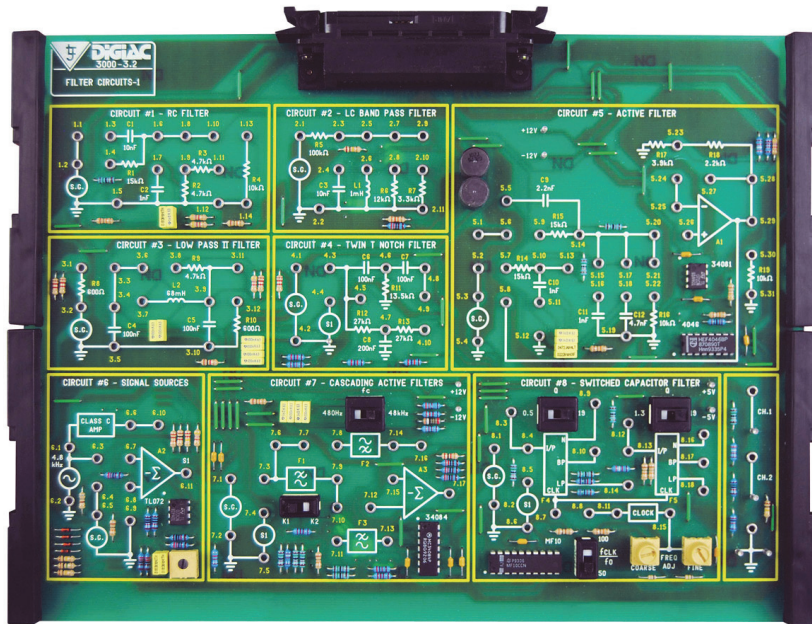


# Product Information Sheet

## Filter Circuits 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 filter circuits and their applications 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:

- Logarithmic Scales
- Simple RC Filters
- LC Band Pass Filter
- The Low Pass Pi Filter
- Twin T Notch Filter
- Active Filters-1
- Active Filters-2
- Composite Filters
- Switched Capacitor Filters

### Typical Activities Include:

- Identify advantages of using the logarithmic scale for amplitude and frequency
- Measure the cut-off frequency for high- and low-pass filters
- Determine from measurements the roll-off response for high- and low-pass filters
- Determine the Q factor of a coil
- Determine the resonant frequency
- Recognize the effect of a damping resistor
- Identify the low-pass and high-pass portions of a twin T filter
- Measure notch frequency and rejection
- Recognize the effect of loading passive RC circuits
- Determine cut-off frequency for a Sallen & Key low-pass filter

- Diagnose faults in an active bandpass filter circuit
- Observe the response of a high-pass and low-pass filter in cascade
- Measure the cut-off and notch frequency for a switched-capacitor filter
- Faultfinding filter 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
- Signal Generator

### General Information:

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

**Order Code: 303-32**

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