

Electricity with the Modular System

Basic Electric Circuits

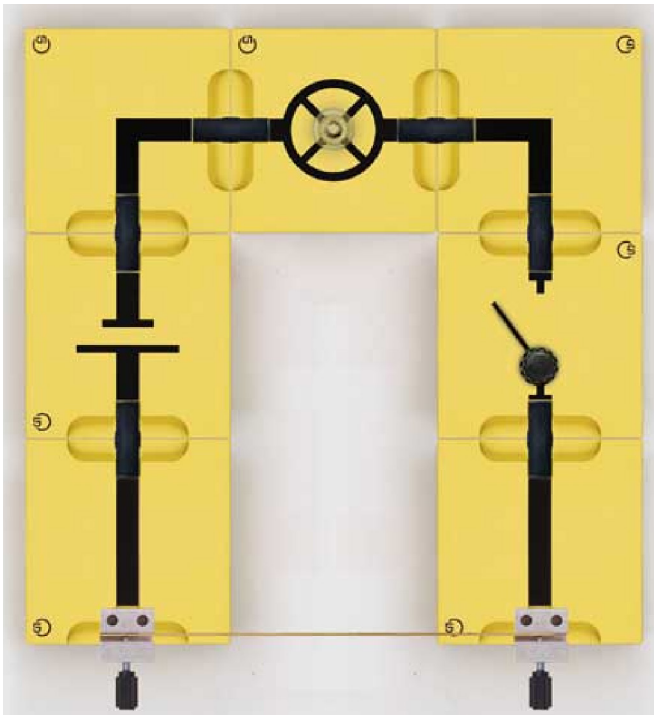
Conductors and non-conductors

Current flow in solid bodies

Objective of the experiment

To investigate current flow in solid bodies of different materials.

Setup



Apparatus

1		539 024	Lamp socket E10, BST
1	from	505 11	Incandescent lamp, 2.5 V / 0.1 A, E10
1		539 025	Toggle switch, BST
1		539 053	Battery element, BST
2		539 001	Connector block BST, straight
2		539 004	Connector blocks BST, 90° angle
2		539 060	Adapter plug, BST
1		539 063	Set of conductors / insulators
6		539 000	Bridging plug, BST
1		301 300	Demonstration experiment frame
1		301 301	Adhesive magnetic board

Carrying out the experiment

- Screw the lamp into the lamp socket and set up the circuit.
- Clamp the strips of aluminium, brass, wood, polystyrene, Pertinax and acrylic glass (set of conductors / insulators) into the adapter plug in succession and observe the lamp.

Measuring example

Material	Lamp lit up
Aluminium	yes
Brass	yes
Wood	no
Polystyrene	no
Pertinax	no
Acrylic glass	no

Evaluation

Materials that conduct an electrical current are called conductors.

The metals aluminium and brass are conductors.

Materials that do not conduct an electrical current are called non-conductors or insulators.

Wood and plastics like Polystyrene, Pertinax and acrylic glass are insulators.