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Product Name :

Primary and Secondary Coil Set

Product Code :

SLE/EM/19



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Description :

Primary and Secondary Coil Set (Product Code: SLE/EM/19) is a pair of nested induction coils — a heavy-wire primary and a fine-wire secondary, both wound with enamelled copper wire on plastic spools — used to show how a changing current in one coil induces a voltage in the other. Physics teachers in schools, junior colleges and teacher-training institutes build their electromagnetic induction kit around a set like this for mutual-induction and transformer lessons.It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, India.

Specifications

Parameter	Detail
Construction	Two coils wound with enamelled copper wire over heavy plastic spools, one fitting inside the other
Primary coil (inner)	1250 turns of heavy wire
Secondary coil (outer)	250 turns of fine wire
Turns ratio	1250 : 250 (the primary has five times as many turns as the secondary)
Connections	Binding posts on both coils
Core	Soft iron core for induction studies
Mounting	Square supports of thick insulating material, for vertical or horizontal mounting

Typical Use

The classic demonstration is mutual induction. Connect the primary through a key to a low-voltage DC source and the secondary to a centre-zero galvanometer. Closing the key gives a brief deflection one way, opening it gives a deflection the other way, and a steady current gives none — so students see that only a changing magnetic field induces an emf. Sliding the soft iron core into the inner spool links the two coils more strongly and makes the kick noticeably larger, which lets a class compare air-cored and iron-cored coupling in a single period.

Fed from a low-voltage AC supply, the same set doubles as a simple transformer experiment kit for school labs: with the 1250-turn coil as primary and the 250-turn coil as secondary it works as a step-down arrangement, and students can measure input and output voltages with a multimeter and compare their ratio with the turns ratio. Keep the supply at low voltage, switch off before changing connections, and use the insulating square supports to stand the set upright for class viewing or lay it flat on the bench.

Manufacturer

The Primary and Secondary Coil Set comes from Jain Scientific Equipments Private Limited, an Ambala, Haryana company that trades as ScienceLab and makes physics, chemistry and biology teaching apparatus for schools and colleges in India and international markets. You can read more

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