

**INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119**

No. EED/2019/6215/4988

Dated: 16/08/19

M/s Institute Website

Sub: INVITATION OF QUOTATIONS FOR TRANSMISSION LINE SIMULATOR

1. You are invited to submit your most competitive quotation for the following goods:

Sr. No.	Brief Description & Specifications of Goods	Quantity
1.	Transmission Line Simulator (Detailed Specifications are attached)	01 No.

- Necessary literature of the goods may please be sent to facilitate to take decision.
- Payment will be made Online through RTGS/NEFT within 30 days after receipt of material in good condition and according to specifications and installation of the same. The Bank detail for making online payment may be indicated in the quotation.
- The supplier shall deposit Earnest Money along with the Quotation amounting to Rs. 40000 /- in shape of Accounts Payee Demand Draft/Fixed Deposit Receipt/Bankers Cheque or Bank Guarantee from any scheduled commercial Bank in favour of the Director, National Institute of Technology, Kurukshetra. The Quotations without Earnest Money shall be rejected, the EMD will remain valid for a period of 45 days beyond the final validity period of quotation.
- Performance Security @ 5% of the total value of the equipment must be furnished in shape of Demand Draft/Fixed Deposit Receipt or Bank Guarantee from any scheduled Commercial Bank in favour of the Director, NIT Kurukshetra valid up to 02 months after the date of completion of warranty by the successful bidder.
- The items must be supplied within delivery period or delivery period extended by the Institute on the request of the supplier on genuine grounds otherwise the penalty for delayed period @ 0.5% of the amount shall be charged for every week or part thereof and the maximum 10%. The request for extension of delivery period (if any) must be made before the last date of supply as per P.O.
- The goods are not required exclusively for Research Purpose.
- The quotation should remain valid for a period not less than 90 days from the date of submission.
- The firm must have got GST No. printed on their quotation.
- The right of accepting or rejecting any quotation and to cancel the bidding process and reject all quotations without assigning any reason is reserved with the Institute,
- The supplier must attach copies of two latest purchase order of the same equipment (preferably from IITs/NITs) indicating the price for the equipment.
- The due date for receipt of quotation is 03.09.2019 and will be opened on next working day at 10:00 AM. Please quote on the top of the envelope our Ref. No. and due date of opening.

[Signature]
14.08.19

Prof-Incharge (Stores)

Specification of Transmission Line Simulator

Generating Station Model:

- 440 / 110 V Isolated Source Transformer (3 Phase)
- Electrical Ratings - I/P Voltage-440V, O/P Voltage-20-130V (Continuously Variable), Nominal Current-1A, Fault Current-5A(10 Sec.), 10A(1.2 Sec)
- Numerical 3 Phase Over Current Relay with Multiple Curve Setting
- Inbuilt Breaker for Relay
- 1VI Meter Primary
- RS 485 Based Communication
- 1 Multifunction Meter Secondary
- Multifunction Parameters - v, I, PF, VAR, VA, W, Freq., etc with 4 Line Display
- Three Phase LED indication (R-phase, Y-phase, B-phase)
- Primary and Secondary Breakers
- ELCB Protection, MCB Protection
- In panel control buttons for Pri. & Sec. Breakers

Load Station Model:

- Inductive Loading with Continuous Variable Control
- Inbuilt 3 Phase Inductor for Loading
- Resistive Loading with Continuous Variable Control
- Inbuilt 3 Phase Rheostat for Loading
- 10 Step Capacitor Bank with Step Control
- Numerical 3 Phase Over Current Relay with multiple curve setting
- Inbuilt Breaker for Relay
- Inbuilt Digital IO for remote breaker operation
- RS 485 Based Communication
- 3 Separate Multifunction Meter for Input, Load and Capacitor Bank
- In panel control buttons for Inductive, Resistive & Shunt Capacitor bank

PI Selection Model Electrical Ratings:

- 400kV Line with 3 Phase Twin Moose Conductor of 200 KM length with taps at 50Km, 100Km, 150Km X2 No's (Total 400 KM)
- MS Panel with Powder Coating
- Screen Printed Front Panel
- Electrical Ratings:- Voltage - 110V (Nominal), Nominal Current - 1A; Fault Current - 5A (10 Sec), 10A (1.2 Sec)
- Easy Connection through front terminals
- Inbuilt Resistors, Capacitors and Inductors of High Quality

Fault Simulator Module:

- Phase selector switch to simulate LG, LL, LLL, LLG, LLLG faults
- Inbuilt fault creation breaker to emulate simultaneous fault
- Option to add additional resistance to the fault
- Maximum current rating 20 times the rated current for faults less than 1.3 sec
- Screen Printed Front Panel
- Easy connection through front terminals

Series Compensation Module:

- Capacitor based series compensation

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- Maximum compensation upto 50%
- Front end terminals for connection to Pi line in series Can type capacitors for maximum efficiency

Advance Over Current Relay with Disturbance Recorder

- Multiple curve setting
- Adjustable PMS and TMS
- Site configurable to 1A or 5A
- Disturbance Recorder
- Waveform capture – Up to 10 Waveforms and 50 Events Relay data downloadable through remote software Remote settings of relays
- RS232 / USB based interface
- DR download software included

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