

# Electricity with the Modular System

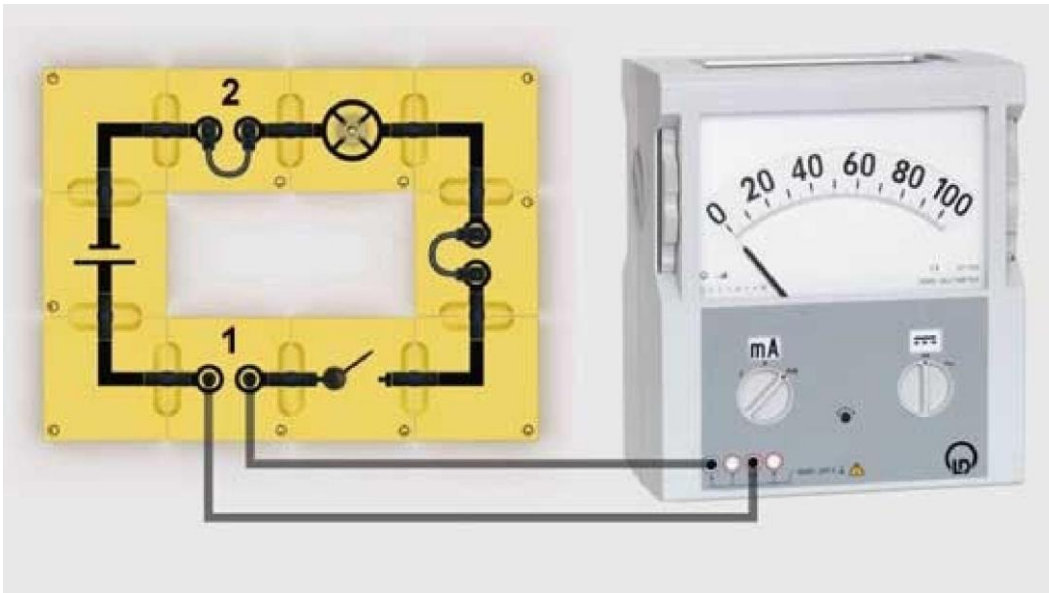
Basic Electric Circuits  
Simple circuit

## Measuring current in a simple circuit

### Objective of the experiment

To measure the current at different points in a simple circuit.

### Setup



### Apparatus

1	539 024	Lamp sockets E10, BST
1	from 505 11	Incandescent lamps, 2.5 V / 0.1 A, E10
1	539 025	Toggle switch, BST
1	539 053	Battery element, BST
3	539 003	Connector blocks BST, straight with 2 sockets
4	539 004	Connector blocks BST, 90° angle
10	539 000	Bridging plug, BST
1	531 906	Demo multimeter, passive
2	500 644	Safety connection lead, 100 cm
2	500 604	Safety connection lead, 10 cm
1	301 300	Demonstration experiment frame
1	301 301	Adhesive magnetic board

**Carrying out the experiment**

- Screw the incandescent lamp into the lamp socket and set up the circuit.
- Measure the current  $I$  at measuring points 1, 2 and 3, in succession.

**Measuring example**

Measuring point	Current $I$ / mA
1	100
2	100
3	100

**Evaluation**

The current is always measured in series with the elements of the circuit (e.g. battery, incandescent lamp and switch).

In a simple circuit, the current strength is the same at any point.