



# DELHI TECHNOLOGICAL UNIVERSITY

(formerly DELHI COLLEGE OF ENGINEERING)

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Tender Ref No: F DTU/ SP/211/04-02/15-16

DT: 26.11.2015

Tender ID No 2015\_DTU\_93325\_1

## CORRIGENDUM

Notice Inviting Tender for Supply of High Performance Data Acquisition System for Dynamic Vibration/Strain and Displacement Measurement in Civil Engg. Deptt.

**The tender specification may be read as under:-**

S. No	Specifications
<b>1. DATA ACQUISITION SYSTEM: CONSISTING</b>	
A.	<p>High Performance Data Logger/Recorder with 3 I/O Slots I/O slots (must be available;3 slots for 3 input layers Storage media: DDRAM 128 MB/ SD Card of 4 GB Storage capacity Data retrieval: Via logger Ethernet port and SD Card, can be read directly with a standard SD Card reader Processor: Freescale, 400 MHz, 32-bit Interface : To host computer 10/100Base-T, standard RJ-45 connector Daisy chain output 10/100Base-T, standard RJ-45 connector Config/general; RS-232, 9-pin "D" Status LEDs on front panel for Attention, Read/Write, Power, Communications Active Environmental Parameters: Temp (operating); -40 °C to 85 °C, Humidity 0 to 95%, non-condensing Controller Tested At: Vibration: IEC 60068-2-64, 10-500 Hz, 5 g Shock: IEC 60068-2-6, 50 g Altitude: 70,000 feet, maximum Power Requirement: Input voltage 9-36 VDC. 120/240 VAC Power consumption;3.5 Watt max, Physical Dimensions: 4 x 4.1x 5.8 inches Specifications must be supported by printed OEM catalogue specified specifications</p>

B	Analog input layer for 4 channels for LVDT	<p>Number of channels:4 (individual A/D per channel)  ADC resolution:18 bits  Sampling rate:250 kHz/channel  FIFO size:2048 samples  Input ranges:±100V, ±10V, ±1V, ±0.1V  Input bias current:± 1.5 nA  Input impedance:2 MΩ  Isolation:500V rms  Input Overvoltage Protection :2000V ESD, ±150V  ENOB @ G=1:18 bits @ 10 Hz (filtered)17.1 bits @ 60 kHz  Total Harmonic Distortion: -100dB  S/(N+D) Ratio : 100dB  Integral Non Linearity: 2.5LSB  Channel Cross Talk: 120dB with D type/BNC connectors</p>	01 no.
C	Analog input layer for 16 channels of Strain Inputs	<p>Analog input strain gage layer  Number of channels :8 isolated(fully differential)  ADC Resolution :18-bit  Sample rate 100 kS/s/cahannel,8ks/s aggregate  FIFOsize 512 samples  Input impedance -10Mohm(max board rate 400 kS/s)  Configuration :Full, Half, or Quarter bridge  Accuracy:Integral non-linearity ±0.0015%  Offset error @ 25 °C, G=2 0.0005% typical  Gain error @ 25 °C, G=2 0.003% typical  Offset drift per °C 2ppm typical / 10ppm max  Gain drift per °Cz 2ppm typical / 10ppm max  Overall error &lt; 250 μV  Bridge resistance 120, 350 or 1000 Ohm  Anti-aliasing filter* Automatic, 72 dB minimum rejection  Input impedance 10 MegOhm,  Input Range:±10 V  Gains:1,2,4,8,10,20,40,80,100,200,400,800  Bridge Resistance:120Ω, 350Ω, 1000Ω, and custom  Bridge Configurations:  Full-Bridge,Half-Bridge (with ext. terminal panel),Quarter-Bridge (with ext. terminal panel)  Shunt Calibration: Onboard (software selectable) – 256 steps from 5K to 205K;  ExternalTemperature drift:  Offset drift, 5μV/°C typ  Gain drift :30ppm/C° @ G=1, 45ppm/C° @ G=800  Excitation Voltage:1.5 to 10.05 V  Isolation: 350 Vrms  Overvoltage protection: -40 to +55V  Power consumption: bridge resistance/excitation dependent; 2.5W - 4.5W  With D type/ BNC connectors</p>	01 No.

D	Software Development	<p>Supply suitable software to work with the system, to process the collected data and to transform the data into various forms psds, facilitate data import in excel format of Windows ,etc.</p> <p>Front and back end tools to manage the m/c computer interface ,must be manageable in Laptop ,desktop, tablets etc.</p> <p>Provide calibration certificates :no of user licence if any</p>	01 no.
E	LVDT	<p>Measuring Range:0 to <math>\pm 50</math> mm</p> <p>Construction Material: Stainless Steel Construction</p> <p>Supply Voltage :AC or DC powered , 10-24V DC</p> <p>Supply Current: 35mA @15 V</p> <p>Max output sink current :0.5 mA</p> <p>Nonlinearity:&lt; 0.5</p> <p>Electrical Output :Output Voltage 0- 5 V</p> <p>Accuracy at 25°C:&lt;1.0%</p> <p>Protection;IP54</p> <p>Operating temperature range:0 to 70°C</p> <p>Shock Resistance:1000g for 5 ms</p>	04 nos.

(Officer In charge)  
( S&P )