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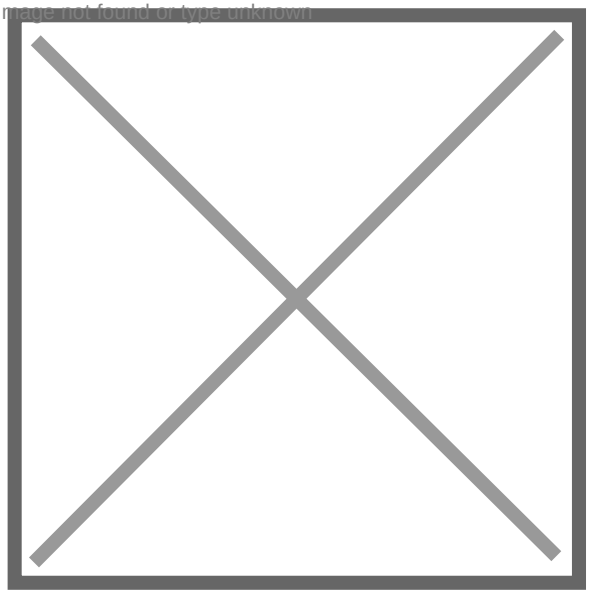
Product Name :

Apparatus for Studying the Dependence of Electrical Resistance on the Factors that Determine it

Product Code :

SCL-361/020

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Description :

Apparatus for Studying the Dependence of Electrical Resistance on the Factors that Determine it (Product Code: SCL-361/020) is a wire-resistance experiment set used to showhow a conductor's resistance depends on its thickness and material, in school and collegephysics practicals. It pairs 24 SWG and 30 SWG conducting wires, plus copper and iron 30 SWGwires, with a 2–14 V AC/DC, 6 A supply and digital meters. It is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer, at its own factory in Ambala, India.

Specifications

Parameter	Detail
Power supply	2–14 V AC/DC, 6 A
Meters	Digital ammeter and digital voltmeter
Conducting wires	2 pairs, 24 SWG; 2 pairs, 30 SWG
Copper wires	2 pairs of guide wires, copper, 30 SWG
Iron wires	2 pairs of guide wires, iron, 30 SWG
Connecting leads	2 pairs, 4 mm, 100 cm, red and black; 2 pairs, 4 mm, 50 cm, red and black
Product code	SCL-361/020
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Electrical Resistance Apparatus Used For?

The resistance of a conductor depends on its material, its length and its cross-sectional area, and this set lets students isolate those factors one at a time. Comparing the 24 SWG and 30 SWG conducting wires shows the effect of thickness — the higher SWG number is the thinner wire, with the greater resistance — while comparing copper and iron wires of the same 30 SWG gauge shows the effect of material. For each wire, students apply a voltage from the supply, read current and voltage on the digital meters and calculate R = V/I.

If your syllabus also covers length, the same method is applied to different lengths of one wire. Use the DC output and keep currents modest, because a wire that warms up changes its resistance and spoils the comparison; switch off between readings to let it cool. As an Ohm's law experiment kit for schools in India and international markets, the set leads naturally to the formula R = ?L/A and the idea of resistivity.

What to Specify When Ordering

- The number of sets needed for your practical groups.
- Whether extra wire pairs of a particular gauge or material should be included.
- Whether a screw gauge or resistance box should be quoted for extension work.
- The delivery city or country, for packing and freight.

OEM

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