



**DR. BABSABH AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**  
At. Po. Lonere, Tal. Mangaon, Dist. Raigad 402 103 MS (www.dbatu.ac.in)

INVITATION FOR QUATATION

23 JUL 2024

Our Ref No. : DBATU/Store/Elect.Engg.Dept./Distance Protection Relay Trainer Kit/2024/2011 Date:

Quotation For: Distance Protection Relay Trainer Kit

Due On:

Date of Opening:

Time: 11:30 am

To,

**Sub: QUOTATION FOR THE SUPPLY OF STORE**

Dear Sir,

Your quotation for the items listed overleaf, may please be submitted to the under signed, so as to reach this Office not later than

While submitting your quotation, the following procedure may please be observed and other points borne in mind.

1. The maker's name must be specified.
2. The "Terms and Conditions" for supply and delivery of stores, should be clearly indicated in the quotation, stating whether rates are, inclusive of all taxes, Packing and forwarding charge,s Freight charges, etc. or not, however rates offered as including all taxes will be more welcome.
3. If packing and forwarding charges are to be charged separately, it should be so clearly stated in your quotation.
4. Please mention clearly whether consignment would be Ex-Godown, Ex-Shop, of F.O.R. dispatching stations. Preferably terms offered as "Delivery of consignment of stores, on F.O.R."
5. Envelope should be super-scribed "Quotation for reference No. of dated....." It should also be superscripted as per the format given above.
6. The quotation would be opened as per date and timing given above, if desired by you, may depute an authorized representative with a letter of authority to be present at the time of opening of the quotation at this Office on the aforesaid day, date & time.
7. Your quotation must be valid for a minimum 30 (Thirty) working days from the date of it's opening.
8. Quotation received after the date of opening may not be taken into consideration.
9. Items tendered should confirm to the specification shown in the attached list when and where, full or no specifications are indicated against items in the list. Kindly furnish your full specification in accordance with accepted standards against each item tendered. Where reference to catalogue is made, the relevant catalogues/ Pamphlets/ Literature should accompany the quotation,
10. Your quotation should be for all new items and not for second hand.
11. Please state whether items will be available Ex-Stock. If not the minimum period for delivery, or for supplying the items or stores.
12. It should be clearly stated whether GST, Insurance, Freight or packing and forwarding charges, or any other taxes and duties, etc. leviable.
13. It would be appreciated if illustrated catalogues/Literature etc is furnished with the quotation.
14. Expression to as "Complete with standard Equipment" complete with standard accessories "Equipment to" As good as should be avoided. If at all their use is unavoidable then it should be very specifically indicated as to what exactly they mean and what exactly would be supplied under them. Any ambiguity or vagueness should be avoided.



15. For convenience, kindly adopt while quoting the same serial Nos. as given in the list detailed below.

Thanking You.

Yours faithfully,



Registrar

Dr. Babasaheb Ambedkar Technological University, Lonere

### List of Items

Sr. No.	Description	Make	Approx. Qty Reg.	Rate per / Each / Unit	Remark
1.	Distance Protection Relay Trainer Kit		01		

### Distance Protection Relay Trainer Kit Specifications

#### Control Panel Technical Specifications:

- **Three phase Power Supply panel:**
  - MCB 4 pole, 4 Amp, 415V AC, 50Hz.
  - RYB power input Indicator (22 mm) x 3 Nos.
  - Volt meter 415V AC ( 72x72mm)
- **DOL Starter panel:**
  - Contactor 9 Amp. 415V, 50 Hz, 3 Pole, 1 NO.
  - Contactor Coil: 230V, 11VA.
  - Bimetallic over load thermal Relay.
  - Relay Range 1.4A - 2.3A. (Set: 2.3 Amp.)
  - Start-Stop Push Button Switch.
  - DOL ON Red Indicator (22mm)
- **Multi-function Bi-directional Power Measurement Panel: (2 Nos)**
  - Digital Bi-directional Multi-function meter (96X96mm).
  - 3 Phase 3/4 wire, Voltage line to line & line to neutral.
  - Measurement of 415V, 3 ph. & 230V, 1 ph. parameters.
  - Measures V, I, Hz, PF, KW, KVA, KVAR, Energy in KWh.
  - Current for all 3 ph. up to 5A. (Inbuilt CT 5A:5A x 3 Nos.)
  - LCD/LED display, Reverse Power Indication.
  - Aux. Supply 230VAC, 45-65Hz, 5W
  - Optionally PC interface with RS485 (Power Analyzer)
- **ON OFF ON, FWD/REV Panel:**
  - Three Ph. ON-OFF-ON with FWD/REV, 3 pole 3 way switch with Centre OFF, 6A/440V.
  - Power ON Red Indicator (22 mm)
- **Single phase Power Supply Panel:**
  - MCB 230V AC, 50Hz. 1 pole/6 Amp.(3 Nos.) 1 pole/10 Amp.(1 No.)
  - Output Terminals: 230V, 6 Amp.(3 Nos.) & 10 Amp.(1 No.)
  - Red Power Indicator (22 mm), Lamp Holder.
  - 8A push button switch (Simulate as centrifugal switch) & Resistor 30E/400W. (Provide if Single ph. Ind. Motor supply)
- **Resistive (R) Load Panel:**
  - Resistors with switch selectable 1 off + 6 nos. of taps at 100, 125, 150, 175, 200 & 225 Ohm & SIL tap of 262 Ohm/1KW (3 nos.)
  - Fan cooled.

- ❑ **Current Transformer (CT) panel:**
  - Consist of 5:5 Amp. (CT 6 nos.)
  - Primary side of CTs should brought on 3 x 2 x 2 SBS-5 sockets.
  - Secondary side of CTs should Star connected in group of 3 & brought out on 4 x 2 SBS-5 sockets.
- ❑ **Transformer (415V/110V) Panel:**
  - Step down Transformer: Primary Star 415Volt & Secondary Star 110Volt, 50VA.
  - All the connection of Transformer primary & Secondary are brought out on this panel.
- ❑ **Distance Protection Relay type:**
  - Numerical type Distance protection Relay, rating Current 1A/5A for protection of Transmission line, RS 232 port for PC communication. Relay setting with soft wear on CD.
  - RS 232 to USB convertor for USB interface. (Numerical/Electromechanical/Static type)
- ❑ **Distance Protection Relay terminal Panel:**
  - All the connection of relay are brought out on this panel.
  - 2 NO trip contact, 1 NC trip contact, 1 NO Auto reclose contact.
  - Auxiliary supply terminal. (Aux. Supply 230V AC)
- ✓ **Accessories:** Patch Cord, Manual, Dust Cover.

#### ✓ **EXPERIMENT LIST:**

- ✓ 1) To perform experiment for distance protection.