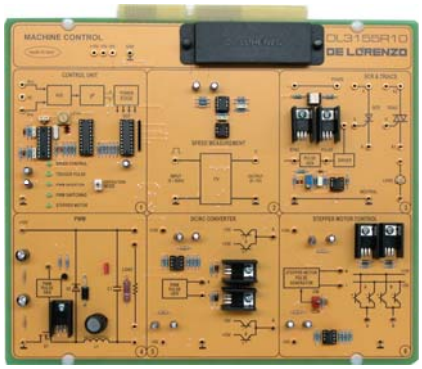
TIME ELECTRONIC BOARDS

MACHINE CONTROL



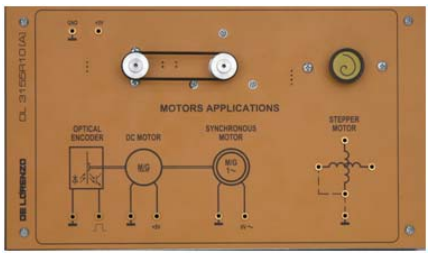
DL 3155R10

Theoretical topics:

- Familiarization with power devices
- The MOSFET
- The SCR & the TRIAC characteristics
- Familiarization with DC motor driving systems
- Circuits for the control of direct current machines
- Circuits for the control of AC machines
- Circuits for the control of stepper motors
- Study of the PWM power stage
- Frequency/Voltage converter
- Effect of feedback (speed and torque)Fault simulation

Circuit blocks:

- Control unit (speed, trigger pulse, PWM and stepper motor)
- Speed measurement unit
- SCR & TRIAC
- PWM
- DC/AC Converter
- Stepper motor control unit

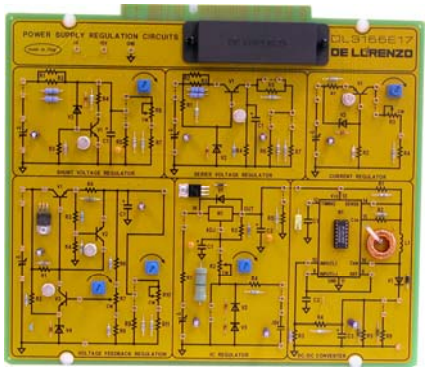


MOTORS APPLICATIONS (APPLICATION BOARD FOR MACHINE CONTROL)

DL 3155R10A

- Direct current motor/generator
- Synchronous motor
- Stepper motor
- Characteristics of an optical encoder

POWER SUPPLY REGULATION CIRCUITS



DL 3155E17

Theoretical topics:

- Regulated power supplies
- Shunt voltage regulator
- Zener diode introductory information
- Shunt voltage regulator with Zener diode parallel connected to the load
- Shunt voltage regulator with bipolar transistor
- Series voltage regulators
- Voltage feedback regulators with current limiting protection
- Series current regulators
- IC regulators and DC-to-DC converter
- General characteristics of monolithic regulators
- Three-pin IC regulator operation (LM317T)
- DC-to-DC converter operating characteristics (LM78S40N)
- Fault simulation

Circuit blocks:

- Shunt Voltage Regulator
- Series Voltage Regulator
- Current Regulator
- Voltage Feedback Regulation
- IC Regulation
- DC-to-DC Converter