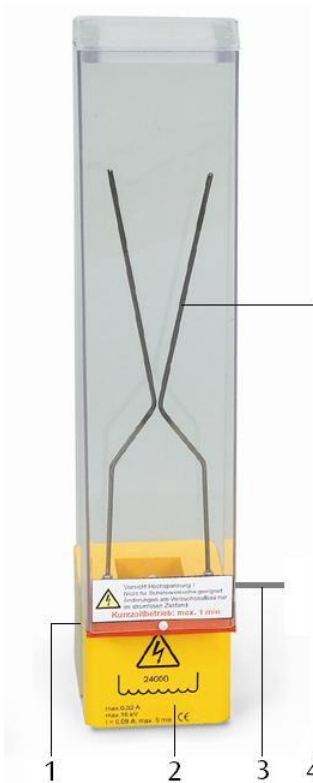


## High Voltage Coil Including 2 Horn Shaped Electrodes 1000991

### Operating manual

06/15 TL/ALF



- 1 Air vents
- 2 Housing
- 3 Adjustment lever
- 4 Electrodes

### 1. Safety instructions

Safe operation of the equipment is guaranteed, provided it is used correctly. However, there is no guarantee of safety if the equipment is used in an improper or careless manner.

- If there is any indication that safe operation may not be possible (e.g. visible damage), the equipment should be turned off at once or should not be turned on in the first place.
- The device is not suitable for experiments by students.
- Always use safety cables for experiments.
- The experiment configuration may only be altered when the power is turned off.
- Do not turn on the mains coil until the experiment set-up is complete.
- The maximum operating time is 1 minute in each case.
- Do not touch the housing, the air vents or the electrodes while the device is operating.
- Do not cover air vents.
- Do not open the case.
- Do not allow the equipment to come into contact with liquids.

## 2. Description

Secondary coil for transformer core D, generating high voltages which can cause spark discharges between two shielded horn electrodes.

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.

Ionisation leads to the formation of a gas discharge arc between the V-shaped pair of horn electrodes the consequential rise in air temperature causes the arc to drift upward. The arc is eventually broken but then forms again where the gap is smallest. While the arc is burning, the voltage drops to a minimum value. Consequently, further ignition is only possible after the arc has extinguished again.

The electrode spacing can be finely adjusted to the optimal value by means of an adjustment lever.

### 2.1 Accessories

Transformer Core D	1000976
Mains coil with connecting lead	1000986
or	
Mains coil with connecting lead	1000987

## 3. Scope of delivery

- 1 High voltage coil
- 2 2 Horn shaped electrodes

## 4. Technical data

Number of turns:	24000
Open-circuit voltage:	9200 V approx.
Resistance:	10 k $\Omega$
Max. current:	0.02 A
Inductance:	28 H
Maximum operating time:	1 minute
Minimum cooling phase:	5 minutes
Dimensions:	90x70x350 mm <sup>3</sup>
Weight:	550 g approx.

## 5. Storage, cleaning and disposal

- Keep the coil in a clean, dry and dust-free place.
- 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.

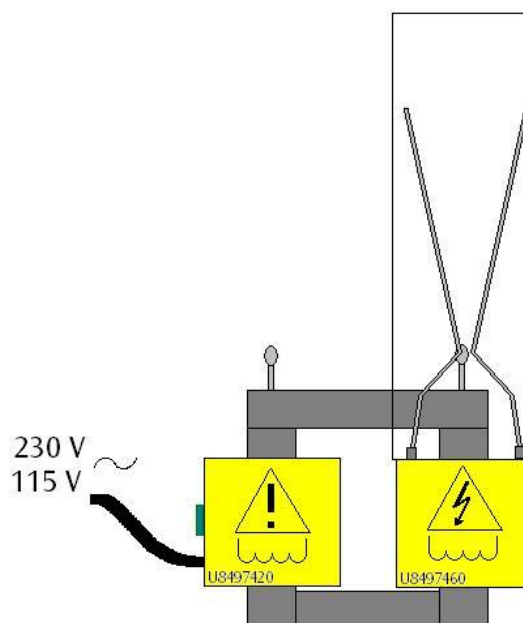
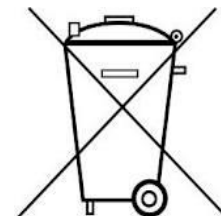


Fig.1 Experimental set-up