 <b>ENQUIRY</b>		<b>Bharat Heavy Electricals Limited</b> (A Government of India undertaking) HIGH PRESSURE BOILER PLANT PURCHASE DEPARTMENT/VALVES TIRUCHIRAPPALLI-620 014.		Phone: 0431-2577123/7096 FAX : 0431-2520383 Email: <a href="mailto:nagarajank@bheltry.co.in">nagarajank@bheltry.co.in</a> <a href="mailto:vramki@bheltry.co.in">vramki@bheltry.co.in</a>	
		ENQUIRY NO.	DATE	DUE DATE FOR QUOTATION	
		EN:SQN1497	21.02.2013	22.03.2013	
Please quote Enquiry No., and due date in correspondences This is only a request for quotation and not an order.					
SL.NO.	MATERIAL CODE DESCRIPTION	UNIT	QUANTITY	DELIVERY SCHEDULE	
	DRAWING NO TDC NO./Specification			QUANTITY	DATE
	Supply of LIMIT SWITCHES & POSITION TRANSMITTER As per the purchase specification & drawing enclosed.  <u>Date , Time &amp; Venue of          tender</u> A) Technical Bid opening : 22.03.2013 at 14:30 IST at Valves Purchase Conference Hall , Building No 24, BHEL Tiruchirappalli- 620014, Tamil Nadu ,India. B) Price Bid will be opened only for those vendors whose offers are technically suitable. The intimation regarding price bid opening will be informed later.			<b>AS PER ENCLOSED ANNEXURE-1</b>  <u>Annexure:</u> 1. Special Conditions of contract. 2. Terms & Conditions for Indigenous/Import 3. Required Delivery: As mentioned in our annexure-1  <u>Note:</u> Only manufacturers are requested to quote for this tender. If Trader or Agent are quoting their offer, "Valid authorization letter from original manufacturer are required along with techno-commercial offer."	
The rate of Excise Duty and Sales Tax, Prevalent on the date of quotation, should be clearly indicated in the quotation itself. If these particulars are not provided, the quotation is liable for rejection. Please, submit your lowest quotation in duplicate subject to our terms and conditions overleaf, for the above materials, so as to reach us on or before the due date by 2:00 P.M. Quotation will be opened at 2:30 P.M. on the due date in the presence of tenderers who may like to present. Late tenders are liable to be rejected.				Yours faithfully,  For Bharat Heavy Electricals Ltd (Valves Purchase)	

**ANNEXURE-1**  
**OPEN TENDER ENQUIRY : EN-SQN1497**

<b>Enquiry Sl no</b>	<b>Material</b>	<b>Material Description</b>	<b>Spec No/Rev No</b>	<b>Enquiry Quantity</b>	<b>Delivery Start</b>	<b>Delivery reqd for BHEL</b>
1	964608700000	LS-1LS244-4PG-F1-B1,2NO+2NC+con. HAN7D	VL/STDC/QN/024/02	<b>1500</b>	6-8 weeks from the PO date	250 unit per month
2	974600710000	LIMIT SWITCH (HYD) 1NO + 1NC	VL:STDC:QN:001/03	<b>100</b>	6-8 weeks from the PO date	50 unit per month
3	974601070000	POSITION TRANSMITTER - QCNRV	VL:STDC:QN:004/04	<b>300</b>	6-8 weeks from the PO date	50 unit per month



# Bharat Heavy Electricals Ltd.

( A Govt. of India Undertaking )

Valves purchase,  
Tiruchirappalli - 620 014. India

PHONE: 91-0431-257 7123, 257 7096  
FAX: 91-0431-252 0383

EMAIL: [nagarajank@bheltry.co.in](mailto:nagarajank@bheltry.co.in)

## IMPORT ENQUIRY TERMS AND CONDITIONS

### I OFFER

Offer in ENGLISH LANGUAGE and in a SEALED COVER SUPERSCRIBING the Enquiry Number and the due date shall be submitted addressed to

THE SR. MANAGER  
PURCHASE VALVES  
BHARAT HEAVY ELECTRICALS LIMITED  
HIGH PRESSURE BOILER PLANT  
TIRUCHIRAPPALLI - 620 014  
TAMIL NADU, INDIA

Offers should be firm for net FCA/FOB Nearest AIR / SEA Port price and C & F Chennai Port price, indicating the shipping specifications and the earliest delivery in respect of offers from overseas suppliers.

### II: DOCUMENTS

- (i) Offers should be accompanied by detailed technical literature, Catalogue and detailed dimensional drawings in ENGLISH, or otherwise, the offers will not be considered.
- (ii) In case overseas suppliers route their offer through their accredited selling agents, a letter of authority should be furnished mentioning the name and address of their selling agents who are authorised to bid, negotiate and conclude a Contract on their behalf.

### III SPARES:

The tenderer should quote separately for spares that are required for two years trouble free operation. The spares offer should accompany the offer of main equipment; otherwise the quotation will be overlooked.

### IV VALIDITY:

The offers for main equipment and spares shall be kept open for acceptance for 200 days (Two hundred days) from the date of opening of the tender.

### V TEST CERTIFICATES, OPERATING AND MAINTENANCE MANUALS:

The tenderer shall clearly mention in their offer, that the Test Certificate and Operating and Maintenance Manuals, etc., as called for in the technical specification, in the required number of copies will be provided at no extra cost. If any amount is payable as extra, the same shall be indicated separately in the offer.

VI

**Terms of Payment**

In the event of an order, the purchaser will arrange for 100% payment against presentation of documents through Bank.

VII **GENERAL:**

- (i) Preference will be given to suitable indigenous or ex-stock imported offers failing which imported offers from incoming consignment against the indigenous supplies "Stock and sale licence" will be accepted. If "stock and sale licence" is not available with the indigenous suppliers, the same shall be indicated in their offer.
- (ii) **Bank Guarantee:** The supplier in the event of an order should furnish a Bank Guarantee from an approved Bank at no extra cost in a proforma which will be Supplied to the Supplier, along with the order, for an amount equivalent to 10% of the value of the contract. The Bank Guarantee should remain in full force and effect during the period that would be taken for successful completion of the contract and shall continue to be enforceable till 12 months from the date of receipt of consignment at purchaser's site or 18months from the date of last shipment at the Port of Delivery whichever is earlier.

VIII **LD / PENALTY AND INTEREST ON ADVANCES FOR DELAY IN DELIVERY:**

(i) **LIQUIDATED DAMAGES:**

It is clearly understood among the parties to the contract that 'Time is the essence of the Contract. Therefore, the delivery of the goods specified in the purchase order should be made within the time prescribed. Where the seller supplies or despatches the goods beyond the delivery period specified the purchaser will have no obligation to accept the goods. If accepted liquidated damages at the rate of ½ % of the value of goods delayed for each week of delay to the maximum of 10% or part thereof will be levied without prejudice to any other relief of compensation due to the purchaser under any other condition of this contract.

(ii) **RISK PURCHASE:**

Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefore. The supplier shall be liable for any loss, which the purchaser may sustain by reason for such risk purchases in addition to penalty at the rate mentioned in "clause IX (ii)" above.

(File: Enq-Anx-Import)



**Bharat Heavy Electricals Ltd.**  
( A Govt. of India Undertaking )  
VALVES PURCHASE,  
TIRUCHIRAPPALLI- 620 014. INDIA



PHONE: 91-0431-257 7123, 257 7096

EMAIL: [nagarajank@bheltry.co.in](mailto:nagarajank@bheltry.co.in)

FAX: 91-0431-252 0383

[vramki@bheltry.co.in](mailto:vramki@bheltry.co.in)

**INDIGENOUS ENQUIRY**

**TERMS AND CONDITIONS**

**1. QUOTATIONS :**

- a. Each tender should be sent in double cover, should be sealed and super scribed with correct Tender No., item of supply and due date of opening. The outer cover should only bear the address of this office and should not have any indication that a tender is within. Two or more quotations should not be sent in one cover but the quotation against each tender should be sent separately to avoid confusion. Tender should not be addressed to any individual's name but only by designation.
- b. Tenders should be free from CORRECTION AND ERASURES. Corrections if any must be attested. All amounts shall be Indicated both in words as well as figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.
- c. Price should be F.O.R. BHEL TRICHY inclusive of risk in transit and remain valid for 200 days from date of opening.
- d. If any Sales Tax is payable as extra to the quoted price, it should be specifically stated in quotation along with CST & T.N.G.S.T No. failing which the purchaser will not be liable for payment of Sales Tax. Our T.N.G.S.T No. 3550005 Dated 01-04-1995 C.S.T. No. 259383 Dt. 11.06.1991.
- e. No revision of prices will be entertained after tenders are opened.
- f. Manufacturer's name, Trade Mark or Patent No. if any should be specified. Illustrative leaflets giving technical particulars are required along with quotation wherever necessary.
- g. Products with I.S.I. certification marks will be preferred.
- h. The purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any tender in part or full without assigning any reason whatsoever.

**2 SAMPLES :**

Wherever possible samples should be submitted separately whether specifically requested or not so as to reach the purchaser on or before its due date of the enquiry. They should be clearly marked with the enquiry No. and the date on the outside cover to facilitate identification.

**3 PACKING AND MARKING:**

The supplier shall arrange for securely protecting and packing the stores to avoid lose or damages during transit.

**4 TERMS OF PAYMENT :**

100% Payment will be made after 45 days on acceptance & satisfactory receipt of materials. Where required by the purchaser, the successful tenderer must send the operation and maintenance manuals, test certificates, drawings, etc., for the materials should be sent immediately after dispatch of the materials and a statement to that effect should be made in the Invoice. Failure to comply with this provision will result in delay in payment of the bills. Goods dispatched either by V.P.P. or by thro' document presented through bank will not be accepted unless agreed to by the Purchaser.

The Original Excise Duty Gate Pass or certified extract form Excise Duty Ledger should accompany the material. A Photostat copy of the above gate pass for each delivery challan should be submitted along with the original bills submitted directly to BHEL Department.

**5 LIQUIDATED DAMAGES:**

It is clearly understood among the parties to the contract that 'Time is the essence of the Contract. Therefore, the delivery of the goods specified in the purchase order should be made within the time prescribed. Where the seller supplies or despatches the goods beyond the delivery period specified the purchaser will have no obligation to accept the goods. If accepted liquidated damages at the rate of ½ % of the value of goods delayed for each week of delay to the maximum of 10% or part thereof will be levied without prejudice to any other relief of compensation due to the purchaser under any other condition of this contract.

**6 RISK PURCHASE:**

Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefore. The supplier shall be liable for any loss, which the purchaser may sustain by reason for such risk purchases in addition to penalty at the rate mentioned in clause 6 above.

**7 PREFERENTIAL DELIVERY :**

It should be noted if a contract is placed on a higher tender as a result of this invitation to tender in preference to the lowest acceptable offer in consideration of the earlier delivery, the seller will be liable to pay to the purchaser the difference between the contract rate and that of the lowest acceptable tender on the basis of final price F.O.R. destination, including all elements of freights, sales tax, duties and other incidents, incidental in case of failure to complete supplies. In terms of such contract within the date of delivery specified in the tender and incorporated in the contract.

**8 MODVAT / CREDIT:**

If any Excise Duty is payable, the chapter head/sub-head reference and the rate of the duty should be quoted. If the tender is availing MODVAT credit for his input materials, the effect of proforma invoice should be passed on to the purchaser; Tenderer under MODVAT shall be preferred.

**9 GENERAL :**

The Purchaser reserves the right to split up the tender and place order for individual items with different tenders and also increase or decrease the quantity.

Any other conditions which might have been quoted by the seller and are in contravention to the terms prescribed in the order and which have not been specifically accepted in by Purchaser will not be applicable to the contract.

File : Anx-enq-ind-txt



# ***Bharat Heavy Electricals Ltd***

**(A.Govt.of India Undertaking)**

**Valves Purchase, Tiruchirappalli- 620 014. INDIA**

Phone : 91- 0431-2577123

e-mail : nagarajank@bheltry.co.in

: 91- 0431-2577096

vramki@bheltry.co.in

Fax No: 91- 0431-2520383

## **Scope of supply & SPECIAL CONDITIONS OF ENQUIRY**

**EN-SQN1497**

**Date:21.02.2013**

We require the Limit switches & Position transmitter as per the technical delivery conditions indicated against annexure 1 for our production. Kindly send your competitive offer immediately for our consideration. The tender will be opened positively **on 22.03.2013 at 14.30 IST.**

### **1. The offers are invited in two parts.**

- a) Techno commercial bid covering Technical Conditions, Delivery conditions, acceptance of all our commercial conditions and a copy of unpriced bid. **(Please submit a separate envelope super scribing the enquiry no for techno commercial bid).**
  - b) Price bid for each Enquiry Sl no. **(Please submit a separate envelope super scribing the enquiry no for price bid.)**
2. Kindly quote your rates on firm price basis with the offer validity of minimum 200 days from the date of tender opening. The same shall be per unit basis for each item and on FOR, BHEL, Trichy for indigenous vendors. The offer shall be on FOB/FCA basis In case of foreign vendors.
  3. The quantities indicated are approximate only for our annual requirement.
  4. Our delivery requirement is indicated in the annexure for each item. Offers not meeting this delivery will be consider after applying the loading factor @ 0.5% per week for the delays.
  5. Prices shall be firm till entire execution of the Purchase Order. Price variation Clause is not acceptable.
  6. Technically acceptable offers alone will be considered for Price-Bid opening.
  7. Supplier's have to submit all type test reports/ inspection reports for each enq sl nos as per our Purchase specifications. And deviations with respect to our specification should be clearly mentioned in Techno commercial Bid.
  8. Delivery schedule shall be strictly as per BHEL requirements only which is indicated in the Enquiry / Purchase Order sheet that will be issued. In case of delay in delivery, beyond the end delivery dates given in the Purchase Order sheet, Liquidated Damage clause will be applicable at the rate of 0.5 % per week and subject to a maximum of 10% of undelivered portion of the item value.
  9. One copy of Test certificates/non-negotiable documents shall accompany the dispatches.

Contd...2...

**10. PAYMENT TERMS:-****For indigenous vendors:-**

100% payment will be made after 45 days on acceptance of material at BHEL Stores. No other Payment term is acceptable to BHEL.

**For Foreign vendors:-**

100% Payment against this contract will be made to the seller on collection basis. You have to send the documents to our banker M/S. State Bank of India, Kailasapuram, Tiruchirapalli-620014.

The original clean HAWB( in case of Air)/Original Bill of Lading( In case of Ship) issued by our forwarding agency ,original invoice, Packing list with your signature, Certificate of origin, Test certificates as per respective purchase specification Etc. are to be sent in triplicate to our bankers.

**BHEL is not operating Advance payment for all vendors.**

11. The delivery of the item shall be strictly as per BHEL's enquiry/ Purchase orders. In case of urgency, the delivery period have to be altered to meet BHEL's production plan.
12. Confirmation for compliance is to be given in the offer for all the conditions specified in the respective Purchase specification.
13. BHEL reserves the right to increase / decrease the enquired quantities or to delete the enquired quantities for any of the items. Also BHEL reserves the right to split the enquired quantity among more than one tenderer and place orders accordingly in any proportion, based on BHEL's requirements and supplier's Capability in terms of delivery and quality.
14. Every dispatch of material shall accompany the packing list, detailing the Numbers of items. An advance Copy of dispatch details shall be furnished to Purchase/Valves/BHEL/Tiruchy-14.
15. The materials are to be dispatched with proper identification of material code for each item and proper packing to avoid transit damages.
16. BHEL reserves the right to finalize the tender either through **price bid opening** or **through Reverse Auction route**. A typical copy of "Business Rules and Conditions" of Reverse Auction is enclosed herewith for information and reference.
17. Kindly quote for enclosed specification or equivalent that meets Purchase specification (copy attached).
18. If the supply is short the extra cost to BHEL in replenishing the short fall will be debited to the vendor.
19. In addition to all the above conditions, BHEL standard terms & conditions given as a separate annexure shall also be applicable to the extent they are not superseded by the above conditions.
20. **Non-adherence to these special conditions of enquiry and BHEL's standard terms and conditions will lead to disqualification of offer.**

**GENERAL TERMS AND CONDITIONS OF Reverse Auction:-**

Against this enquiry for the subject item/system with detailed scope of supply as per enquiry specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING ON INTERNET.

- a. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- b. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
- c. BHEL will inform the vendor in writing in case of reverse auction, the details of Service Provider to enable them to contact & get trained.
- d. Business rules like event date, time, and Start price, bid decrement, extensions etc. also will be communicated through service provider for compliance.
- e. Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse auction. Without this, the vendor will not be eligible to participate in the event.
- f. BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the vendor to enable them to fill-in the price and keep it ready for keying in during the Auction.
- g. Reverse auction will be conducted on scheduled date & time.
- h. At the end of Reverse Auction event, the lowest bidder value will be known on the network.
- i. The lowest bidder has to Fax the duly signed Filled-in prescribed format as provided on case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail.
- j. Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL as per prevailing procedure.

**Along with the offer (Technical/Commercial bid and price bid in two separate sealed covers) you are requested to indicate from whom you are going to source the components also send a typical type Test Certificate for the components from that maker and Authorization letter. Without the type Test Certificate, your offer may not be considered for further processing's.**

**Note\***- Supplier should provide the filled Annexure-3A and Bids should be as per annexure-3B & 3C

**V.RAMAKRISHNAN**  
**Senior Manager / Purchase/Valves**

**BHARAT HEAVY ELECTRICAL LIMITED**

**TIRUCHIRAPALLI – 620014 – INDIA**

---

**TECHNICAL DELIVERY**

**LIMITE SWITCH**

**VL/STDC/QN/001/REV03**

**CONDITION FOR**

**FOR QCNRV**

**PAGE 01 OF 03**

**(HYDRABAD TYPE)**

---

**TECHNICAL REQUIREMENT:-**

**A) WETHER PROOF ENCLOSURE :**

IP 65 inclosure, snap action type. The contacts shall be made of silver alloy. The breaking capacity of the contact shall be 30 amps at 500 volts, 50 Hz AC supply, 0.62 amps (non inductive load) at 220 volts DC supply and 0.28 amps (inductive load ) at 220 volts DC supply.

**B) TEST CERTIFICATES FOR THE FOLLOWING SHALL BE ATTACHED:**

- i) Operating check
- ii) HV & IR Measurement
- iii) Type test certificate for the life cycle test.

**C) Component code details**

Comonant Code	Contacts Details
974600710000	1 NO+ 1 NC
964608690000	1 NO+ 1 NC
974604510000	2 NO+ 2 NC
964608670000	2 NO+ 2 NC

**Reference purpose only. :** Micro switch Type BZ-2R244-A2 with roller lever  
YAMATAKE HONEYWELL TYPE AD 5721R-J

**RECOMMEDED SUPPLIER:** Yamatake Honeywel. Japan.

Honeywell, UK.

Honeywell, USA

---

PREPARED BY

CHECKED BY

APPROVED BY

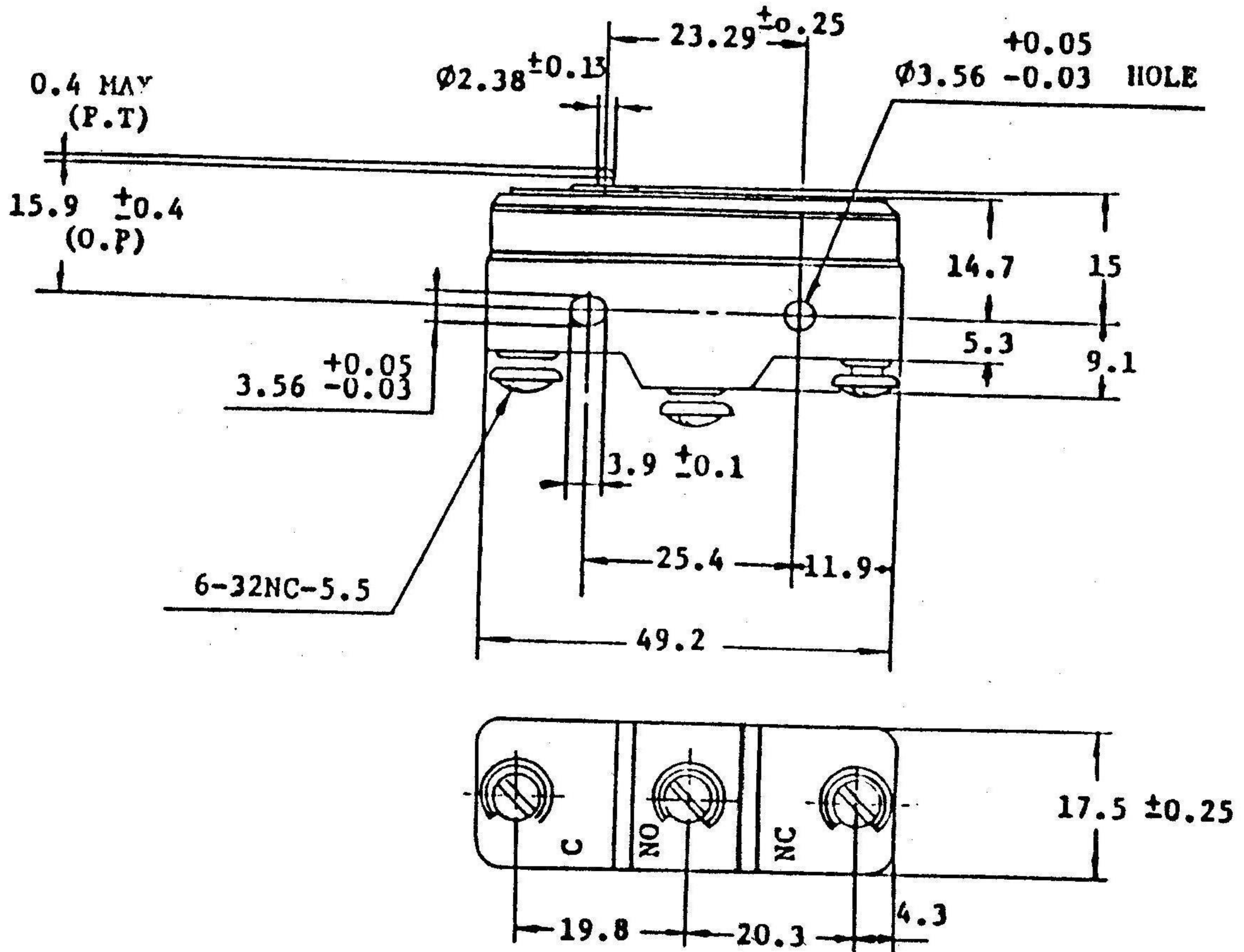
V.ARUMUGAM

PRAMANIKARAN

S.NATARAJAN

Date:02.04.2009

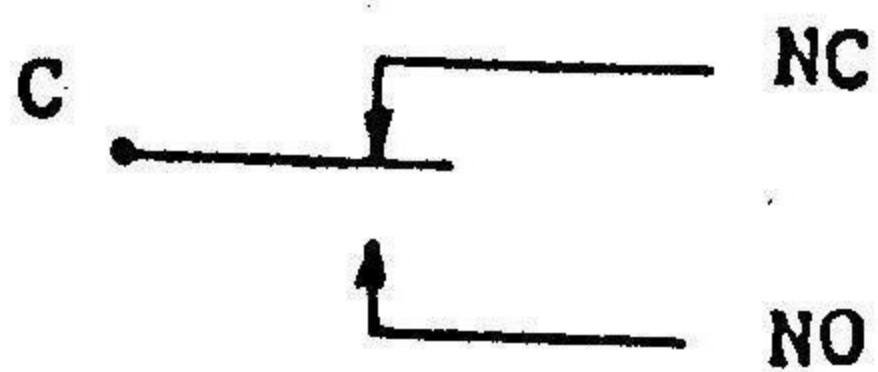
---

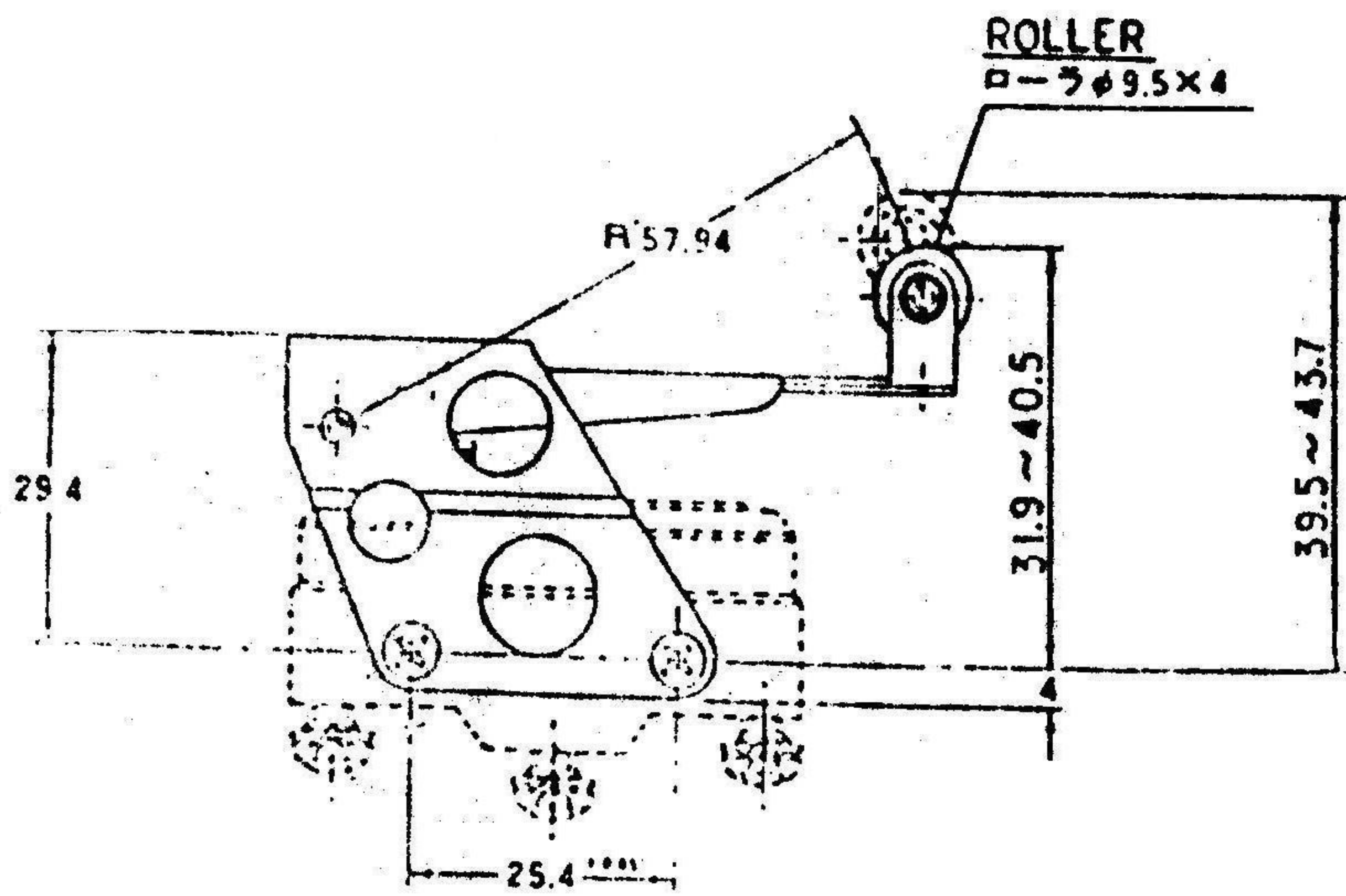
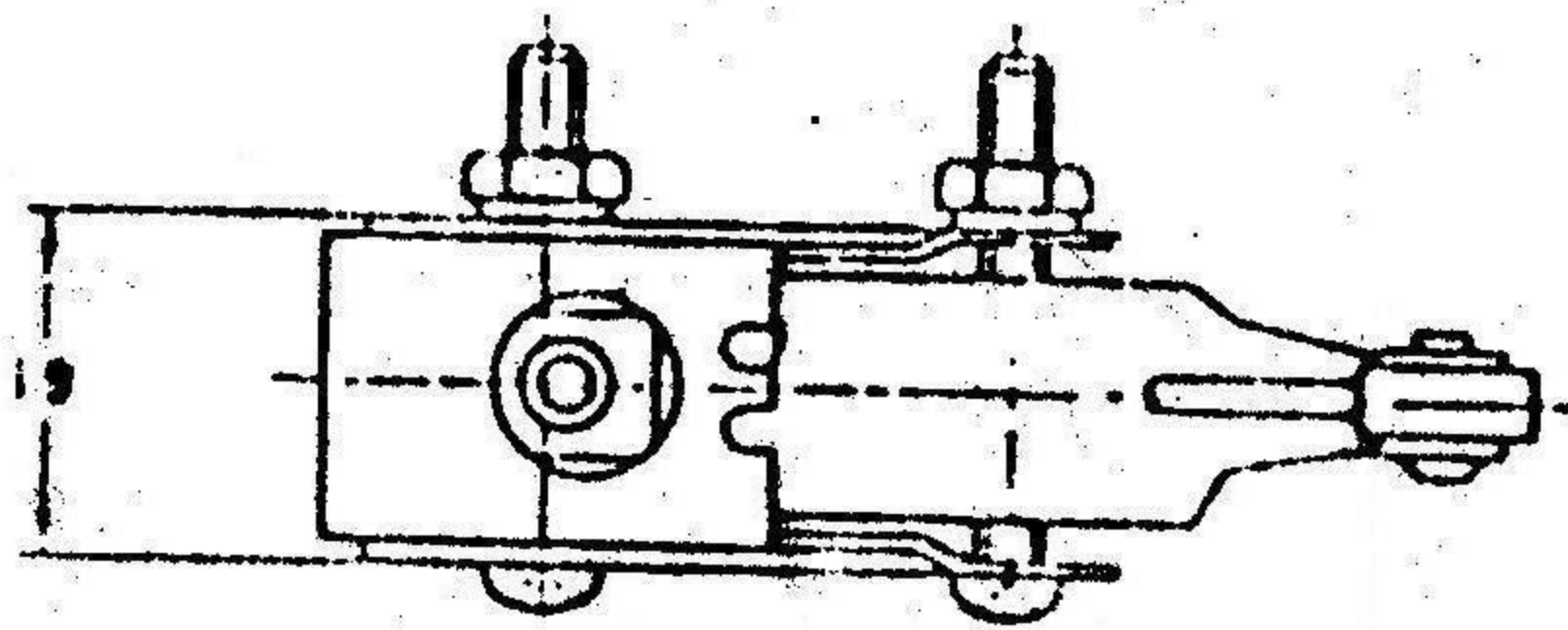
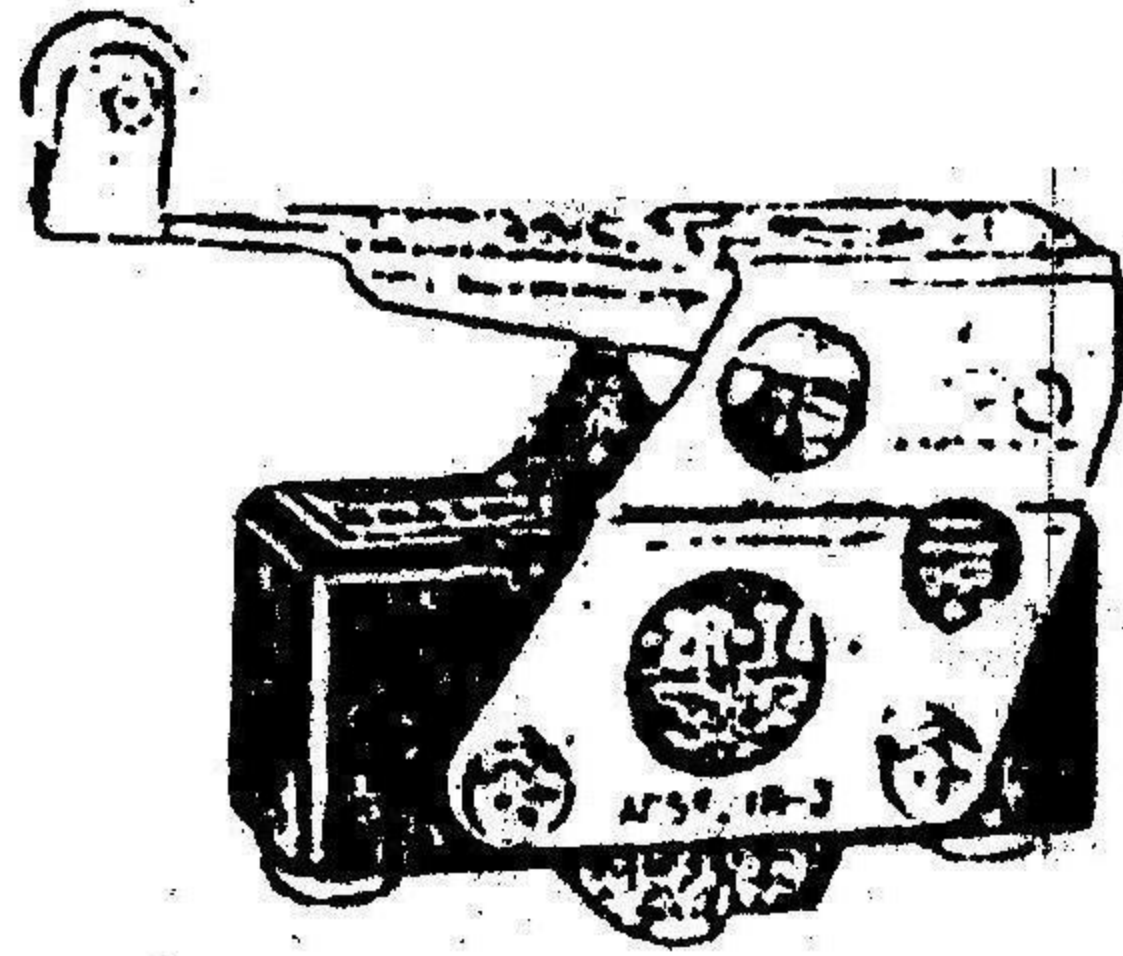


- (2) CHARACTERISTICS
- |                     |                          |
|---------------------|--------------------------|
| OPERATING FORCE     | (O.F.) = 255 ~ 369 g     |
| RELEASE FORCE       | (R.F.) = 113 g approx.   |
| DIFFERENTIAL TRAVEL | (D.T.) = 0.01 ~ 0.051 mm |
| OVER TRAVEL         | (O.T.) = 0.12 mm MIN.    |

- (3) ELECTRICAL RATING AND CIRCUITRY  
5A-125, 250 and 480V AC

SINGLE POLE DOUBLE THROW (S.P.D.T)







**BHARAT HEAVY ELECTRICALS LIMITED.**  
**HPBP - Thiruchirappalli - 620014**  
**PRODUCT ENGINEERING , VALVES**  
**SPECIFICATION FOR**  
**POSITION TRANSMITTER FOR QCNRV**

**VL/STDC/QN: 004**  
**Rev: 04**

Page 01 of 03

<b>1.0 Scope</b>		Supply of 2-wire non-contact type inductive Angular position transmitter
		Angle of rotation required: to a span of 40° in both clockwise and anticlockwise direction. This span shall be adjustable between 35 to 40 at site. Position transmitter to be factory set to 35° span corresponding to 4 to 20mA for both direction of rotation
<b>2.0 Input</b>	Supply voltage	24 V DC (20V to 28V including residual ripple)
<b>3.0 Output</b>		4-20mA DC
	3.1 Permissible Burden	500 ohms
	3.2 Ripple content in output with 13% ripple content in input voltage	≤ 1%
	3.3 Adjustment	Separate & independent adjustment 4 mA and 20mA
	3.4 Max. Linearity error	± 0.5%
	3.5 Accuracy (reproducibility)	: 0.2% or better
	3.6 Effect of input supply Voltage	≤ 0.1% / 10 volts
	3.7 Temperature effect	≤ 0.5% / 10K
	3.8 Burden effect	≤ 0.1% / 500 ohms
<b>4.0 Dial Indication</b>		There should be marking indicating the linear portion of the measuring range in both the direction of rotations
<b>5.0 Characteristic</b>	<p>Output characteristics to be as per the figure shown below. However if the forward and reverse characteristics, are not starting from the same point, then the same shall be embossed or clearly marked in the position transmitter</p>	
<b>Connector</b>	Round type plug-in connector with male and female connector required to be supplied along with position transmitter. The connector shall be as per MIL-DTL-5015 standard, solderable type, Allied "MG" type or equivalent. Male type connector to be fixed to transmitter and female connector for external connection.	

PREPARED BY

CHECKED BY

APPROVED BY

Date:

(K.Jalaludeen)

(K. Sridharan)

(D.Dinakaran)

19.01.2013

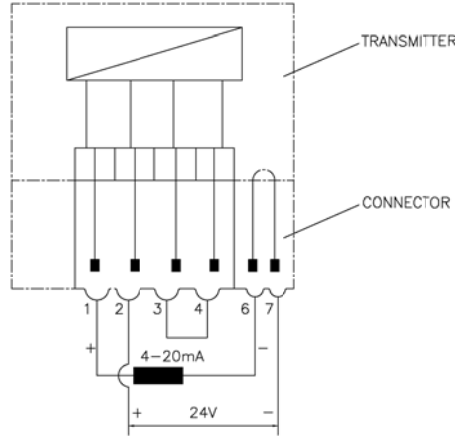


**BHARAT HEAVY ELECTRICALS LIMITED.  
HPBP - Thiruchirappalli - 620014  
PRODUCT ENGINEERING , VALVES  
SPECIFICATION FOR  
POSITION TRANSMITTER FOR QCNRV**

**VL/STDC/QN: 004  
Rev: 04**

Page 02 of 03

CONNECTION DIAGRAM



<b>General</b>	Protection Class	: IP66
	Test Voltage to earth	: 500 V rms, 50 Hz
	Permissible ambient temp.	: Up to 80°C
	Permissible relative humidity	: Up to 90 %
	Life expectancy of the Position transmitter shall be at least 5000 operating hours	
	Type test report for guaranteed cyclic operation.	
	Time constant of the transmitter along with mechanical linkages shall be so small that even for an operating time of 0.4 Secs for full range, the transmitter output shall represent the angle within the limits of error specified above.	
	Mounting Dimensions of position transmitter shall be as per the attached Drawing. Required bushing, pointers and screws are in vendor scope.	

**Test Certificates required :**

**Routine test:**

- I. Check on linearity accuracy on minimum 5 points.
- II. Voltage withstand test (high voltage test)
- III. Insulation resistance measurement
- IV. Dimensional report.
- V. Functional test for 4 to 20 mA output corresponding to 0° to 35° rotation.

**Type Test:**

1. Life expectancy of the Position transmitter for at least 5000 operating hours.
2. Certificate on Effect of input supply Voltage
3. Certificate on Temperature effect
4. Certificate on Burden effect

PREPARED BY

CHECKED BY

APPROVED BY

Date:

(K.Jalaludeen)

(K. Sridharan)

(D.Dinakaran)

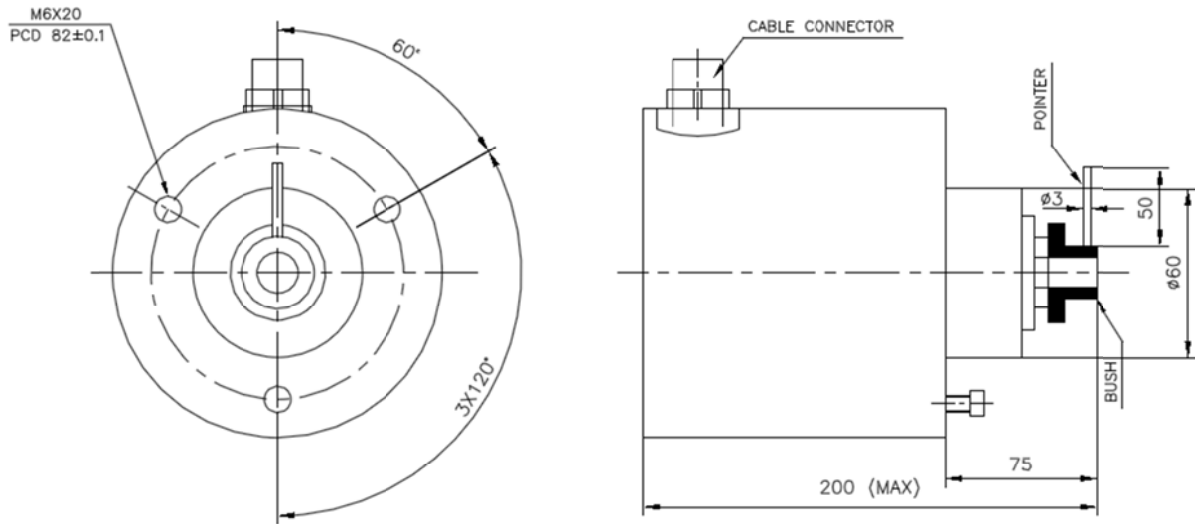
19.01.2013



**BHARAT HEAVY ELECTRICALS LIMITED.**  
**HPBP - Thiruchirappalli - 620014**  
**PRODUCT ENGINEERING , VALVES**  
**SPECIFICATION FOR**  
**POSITION TRANSMITTER FOR QCNRV**

**VL/STDC/QN: 004**  
**Rev: 04**

Page 03 of 03



TRANSMITTER MOUNTING DIMENSIONS

PREPARED BY

CHECKED BY

APPROVED BY

Date:

(K.Jalaludeen)

(K. Sridharan)

(D.Dinakaran)

19.01.2013



**BHARAT HEAVY ELECTRICALS  
LIMITED.**  
**HPBP - Thiruchirappalli - 620014**  
**PRODUCT ENGINEERING , VALVES**  
**TECHNICAL SPECIFICATION FOR**  
**LIMIT SWITCHES FOR QCNRV**

**VL/STDC/QN/024**  
**Page 01 of 03**

Rev: 02

**Technical Requirements:**

1. Contact Type : Snap Action
2. Contacts : Silver
3. Number of contacts : Two changeover contacts.
4. Contact terminals shall be suitably numbered and shall be suitable for 0.5 mm<sup>2</sup> cable cross section.
5. The terminal of limit switch will be connected to a plug/socket connector mounted on the limit switch.
6. Connector : Round type plug-in connector with male and female connector required to be supplied along with limit switch. The connector shall be as per MIL-DTL-5015 standard, solderable type, Allied "MG" type or equivalent. Male type connector to be fixed to limit switch and female connector for external connection.
7. Connections : Pin No.1 – Common, Pin No.2 – NO, Pin No.3- NC
8. Internal wiring shall be done with Teflon insulated wires. / wires will be screwed with cable lugs at switch terminal and avoid loosening due to vibration.
9. Life of switch and contact :  $\geq 5000000$  switching cycles.
10. Contact rating : a. 5A AT 240 V AC      b. 0.25A AT 220 V DC
11. Type of protection : IP65
12. Operating temperature : MAX 120°C

**PREPARED BY**

**CHECKED BY**

**APPROVED BY**

**DATE**

(Arumugam V)

(Ramanikara.P)

(Natarajan.S.N)

10.04.2009

13. Operating Force : Max 13.3 N (1.3 kg)
14. Pre Travel : Max 20 Degrees
15. Over Travel : Min 30 degrees.
16. Differential Travel : Max 12 Degrees.
17. Operation can be possible on both sides of Neutral Position.
18. Lever Position shall be possible /adjustable through 360 Degrees in Steps of 90 Degrees.
19. Roller Lever shall be suitable for stepless adjustments on the actuating axis.

**Test certificate for the following shall be attached:**

1. Operation Check
2. HV and IR Measurement.
3. Type Test certificate for life cycle test.

02	Contact material changed to Silver from Gold, Connector Type changed, Mounting Dimensions modified.	Jalaludeen. K	Dinakaran.D	13.02.2013
<b>Revision No.</b>	<b>Description</b>	<b>Prepared and Checked By</b>	<b>Approved By</b>	<b>Date</b>

**PREPARED BY**

**CHECKED BY**

**APPROVED BY**

**DATE**

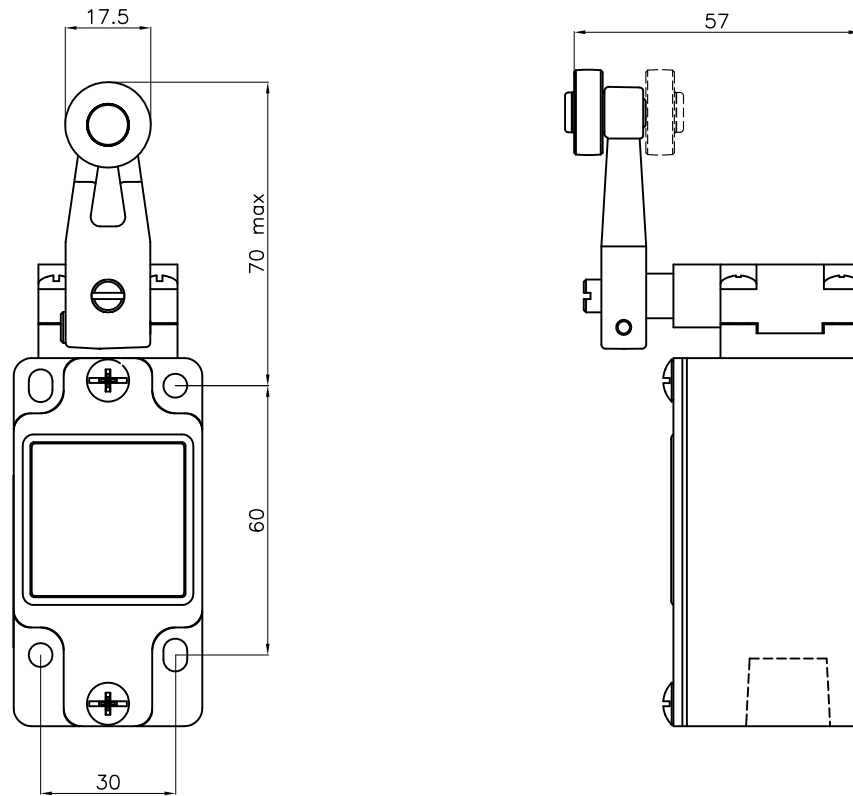
(Arumugam.V)

(Ramanikaran. P)

(Natarajan.S.N)

10.04.2009

## LIMIT SWITCH MOUNTING DIMENSIONS



VL/STDC/QN/024 REV:02

PREPARED BY

JALALUDEEN.K

CHECKED BY

DINAKARAN.D

APPROVED BY

RAJAKUMAR.M

DATE

14.02.2013



# Bharat Heavy Electricals Ltd.

Valves Purchase  
Trichy - 620 014. India

Annexure 3A

Phone : 91-0431-2577123

EMAIL: nagarajank@bheltry.co.in

BHEL Enquiry No. EN-SQN1497

Date : 21.02.2013

Sl No	<b><u>BHEL COMMERCIAL TERMS AND CONDITIONS for IMPORT SUPPLIES</u></b>	Vendor's Confirmation
1	Vendor should give confirmation to BHEL's Technical Specification. Any deviations from the specification are to be furnished separately as "Schedule of Deviation ".If there is no deviation vendor should indicate "No Deviation".	
2	Vendor to indicate Quoted/Not Quoted item wise as per the format (Annexure 3B) enclosed.	
3	<b>Prices shall be quoted item wise only as per the format (Annexure 3C) enclosed.</b>	
4	Prices shall be quoted on " <b>FIRM PRICE</b> " basis only. The prices should be only on <b>FOB basis</b> inclusive of Packing & Forwarding charges if any.	
5	<b>Validity of offer</b> shall be for a minimum period of <b>200 days</b> from the date of Tender opening	
6	<b>Delivery period</b> from the date of Purchase order shall be clearly mentioned in the offer.	
7	<b>Liquidated damages @ ½% per week</b> subject to a maximum of 10% of the order value shall be applicable for delay in deliveries.	
8	<b>Following Risk Purchase clause</b> shall be applicable: The Purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated or if the same were not available, the best and the nearest available substitute therefore. The supplier shall be liable for any loss which the Purchaser may sustain by reason of such risk purchases.	
9	<b>Payment terms for Foreign vendor (Principal):</b> 100% value of the goods will be paid on collection basis on receipt of documents established by our bankers.	
10	<b>All bank charges outside India are to vendor's account only.</b>	
11	In case of any short shipment in the main equipment / spares, where separate rates are not available in the contract, the customs duty levied on such supplies, shall be borne by the supplier.	
12	Any warranty replacement during warranty period shall be supplied free of charge on FOR Site basis/destination specified by BHEL	
13	The equipment shall be guaranteed for a period of 12 months from the date of commissioning or 18 months from the supply, whichever is earlier.	
14	The vendor shall provide necessary drawings, Test Certificates and Operating Maintenance Manuals as called for in the Technical Specification, in the required number of copies at no extra cost.	
15	<b>Offers should be submitted only in sealed cover super-scribing clearly the Enquiry reference and due date.</b>	

**NOTE:-**

- It is confirmed that all the terms and conditions stipulated in the Enquiry have been fully understood by us and all clarifications & details have been obtained.
- The prices are to be offered only on FOB basis, inclusive of Packing & Forwarding charges if any.
- Your specific acceptances to BHEL Payment terms, LD and Risk Purchase Clause ,Otherwise your offer is liable for rejection.

Signature & Office Seal of the vendor



# Bharat Heavy Electricals Ltd.

Valves Purchase  
Trichy - 620 014. India

re 3A

Phone : 91-0431-2577123

E-mail: nagarajank@bheltry.co.in

BHEL Enquiry No.EN-SQN1497

Date :21.02.2013

Sl No	<b>BHEL COMMERCIAL TERMS AND CONDITIONS for INDIGENOUS SUPPLIES</b>	Vendor's Confirmation
1	Vendor should give confirmation to BHEL's Technical Specification. Any deviations from the specification are to be furnished separately as "Schedule of Deviation". If there is no deviation vendor should indicate "No Deviation".	
2	Vendor to indicate Quoted/Not Quoted item wise as per the format (Annexure 3B) enclosed.	
3	<b>Prices</b> shall be <b>quoted item wise</b> only as per the format (Annexure 3C) enclosed.	
4	Prices shall be quoted on " <b>FIRM PRICE</b> " basis only. The prices should be only on <b>FOR Site basis</b> inclusive of Packing & Forwarding charges if any.	
5	<b>Validity of offer</b> shall be for a minimum period of <b>200 days</b> from the date of Tender opening	
6	<b>Delivery period</b> from the date of Purchase order shall be clearly mentioned in the offer.	
7	<b>Liquidated damages</b> @ ½% per week subject to a maximum of 10% of the order value shall be applicable for delay in deliveries.	
8	<b>Following Risk Purchase clause</b> shall be applicable: The Purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated or if the same were not available, the best and the nearest available substitute therefore. The supplier shall be liable for any loss which the Purchaser may sustain by reason of such risk purchases.	
9	<b>Payment terms</b> 100% after 45 days on acceptance of material at BHEL stores, No other payment term is acceptable to BHEL.	
10	Excise duty, sales tax and other levies (if any) shall be indicated as extra in the offer.	
11	Any warranty replacement during warranty period shall be supplied free of charge on FOR Site basis/destination specified by BHEL	
12	The equipment shall be guaranteed for a period of 12 months from the date of commissioning or 18 months from the supply, whichever is earlier.	
13	The vendor shall provide necessary drawings, Test Certificates and Operating Maintenance Manuals as called for in the Technical Specification, in the required number of copies at no extra cost.	
14	<b>Offers</b> should be submitted only in <b>sealed covers</b> super-scribing clearly the <b>Enquiry reference and due date.</b>	

**NOTE:-**

- It is confirmed that all the terms and conditions stipulated in the Enquiry have been fully understood by us and all clarifications & details have been obtained.
- Your specific acceptances to BHEL Payment terms, LD and Risk Purchase Clause, Otherwise your offer is liable for rejection.

Signature & Office Seal of the vendor



<b>BHEL Enquiry No. &amp; Date</b>			<b>Vendor's Offer Ref No. &amp; Date</b>		
EN-SQN1497 / 21.02.2013					
<b>Enq SI No.</b>	<b>Material Code</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Unit Price in INR</b>
10	964608700000	LS-1LS244-4PG-F1-B1,2NO+2NC+con. HAN7D	Nos	1500	Quoted/Not Quoted
20	974600710000	LIMIT SWITCH (HYD) 1NO + 1NC	Nos	100	Quoted/Not Quoted
30	974601070000	POSITION TRANSMITTER - QCNRV	Nos	300	Quoted/Not Quoted
<b>Total Ex-works Value in Rs</b>					
Add Packing & Forwarding Charges if extra					
Excise Duty					
CST/VAT					
Add Freight Charges if extra					
Add Transit Insurance Charges if extra					
Validity of offer					
<b>Consignment Package Details</b>					
Approximate Net / Gross Weight in Kgs					
Dimension of Consignment					
<b>NOTE:</b>					
The Price Bid should be submitted strictly in line with the above <b>FORMAT</b>					
			<b>Signature &amp; Seal of Vendor</b>		



<b>BHEL Enquiry No. &amp; Date</b>				<b>Vendor's Offer Ref No. &amp; Date</b>		
EN-SQN1497 / 21.02.2013						
<b>Enq SI No.</b>	<b>Material Code</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Unit Price in INR</b>	<b>Value in INR</b>
10	964608700000	LS-1LS244-4PG-F1-B1,2NO+2NC+con. HAN7D	Nos	<b>1500</b>		
20	974600710000	LIMIT SWITCH (HYD) 1NO + 1NC	Nos	<b>100</b>		
30	974601070000	POSITION TRANSMITTER - QCNRV	Nos	<b>300</b>		
<b>Total Ex-works Value in Rs</b>						
Add Packing & Forwarding Charges if extra						
Excise Duty						
CST/VAT						
Add Freight Charges if extra						
Add Transit Insurance Charges if extra						
Validity of offer						
<b>Consignment Package Details</b>						
Approximate Net / Gross Weight in Kgs						
Dimension of Consignment						
<b>NOTE:</b>						
The Price Bid should be submitted strictly in line with the above <b>FORMAT</b>						
						<b>Signature &amp; Seal of Vendor</b>