Email : sales@scilabexport.com
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Product Name :

Demonstrative Transformer (for high school)

Product Code :

SCL241/039



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Description :

Demonstrative Transformer (for high school) (Product Code: SCL241/039) is a working model of a U-shaped steel core transformer that lets students see every part of a real step-down transformer: the steel core that carries the magnetic flux, a clamped bar that closes the field lines, and two enamelled copper coils on a wooden or plastic support. The 1400-turn primary takes 220 V and the 400-turn secondary delivers 60 V, so the turns ratio can be checked directly against measured voltages. It is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, India.

Specifications

Parameter	Detail
Type	Functional model of a U-shaped steel core transformer
Core	U-shaped steel core with a bar that closes the clamped field lines
Coils	Enamelled copper
Support	Wooden or plastic
Primary coil	220 V / 0.3 A, 1400 turns
Secondary coil	60 V / 1 A, 400 turns
Transformer power	30 W

Typical Use

With the closing bar clamped in place, the teacher energises the primary and students read both voltages on AC meters. Dividing 1400 turns by 400 turns and comparing the result with the ratio of the measured voltages is the central calculation of the topic. Loosening or removing the bar then shows a clear drop in secondary output, because the flux now leaks through air instead of staying in the steel, which explains why real transformers use closed cores.

A small lamp on the secondary lets the class compare input and output power and discuss efficiency and heating losses. Because the primary works at 220 V, the model should be connected and switched only by the teacher, using insulated leads, and all rewiring should be done with the supply off. It suits any transformer experiment kit for school physics labs.

Manufacturer

This demonstration transformer comes from Jain Scientific Equipments Private Limited, which manufactures teaching apparatus at its Ambala, Haryana factory and sells it, with the rest of its electromagnetism range, under the ScienceLab brand. For more about the company and its manufacturing base, open the company profile.

Related Lab Equipment

These items are used with the transformer when teaching electromagnetic induction:

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