52090 provides study of Strain Gauge and their application for measurement of Torque, It helps to study bridge configuration of Strain Gauge and the signal conditioning circuits required to measure Torque. It uses cantilever beam arrangement to produce Torque on Strain Gauge.
The Strain Gauge are firmly cemented to the cantilever at the point where the Torque is produced. Torque developed changes the resistance of Strain Gauge which is detected by full bridge configuration. Seven segment LED display shows Torque in kg.m units. Different weights are provided to perform linearly and sensitivity experiments.

Object:

1. To study Torque measurement using strain gauges and cantilever assembly.
2. To determine the linear range of operation of Torque measurement.
3. To determine sensitivity of the trainer.

Features

The board consists of following built in parts

1. ±12V D.C. at 100mA, I.C. regulated Power Supply.
2. 5V D.C. at 100mA, I.C. regulated Power Supply.
3. Strain Gauge of 3 kg capacity with 200mV output.
4. Strain gauge impedance of 350 ohms, connected in bridge configuration.
5. 1-Meter long arm fixed on chassis. The arm is graduated from 0 to 1 meter in steps of 10 cm.
6. DPM of 3½ digit display for kg./meter.
7. Adequate no. of other electronic components.
8. Mains ON/OFF switch and jewel light.
9. The unit is operative on 230VAC ±10% at 50Hz
10. Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/ observation of waveforms.
11. Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.
12. Weight : 2 Kg. (Approx)
13. Dimension : W 340 x H 125 x D 210

List of Accessories:

1. Iron weight 5 Nos of 50 gm total weight 250 gm.

Note: Specifications are subject to change.

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