



भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS

पश्चिम क्षेत्रीय : 'मानकालय', ई-9, एम. आय. डी. सी. रोड नं. 8,
कार्यालय अंधेरी (पूर्व), मुंबई - 400093.
Western Regional : 'Manakalaya', E-9, M.I. D.C., Road No. 8,
Office Andheri (East), Mumbai 400093

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Website]

तार : मानकसंस्था
Grams : Manaksanstha
ई मेल] wro@bis.org.in
e-mail]

Our Fax No. 022 2826 2057

Our Ref : WROL/ 3 :40

Subject : Inviting Sealed Quotation for supply of

"Normal Operation as well as Making Breaking Capacity Test Equipment"

To,

Mumbai,
2007 03 29

Page 1 of 2

Manufacturers & suppliers of **"Normal Operation as well as Making Breaking Capacity Test Equipment"** used for **Testing of Switches for Domestic and Similar Purposes, Ref : IS 3854 : 1997 (including three amendments)**

Dear Sirs,

Technical & Commercial Bids are invited by Bureau of Indian Standards for the supply of - **Normal Operation as well as Making Breaking Capacity Test Equipment"** used for **Testing of Switches for Domestic and Similar Purposes**, in SEPARATE SEALED covers, which should reach the undersigned latest by 1700 h, on **2 May 2007**, at the following address.

Scientist F & Head
WRO Laboratory, "Manakalaya"
Bureau of Indian Standards
E-9, M.I.D.C., Behind Marol Telephone Exchange.
Andheri (East),
Mumbai 400 093

1. The detailed specification(s) of the above mentioned equipment(s)/item(s) are given in Annex-I
2. Terms and conditions of supply are given in **Annex-II**
3. The sealed envelope containing EMD should be superscribed **"EMD"** and stapled separately with the envelope containing Technical Bid or shall be put in the technical bid document.
4. First, only the Technical Bids shall be opened in the chamber of Sc. F & Head, WRO Laboratory at the address mentioned above at **1530 h on 3 May 2007** and in the presence of such tenderer/s or their duly authorized representatives, who may like to attend.
5. Please note that the envelopes containing **Technical & Commercial Bids are sealed separately and properly i.e. either wax sealed or with adhesive cello tape on both ends. Unsealed and stapled envelopes shall not be accepted.**
6. The specification and the General terms & conditions of the supply may also be downloaded from BIS Website at www.bis.org.in.
7. The bidder should submit along with his/her offer, the tender document enclosed with his/her signature on each page of the same as a token of acceptance of the terms and conditions.



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तार मानक संस्था
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8. It may please be noted that non-fulfilment of any of the requirements of this tender document may result in rejection of the submitted tender/quotation

Thanking you,

Yours faithfully,

B.R. Kulkarni

(B.R. Kulkarni)
Sc.E & OIC Purchase
Ph: 022-2832 7856

Encls: as above

c.c : BIS WRO Notice Board

: BIS Web Site

: WRO Accounts & Admn Section for information only : The equipment proposed to be procured is under WRO Lab Modernisation Programme

मुख्यालय : मानक भवन, 9 बहादुर शाह जफर मार्ग, नई दिल्ली 110002

Headquarters : Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002.

ANNEX-I

BUREAU OF INDIAN STANDARDS
(WRO Laboratory - Purchase Cell)

EQUIPMENT/SPECIFICATION:

PAGE 1 OF 3

NAME OF THE EQUIPMENT : Normal Operation as well as Making Breaking Capacity Test Equipment used for Testing of Switches for Domestic and Similar Purposes,
Ref : IS 3854 : 1997 (including three amendments)

WHERE REQUIRED : ELECTRICAL LAB, BIS WESTERN REGION

TOTAL QUANTITY REQUIRED : ONE UNIT

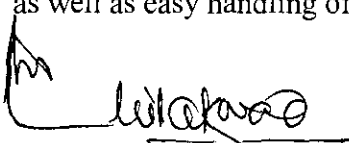
PURPOSE : Testing of Switches for Domestic and Similar Purposes
Ref : IS 3854 : 1997 (including three amendments)

Details of Specification : A) Basic Testing Device /Unit (minimum requirements)

The machine shall be capable of

- i) Operating on normal supply of voltage of 240 V AC, Single Phase
- ii) Testing three switches at a time, i.e. mounting arrangement shall be made for mounting six switches at a time of same type.
- iii) Testing Single Pole, Two Pole, Two-way switches and also Tumbler, Rocker, Push Button, Cord Operated switches of Surface/Flush/ Semi-flush mounting type.
- iv) Measuring ON - OFF i.e. operating cycles through digital counter capable to measure upto 5 digits, i.e. 0 to 99999
The counters shall be such that in the event of shorting of the switch or open circuiting of the switch under test, the counters will stop further counting individually.
- v) Electronic time controller to adjust operating cycle time from 0.5 sec to time in seconds/minutes/hours required during testing of switches.
- vi) adjusting operating time independently for ON as well as OFF operation.
The device for operation of switches for ON - OFF shall be separate and shall be such that it should be possible to exert required force to operate the same.
It shall be possible to adjust the operating time in three ways :
 - a) ON - OFF time shall be equal,
 - b) ON period 25 % + (0 to 5) % of the total cycle and
 - c) OFF period 75 % - (0 to 5) % of the total cycle.For rate of operation see 'C' below
- vii) Other necessary controls and indicators - cum - controllers for safe use as well as easy handling of the equipment

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(M.D. Chitale)
Sec. E & OLC Electrical

EQUIPMENT/SPECIFICATION:

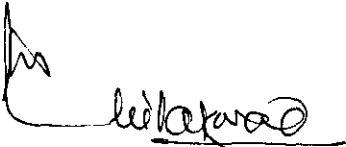
**Normal Operation as well as Making Breaking Capacity Test Equipment
for Testing of Switches for Domestic and Similar Purposes
Ref : IS 3854 : 1997 (including three amendments)**

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B) Load Requirements (Load Panel)

- i) Voltage : 230V/240V/250V AC & shall have means to give voltage upto 110 % of the rated with suitable VA capacity.
- ii) Current : Shall be suitable to give 6/10/16/20/25/32A (basic loads in multiples of 1A, 2A, 4A, 8A, 16A & 32A in suitable sets may be designed which can be added as per requirement of the switches under test) with a power factor of 0.6 ± 0.05 lag. Load shall be arranged such that it shall be possible to give 6A load at rated voltage of either 230/240/250V to three switches of the same rating independently (similar is the requirement for other ratings too).
- iii) The load panel shall be such that it shall be possible to raise the current to 130 % of the rated as indicated above. This increased load current shall be at a voltage of 110 % of the rated and at a power factor of 0.3 ± 0.05 lag.
- iv) The load shall be such that resistors and inductors are not connected in parallel, except that if an air-core inductor is used, a resistor taking approximately 1 % of the current through the inductor is connected in parallel with it. Iron-core inductors may be used provided the current has substantially sine-wave form.
- v) For X rated switches, incandescent lamp as given in IS 3854 : 1997 shall be provided. Switch with a rated current not exceeding 16 A except switches of pattern numbers 3 & 03 and momentary contact switches, should have fluorescent lamp current rating equal to the rated current (Fig. 14).
- vi) The panel shall have following meters mounted on it:
 - a) Digital ac volt meter : Range 0 - 600 V; LC 0.1V, Accuracy 1 % or better
 - b) Digital ac ammeter : Range 0 - 100 A; LC 0.1 A; Accuracy 1 % or better
 - c) Digital power factor meter : Range 0.3 lead to 0.3 lag, LC 0.05 Hz.

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(M. D. Chitalewad)

**Normal Operation as well as Making Breaking Capacity Test Equipment
for Testing of Switches for Domestic and Similar Purposes**

Ref : IS 3854 : 1997 (including three amendments)

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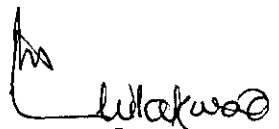
C) Rate of Operation :

- a) 30 operations per minute if the rated current does not exceed 10 A
- b) 15 operations per minute if the rated current exceeds 10 A, but is less than 25 A.
- c) 7.5 operations per minute if the rated current is more than 25 A.

D) Drawings and Guiding Figures:

Relevant drawing and figures from IS 3854 : 1997 as well as detailed description of the test is enclosed (Fig 10, Fig 13 & Fig 14)

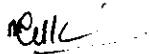
- E) The successful bidder shall submit electrical drawing as well as operational instruction manual for the above equipment.**



(M.D. Chilakwad)
Sc.E & OIC, Electrical

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 equipment 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 equipment.
3. **The Technical & Commercial Bids should be sealed in separate envelopes and sent in sealed envelope. 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.
6. Each tender document shall be accompanied with **EMD amount of Rs 10,000.00**. The demand draft for the EMD amount shall be drawn in favour of **BUREAU OF INDIAN STANDARDS** payable at Mumbai. The sealed envelope containing EMD should be super scribed "**EMD**" and stapled separately with the envelope containing the **Technical Bid or shall be put in the technical bid document**.
7. Bid security (EMD) of the successful bidder shall be refunded on receipt of the equipment.
8. Bid security (EMD) of unsuccessful bidders shall be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after award of the contract.
9. 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.
10. The warranty period of the equipments may be stated clearly in the Technical Bids. In case the same is not found stated, it will be presumed that warranty period as mentioned in their respective specifications of the quotation document (if specified), is applicable.
11. Please mention clearly in the Technical Bids regarding address of **arrangements for service/repair** of the equipments is available. Suppliers having such arrangements near Mumbai would be preferred.



(B.R. Kulkarni)
Sc.E & OIC Purchase

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12. All goods received would be subjected to inspection, by BIS before or after receipt or commissioning (as applicable) and the decision of BIS shall be final & 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.
13. The Bureau reserves the right to accept or reject summarily and or all quotations/s in whole or part without assigning any reason whatsoever.
14. The Bureau takes no responsibility for delay, loss or non-receipt of quotations after despatch.
15. 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 specifications.
 - 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.
16. All questions, disputes or difference arising under, out of or in connection with this tender enquiry shall be subject to the exclusive jurisdiction of Mumbai Courts.
17. The bidder should submit along with his/her offer, the tender document enclosed with his/her signature on each page of the same as a token of acceptance of the terms and conditions of the tender document.



(B.R. Kulkarni)
Sc.E & OIC Purchase