Department of Aerospace Engineering

July 26, 2018

Quotation notice

Sealed quotations are invited from the authorized dealer/distributors by undersigned, for purchase of **two units** of **six component load cell with DAQ cards**.

The detailed specifications for these are appended below. The quotations have to reach in the Aerospace Engineering Department on or before 25/07/18

Enquiry No.   : **IITK/AE/ABHI/18/02**
Opening date : **1000hrs, 27/07/18**
Closing date : **1500hrs, 06/08/18**

SIX COMPONENT LOAD CELL

Technical Specification for Six component load cell	
Quantity : 02 Nos.	
DESCRIPTION	The quoted six component load cell should have circular cross section and should measure dynamic loads.
SENSOR UNCERTAINITIES*	$Fx \le 0.75\%$, $Fy \le 1.25\%$, $Fz \le 0.75\%$, $Tx \le 1\%$, $Ty \le 1.25\%$, $Tz \le 1.5\%$
RESONANT FREQUENCY*	$Fx \ge 1400Hz$ $Fy \ge 1400Hz$, $Fz \ge 2000Hz$, $Tx, \ge 2000Hz$ $Ty \ge 2000Hz$, $Tz \ge 1400Hz$
CALIBRATION SETTINGS	Two calibration settings
CALIBRATION SETTING 1 *	Range:$Fx,Fy \ge 32N$, $Fz \ge 100N$, $Tx,Ty ,Tz \ge 2.5Nm$ Resolution: $Fx,Fy \le 1/160N$, $Fz \le 1/80N$, $Tx,Ty,Tz \le 1/2000Nm$
CALIBRATION SETTING 2*	Range:$Fx,Fy \ge 65N$, $Fz \ge 200N$, $Tx,Ty ,Tz \ge 5Nm$ Resolution: $Fx,Fy \le 1/80N$, $Fz \le 1/40N$, $Tx,Ty,Tz \le 10/13333Nm$
STRAIN GAUGE TYPE	Silicon strain gauges that provide high signal to noise ratio
TRANSDUCER WEIGHT	Weight ≤ 0.225 kg
TRANSDUCER DIAMETER	Diameter ≥ 75 mm
TRANSDUCER HEIGHT	35 mm $\ge$ Height ≥ 33 mm
MAXIMUM OVERLOAD VALUES	At least 6.5 times the maximum allowable range
DATA ACQUISITION UNIT	DAQ unit to acquire transducer signals. External DAQ transducer power source should be available. Length

	of DAQ cable from power supply should be at least 2 meters.
LOAD CELL CONNECTIVITY	PCI DAQ card, 8 DIch, 16‑bit 250KS/s
DOCUMENTS	• Detailed manual for F/T transducer, DAQ • Detailed transducer drawings
SOFTWARE	• Software to process the signals from DAQ and give real time force and voltages • License for software if open source is not available

(Fx,Fy,Fz and Tx,Ty,Tz are forces and moments in X,Y & Z directions respectively)

Terms & Conditions of the quotations are as under :

1. The quotations should be submitted in the properly sealed envelop, addressed to the undersigned. The enquiry no. and date should invariably quoted on the top of the envelope.
2. The rate quoted should be inclusive of sales tax and other taxes including freight charges (if any).
3. The quotations shall remain valid for two months from the date of opening.
4. The Institute reserves the right of accepting or rejecting any quotations without assigning any reason thereof.

Your early response in this matter would be highly appreciated.

Sincerely,

Abhishek
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