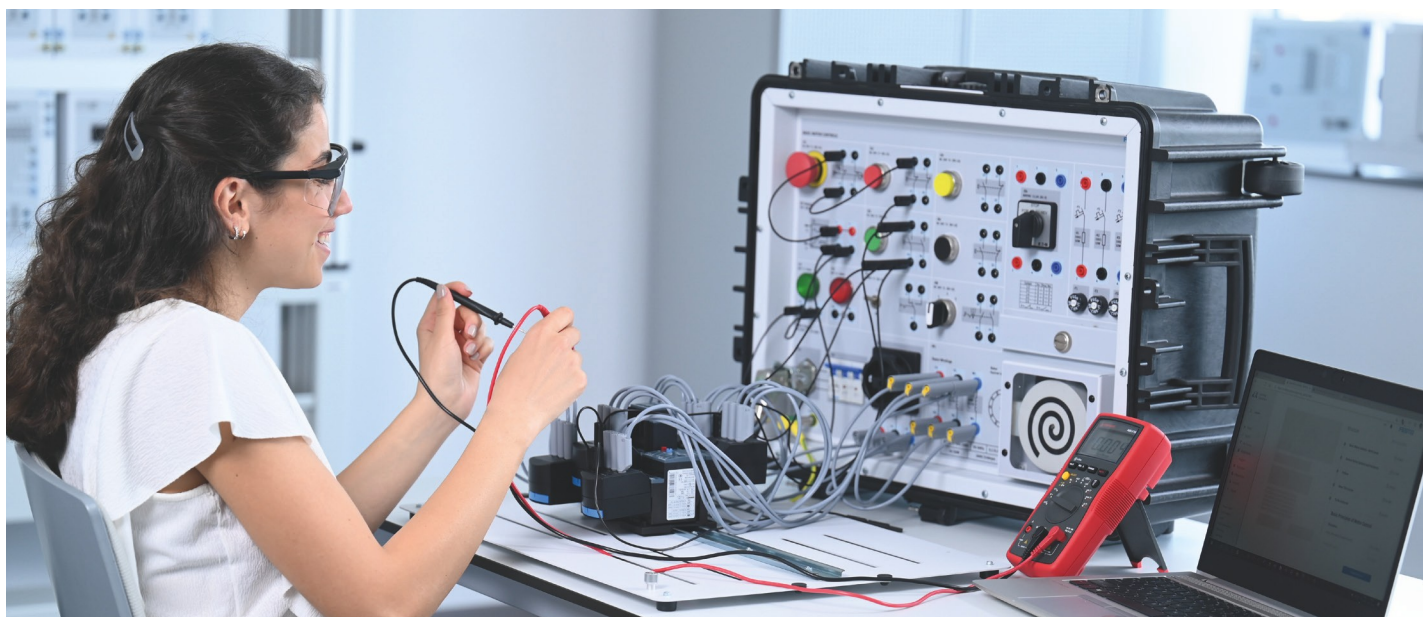


TP 1221-P Basic Motor Control Technology

The fundamentals of electric motor controllers, in a suitcase

FESTO



Highlights

- First-hand experience with an industrial switchgear
- Innovative fault-insertion method
- Safe, rugged system
- Comprehensive pedagogical material available in Festo LX or print format
- Special focus on soft skills development
- Online simulator

With the shift toward industrial electrification, control systems for electric motors are vital to the performance and protection of factory equipment. These systems range from the simple starting and stopping of electric motors to directing energy flows in an automated factory.

Many types of technical workers, primarily industrial electricians, industrial maintenance technicians, and mechatronics technicians, need to understand, install, maintain, and troubleshoot control circuits and their main controllers such as manual starters, automatic starters, reversing starters, reduced voltage starters.

The Basic Motor Control Technology learning system builds knowledge and skills in the fundamentals of industrial electric motors controllers.

A wide range of hands-on learning activities optimize the development of technical knowledge, as well as soft and troubleshooting skills – the prerequisites for a good preparation for the workplace.



Video → bit.ly/TP1221P-video-en

A complete, safe work environment enclosed in a portable suitcase

01



Students create control circuits by wiring power components (relays, contactors...) with a motor as well as control and protection devices. They learn to install, test, and troubleshoot the most common motor controllers through a varied range of learning activities.

Teachers can insert faults using fault switches on the front panel or fault keys on the components. All the equipment required to perform the practical exercises is contained in the rugged suitcase for convenient storage and transportation.

Learning content

- Lockout/tagout procedure
- Symbols and schematics – understanding and implementing
- Troubleshooting components and circuits
- Control and pilot devices
- Protections (breakers, overloads)
- Manual starters
- Two- and three-wire control
- Reversing starters
- Jogging control
- Time-delay relays
- Primary resistors starters
- Star-delta starters
- Motor testing and troubleshooting

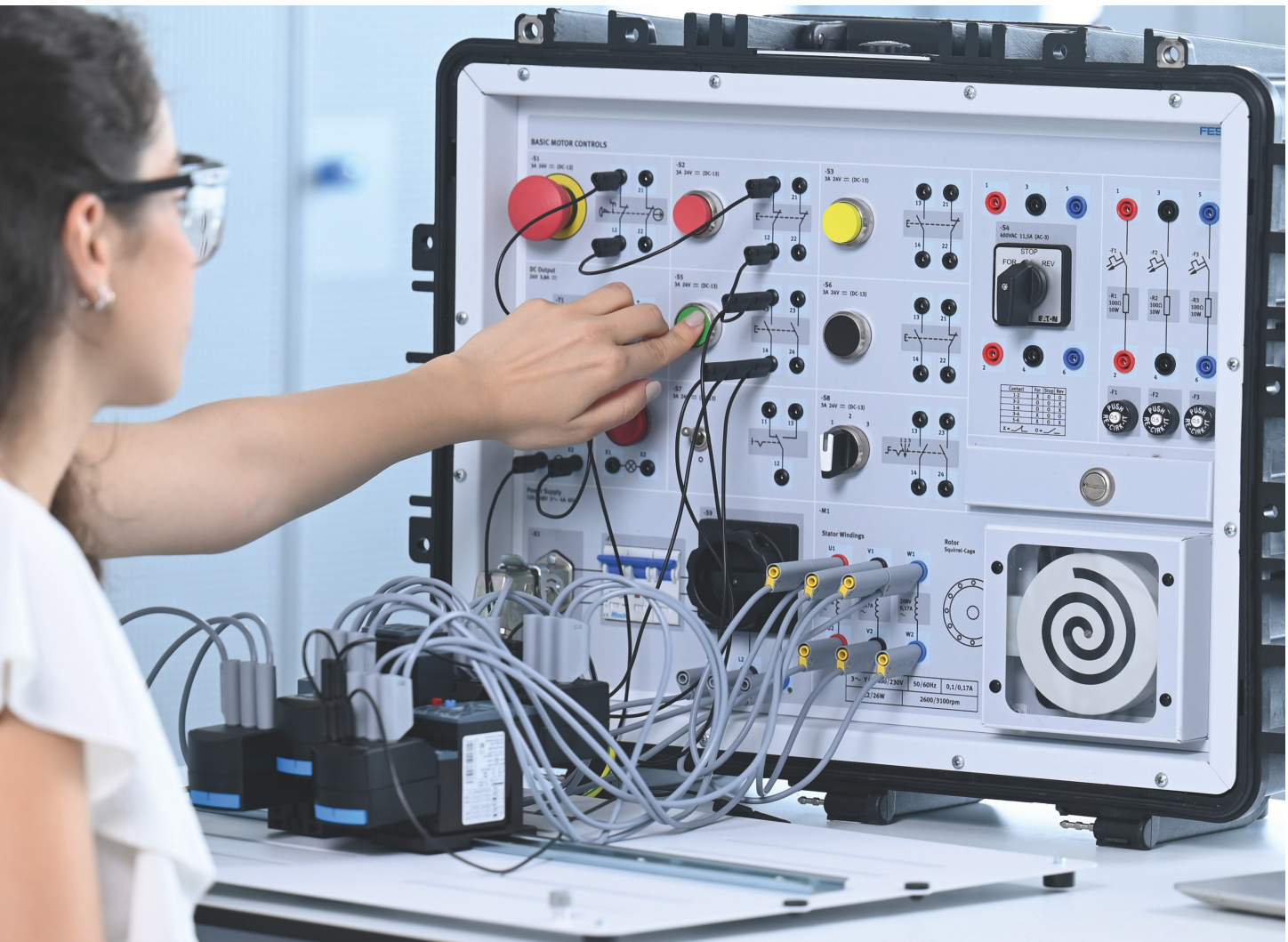


The online simulator allows students to perform practical experimentation remotely. Visit our website for more information and a free trial:
→ bmcsim.festo.com

01 Courseware is available as an eLab course on Festo LX, or in print or PDF versions.

02 Power components are mounted on the DIN rail of the mounting plate.

02



Components*

- Pushbuttons, switches and emergency buttons
- Pilot lights
- Circuit breaker
- Disconnect switch
- Cam switch
- High-power resistors
- Three-phase induction motor (star/delta) with inertia load
- Contactors
- Control relay
- Overload relay
- Motor protective switch
- Time-delay relay
- Fault keys for power components and fault switches
- Power supplies (120/208 V AC and 24 V DC)
- Tabletop mounting plate with DIN rail
- Safety laboratory cables
- Three-phase power cord

* **Notes:** Measuring instruments sold separately. Three-phase power (120/208 V – 5 wires including neutral and ground) is required for operation. For other voltage configurations, contact a representative.

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TP 1221-P is also available as a modular system compatible with other learning solutions.



Watch the presentation video to see the system in action and visit our website for all details.

→ bit.ly/TP1221P-video-en

→ [product web page](#)

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