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Product Name :

Primary-Secondary Coils

Product Code :

SLE/EM/12



Description :

Primary-Secondary Coils (Product Code: SLE/EM/12) are a classic two-coil set for demonstrating electromagnetic induction and the working principle of a transformer. A primarycoil of 175 turns of 18 AWG insulated copper wire and a secondary coil with three availablewindings — 500; 1,000; and 1,500 turns — are used on a plated iron core 165 mm long and 19mm in diameter, so students can change the turns ratio and see the effect on the induced voltage directly. Manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, a physics instruments supplier in India, the set is a durable transformer experiment kit for school andcollege physics labs.

Specifications

Parameter	Detail
Iron core	Plated iron, 165 mm long, 19 mm diameter
Primary coil	175 turns of 18 AWG insulated copper wire
Secondary coil	Three available windings: 500; 1,000; and 1,500 turns, insulated copper wire
Coil formers	Moulded formers fitted with shielded banana jacks
Demonstrates	Electromagnetic induction and transformer principles

Typical Use

For induction, the primary is connected to a low-voltage DC source through a switch and the secondary to a centre-zero galvanometer: the needle kicks one way when the switch is closed and the other way when it is opened, showing that only a changing current in the primary induces a current in the secondary. Sliding the iron core in and out shows how strongly the core links the two coils. For the transformer principle, the primary is fed from a low-voltage AC supply and the output is taken from each secondary winding in turn; moving from the 500-turn to the 1,500-turn winding raises the output, which students can compare with the turns ratio they calculate.

Because every connection is made through shielded banana jacks, students can rewire the circuit quickly and safely between trials. Always use a low-voltage laboratory supply rather than mains, and switch off before changing windings. The experiment appears in the electromagnetic induction chapter of CBSE and state-board syllabi, so the coils sit well in any list of physics practical equipment for CBSE schools as well as undergraduate labs.

Manufacturer

ScienceLab apparatus such as these coils is produced by Jain Scientific Equipments Private Limited (CIN U29309HR2020PTC087597), a private limited company based in Ambala, Haryana. Manufacturing is carried out at the company's licensed factory at 449, HSIIDC Industrial Area, Saha, Ambala (Factory Licence AMB-ONLINE-CHD-J-414). Read more on our company profile.

Related Electricity Equipment

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