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Product Name :

Strain Gauge

Product Code :

SLE/EAM/21



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Description :

The **Strain Gauge** (Product Code: SLE/EAM/21) lets students watch how the electrical resistance of a gauge changes when the steel blade it is bonded to is bent under strain. The gauge's terminations are brought out to a resistive bridge network on the main support, and the bridge output lead plugs straight into an Instrumentation Amplifier so the tiny changes become measurable. Manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, it suits A-level style physics, diploma and engineering lab equipment in India where sensors and materials are taught together.

Specifications

Parameter	Detail
Sensing element	Strain gauge sensor bonded to a steel strip (blade)
Circuit	Terminations brought out to a resistive bridge network mounted on the main support
Output	Output lead from the bridge interfaces directly with the Instrumentation Amplifier
Measurement	Monitors tiny resistance changes when the blade is under strain
Spares	Replacement blade/strain gauge available separately
Dimensions	280 x 160 x 65mm overall

Typical Use

A strain gauge is a fine resistive track that stretches or compresses with the surface it is glued to, changing its resistance very slightly. Placing it in a bridge network turns that small change into an out-of-balance voltage, which the amplifier then raises to a level a multimeter can show. In class, students deflect the blade by increasing amounts, record the amplified output each time and plot output against deflection or load to see how linear the response is. The same set-up opens discussion of how weighing scales, load cells and structural monitoring systems work.

For consistent results, let the bridge settle after switching on, note a zero reading with the blade unloaded, and apply strain gently so the blade is never permanently bent. As a piece of mechanics lab equipment in India it bridges the gap between materials science and electrical measurement, and because the blade and gauge can be replaced separately, the main unit remains usable if a gauge is ever damaged.

Manufacturer

ScienceLab is the brand of **Jain Scientific Equipments Private Limited**, an Ambala, Haryana manufacturer of sensor, electricity and physics apparatus for teaching laboratories. Visit our company profile to learn how the company works with schools, colleges and distributors.

Related Electricity and Magnetism Equipment

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