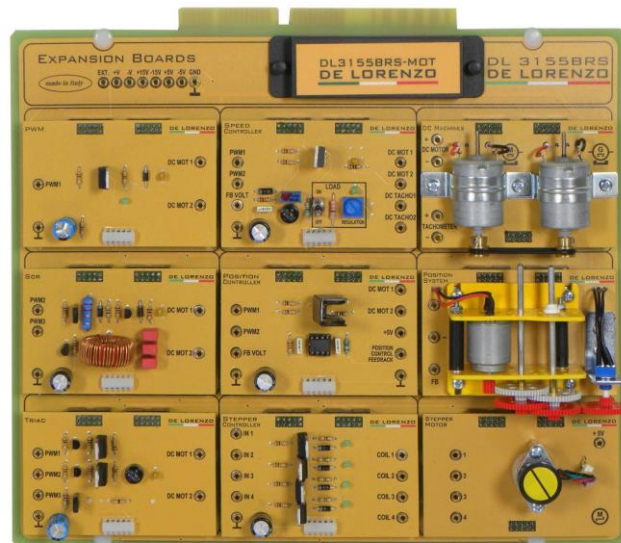




MOTOR CONTROL CIRCUITS



DL 3155BRS-MOT

The design and construction of electronic circuits to solve practical problems is an essential technique in the fields of electronic engineering and computer engineering.

With this board, the students can study the operation of the control circuits for Direct Current motors, Alternating Current motors and stepper motors.

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/multiphase stepper motors

CIRCUIT BLOCKS

- Microcontroller board for digital control and speed measurement (showed in the digital display)
- LCD display board.
- PWM power stage
- SCR power stage
- TRIAC power stage
- DC Machines with tachogenerator for speed measurement.
- Speed control unit for DC motor
- DC motor position system
- Position control unit for DC motor
- Stepper motor
- Stepper motor control circuit
- Synchronous motor with speed sensor.
- Analog variable frequency controller for Synchronous motor
- Asynchronous motor with speed sensor.
- Analog variable frequency controller for Asynchronous motor
- Single phase transformer



ELECTRONICS



Complete with manual (theoretical and practical)
and cable kit.

Dimensions of the board: 297x260mm

ACCESSORY NEEDED:

DL 2555ALG - DC POWER SUPPLY



- ± 5 Vdc, 1 A
- ± 15 Vdc, 1 A