

भू-प्रौद्योगिकी प्रयोगशाला
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No.: CE/GTE/NRP/2017
Dated: 06/06/ 2017

M/S

Subject: Quotation for the supply of sensors with data logger box (16 channels).

Dear Sirs,

We would like to purchase following sensors with data logger box for my project work.
Following are the technical specifications.

I.) **ACCELEROMETER:**

Performance Specifications:

Output:	15 mV to 75 mV full scale
Transverse sensitivity:	Less than 5 %
Temperature sensitivity:	0.145/°F
Frequency range :	Dependent on dynamic range ± 5 %
Dynamic Range :	$\pm 5G, \pm 10 G, \pm 20$ (dc to 10 kHz)
Amplitude linearity:	Better than 1 % linearity
Acceleration limits	x20 of dynamic range
Mounted base resonance	18kHz

Environmental Specifications:

Temperature, operating:	-18 °C to 82 °C [0 °F to 180 °F]
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Electrical Specifications:

Input:	Voltage
Supply voltage:	5 or 12 VDC
Cable:	Standard cable length 5m length
Electrical Noise	10mG
Isolation:	Base isolated

II.) EARTH PRESSURE CELLS:

Design to measure total pressure in earth fill up to 100 psi (approx 690 KN/square meter), to be placed at a depth of 0.5 , 1.0 m , 1.50 m and 2.0 m below ground surface.

Technical specifications

Transducer type	Vibrating wire type /Semiconductor type
Characteristic	Dynamic measurement
Output:	2000-3000 HZ / (2mv/V), 0-5VDC, 4-20mA
Range:	0-100psi
Over Range	1.5 x rated pressure
Resolution	±0.025% FS /Infinite (Semiconductor type)
Accuracy	± 0.1% FS/±0.05% FS (Semiconductor type)
Linearity	< 0.5% FS
Excitation voltage	10V maximum
Excitation Frequency	1400-3500 Hz/NA
Material	Stainless steel
Temperature range	-20 °C to 80 °C
Cables	4 core armored PVC outer sheath

III.) MULTI DEPTH DEFLECTOMETER:

It is a series of linear variable differential transducer (LVDT) modules that are mounted on a rod in a 1.50 inch diameter hole upto 4-6 LVDT modules can be mounted at various depths.

Performance specifications:

Characteristic:	Measure
Stroke range:	± 20mm
Non-linearity (max.):	±0.25 %
Full scale Non-linearity (max.):	±0.5 %
Output load (min.) :	2000 ohm
Output impedance :	2 ohm
Output sensitivity :	±2 Vdc (nominal)
Isolation :	1000 V input to output
Least count on data logger box:	0.001mm

Environmental specifications:

Temperature, operating:	-18 °C to 82 °C [0 °F to 180 °F]
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Electrical specifications:

Element Type:	DC-DC Displacement Transducer
Supply voltage:	5 or 12 VDC
Cable:	Standard cable length 5m length
Electrical termination:	Multiconductor shielded cable
Reverse polarity protection:	Yes

Note: All these above mentioned sensors should be connected to one data logger box having 16 channels which will be compatible with computer system. Also data logger box should have high sampling speed with adjustable data recording time interval.

Please send your offer for the above mentioning the following:

1. Cost of the software/Hardware including 1 year warranty with all calibration charts and complete installation, demonstration at IIT Kanpur.
2. Validity of the quotation should be at least 90 days.
3. Technical specifications in detail with operating manuals.
4. Delivery time.
5. Educational discount applicable.
6. Payment terms.
7. Proprietary Certificate, if applicable.
8. Any other relevant details.

Kindly arrange to send the quotation(s) with detailed specifications of the item in a sealed envelope to the given address, cited above, so as to reach us on or before the **closing date 20/06/2017**.

The undersigned reserves the right to accept the offer in part or full or reject without assigning any reason.

Thanking you

Sincerely,

(N.R Patra)