

TECHNICAL SPECIFICATIONS AND OTHER ALLIED REQUIREMENTS

SI	Specification	Qty
1	1. Supply of Strain Measurement System (Detailed Scope of work is given below,)	1 No.

1. QUALIFICATION CRITERION.

- 1.1 Strain values from 10 different strain gauges should be recorded, displayed and saved simultaneously.
- 1.2 Time vs. Strain data need to be recorded at a time for continuous 24hr to 48hr for all the 10 channels.
- 1.3 Strain Measurement System/Universal Data logger need to record and display the value of Strain in all the 10 channels at any time of measurement.
- 1.4 The Strain Measuring System/Data logger should be compatible to sense and take data from Electrical Strain gauges (2 wire, 3 wire, 4 wire Type), Vibrating Wire type strain gauges etc.
- 1.5 The connection between strain gauges and data logger should be simple and easy with quick fixing and un-fixing attachments.

2. **INSTALLATION.**

- 2.1. The ordered goods are to be delivered and installed and demonstrated within 7 days from the date of delivery. Vendor shall provide onsite service during warranty period as and when required.

3. **WARRANTY**

- 1.1 3 Years from the date of installation, demonstration and acceptance of the materials.

4. **BID SECURITY FORM**

- 1.1. Vendor should provide BID Security Declaration as per Annexure – 5E provided in the Tender Documents.

Annexure Regarding Note of indented item – Supply of Strain Measurement System

1. End use:

- Structural inspection of concrete and steel bridges, Flyovers, Jetty, industrial structures.
- Measurement of in-situ induced strain of steel and concrete structural components for Health Assessment studies.

2. Scope of Supply & Incidental Services:

Strain Data-logger (10 Channels)

- Capable of connecting 2 wire, 3 wire, 4 wire Type strain sensors.
- Can accept and display/store strain values from Quarter Bridge, Half Bridge and Full Bridge Orientation Electrical Strain gauges.
- Compatible with RTD Thermocouples, 4 to 20 mA, 0 to +/- 30 VDC Thermistor type, Vibrating Wire strain gauges and display/store strain and temperature values directly on connection.
- Display Resolution: 18 Bit
- Data Sampling Frequency Rate: 40 Hz
- Internal memory: 1 core data points.
- Internal channel isolation: 100V.
- SDI-12 port for Sensor communication.
- FTP protocol is available.
- Communication port: USB, Ethernet, Serial
- Compatible Software loaded for data display and logging and data scheduling.
- Rechargeable Batteries and power adapter.
- Portable rugged cover box for carrying in-situ.

Vibrating Wire Strain gauges

- Sensor element: Vibrating wire sensor
- Range: 3000 microstrain
- Resolution: 0.5 microstrain
- Accuracy: +/- 0.1%
- Non-linearity: +/- 0.5%
- Operating temp: - 0.40 degc to 80 deg c
- Built-in temperature device: Thermistor (3KOhm)
- Temperature device range: -40 deg c to 105 deg c
- Gauge length: 70 mm to 80mm
- Materials: Stainless Steel

03.10 Incidental Services:

Installation and Demonstration of the supplied equipment.

Onsite Service during Warranty period as and when required.

04 11 Inspection and Test Required:

Inspection of the equipment in all complete condition will be done by performing testing and collection of data with subsequent post processing through software during installation at CSIR-CMERI, Durgapur / On site.

05 12 Acceptance Criteria:

Compliance to Technical Specification and performance testing.

06 13 Qualification Criteria:

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4. The Strain Measuring System/Data logger should be compatible to sense and take data from Electrical Strain gauges (2 wire, 3 wire, 4 wire Type), Vibrating Wire type strain gauges etc.
5. The connection between strain gauges and data logger should be simple and easy with quick fixing and un-fixing attachments.