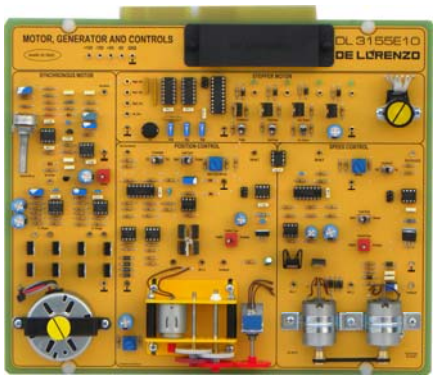
TIME ELECTRONIC BOARDS

REGULATIONS AND CONTROLS

MOTORS, GENERATORS AND CONTROLS



DL 3155E10

Theoretical topics:

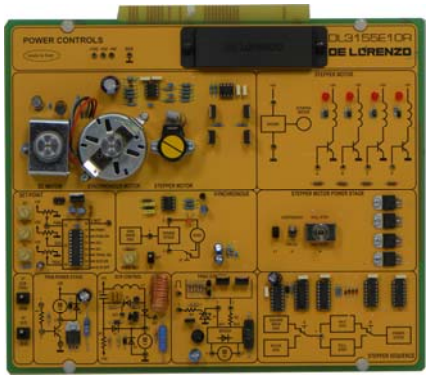
- Types of electric motors
- Familiarization with AC motor circuits
- Familiarization with DC motor connection types
- Familiarization with stepper motor circuits
- Main characteristics of DC motor driving systems
- Speed variation in motor controls
- Position control with DC motor
- PWM DC motor control
- Bi-directional H bridge DC motor control circuit
- Advantages and disadvantages of synchronous motors
- Comparison between stepper motor and DC motor
- Familiarization with unipolar/bipolar/bifilar/multi phase stepper motors
- Fault simulation

Circuit blocks:

- Synchronous motor
- Stepper motor
- Open/Closed loop position control of a DC motor
- Digital/Analog position control of a DC motor
- Open/Closed loop speed control of a DC motor with Tachogenerator
- Digital/Analog speed control of a DC motor with Tachogenerator

---

POWER ELECTRONICS AND CONTROLS



DL 3155E10R

Theoretical topics:

- Direct current motors
- Generators
- Circuits for the control of direct current motors
- Alternate current motors
- Circuits for the control of alternate current motors
- Stepping motors
- Circuits for the control of stepping motors
- Fault simulation

Circuit blocks:

- Motors
- Stepper motor
- PWM power stage
- Synchronous
- Stepper motor power stage
- Set point and PWM generator
- Stepper sequence
- SCR TRIAC control