

DEPARTMENT OF ELECTRICAL ENGINEERING

Dated: November 18, 2015

Sub: Notice inviting quotations for the 200 MHz Digital storage oscilloscope with isolated channels

S.No	Technical Parameter	Specifications
1	Channels	4 Fully Isolated & Floating Channels with External Trigger
2	Bandwidth	200 MHz
3	Sample Rate per Channel	2 GS/s
4	Vertical Zoom	Vertically expand or compress a live or stopped waveform
5	Max Input Voltage (1 M Ω)	300 VRMS CAT II
6	Float Voltage	600 VRMS CAT II
7	Time Base Range	2.5 ns to 50 s/div
8	Input Coupling	AC, DC, GND
9	Acquisition Modes	Peak Detect, Sample, Average, Sequence, Scan/Roll Mode
10	Trigger Modes	Auto, Normal, Single Sequence
11	Persistence	Variable Persistence should be available
12	FFT	Windows: Hanning, Flat Top, Rectangular; 2048 Sample Points
13	Automatic Waveform Measurements	Period, Frequency, +Width, -Width, Rise Time, Fall Time, Max, Min, Peak-to-Peak, Mean, Cycle RMS
14	Power Measurements	True real power in watts, Reactive Power in VAR, Power Factor, Crest Factor, RMS Measurements, Frequency Measurements, Phase Angles, Harmonics Measurements, THD, Switching-loss Measurements – Turn-on loss, Turn-off loss, Conduction Loss, total switch loss.
15	Cursors (Type, Measurement)	Voltage, Time(ΔT , $1/\Delta T$ (frequency), ΔV , dv/dt , di/dt)
16	Probe Check	Probe check wizard to ensure correct probe usage
17	Battery	Instrument should have hot-swappable Lithium-ion battery with fuel gauge for 4 Hours power backup,
18	Envoirmental condition	Operating 0 °C to +50 °C; Non-operating -40 °C to +71 °C
19	Software	Software should be available for Quickly document and analyse measurement results

20	I/O interface	RS232, Drive should be available for External Memory Storage ≥2GB Compact Flash for Data & waveform Storage
21	Display	Active TFT Color LCD display & Backlit menu buttons for high visibility
22	Accessories	4 Nos. 200MHz 10X Passive voltage probes, RS-232 to USB interface cable, PC Communication software, AC Power Adaptor, Calibration Certificate
23	Warranty	3 Year for Oscilloscope & one year for Accessories.

TERMS & CONDITIONS

1. Please submit the TECHNICAL and FINANCIAL bids in separate sealed envelopes. Mark the two envelopes clearly as "Technical Bid" and Financial Bid". Both the sealed envelopes should be sent in a single sealed envelope, with clearly marked as "Quotations for 200MHz digital storage oscilloscope with isolated channels". The quote should reach the following address on or before **December 4, 2015** upto **5:00 PM**.

Name : Dr. Sukumar Mishra
Address : Deptt. of Electrical Engineering
Indian Institute of Technology, Delhi
Hauz Khas, New Delhi-110016 (India)

2. Quote should be in Indian Rupees as well as US Dollars and to valid for at least three months.
3. Attach all the technical literature and a list of similar installations done in India.
4. A minimum of three years comprehensive onsite warranty.
5. If the quote is being submitted by the representative of the Principals/manufactures themselves, a valid Agency ship/Dealership Certificate authorizing the agent to quote to IIT Delhi on behalf of the Principals should be enclosed.
6. The Institute reserves the rights to accept/reject any/all quotations without assigning any reasons thereof.
7. Delivery as early as possible in weeks on receipt of PO.

(Prof. Sukumar Mishra)
Deptt. of Electrical Engg.
IIT, Delhi

DEPARTMENT OF ELECTRICAL ENGINEERING

**COMPARATIVE STATEMENT FOR PURCHASE OF DIRECTION RELAY & MICROPROCESSOR
BASED OVER VOLTAGE RELAY**

S. No	Description	M/s Electro Tech Devices, N.Delhi-41	M/s Associated Scientific Corp.(I), N.Delhi-26	M/s Technico India, N.Delhi-26
1.	Direction Over Current Relay	93,800/-	1,02,400/-	1,01,350/-
2.	Microprocessor based over voltage relay	48,000/-	66,400/-	72,300/-
3.	Microprocessor based under voltage relay	48,000/-	48,000/-	72,800/-
4.	VAT	5% extra	5% extra	5% extra
5.	Payment	30% adv. & bal. agt. Delivery	Against COD	50% adv. & bal. agt. Delivery
6.	Warranty	-	1 year	-
7.	Delivery	4-8 weeks	4-6 weeks	Within 8 weeks
8.	Validity	90 days	3 months	-

(Dr. S.Mishra)

(Dr. B.K.Panigrahi)

(Dr. N.Senroy)

DEPARTMENT OF ELECTRICAL ENGINEERING

Date:

Sub: Meeting of Purchase Committee

Duly approved Purchase Committee meeting held in the office of Dr. Sukumar Mishra for purchase of 200MHz digital storage oscilloscope with isolated channels. Received sealed quotations are opened by the committee members and on the basis of comparative statement committee decided to place the order to M/s Electro Tech Devices, New Delhi on lowest basis at a cost of Rs.93,800/- each for Directional over current relay, Rs.48,000/- each for Microprocessor based Over current relay & Rs.48,000/- each for Microprocessor based Under current relay plus VAT 5% extra at FOR IIT Delhi. Payment will be made on COD basis through proforma invoice. Order is for one no. each of above items.

(Dr. Sukumar Mishra)

(Dr. B.K.Panigrahi)

(Dr. N.Senroy)

DEPARTMENT OF ELECTRICAL ENGINEERING

Date: Nov 6, 2015

Sub: Pre-bid meeting for purchase of for purchase of 200MHz digital storage oscilloscope with isolated channels.

Members Present: Prof. S. Mishra, Dr. B. K.Panigrahi, Dr. N.Senroy, Dr. A.R.Abhyankar

Duly approved purchase committee meeting held in the office of Prof. Sukumar Mishra to discuss and finalize for the purchase of 200MHz digital storage oscilloscope with isolated channels. The committee finalized the following specification for NIQ.

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(Prof. S. Mishra)

(Dr. B. K. Panigrahi)

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