



भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS

CENTRAL LABORATORY (ELECTRICAL)
Plot No.20/9, Site-IV, Sahibabad Industrial Area,
Sahibabad-201 010, Ghaziabad (U.P.)

Our Ref:CL/DCLE/10:7/BID-04(12-13)

Date: 07 Jan 2013

Subject: SUPPLY OF TEST SYSTEM WITH LOAD FOR MAKING & BREAKING CAPACITY AND NORMAL OPERATION TEST ON SWITCHES

Dear Sirs,

Technical & Commercial Bids are invited for the supply of - **TEST EQUIPMENT FOR MAKING & BREAKING CAPACITY AND NORMAL OPERATION TEST ON SWITCHES**, in separate SEALED covers, which should reach the undersigned latest by **1500 h**, on **30 Jan 2013**, at the following address.

Head (Electrical)
BUREAU OF INDIAN STANDARDS
Central Laboratory
Plot No.20/9, Site-IV,
Sahibabad Industrial Area, Sahibabad,
Distt. Ghaziabad-201010 (U.P.)

2. The detailed specification(s) of the above mentioned equipment(s)/item(s) are given in **Annex-I**
3. Terms and conditions of supply are given in **Annex-II**
4. The technical Bids shall be opened in the **Conference Hall**, of the Central Lab, at the address mentioned above at **1600 h on 30 Jan 2013** and in the presence of such tenderers or their duly authorized representatives, who may like to attend.
5. Please note that the Technical Bids, Commercials Bids and EMD are packed in separate envelopes and each envelope is sealed properly i.e. either wax sealed or with adhesive cello tape on both ends. All the sealed envelopes may be enclosed in a big envelope and sealed. **Unsigned Bids, Unsealed /stapled envelopes** and bids **without EMD** shall be summarily rejected. **No exemption** whatsoever for payment of EMD shall be accorded.
6. THE BIDS SHOULD BE DROPPED IN SPECIFIED TENDER BOX ONLY.
7. The specification and terms & conditions can also be downloaded from www.eprocure.gov.in and BIS Website – www.bis.org.in

Thanking you,

Encls: as above

Yours faithfully,

(U THANU)
Scientist-'F' & Head (Electrical)
Ph: 0120-4177130
E mail id ; cle@bis.org.in

**TEST SYSTEM WITH LOAD FOR MAKING & BREAKING CAPACITY AND NORMAL OPERATION TEST
FOR SWITCHES**

ANNEX-1

**BUREAU OF INDIAN STANDARDS
CENTRAL LABORATORY
EQUIPMENT SPECIFICATION**

NAME OF THE EQUIPMENT : TEST SYSTEM WITH LOAD TO CARRYOUT NORMAL OPERATION TEST AND MAKING & BREAKING CAPACITY TEST ON SWITCHES OF RATINGS 6 & 16 AMP (AS PER CLAUSE 18 & 19 OF IS 3854:1997)

PROPOSED FOR BIS LABS : CL ELECTRICAL

TOTAL QUANTITY REQUIRED : One

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TECHNICAL SPECIFICATION FOR TEST SYSTEM TO CARRYOUT NORMAL OPERATION TEST AND MAKING & BREAKING CAPACITY TEST ON SWITCHES OF RATINGS 6 & 16 AMP (AS PER CLAUSE 18 & 19 OF IS 3854:1997)

1. The Equipment shall be capable to test the switches for Making & Breaking Test (Cl. 18 of IS 3854:1997) at controlled / adjustable Number of Operation, Speed, Voltage, Current and Power Factor. One Operation consists of “transfer of the moving contacts from one operating positions to another”.
2. The Actuating Mechanism shall have controlled speed ranging from 5 to 50 operation / minute.
3. After completion of Making & Breaking Test the equipment shall be capable of switching over to Normal Operation Test (Cl. 19 of IS 3854:1997) manually at controlled / adjustable Number of Operation, Speed, Voltage, Current and Power Factor.
4. TEST VOLTAGE, CURRENT AND POWER FACTOR:
 - i) For Normal Operation Test – Test voltages are 230 V, 240 V and 250 V, ac and Test currents are 6 Amp. and 16 Amp., ac, at Power Factor 0.6 ± 0.05 .
 - ii) For Making & Breaking Test - At 1.1 times the Test Voltages stated at Sl. No. 4, i) and 1.25 times the Test Currents stated at Sl. No. 4, i) at Power Factor 0.3 ± 0.05 .
 - iii) The tolerance for the test voltage is + 5 % & - 0 %.

The system shall put the switches ‘ON’ and ‘OFF’ for adjustable time-period for the operation i.e. 50 % ‘ON’ & 50 % ‘OFF’ for Making & Breaking Test and 25 % ‘ON’ & 75 % ‘OFF’ for Normal Operation Test as per the following table:

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5.

Rating of switches of all varieties	Operation per minute	'ON' time	'OFF' time	Remarks/ CI reference
Making & Breaking Test				
6 Amp	30	2 Second	2 Second	See CI 18 of IS:3854-1997
16 Amp	15	4 Second	4 Second	
Normal Operation Test				
6 Amp	30	1 Second	3 Second	See CI 19 of IS:3854-1997
16 Amp	15	2 Second	6 Second	

6. The 'ON' period shall be (25 % +5% -0) of the total cycle and the 'OFF' period shall be (75 % -5% +0) for normal operation test.
7. The test system should be capable to monitor / control / display / each switch separately at the time of operation / completion of test
8. The system should be capable to stop testing after completion of number of operation at ' OFF ' position only.
9. The apparatus shall have the provision to mount / fix the Switches as in normal use without using special type of tools.
10. The system should be safe from dust, corrosion and electric shock and have adequate mechanical strength.
11. The Equipment should have Digital Ammeter, Voltmeter, Power Factor meter and Counter for each switch separately of accuracy class 1.0. These instruments shall be detachable / portable to facilitate their calibration/ repair/ replacement.
12. The test system should be capable to test simultaneously 6 Nos. of switches for the 6 Amp rating or 3 Nos. of switches of 16 Amp rating in a three phase balanced load system.
13. The system should be capable to test the samples of different ratings (Current / Voltage) and types (Flush type, Surface type and Press fit type).
14. The System shall have manual controls for carrying out Normal Operation and Making & Breaking Test. The system should comply with all the provisions of Cl. 18 & 19 of IS 3854:1997

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- 15.** The supplier shall provide all the literatures related to the system such as Operation / Instruction Manual, Circuit Diagram, trouble shooting etc.
- 16.** All measuring instruments shall be supplied with calibration certificates from NABL approved Calibration Agency.
- 17.** Service repair backup of the test system should be available in / around Delhi.
- 18.** The supplier of this system shall give extended warranty of at least Two Years in addition to the warranty period of ONE Year.

**TEST SYSTEM WITH LOAD FOR MAKING & BREAKING CAPACITY AND NORMAL OPERATION TEST
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ANNEX-II

TERMS & CONDITIONS

1. The BUREAU gives FIRST PREFERENCE in its purchase to goods bearing ISI CERTIFICATION MARK and second preference to those which conform to the relevant Indian Standard Specifications.
2. The delivery of the stores is required to be made within 30 days of receipt of order. If, it is not possible for you to effect delivery within the period, you are required to specify the date by which you can guarantee delivery of the stores.
3. The **Technical & Commercial Bids should be sealed and sent separately in sealed envelopes.** Such Bids shall remain valid for a period of 90 days from the date of opening.
4. Quotations/Bids, qualified by indefinite expressions as "Subject to immediate acceptance, Subject to prior sale" etc. and incomplete quotations are liable to be summarily rejected.
5. The Bids should clearly give break-up of cost of each equipment. The rates quoted should separately indicate Basic Cost, Excise Duty, Sales Tax, P&F charges, Freight, Insurance, VAT etc. Rates quoted should specifically state Sales Tax, Excise Duty or any other taxes/charges. In absence of any such stipulation, it will be presumed that the prices include all such charges and no claim for the same shall be entertained. **Form C/D shall not be provided by BIS.**
6. Each tender document shall be accompanied with **EMD of 3% of cost of the equipment.** The demand draft for the EMD amount shall be drawn in favour of BUREAU OF INDIAN STANDARDS payable at Sahibabad/Ghaziabad. The sealed envelope containing EMD should be superscribed "**EMD**" and **stapled separately with the envelope containing the commercial Bids.**
7. BIS shall pay **90%** of the cost after satisfactory installation & commissioning and the Balance of **10% as contract performance security** would be paid after expiry of warranty period. However other terms of payment for contract performance security can also be considered, if so stated clearly.
8. The **warranty period** of the equipments **shall be at least 1 year and be stated in the** Technical Bids.
9. Please mention clearly in the Technical Bids regarding address of **arrangements for service/repair** of the equipments are available. Suppliers having such arrangements near Delhi/Ghaziabad would be preferred.
10. All goods received would be subjected to inspection, by BIS before (Pre Delivery Inspection) and after receipt or commissioning (as applicable) and the decision of BIS shall be binding. Rejected items/goods/stores shall be removed by the supplier at his own cost and risk, within 30 days of receipt of notice for the removal of such goods, and no liability, whatsoever, on the Bureau shall be attached for the rejected/disapproved goods/items/stores.
11. The Bureau reserves the right to accept or reject summarily and or all tenders in whole or part without assigning any reason whatsoever.
12. The Bureau takes no responsibility for delay, loss or non-receipt of tenders after dispatch.
13. **In case of non compliance with the Terms & Conditions of the contract, the Bureau reserves its right to:**
 - a) Cancel/rescind/revoke the order if supply is not made in time and is not conforming to the required specification.
 - b) Impose Penalty up to 1% of the total value of the order for a delay of every seven days after the schedule date subject to the ceiling of a maximum of 10% of the total value of the order.
14. All questions, disputes or differences arising under, out of or in connection with this tender enquiry shall be subject to the exclusive jurisdiction of Delhi/ Ghaziabad Courts.
