

Item No.: SO4204-5R

Course - Electronics 7: Analog power supplies

Includes:

- 1 Experiment card with half-wave and bridge rectifiers plus load circuit
- 1 Experiment card with voltage multiplier in Villard cascade circuit
- 1 Experiment card with transistor voltage regulator and load circuit
- 1 Experiment card with fixed-voltage regulator and load circuit
- CD-ROM with Labsoft browser and course software

Course contents:

- Introduction to design and function of half-wave and bridge rectifiers
- List of parameters for rectifier circuits (mean and rms values, form factor and ripple)
- Introduction to common circuits for smoothing the output voltage from rectifiers
- Determining the characteristics of half-wave (and bridge) rectifiers with a resistive load by measurement
- Determining the characteristics of half-wave (and bridge) rectifiers with smoothing by measurement
- Investigation by measurement of a loaded and unloaded voltage multiplier circuit
- Measuring the load dependency of the ripple
- Introduction to the design and function of transistor voltage regulators (Darlington transistors)
- Measuring the adjustment range of unloaded transistor voltage regulators
- Investigating the load response of transistor voltage regulators
- Explanation of the functioning of fixed-voltage regulators with series-type control transistor
- Explanation of the functioning of a shunt-type transistor as controller for adjustable voltage
- Investigation of static and dynamic control quality of transistor voltage regulators by measurement
- Fault simulation (9 simulated faults activated by relay)
- Course duration 5.5 h approx. (fault finding 1.5 h approx.)



