

## Electrical conductivity of metals

Article no: P2350205



### Principle

The electrical conductivity of copper and aluminium is determined and the Wiedmann-Franz law is tested.

### Benefits

- Easy and precise measurement of the electrical conductivity
- Compact, easily transportable setup

### Tasks

1. Determine the electrical conductivity of copper and aluminium by recording a current-voltage characteristic line.
2. Test of the Wiedmann-Franz law.

### Learning objectives

- Electrical conductivity
- Resistivity
- Wiedmann-Franz law
- Lorenz number
- Four-point measurement

## Scope of delivery

Heat conductivity rod, Cu	04518-11	1
Heat conductivity rod, Al	04518-12	1
Rheostat 10 Ohm, 160 W	06110-03	1
PHYWE Multitap transformer DC: 2/4/6/8/10/12 V, 5 A / AC: 2/4/6/8/10/12/14 V, 5 A	13533-93	1
PHYWE Digital multimeter, 600V AC/DC, 10A AC/DC, 20 MΩ, 200 μF, 20 kHz, -20°C...760°C	07122-00	2
PHYWE Universal measuring amplifier	13626-93	1
Connecting cord, 32 A, 500 mm, red	07361-01	3
Connecting cord, 32 A, 500 mm, blue	07361-04	4
Connecting cord, 32 A, 500 mm, red	07363-01	1