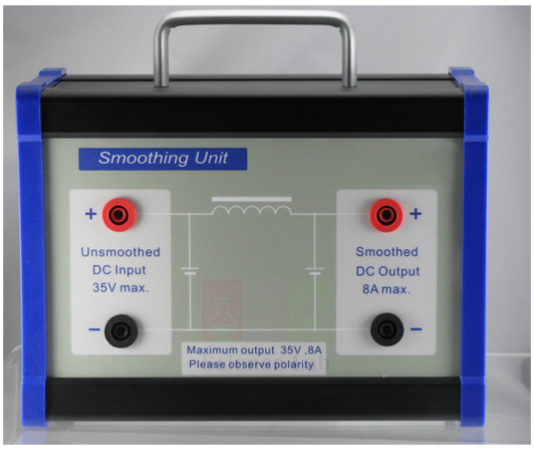
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Product Name :

Smoothing Unit

Product Code :

SLE/PHY/294



Science Lab
Email : sales@scilabexport.com
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Description :

Smoothing Unit (Product Code: SLE/PHY/294) is an LC filter unit used to reduce ripple from non-regulated low-voltage power supplies in school and college laboratories. A toroidal 0.1 H inductor works with a network of 2,200 µF capacitors and diodes to keep the output smooth at currents up to 8 A at 35 V. It is supplied by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, a physics instruments supplier in India, as an add-on for the power supply units in a lab.

Specifications

Parameter	Detail
Function	Reduces ripple from non-regulated power supplies
Filter components	Toroidal 0.1 H inductor with a network of 2,200 µF capacitors and diodes
Input voltage	0 to 35 V d.c.; absolute maximum 40 V d.c. (d.c. rectified from 28 V a.c.)
Current rating	8 A maximum (up to 8 A at 35 V)
Typical ripple	About 1% with a 12 V supply at 3 A
Reverse polarity	Works without damage even with reversed polarity
Connections	Shrouded sockets accepting standard 4mm plugs and shrouded plugs
Dimensions	208 x 155 x 115 mm (W x H x D); height including handle 187 mm
Product code	SLE/PHY/294
Supplied by	Jain Scientific Equipments Pvt Ltd (ScienceLab), Ambala, India

What Is the Smoothing Unit Used For?

Many school low-voltage supplies deliver rectified but unsmoothed DC, which rises and falls with every mains cycle. Connected between such a supply and the experiment, the Smoothing Unit turns that pulsing output into steady DC, even when the load draws several amperes. That matters for electrolysis, electromagnets, DC motors and any measurement where a fluctuating current would make meter readings jump.

It is also a teaching aid in its own right. Displaying the supply voltage on an oscilloscope before and after the unit shows students exactly what smoothing does, which links neatly with half wave and full wave rectifier kit experiments. Keep the input within 35 V (never above the 40 V absolute maximum), connect with shrouded 4mm leads, and note that an accidental reversal of polarity will not damage the unit.

What to Specify When Ordering

- Number of Smoothing Unit pieces, often one per low-voltage supply.
- The output voltage and current of the power supplies you will smooth, to confirm they are within 35 V and 8 A.
- Whether shrouded 4mm leads or an oscilloscope should be included in the quotation.

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