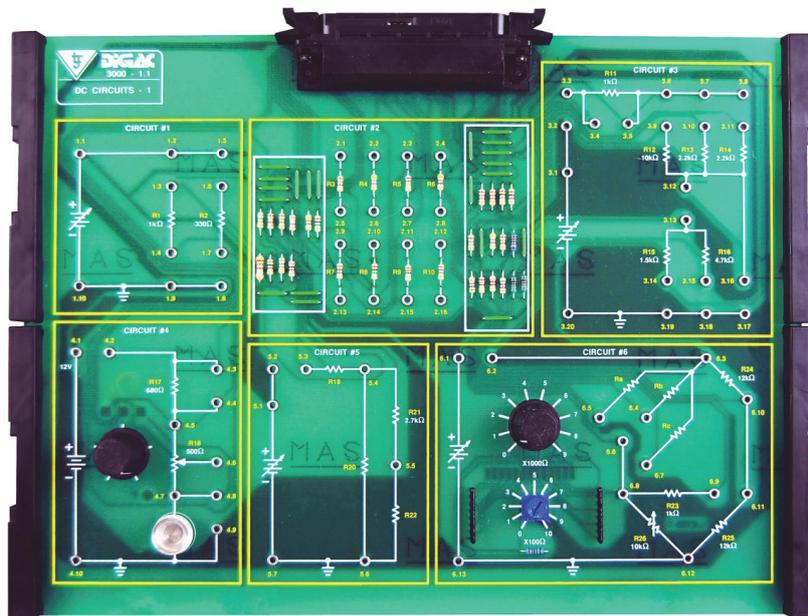


Product Information Sheet

DC Circuits Study Module



LJ CREATE™
Learning for life



This electronics study module is designed to connect to the 300-01 or 300-02 Advanced Electronics Experiment Platforms as part of a modular electronics programme.

The study module is designed to introduce students to resistive circuits that operate from a DC source. Topics include basic DC circuits, Ohm's Law, Resistors and the Wheatstone Bridge.

Using either of the Experiment Platforms, users can select from a range of faults to be inserted into the study module circuits to develop electronic diagnostic and faultfinding techniques.

The study module is supplied with PDF manuals that provide theory materials, practical tasks, faultfinding activities, and technical information.

The board can also be used in conjunction with our optional cloud-based engineering software, which offers online interactive theory presentations, investigations, and assessments to underpin the practical learning carried out on this resource.

Topics Include The Following:

- The Basic DC Circuit
- Ohm's Law
- Power in a Resistor
- Resistor Color Coding
- Resistors Connected in Series
- Resistors Connected in Parallel
- Series-Parallel Connected Circuits
- Variable Resistor Characteristics
- Controlling a Lamp with a Variable Resistor
- Series-Parallel Circuit Exercise
- The Wheatstone Bridge

Typical Activities Include:

- Identify the terms and units used in the basic DC circuit
- Recognize how a multimeter is configured to measure voltage
- Measure to a given accuracy direct voltage
- Plot an I-V curve for a resistor from measured values in a DC circuit
- Locate a fault in a resistive circuit
- Identify faults in individual resistors
- Measure total resistance and volt drops in a series circuit
- Calculate total power dissipation in a series-parallel circuit from given data

- Measure total resistance and branch currents in a parallel circuit
- Plot resistance and voltage for a potentiometer from measured data and perform a check calculation
- Determine lamp resistance and power in a lamp circuit from measured values
- Diagnose faults in a Wheatstone Bridge circuit

Items Included:

- Circuit Card
- Storage Case
- Curriculum Manual in PDF Format

Other Items Required:

- 300-01 Advanced Electronics Experiment Platform
- Digital Multimeter
- or
- 300-02 Advanced Electronics Experiment Platform with Virtual Instrumentation

General Information:

Dimensions: 81 x 323 x 256 mm (W, H, D)
Shipping Volume: Approx 0.008 m³
Shipping Weight: Approx 2 kg

Order Code: 301-11

P8517-B

For more information visit www.ljcreate.com