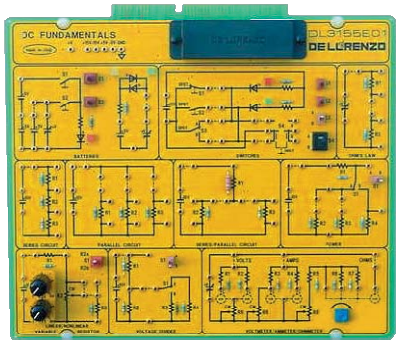
TIME ELECTRONIC BOARDS

ELECTRICITY AND ELECTROMAGNETISM

DC FUNDAMENTALS



DL 3155E01

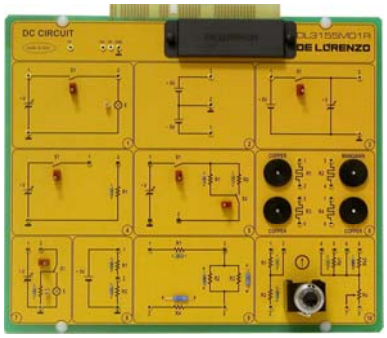
Theoretical topics:

- DC power sources
- Batteries
- Conventional directions of voltages, e.m.f. and currents
- Ohm's law
- Circuit with linear resistance and non linear resistance
- Series/parallel resistive circuits
- Power in dc circuits
- Linear/non linear variable resistor
- Voltage/current divider circuits
- Direct current meters
- Fault simulation

Circuit blocks:

- Batteries
- Switches
- Ohm's law
- Series circuit
- Parallel circuit
- Series/Parallel circuit
- Power
- Linear/non-Linear variable resistor
- Voltage divider
- Voltmeter/Ammeter/Ohmmeter

DC CIRCUITS



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Theoretical topics:

- Structure of the circuits
- Electric current
- Voltage and electromotive force
- Electric resistance
- Conventional sense of voltage and current
- Types of measurement and types of errors
- Types of instruments
- Measurement of e.m.f. and voltage
- Measurement of the current
- Measurement of the resistance
- Relationships among current, voltage and resistance: Ohm's law
- Conductors resistivity and temperature coefficient
- Circuit with linear and non-linear resistance
- Types of resistors
- Identification of the value of the resistors
- Series and parallel resistors
- Constant signals
- Variable signals
- Wheatstone Bridge
- Fault simulation

Circuit blocks:

- Electrical circuit: Components and measurements
- Series generators
- Parallel generators
- Ohm's law
- Application of the Ohm's law: how a resistance influences the current
- The resistivity: resistance, length, section and resistivity of a conductor
- Linear and non-linear ohmic resistance
- Series circuit: current, resistance and voltage
- Colour code of the resistors
- Wheatstone Bridge