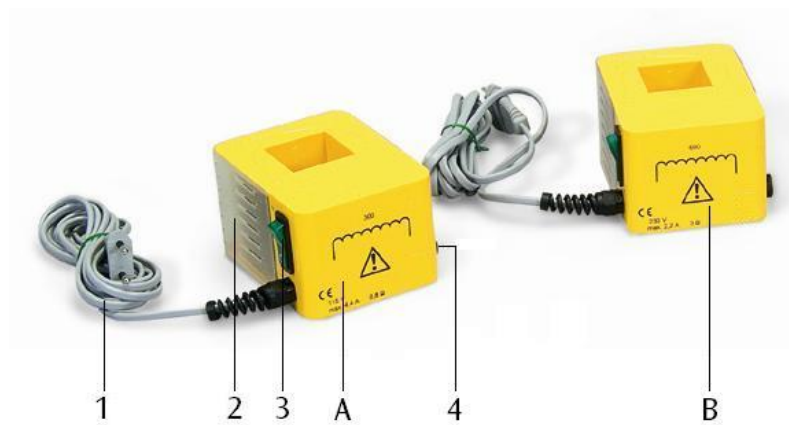


**Mains Coil with Connecting Lead @115 V 1000986**  
**Mains Coil with Connecting Lead @230 V 1000987**

## Instruction sheet

06/15 SP/ALF



- A Mains coil for mains voltage 115 V
- B Mains coil for mains voltage 230 V
- 1 Mains lead
- 2 Air vents
- 3 Mains switch
- 4 Fuse

### 1. Safety instructions

- The coil operates at mains voltage. Depending on the set-up of the transformer, it may be possible to come into contact with dangerous voltages at the secondary coil.
- The resulting magnetic fields can cause damage to or even destroy electrical/electronic components and equipment or electromagnetic storage media. Such items must be kept away from the coil by at least the amount specified for safety.
- The safety of operators and of the mains coil itself can only be guaranteed when it is used according to the instructions.
- Do not exceed the maximum voltage over any length of time.
- If the coils should become overloaded, they must be allowed to cool before switching on the current again.
- Do not cover air vents.
- Disconnect the coil from the mains before replacing the fuse.
- Any modifications to the transformer set-up must be made with the primary voltage switched off.

- Never apply voltage to the mains coils without an iron core inside.
- Always use safety cables for experiments.
- Do not turn on the mains coil until the experiment set-up is complete.
- Do not open the case.
- Do not allow the equipment to come into contact with liquids.
- The coil may be operated without the core being closed by a yoke (e.g. in Thomson's ring experiment) for no more than 10 seconds.

### 2. Description

The mains coil with connecting lead is intended for use as the primary coil for the demountable transformer D.

Coils are made of impact-resistant plastic, safe to touch. Number of turns, maximum current for long-term operation, effective resistance and inductance are specified on the case of the coil.

## 2.1 Accessories

Transformer Core D 1000976

Metal Ring for Thomson's experiment 1000992

Coils:

Item	Cat. no.	Winding turns	Tap(s)
Low Voltage Coil D	1000985	72	6/30/54/66/72
Coil D	1000988	600	200/600
Coil D	1000989	1200	400/1200
Coil D	1000990	6000	2000/6000
Fusion ring	1000980	1	
High current coil with 5 turns Coil for spot welding	1000981	5	
High current coil D for nail fusing experiment	1000984	6	
High voltage coil D including 2 horn shaped electrodes	1000991	24000	

### 3. Technical data

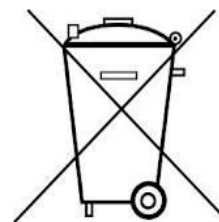
	1000986	1000987
Mains voltage	115 V, 50/60 Hz	230 V, 50/60 Hz
Winding turns	300	600
Resistance	0.75 $\Omega$	3 $\Omega$
Inductance	7.5 mH	15 mH
Max. current for long-term use	4.4 A	2.2 A
Dimensions	120x90x70 mm <sup>3</sup>	120x90x70 mm <sup>3</sup>
Opening for iron core	42 x 42 mm <sup>2</sup>	42 x 42 mm <sup>2</sup>
Weight	0.9 kg approx.	1.2 kg approx.

### 4. Replacing the fuse

- Disconnect the coil from the mains.
- Turn the fuse holder a quarter turn to the left.
- Pull out the fuse holder.
- Remove the blown fuse from the holder and replace it with a new one.

### 5. Storage, cleaning and disposal

- Keep the coil in a clean, dry and dust-free place.
- Before cleaning the coil, disconnect it from its power supply.
- Do not clean the coil with volatile solvents or abrasive cleaners.
- Use a soft, damp cloth to clean it.
- The packaging should be disposed of at local recycling points.
- Should you need to dispose of the coil itself, never throw it away in normal domestic waste. Local regulations for the disposal of electrical equipment will apply.



## 6. Example experiments



Fig.1 Step-up transformer

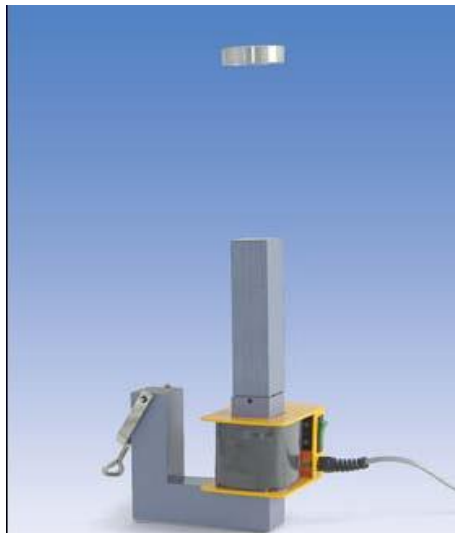


Fig. 2 Thomson's ring experiment

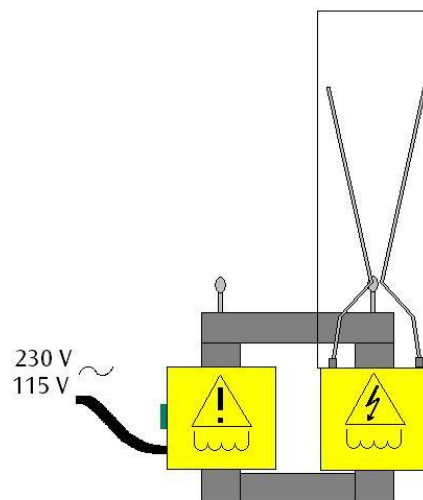


Fig. 3 Spark discharge along hornshaped electrodes

