



# भारतीय प्रौद्योगिकी संस्थान (भारतीय खनि विद्यापीठ), धनबाद

धनबाद, झारखण्ड, भारत, पिन-826004

(मानव संसाधन विकास मंत्रालय, भारत सरकार के अधीन राष्ट्रीय महत्व का एक संस्थान)

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD

DHANBAD, JHARKHAND, INDIA, PIN-826004

(An Institute of National Importance under Ministry of H.R.D., Govt. of India)

STORES & PURCHASE SECTION Phone:(0326) 2235678 || Email : purchase@iitism.ac.in || Website : www.iitism.ac.in

No. EE/INS/214/18-19

Date: 17 September 2018

## NOTICE INVITING TENDER

### Subject: Supply & Installation of Kit for Study of Percentage Differential Relay

Indian Institute of Technology (Indian School of Mines), Dhanbad invites quotations for the following to be supplied and delivered in Electrical Engineering Department.

S No	Full Description of items/ store	Qty	Delivery
1	<b>Supply &amp; Installation of Kit for Study of Percentage Differential Relay.</b>  (Detailed Specification is given in Annexure – I)	03 Nos.	At the Earliest

### Tender Schedule

Particulars	Date & Time
<b>Tender Fees</b>	<b>Rs. 590.00 (Five Hundred &amp; Ninety Only)</b>
Bid Security or Earnest Money Deposit	<b>Rs. 10,000.00 (Ten Thousand Only)</b>
Last date and time for submission of tenders	<b>16.10.2018 at 1:00 P.M.</b>
Date and time of opening of tenders	<b>16.10.2018 at 4.00 P.M.</b>

1. You are requested to quote your lowest rates for the supply of above items in the attached format for Financial Bid (Annexure – II)
2. You may send your representative in the office of the undersigned at the scheduled date and time of opening of tender.
3. Tender should be submitted in sealed cover only superscribed with Enquiry No. and due date at the following address only:

*The Deputy Registrar (P&S)*

*Indian Institute of Technology (Indian School of Mines),*

*Dhanbad – 826 004 Jharkhand*



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## Terms & Conditions

- 1) The rates should be quoted for each item separately.
- 2) Conditional offer will not be accepted.
- 3) IIT (ISM) does not issue any Form 'C' or 'D' towards sales tax concessional rate. Hence, full rate of sales tax/VAT, GST applicable should be quoted.
- 4) Since IIT(ISM) Dhanbad is an Indian Institute of Technology and subject item will be used for research, hence benefit of reduced rate of GST should be considered if applicable.
- 5) **Educational discount**, if any, should be clearly mentioned.
- 6) Earnest Money Deposit (EMD): Should be submitted in form of A/C payee demand draft drawn in favor of Registrar, IIT(ISM) and payable at SBI, IIT (ISM) campus branch or any other Bank/ Branch located in Dhanbad and Tender Fees must be paid through SB collect only through the link <https://www.onlinesbi.com/prelogin/collecthome.htm?corpID-272342>, tender cost payments through other modes viz. Cash/DD/NEFT/RTGS etc. shall not be accepted.
- 7) You are requested to submit your quotation strictly as per the specifications mentioned in the NIT.
- 8) Your tender must be valid for **minimum 90 days** from the date of opening of tender.
- 9) Please mention warranty/ guarantee in your offer clearly. Material/ equipment to be supplied must have minimum warranty/guarantee of **12 months**.
- 10) Each page in the bid document must be numbered properly and duly signed & sealed by the bidder on every page of the bid.
- 11) **The items/ materials shall be required to be delivered at EE Department/ Section through Purchase & Store Section, IIT (ISM) Dhanbad at the risk and cost of the tenderer.**
- 12) Unloading and installation shall be the complete responsibility of the supplier.
- 13) The stores are required to be delivered within 30 days. Late delivery may not be accepted.
- 14) The items offered should be of good quality confirming to BIS standards, wherever applicable.
- 15) **Advance payment is not admissible.** Payment shall normally be made within 30-45 days subject to receipt and acceptance & installation of the ordered materials/items PBG and other documents.
- 16) Successful bidders will have to submit Performance Security (PBG) in the form of Bank Guarantee as per the Purchase Order before releasing payment.
- 17) In the event date on which the tender is opened for acceptance is declared to be a holiday, the tenders shall be deemed to remain open for acceptance till the next working day.
- 18) Please send your sealed offer by Regd. Post/ Speed Post/ Courier only along with Courier receipt. By hand delivery of the tender will not be accepted. Tender/ quotation will be received during IIT (ISM) working hours only (i.e. Monday to Friday). *Late or delayed tenders shall be summarily rejected.*
- 19) Any other information that you may like to obtain, you are free to contact IIT (ISM) before submission of tender.
- 20) IIT (ISM) reserves the right to accept and/or to reject any/ all tenders without assigning any reason.

Assistant Registrar



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## Annexure-I

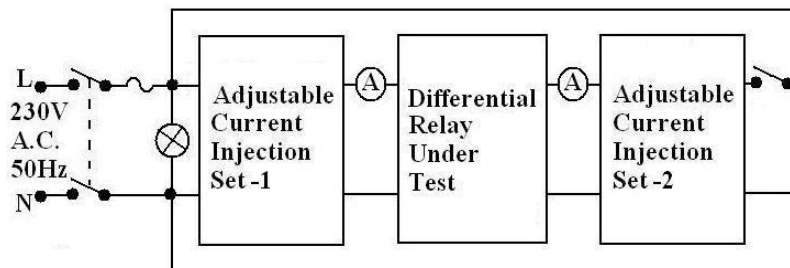
### Technical Specification for Supply & Installation of Kit for Study of Percentage Differential Relay.

Set-up to be supplied, is required to perform the following experiments

- To study the construction of the relay.
- To find the operating characteristics of the relay for two time settings.
- To calculate % bias and determine minimum operating current.

The components of kit are to supplied as per following specification :

#### Block Diagram of Percentage Differential Relay :



Sl. No.	Equipment required for Kit for Study of Percentage Differential Relay	Specification Range	Quantity
1.	Percentage Differential Relay, <u>Make - ALSTOM / AREVA / GEC</u>	Type DDT or equivalent, Electro-mechanical Type with different % bias settings and Time – setting multipliers (TSM).	01 No.
2.	Digital AC voltmeter	0 – 300 V	02 Nos.
3.	Digital AC Ammeter	0 – 5 Amp or Higher, $3\frac{1}{2}$ digit	04 Nos.
4.	Current Injection set Suitable for testing the above relay.	<ul style="list-style-type: none"> <li>Output current (Smoothly adjustable) 0 – 10 Amp.</li> <li>Constant current feature [Regulation <math>\pm 1\%</math> for mains voltage variation of <math>\pm 20\%</math>]</li> <li>Output voltage 25 V Max.</li> <li>Suitable Isolating transformer with single phase variac of suitable rating.</li> <li>Interlock facility with relay [Current Injection set will be automatically OFF if the relay trips].</li> </ul>	02 Nos.





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5.	Double pole (DP) Knife switch / Contactor for switching the relay current for characteristics testing.	Suitable current carrying capacity.	03 Nos.
6.	Indicating Light	As per requirement	As per requirement
7.	Panel Board with suitable terminals, fuse etc.	As per requirement	01 No.
8.	Hard copy operating manual with complete test procedure, circuit details, component specification.	As per requirement	02 Nos.
9.	Engraved / printed circuit diagram on the experimental panel board.	As per requirement	
10.	10 Amp Patch Chords Big Size	Length 100 cm Current carrying capacity 10 A Flexible multi stranded copper wire (8 mm Auto / Vehicle wiring cable) Male socket fitted with heavy duty contact surface spring. Extra Patch Chord insertion facility in male socket.	10 pcs.
11.	10 Amp Patch Chords Small Size	Length 40 cm Current carrying capacity 10 A Flexible multi stranded copper wire (8 mm Auto / Vehicle wiring cable) Heavy Duty contact surface spring of male socket. Extra Patch Chord insertion facility in male socket.	10 pcs.

N.B. : All the accessories and relays have to be housed in a suitable wooden box and wooden cover / Almirah type M.S. box cabinet suitable for table mounting with provision for lock and key arrangement.



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Annexure - II

## Format for Financial Bid

NIT No.: EE/INS/214/18-19

Date: 17 September 2018

Bidders Ref: No.

Date:

GSTIN No.:

**Subject: Supply & Installation of Kit for Study of Percentage Differential Relay.**

Sl. No.	Full Description of Items with (HSN Code/SAC Code)	Qty.	Rate	Amount
		Packing & Forwarding (if any)		
		<b>Total</b>		
		GST		
		Freight (if any)		
		Installation (if any)		
Amount should be in figure as well as word		<b>Grand Total</b>		

### Note:

- 1) Price basis must be FOR IIT(ISM) Dhanbad only.
- 2) All the details must be provided as per prescribed format only.
- 3) Prices quoted by the bidders should include all local taxes, VAT, service tax, GST, HSN Code, SAC Code, livies, transportation cost and insurance costs etc. if any