

Transformer Coil Set

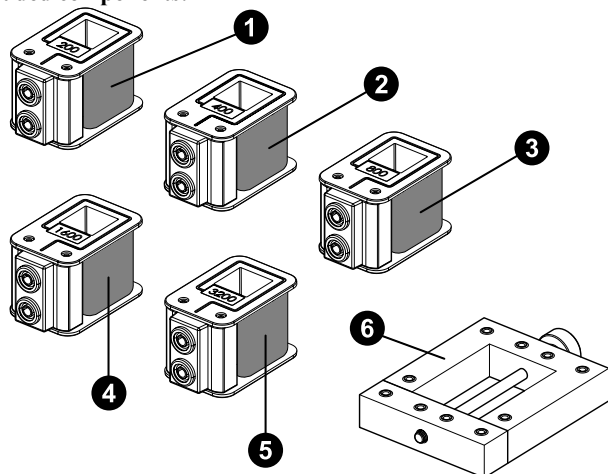
EM-8615

Introduction

The Transformer Coil Set provides the parts needed to experimentally investigate electromagnetic induction. Each coil consists of a length of conductive wire wrapped into a coil with a set number of turns. The exact number of turns on each coil is marked on the top of the coil. An etching on the top of each coil shows the direction in which the coil is wound. If the positive lead from the power supply is connected to the banana jack near the end marked with the number of turns, the current will flow in the direction shown by this etching. When a coil is connected to a voltage sensor and a magnet is moved through the coil, the magnet will temporarily induce a voltage within the coil. The coils can be mounted on the included Transformer Core for experiments studying how adjacent coils can act as a transformer in electric circuits.

Components

Included components:



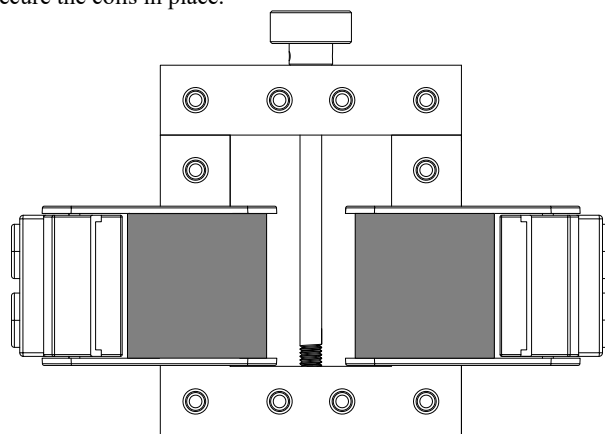
- ❶ 200 Turn Coil (EM-8609)
- ❷ 2× 400 Turn Coils (EM-8610)
- ❸ 800 Turn Coil (EM-8611)
- ❹ 1600 Turn Coil (EM-8612)
- ❺ 3200 Turn Coil (EM-8613)
- ❻ Transformer Core (EM-8614)

Recommended equipment:

- Bar magnet, such as the Alnico Bar Magnets (EM-8620) or equivalent
- AC power supply
- Wireless Voltage Sensor (PS-3211A)
- Wireless Current Sensor (PS-3212)
- AC voltmeter
- AC ammeter
- Oscilloscope

Transformer setup

1. Select the two coils you will be using for the experiment.
2. Loosen the thumbscrew on the top of the Transformer Core. Rotate the cross-bar so it is out of the way of the core's arms.
3. Insert one of the chosen coils onto one of the arms of the Transformer Core. Make sure the coil is oriented so that the banana plug jacks face directly away from the center of the core.
4. Insert the other chosen coil onto the other arm of the Transformer Core. Once again, make sure the banana plug jacks face directly away from the center of the core.
5. Realign the cross-bar with the arms and tighten the thumbscrew to secure the coils in place.



6. Connect each coil to an ammeter, voltmeter, or other device to measure the flow of electricity through the coils.

Storage

The Transformer Coil Set is shipped in a box containing foam padding with cutouts for the six provided coils and the Transformer Core. Two additional coil cutouts are also included in the foam, allowing two separately purchased coils to be stored in the same box for convenience.

Experiment files

Download one of several student-ready activities from the PASCO Experiment Library. Experiments include student handouts and teacher notes. Visit [pasco.com/freelabs/EM-8615](https://www.pasco.com/freelabs/EM-8615).

Technical support

Need more help? Our knowledgeable and friendly Technical Support staff is ready to answer your questions or walk you through any issues.

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-  Phone 1-800-772-8700 x1004 (USA)
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Limited warranty

For a description of the product warranty, see the Warranty and Returns page at www.pasco.com/legal.

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