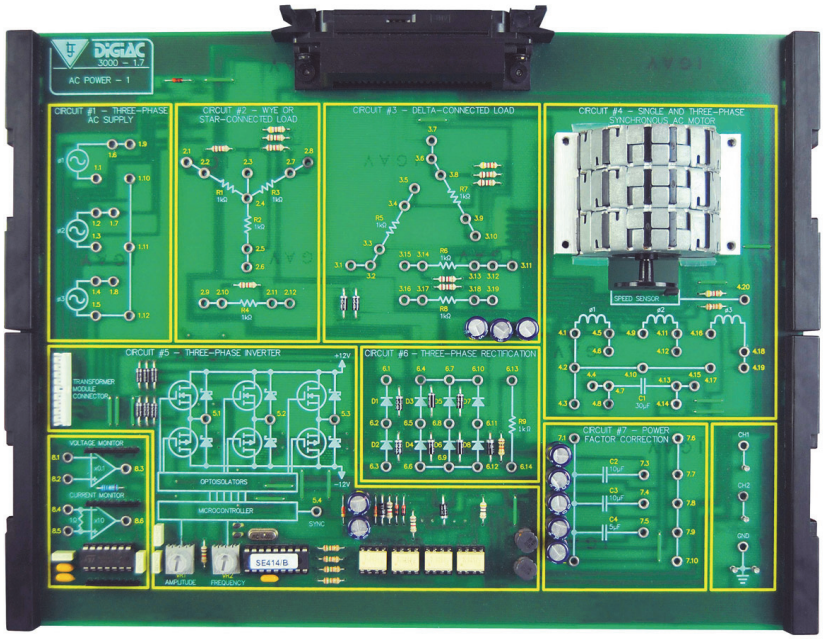
Product Information Sheet

AC Power Study Module



This electronics study module is designed to connect to the Advanced Electronics Experiment Platform (300-01) as part of a modular electronics programme.

The study module is designed to introduce students to the principles of AC power, three-phase AC circuits, and AC motors, including synchronous machines, through a wide range of practical activities.

Using the Advanced Electronics Experiment Platform, a range of faults to be selected and 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.

Topics Include the Following:

- The Three-Phase Supply
- 6-Wire, 3-Wire and 4-Wire Connections
- Delta/Delta Connection
- Delta/Wye Connection
- Wye/Wye Connection
- Wye/Delta Connection
- AC Motor Principles & 3-Phase Synchronous Motor
- Single-Phase Synchronous Motor
- Power Factor Correction
- Other AC Motors
- Three-Phase Rectifiers
- Three-Phase Inverter and Over-Current Protection

Typical Activities Include:

- Measure phase voltages, phase-phase voltages, and phase relationships of a three-phase supply
- Measure voltage and current, and calculate power in 6-wire and 3-wire connected three-phase circuits
- Measure voltages in balanced and unbalanced delta/wye connected circuits
- Measure voltage and current and calculates power in balanced and unbalanced wye/wye 4-wire circuits
- Measure voltage and current, and calculate power in a wye/delta system of connection
- Measure voltages and currents, amplitudes, and phases for wye and delta connected three-phase synchronous motors connected to a wye supply
- Diagnose faults in a dual-polarity three-phase supply
- Identify the principle of an inverter
- Faultfinding AC power circuits.

Items Included:

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

Other Items Required:

- 300-01 Advanced Electronics Experiment Platform
- Digital Multimeter
- Dual Trace Oscilloscope

General Information:

Dimensions: 81 x 323 x 256 mm (W, H, D)
Shipping Volume: Approx 0.008 m^3
Shipping Weight: Approx 2 kg

Order Code: 305-17

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