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Product Name :

Earth Neutral Live Demo

Product Code :

SLE/EAM/33



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Description :

The **Earth Neutral Live Demo** (Product Code: SLE/EAM/33) is a safe, low-voltage model of a domestic circuit that shows how the earth wire and fuse act together to protect both the user and the appliance. Students trace the current from the ‘power station’ through a 13A socket, plug and kettle along the live wire and back through the neutral, then watch what happens when a fault is introduced. It is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, a school laboratory equipment supplier in India, for electricity-safety teaching in secondary science.

Specifications

Parameter	Detail
Demonstrates	The danger of an unearthed appliance; the safe wiring of an appliance; the action of a fuse
Circuit path	‘Power station’, 13A socket, plug and appliance (kettle), via live and neutral wires
Plug layout	3 pin plug laid out in positionally correct form, showing wiring and fuse position
Indicators	LEDs in the kettle show the appliance working or current passing through a person to ground
Fuse	Easily visible; can be seen to ‘blow’ when a fault occurs
Supplied with	10 metres of fuse wire and full instructions
Power required	12V D.C. power supply
Connections	4mm shrouded sockets
Labelling	Clearly labelled throughout

Typical Use

The lesson starts with the appliance wired correctly: when the 12V D.C. supply is switched on, the LEDs in the kettle light to show it is working. The teacher then creates a fault by moving the live wire from inside the kettle to its case. With the earth wire connected, a large current flows to earth and the fuse visibly melts, cutting off the supply and protecting both the user and the appliance. With the earth wire removed, the fuse does not blow; instead, LEDs light to show current passing through the ‘person’ to ground, making the danger of an unearthed metal-cased appliance unmistakable.

Because the plug is laid out in its true positions, students can relate what they see to wiring a real plug and to why the fuse sits in the live line. Rewire a new length of fuse wire after each blown-fuse demonstration and keep the supply switched off while changing connections. It is a practical addition to physics lab equipment for schools in India covering domestic electricity, all without exposing pupils to mains voltage.

Manufacturer

This
brand

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