MODULES FOR THE STUDY OF BASIC ELECTRICITY

The section of the laboratory is composed of four printed circuit boards with, on the upper side, the graphical simplified representation of electric circuits and components of both general type, for the study of basic electricity, and specific type, relevant to the electric circuits found in automobiles.

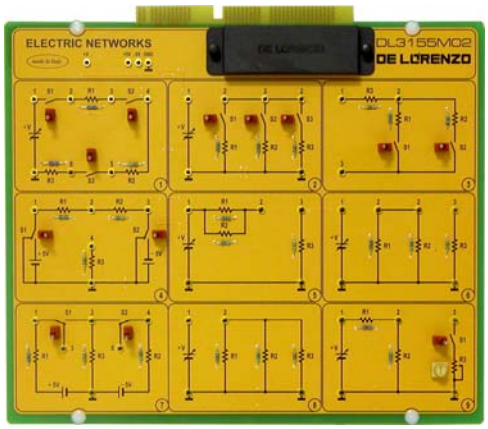
The student must study a circuit, understand theory, analyze the operating conditions and verify, by means of suitable instrumentation, the situation at the various test points of the circuit. Once completed the experiment, the student must identify some simulated malfunction conditions on the basis of measurements and tests.

The modules can be inserted in a base frame able to provide:

- Power supply to the modules
- Connecting interface to a PC to allow the use of a dedicated CAI software that provides the theoretical background, introduces simulated faults, interrogates the student through tests and evaluates his learning progress.

The modules in this section are relevant to:

ELECTRIC NETWORKS



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- Elements of an electrical network: node, arm, mesh
- First Kirchoff principle
- Second Kirchoff principle
- Series resistances
- Parallel resistances
- Series-parallel connection
- Voltage dividers
- Theorem of the effect superposition
- Thevenin theorem
- Norton theorem
- Millman theorem
- Fault simulation