



Strain Gauge Sciencetech 2304 provides study of Strain Gauge and their application for measurement of Strain. It helps to study bridge configuration of Strain Gauge and the signal conditioning circuits required to measure strain. It uses cantilever beam arrangement to produce strain on Strain Gauge. The Strain Gauges are firmly cemented to the cantilever at the point where the strain is to be measured. Weights are placed on free end of cantilever. Strain developed changes the resistance of Strain Gauge which is detected by full bridge configuration. Seven-segment LED display shows strain in micro strain units. Different weights are provided to perform linearity and sensitivity experiments. Detailed experiment manual is supplied with the 2304.

Features

- Self-contained and easy to operate
- Sensitive, Linear, Stable & Accurate
- Test-points to observe input output of each block
- Onboard gain adjustment
- Onboard offset null adjustment
- Built in DC Power Supplies
- 3½ digits LED display
- Onboard Cantilever arrangement
- High repeatability and reliability

Scope of Learning

- Study of strain measurement using strain gauges and cantilever assembly.
- Determination of linear range of operation of strain measurement.
- Determination sensitivity of 2304.

Technical Specifications

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| Strain Gauge (350Ω) | : 4 nos. |
| Gauge factor | : 2.1 |
| Maximum bearable weight | : 500 gm |
| Cantilever material | : Stainless Steel |
| Cantilever width | : 2.5 cm |
| Cantilever thickness | : 0.16 cm |
| Cantilever length | : 20 cm |
| Bridge Voltage | : +8 V DC |
| Bridge configuration | : Full Bridge |
| Display | : 3½ Digit LED |
| Test points | : 8 nos. |
| Product Tutorial | : Online on www.ScientechLearning.com |
| Power Supply | : 230 V ±10%, 50 Hz . 60 Hz on request |
| Power Consumption | : 3 VA (approx.) |
| Dimensions (mm) | : W 340 × D 240 × H 105 |
| Weight | : 3.5 Kg (approx.) |
| Operating Conditions | : 0-40°C, 85% RH |
| Accessories Included | : Mains cord-1no. Standard Weights-1set. USB cable (optional)-1no. |

