

CONTROL ENGINEERING & AUTOMATION

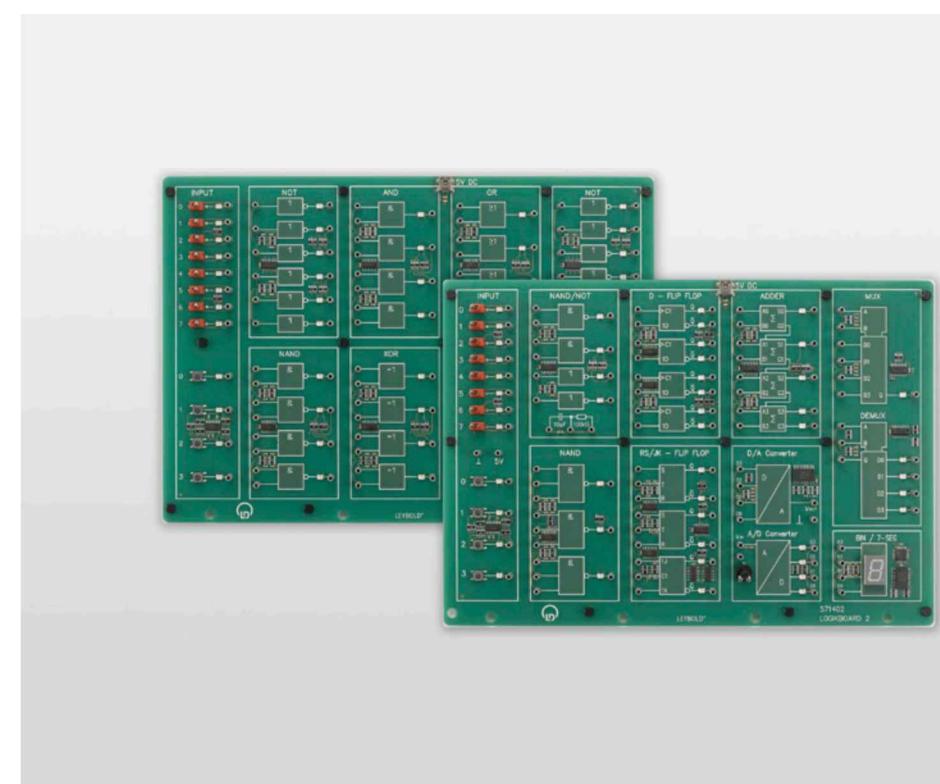
OPEN LOOP CONTROL ENGINEERING

E6.5.1

BASICS OF OPEN LOOP CONTROL

E6.5.1.1

Compact Course:
Digital Technology



Compact Course: Digital Technology (E6.5.1.1)

Cat. No.	Description	E6.5.1.1
571 401	Logic board 1	1
571 402	Logic board 2	1

Compact Course Digital Technology

Theory and praxis of open loop control technology are basically carried out with two equipment sets for self-study.

Basic logic gates (AND, OR, NOT, NAND, XOR) of digital electronics are introduced. These are used to investigate the laws of logical operations (de Morgan's law, associative law and distributive law) and non-feedback logic circuits (switch networks). Then, simple flip-flop circuits with feedback are assembled to study storage of information. An adder is explored as a practical example of a switching network (logic circuits without feedback). Various flip-flop circuits enhance the knowledge of switching logic circuits with feedback. Applications of digital technology will be investigated, e.g. multiplexing, demultiplexing, control of a 7-segment display, and DAC respectively ADC conversion are covered. Switching states are displayed by means of an LED at each of the outputs.

Topics

- Logic gates: AND, OR, NOT and XOR
- flip-flop
- Adder
- AD converter / DA converter
- Multiplexer
- RS-flops
- etc.