

Electricity with the Modular System

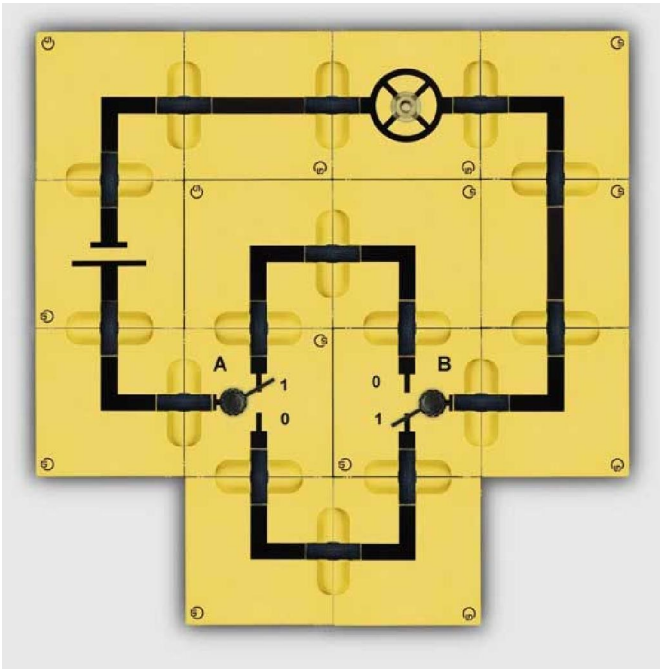
Basic Electric Circuits
Switches in the circuit

Two-way circuit

Objective of the experiment

To demonstrate the operating mode of a two-way circuit.

Setup



Apparatus

1	539 024	Lamp socket E10, BST
1	from 505 11	Incandescent lamp 2.5 V / 0.1 A, E10
2	539 026	Change-over switch, BST
1	539 053	Battery element, BST
2	539 001	Connector blocks BST, straight
8	539 004	Connector blocks BST, 90° angle
15	539 000	Bridging plug, BST
1	301 300	Demonstration experiment frame
1	301 301	Adhesive magnetic board

Carrying out the experiment

- Screw the incandescent lamp (2.5 V / 0.1 A) into the lamp socket and set up the circuit.
- Demonstrate the working principle of the two-way circuit by operating each of the change-over switches individually.
- Now operate both change-over switches simultaneously.

Observation

Switch A	Switch B	Lamp lit up	
		yes	no
1	1		x
0	1	x	
1	0	x	
0	0		x

Evaluation

With the help of a two-way circuit, a lamp can be switched on or off from two different locations.

The lamp lights up by operating one switch, while the circuit is closed by the other switch.

If both switches are operated simultaneously, the current switching state is maintained.