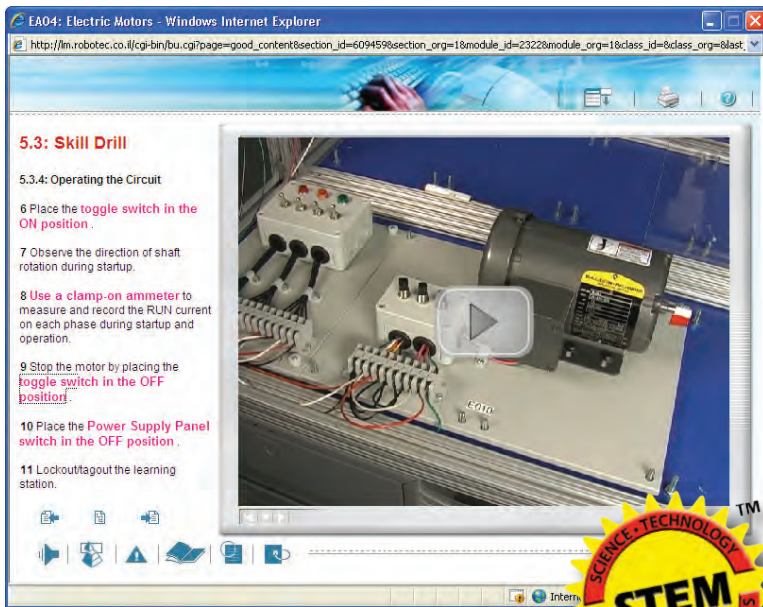


Electric Motors (EA04)

ELECTRICAL CONTROL SYSTEMS



Electric Motors (EA04) guides students through hands-on activities using common industrial motors, including three-phase, split-phase and capacitor-start motors. From wiring motor circuits to preventive maintenance and troubleshooting, students gain practical experience in all aspects of industrial motor operation, including connecting and operating a three-phase motor, troubleshooting a capacitor-start motor and testing motors with adjustable loads

The skills-based curriculum presents hands-on activities using industrial grade electrical components mounted on ten Flexponent™ panels which attach to the JobMaster Learning Station (not included). Panels are easily added and exchanged allowing the workspace to be re-configured as multiple students progress through the course.

Core concepts are taught through self-paced e-learning curriculum. All the necessary resources, including printable instructions, wiring diagrams and troubleshooting charts, are available online, ready for use at the JobMaster Learning Station.

Instructors are also provided comprehensive resources, including a detailed instructors' guide. Teachers' versions of schematics and wiring diagrams as well as tips and tricks are all one click away.

With JobMaster, you can be sure your training program will deliver the skills needed for success in automated manufacturing careers!

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JOB MASTER



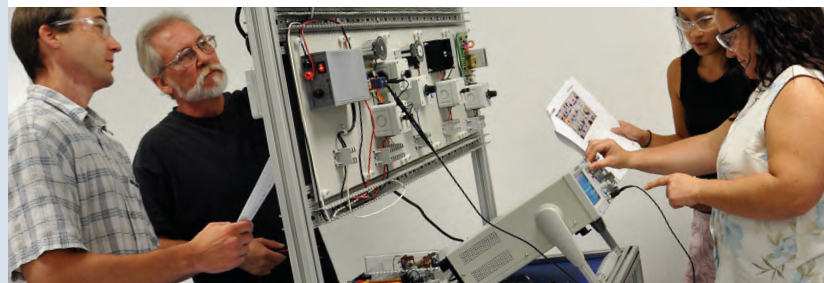
SKILLS-BASED TRAINING

The JobMaster™ Industrial Maintenance and Mechatronics Training teaches the specialized skills required for today's industrial technicians. JobMaster™ provides a superior blended learning solution for automated manufacturing training by combining industrial-grade components with engaging e-learning curriculum.

JobMaster™ courses are entirely skill-based, consisting of individual exercises that reproduce essential tasks performed by maintenance technicians, equipment operators, and machine repairmen. Each skill has been analyzed and field-tested by qualified technicians to teach the specific skills needed in the industrial environment.

intelitek's partners in development of the curriculum include twelve major US industrial companies, including Boeing, Caterpillar, Ford, GE, and US Steel.

**JobMaster™, the new standard in
industrial maintenance and mechatronics training!**



Fully equipped Learning Station shown. Learning station sold separately. Some panels and components shown may be sold separately.

POWERED BY

LearnMate™

JobMaster™ courses are powered by LearnMate™- intelitek's innovative e-learning platform. LearnMate's self-paced interactive content may be deployed stand-alone or through the robust learning management system (LMS). The LearnMate™ e-learning suite provides everything needed for the ultimate blended learning experience:

- SCORM-compliant interactive content
- Anytime, anywhere accessibility
- Student and class management
- Grade tracking
- Skill/competency reporting mapped to national academic skill standards

Electric Motors (EA04)

Materials Included

Order #14-EA04:

- Electric Motors (EA04) Content and Teachers' Guide
- Flexponent™ panels:
 - E007 SCR Speed Controller Panel
 - E010 Three-Phase Motor Panel
 - E012 Transformer Panel
 - E019 Capacitor-Start Motor Panel
 - E027 Shaded-Pole Motor Panel
 - E034 DC Motor Panel
 - E065 Split-Phase Motor Panel
 - E066 Adjustable Motor Load Panel
 - E154 Lamps and Switches Panel
 - E156 Dissectible Motor Panel

Materials required (sold separately):

- JobMaster™ Learning Station Order #10-LS00-0200
- Power Control Panel (220V) 3-Phase Order #10-PC06-0000
- DMM (Fluke Model 115 or equivalent)
- Clamp-on ammeter (Fluke Model 322 or equivalent)
- Insulation Tester (Fluke Model 1587 or equivalent)
- Strobe or Photo Tachometer



Skills Acquired

- Skill 1 Connecting and Operating a Split-Phase Motor
- Skill 2 Connecting and Operating a Capacitor-Start Motor
- Skill 3 Connecting and Operating a Shaded-Pole Motor
- Skill 4 Connecting and Operating a DC Motor
- Skill 5 Connecting and Operating a Three-Phase Motor
- Skill 6 Performing Visual Inspection
- Skill 7 Lubricating Motors
- Skill 8 Performing DMM and Motor Megger Tests
- Skill 9 Troubleshooting a Split-Phase Motor
- Skill 10 Troubleshoot A Capacitor-Start Motor
- Skill 11 Troubleshooting a Shaded-Pole Motor
- Skill 12 Troubleshooting A DC Motor
- Skill 13 Troubleshooting A Three-Phase Motor
- Skill 14 Testing Motors With Adjustable Loads



ELECTRICAL CONTROL SYSTEMS



Panel & Hardware Specifications

All included Flexponent™ panels meet the following specifications:

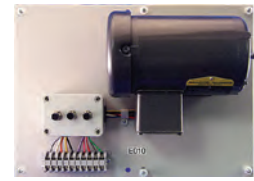
- Construction: 3/8" (9.5 mm) thick environmentally stabilized, chemically resistant, non-conductive, high density polyethylene.
- Terminal strips Industry-standard recessed and insulated fasteners rated for 50-amperes at 600 volts.
- Dimensions
 - Single panel: 8"W x 11.5"H x 0.375"D (203 mm x 292 mm x 9.525 mm)
 - Double-wide 16"W x 11.5"H x 0.375"D (406 mm x 292 mm x 9.525 mm)

Panel E007: SCR Speed Controller



- Panel type: Single
- 1 115V DC SCR Speed Control
 - 2 Fault switches: 4A, 250V push-on/push-off momentary

Panel E010: Three-Phase Motor



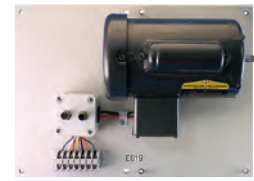
- Panel type: Double
- 1 3-phase motor, .13hp, 1725 rpm
 - 3 Fault switches: 4A, 250V push-on/push-off momentary

Panel E012: Transformer



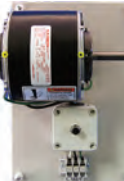
- Panel type: Single
- 1 Midget Fuse 2A
 - 1 Midget Fuse Block, 30A
 - 1 Transformer, 110V, 230 to 115V
 - 1 Transformer Finger Guard
 - 2 Fault switches: 4A, 250V push-on/push-off momentary

Panel E019: Capacitor-Start Motor



- Panel type: Double
- 1 1-phase motor, .08hp, 1725rpm
 - 2 Fault switches: 4A, 250V push-on/push-off momentary

Panel E027 : Shaded-Pole Motor



- Panel type: Single
- 1 Shaded Pole Motor, 1/20 hp
 - 1 Fault switch: 4A, 250V push-on/push-off momentary

Panel E034 : DC Motor



- Panel type: Double
- 1 Motor, 90VDC, .13hp
 - 1 Fault switch: 4A, 250V push-on/push-off momentary

Panel E154 : Lamps and Switches



- Panel type: Single
- 1 125V Raised Indicator Light, RED
 - 1 125V Raised Indicator Light, AMBER
 - 1 125V Raised Indicator Light, GREEN
 - 3 Switches, Toggle, SPST
 - 1 Switch, Toggle, 3pst, On/Off

Panel E065 : Split-Phase Motor



- Panel type: Double
- 1 Motor, Split Phase, NEMA Frame 42
 - 2 Fault switches: 4A, 250V push-on/push-off momentary

Panel E156 : Dissectible Motor



- Panel type: Single
- 1 3ph motor, .13hp, 1725 rpm, disabled

Panel E066 : Adjustable Motor Load



- Panel type: Double
- 1 Brake, Magnetic Particle, 0.6-35 lb-in
 - 1 Power Supply, 0-24VDC output, 220V AC input

- 1 Bracket, Adjustable Torque Brake Mounting
- 1 Coupling Body, Jaw Type, Size L050, 1/2" bore
- 1 Coupling Body, Jaw Type, Size L050, 3/8" bore
- 1 Coupling Insert, Jaw Type, Size L050
- 1 Relay, Solid State, 10sec Delay
- 1 Relay, Solid State, .1 to 100 min Delay
- 1 NO Pushbutton Switch

Most courses require a JobMaster™ Learning Station, sold separately. Some courses require other hardware purchased separately or as part of prerequisite courses in the same series. All included and required materials are noted on each product data sheet.

Affiliated with:



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intelitek

444 East Industrial Park Dr. • Manchester, NH 03109
Phone: 800-221-2763 • info@intelitek.com

www.intelitek.com

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