



**BHARAT HEAVY ELECTRICALS LIMITED**

CORPORATE RESEARCH & DEVELOPMENT DIVISION

VIKASNAGAR, HYDERABAD - 500 093, INDIA

**ENQUIRY**

PHONES: 23774494 (EXCHANGE)

DIRECT: 23882104/23882204/

23778474/23776772

FAX : 91 40 23770698

RD:DP:MPX:F-04

To

Enquiry No: 570701751    Enq Date: 25-JUN-07    Due Date: 24-JUL-07    Delivery By: 31-OCT-07

PLEASE SUBMIT YOUR QUOTATION IN SEALED COVER SUPERSCRIBED WITH ENQUIRY NO, ENQUIRY DATE AND DUE DATE SUBJECT TO OUR TERMS AND CONDITIONS ENCLOSED, FOR THE FOLLOWING MATERIALS SO AS TO REACH US ON OR BEFORE THE DUE DATE BY 12 NOON. THE TENDERS WILL BE OPENED AT 2 PM ON THE SAME DAY

Pin

Email :

Attn. .

PLEASE GIVE REFERENCE OF ENQ NUMBER , ENQ .DATE AND DUE DATE IN ALL YOUR CORRESPONDENCE FOR PROMPT ACTION. IN CASE IF YOU ARE NOT MAKING THE OFFER PLEASE POST A REGRET LETTER AND RETURN THE DOCUMENTS.

SL NO	DESCRIPTION / SPECIFICATION	UNIT	QTY
1	DG SET CONTROL PANEL AS PER ENCLOSED SPECIFICATION	NO.	1

NOTE: PLEASE SUBMIT YOUR OFFER IN TWO PARTS AS PER THE ENCLOSED ANNEXURE "AA" IN SEPARATE SEALED COVERS AS DETAILED BELOW:

- 1) FIRST COVER SHALL CONTAIN THE FOLLOWING:
  - a) TECHNICAL COMMERCIAL BID ALONG WITH COMPLIANCE STATEMENT, MENTIONING APPLICABLE DUTIES, TAXES etc., AND DELIVERY TIME CLEARLY, (TERMS, CONDITIONS, AND COMPLIANCE FORM ENCLOSED)
  - b) A COPY OF THE PRICE BID WITHOUT THE PRICES ( UNPRICED PRICE BID)
- 2) SECOND COVER CONTAINING PRICE BID
- 3) IF THE PRICE BID IS FOUND TO BE DIFFERENT FROM THE UNPRICED PRICE BID IN ANY WAY, YOUR OFFER WILL BE REJECTED

Important:

Taxes & Duties quoted by you will be taken for cost evaluation and order placement and no change will be entertained later except in the case of changes made by the Government. Changes in Taxes and Duties because of the changes in Turnover etc. also be to the supplier's account. In case no tax/duty is included, a self declaration for the exemption may be attached along with the offer.

AS WE ARE ENGAGED IN R&D ACTIVITY "C" FORM WILL NOT BE ISSUED

Yours faithfully

for

BHARAT HEAVY ELECTRICALS LTD

PLEASE FILL UP THE ENCLOSED VENDOR REGISTRATION FORM AND SEND IT ALONG WITH YOUR QUOTATION. OTHERWISE YOUR QUOTATION WILL NOT BE CONSIDERED. (IGNORE THIS IF YOU HAVE ALREADY SUBMITTED THIS FORM)

ARC Rao

Manager

**Email: arcr@bhelrnd.co.in**

## **Specifications for the DG set Control Panel**

### **Indent No. 57070175**

The control panel should meet the following requirements:

1. To independently synchronize two 75 KVA DG sets to an isolated 415 V, 50 Hz, 3 phase grid, and provide for load sharing. The other generating sources on the isolated grid will be two (or more) wind electric generators of 65 KW rating and one 25 KW Solar Photo Voltaic unit. The SPV unit includes 500 Ah batteries and a power conditioning unit. For the purpose of auto synchronization, the grid may be assumed to be stable, similar to main grid. The load will be around 80 KW.
2. The 75 KVA DG sets are of Cummins make. The details of the DG sets, AVR & the electronic governor are enclosed.
3. Synchronization should be automatic, with a provision for manual synchronization as an independent option. Automatic mode should be the primary mode of operation, with the manual mode as a standby option in case the auto synchronizer fails.
4. The DG control panel should have a feature for remote control, wherein ON / OFF, and load sharing of the DG sets can be controlled from a remote controller.
- 5.
6. The quote should include all necessary potential & current transformers required for the control panel. Necessary protection relays should also be included.
7. The quote should also include necessary power & control cables, and only unit price ( per meter ) may be given. The actual length of the cables required will depend on site conditions. Approximately 30 meters may be presumed. Earthing may also be indicated.
8. The control panel will have to be commissioned at Kadavakallu wind farm, which is a site located in Anantapur, about 55 Km from Anantapur station.
9. The quote should include E & C charges.
10. All Components used should of an established & reliable make, such as Woodward, L&T, etc.

Indent Ref. no.  
RD/CIN/07/SVR/003



## SX440 AUTOMATIC VOLTAGE REGULATOR (AVR) SPECIFICATION, INSTALLATION AND ADJUSTMENTS

### General description

SX440 is a half-wave phase-controlled thyristor type Automatic Voltage Regulator (AVR) and forms part of the excitation system for a brush-less generator.

In addition to regulating the generator voltage, the AVR circuitry includes under-speed and sensing loss protection features. Excitation power is derived directly from the generator terminals.

Positive voltage build up from residual levels is ensured by the use of efficient semiconductors in the power circuitry of the AVR.

The AVR is linked with the main stator windings and the exciter field windings to provide closed loop control of the output voltage with load regulation of +/- 1.0%.

In addition to being powered from the main stator, the AVR also derives a sample voltage from the output windings for voltage control purposes. In response to this sample voltage, the AVR controls the power fed to the exciter field, and hence the main field, to maintain the machine output voltage within the specified limits, compensating for load, speed, temperature and power factor of the generator.

A frequency measuring circuit continually monitors the generator output and provides output under-speed protection of the excitation system, by reducing the output voltage proportionally with speed below a pre-settable threshold. A manual adjustment is provided for factory setting of the under frequency roll off point, (UFRO). This can easily be changed to 50 or 60 Hz in the field by push-on link selection.

Provision is made for the connection of a remote voltage trimmer, allowing the user fine control of the generator's output.

An analogue input is provided allowing connection to a Newage Power Factor controller or other external devices with compatible output.

The AVR has the facility for droop CT connection, to allow parallel running with other similarly equipped generators.

### Technical specification

#### INPUT

Voltage	190-264V ac
Frequency	50-60 Hz nominal
Phase	1
Wire	2

#### OUTPUT

Voltage	max 90V dc at 207V ac input
Current	continuous 4A dc intermittent 6A for 10 secs
Resistance	15 ohms minimum

#### REGULATION

+/- 1% (see note 1)

#### THERMAL DRIFT

0.04% per deg. C change in AVR ambient (note 2)

#### TYPICAL SYSTEM RESPONSE

AVR response	20ms
Field current to 90%	80 ms
Machine Volts to 97%	300ms

#### EXTERNAL VOLTAGE ADJUSTMENT

+/- 10% with 1 K ohm 1 watt trimmer (see note 3)

#### UNDER FREQUENCY PROTECTION

Set point	95% Hz (see note 4)
Slope	170% down to 30 Hz

#### UNIT POWER DISSIPATION

12 watts maximum

#### BUILD UP VOLTAGE

4 Volts @ AVR terminals

#### ANALOGUE INPUT

Maximum input	+/- 5V dc (see note 5)
Sensitivity	1v for 5% Generator Volts (adjustable)
Input resistance	1k ohm

#### QUADRATURE DROOP INPUT

10 ohms burden	
Max. sensitivity:	0.07 A for 5% droop OFF
Max. input:	0.33A

#### ENVIRONMENTAL

Vibration	20-100 Hz	50mm/sec
	100Hz - 2kHz	3.3g
Operating temperature		-40 to +70 °C
Relative Humidity	0-70 °C	95% (see note 6)
Storage temperature		-55 to +80 °C

#### NOTES

1. With 4% engine governing.
2. After 10 minutes.
3. Applies to Mod status S onwards. Generator de-rate may apply. Check with factory.
4. Factory set. semi-sealed, jumper selectable.
5. Any device connected to the analogue input must be fully floating (galvanically isolated from ground), with an insulation strength of 500V ac.
6. Non condensing.

# 6BTAA5.9G1I

## Value Package Document

ELECTRONIC GOVERNOR FOR 'B' SERIES 6BTAA5.9G1- I  
G Drive engines ( Suitable for 140 kVA Genset)

### Background

The Purpose of this Topic is to inform the Introduction of Woodward type Electronic Governor on 6BTAA5.9G1- I Series 'G' Drive engines. (Suitable for 140 kVA Genset) The electronic governor has been included in the standard scope of supply with effect from 01/04/2005.

### Specifications :

#### Electrical

<b>Operating Voltages:</b>	12 VDC $\pm$ 20%
<b>Maximum Controlled Output Current:</b>	7 Amps
<b>Maximum Surge Current:</b>	14 Amps for ten seconds
<b>Connections:</b>	Terminal strip with 13 terminals Euro Style
<b>Input Signal from the Magnetic Pickup:</b>	Minimum 2.0 VAC RMS during cranking

#### Mechanical

<b>Ambient Operating Temperature:</b>	-40°F to +185°F (-40°C to +85°C)
<b>Weight:</b>	0.75 lbs (0.34 kg)
<b>Vibration:</b>	Suitable for mounting per SAE J1455; 1 to 500 Hz, 5G amplitude

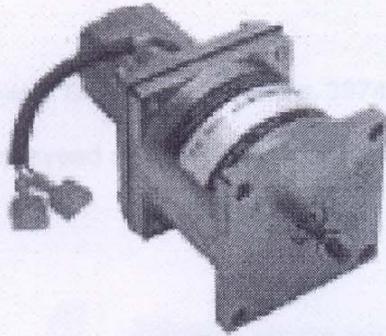
#### Performance

<b>Engine Speed Measurement Range:</b>	10 MPU Hertz to 14,000 MPU Hertz
<b>Governing Speed Range:</b>	500 MPU Hertz to 11,000 MPU Hertz
<b>Drop Adjustment Range:</b>	0 to 10 percent of the set speed

# 6BTAA5.9G1I

## Value Package Document

### Linear Actuator Specs



**Dyna 2500—**  
12 Vdc, 0.50 ft-lb (0.68 J) output

Part No: 3283459

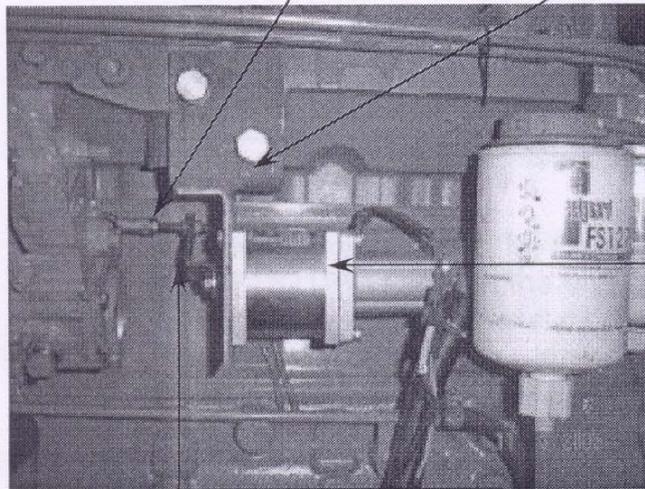
#### SPECIFICATIONS

<b>Force</b>	57.8 N
<b>Output Stroke (Push Type)</b>	20 mm
<b>Weight</b>	1.7 kg
<b>Nominal Steady State Current</b>	2.5 Amps to 5.4 Amps
<b>Operating Voltage</b>	12 VDC $\pm$ 20%
<b>Ambient Operating Temperature</b>	-65 to +250 °F (-54 to 121 °C)
<b>Connection</b>	18 AWG (0.8 mm <sup>2</sup> ) leads with min. length of 3 inches (76 mm) with insulated tab terminal per AMP P/N 2-52013-2. Mates with insulated receptacle per AMP P/N 2-520184-2.

#### Description of various parts required for Governing System & General Arrangement.

4926703  
Rod Control

4926704  
Bracket



3283459  
Actuator-

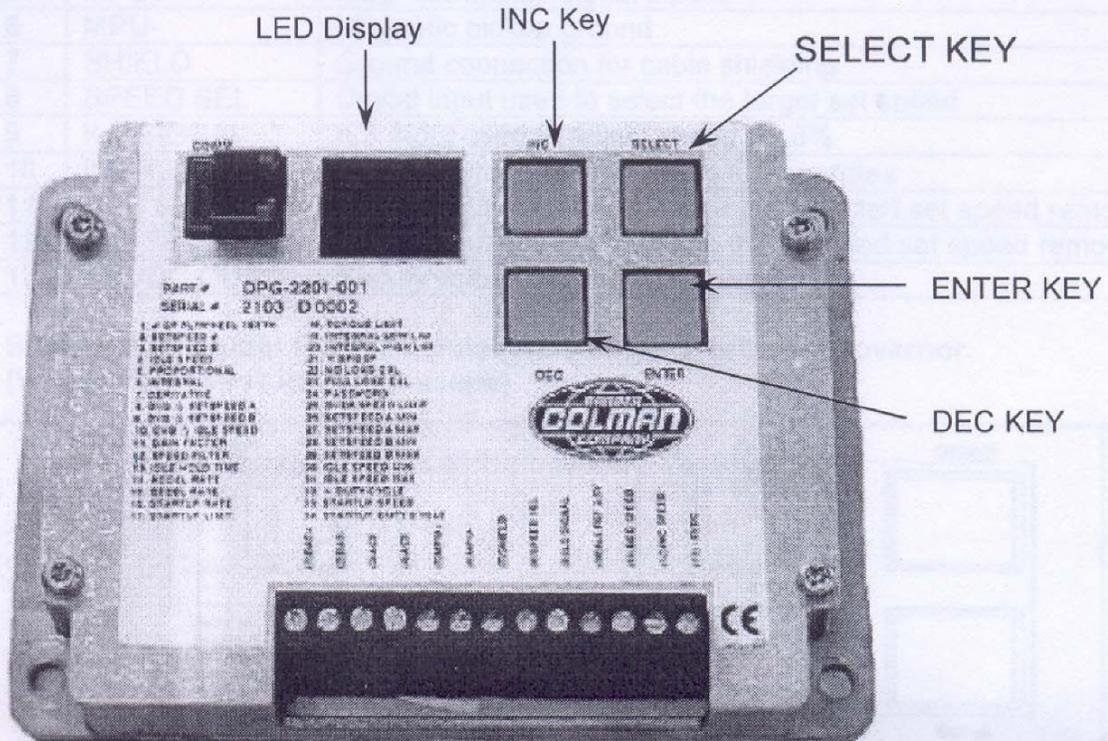
4926864  
Lever Control

# 6BTAA5.9G11

## Value Package Document

### Control Governor ( Part No. 3974704)

The keypad consists of four pushbuttons named ENTER, SELECT, INC, and DEC.



#### Note :

1. Magnetic Pick Up unit ( MPU) (with two connectors) part no. 3815219 is fitted on the engine for connecting to Electronic governor as well as RPM meter.
2. The Panel box & Wiring harness ( for connecting the electronic Governor) is in OEM scope of supply.

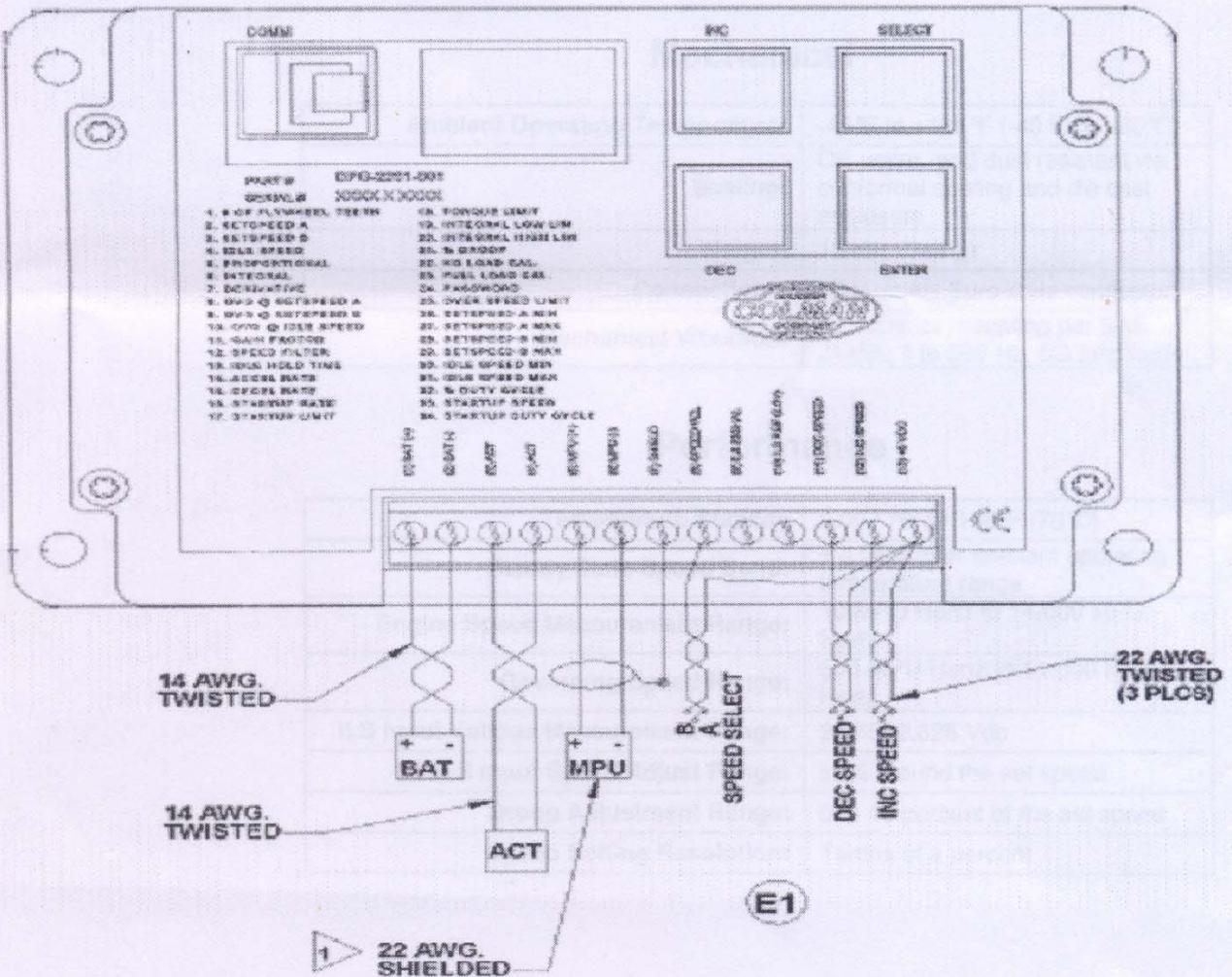
# 6BTAA5.9G11

## Value Package Document

### Terminal Descriptions

NO	NAME	FUNCTION
1	BAT+	Battery positive (supply voltage range is 9 Vdc-30 Vdc)
2	BAT-	Battery negative
3	ACT	Actuator drive output
4	ACT	Actuator drive return
5	MPU+	Magnetic pickup signal inputs
6	MPU-	Magnetic pickup ground
7	SHIELD	Ground connection for cable shielding
8	SPEED SEL	Digital input used to select the target set speed
9	ILS SIGNAL	ILS input used to adjust speed +/- 5%
10	ILS REF (2.5 V)	Supply voltage around which ILS operates
11	DEC SPEED	Digital input used to decrease the selected set speed remotely
12	INC SPEED	Digital input used to increase the selected set speed remotely
13	+5 VDC OUT	Supply voltage for the digital inputs

Schematic Diagram For the connections of the Electronic Governor.  
(Wiring Harness is in OEM's scope)



## Chapter 2. Controller Specifications

The controller's main electrical and mechanical specifications are listed here along with several performance characteristics.

### Electrical

<b>Operating Voltage Range:</b>	9–30 Vdc *
<b>Rated Output Current:</b>	7 A Maximum (continuous)
<b>Maximum Surge Current:</b>	14 A (not to exceed ten seconds)
<b>Connections:</b>	Terminal strip with 13 terminals
<b>Input Signal from the Magnetic Pickup:</b>	2.0 VAC RMS minimum during cranking

(\*) All cabling for this unit is limited to less than 30m (98.4').  
Power cabling is limited to less than 10m (32.8') in total length.  
See wiring diagrams for specific cable types required.

### Mechanical

<b>Ambient Operating Temperature:</b>	-40°F to +185°F (-40°C to +85°C)
<b>Sealing:</b>	Oil, water, and dust resistant via conformal coating and die cast enclosure
<b>Weight:</b>	12 oz. (341 g)
<b>Connections:</b>	13-terminal Euro-style connector
<b>Mechanical Vibration:</b>	Suitable for mounting per SAE J1455; 1 to 500 Hz, 5G amplitude

### Performance

<b>Temperature Stability</b>	0.007 Hz @ 158°F (70°C)
<b>Steady State Speed Band:</b>	± 0.25% over ambient operating temperature range
<b>Engine Speed Measurement Range:</b>	10 MPU Hertz to 14,000 MPU Hertz
<b>Governing Speed Range:</b>	500 MPU Hertz to 11,000 MPU Hertz
<b>ILS Input Voltage Measurement Range:</b>	2.375–2.625 Vdc
<b>ILS Input Speed Adjust Range:</b>	±3% around the set speed
<b>Droop Adjustment Range:</b>	0 to 10 percent of the set speed
<b>Droop Setting Resolution:</b>	Tenths of a percent

**TECHNICAL SPECIFICATIONS**  
**75 KVA & 82.5 KVA**  
**DIESEL GENERATING SET**

**A: DIESEL ENGINE:**

"CUMMINS" Diesel Engine, 6 cylinders, water cooled, turbocharged, suitable BHP @ 1500 RPM under NTP Conditions of BS:5514, with tropical radiator, air cleaner assembly, with safety elements and with vacuum indicator, 12 volts starting system, battery charging alternator MICO I-line fuel pump, spin-on fuel, lube filters, AVM Pads and residential silencer. Engine Instrument cluster panel having safeties for low lube oil pressure, high water temperature, Tachometer along with hour meter.

75 KVA	6 BT 5.9 G 1	105 BHP
82.5 KVA	6 BT 5.9 G1	105 BHP

**B: ALTERNATOR:**

"STAMFORD / AVK" make standard design Alternator, suitably rated at 0.8PF, 415 Volts, 3 Phase, 4 wires, 50 cycles/sec. 1500 RPM, self excited and self regulated, with brushless excitation, Band of voltage regulation +/-2.5% of rated voltage, from no load to full load. Insulation class "H". The alternator generally conforms to BS: 5000 / IS:4722.

<u>DG Rating</u>	<u>Alternator Capacity</u>
75 KVA	60 KW / 75 KVA
82.5 KVA	66 KW / 82.5 KVA

**C: BASE FRAME:**

Sturdy, fabricated, welded construction, channel iron base frame for mounting the above Engine and Alternator.

**D: CONTROL PANEL:**

Cubicle type, floor mounting Control panel, with hinged doors, bottom gland plate and accommodating the following:

- MCB/MCCB
- Ammeter with selector switch
- Voltmeter with Selector switch
- Frequency Meter
- KW Meter
- Current Transformers
- Indicating Lamp for Load "ON" & DG "ON"
- Instrument Fuses
- Safety Control (Trip) : high water temperature(hwt)  
: low lube oil pressure (llop)

**E: FUEL TANK:**

150 liters capacity Fuel tank with mounting brackets complete with level indicator, fuel inlet and outlet, air vent drain plug, inlet arrangement for direct filling and set of fuel hoses for inlet and return.

**F: BATTERY**

1 No. 12 volts, dry, uncharged batteries with leads and terminals.



# BHARAT HEAVY ELECTRICALS LIMITED

CORPORATE R&D DIVISION, VIKAS NAGAR, HYDERABAD – 500 093, AP, India

Ph: 0091-40 – 23778474, FAX: 0091-40 – 23770698

## General Terms and Conditions of Enquiry & Contract for the Purchase of Goods/ Services

1. The quotation and any order resulting from this enquiry shall be governed by these General Terms and Conditions of enquiry and contract for the supply of goods and the supplier quoting against this enquiry shall, unless specifically stipulates any different terms or conditions, be deemed to have read and agreed to the same.
2. Sealed quotations in double cover with tenderer's distinctive seal, superscribing enquiry number, date and due date are to be submitted so as to reach on or before due date & time, addressed to **Additional General Manager(MM), Bharat Heavy Electricals Limited, Corporate Research & Development Division, Vikasnagar, Hyderabad, Andhra Pradesh, India – PIN-500 093, India.**

In the case of **Two-part bid**, each inner cover shall clearly be labeled as a) **Technical & Commercial Bid** containing technical data/ drawings/ catalogues/ quality plans along with commercial terms and conditions & copy of the price bid with the price columns left blank (unpriced price bid), b) **Price bid** containing prices quotes. Installation and/or Commissioning charges shall be spelt out in absolutely lucid terms, taking into account total charges, rather than quoting vaguely, such as charges per man-day or charges per engineer per day etc. **If the price bid was found later to be different from the unpriced price bid in any way, the offer will be rejected summarily.**

3. **Tender/ Technical bid Opening:** Unless specified otherwise, tenders/ technical bids will be opened on appointed date and time as mentioned in the enquiry or as communicated changed date/time, if any, in the presence of such of those tenderers who may be present.
4. **Delayed/ Late Tender:** Tenders, which have been posted by registered post through the postal department in time before opening date but received after tender opening, shall be treated as regular tenders. Other tenders received after tender opening time shall be treated as late tenders and normally they may be rejected.
5. The Quotation should be free from overwriting and erasures. Corrections and additions, if any, must be attested. Supplier should indicate in the quotation dimensions (Size), weight, rate etc., in the metric system unless the enquiry calls for different unit.
6. **Validity of Quotation:** All quotations shall be kept open for acceptance for a period of ninety days from the date of opening of Tenders/ Technical bid and this shall be deemed to be an express condition of all quotations. The rate shall be quoted in both figures and in words.
7. In the case of Two-part bid, the vendor should furnish technical clarifications, if any, within stipulated time mentioned, failing which, it will be construed that the vendor is not interested in the tender and BHEL shall not consider the offer for further evaluation.
8. **Revision of Pricebid:** In the event of any bidder, after finalizing the technical specifications and scope of supply, opting to revise and submit their latest price bid, then BHEL reserves the right to open their original / previous price bid also while evaluating revised bid.
9. **Pricebid Opening:** Unless specified otherwise in the enquiry, the Price bids of technically qualified vendors shall be opened with prior intimation in the presence of such of those tenderers who may be present.
10. **Conformity to Specifications:** The material should be of the best quality and shall be conforming to our specification given in our enquiry. Unless otherwise agreed upon by BHEL, no payment shall be due by BHEL in respect of any sample. Offers without details of specifications/ applicable catalogues will not be considered and are liable to be rejected.
11. **Terms of Delivery:** All suppliers shall quote the lowest prices on ex-works and FOB/FCA basis. Foreign suppliers will also indicate their Indian agent's name and address with percentage of agency commission out of the quoted price, if any. Name and Address of the supplier's Bankers address should also be given. Indian suppliers for the indigenously manufactured/ imported stock shall quote on Ex-works /Free-on-Rail/Road /FOR-destination basis, indicating packing & forwarding charges, if any, separately.
12. **Taxes and Duties:** Unless specified otherwise in the enquiry, BHEL do not provide "C" or "D" Form as it is engaged in R&D. All Indian suppliers shall clearly mention Sales Tax/ VAT, Excise Duty, and Service Tax etc, if any, payable in addition to the quoted price and indicate applicable rates/ percentage, item-wise. It will be paid

only if Registration Number under State(TIN)/ Central Sales Tax or Service Tax is specifically mentioned in the Bill/Invoice. Vendors without a Sales Tax/VAT registration and applicable Service Tax registration will not be considered.

13. **Insurance:** Insurance will be arranged by BHEL in case of Ex-Works as well as FOB basis supplies.
14. **Terms of Payment:** Full payment will be made within 30 days after receipt, inspection and acceptance of the material (and where involved, Erection and commissioning of the material/ equipment at BHEL/Destination) by Crossed cheque and no Bank commission charges are admissible. The Cheque will be sent by registered post and BHEL is in no way responsible if loss occurs due to delay by postal authorities and cheques falling into improper hands or through forgery or fraud. Suppliers having RBI-SEFT-enabled accounts can seek payment through Electronic Fund transfer. For foreign suppliers, the preferred payment term will be on Sight Draft basis and bank charges inside India will be to BHEL account and outside India will be to supplier's account.
15. Suppliers shall quote competitive price and best delivery for all the items mentioned in the enquiry. BHEL reserves the right to reject partial quotations and to place order on overall landed cost basis. Correct date of effecting supplies in the event of an order should be indicated in the offer. If the supplier's quoted terms are different from BHEL standard payment terms, interest @10.5% per annum (or as indicated in the enquiry) will be loaded to the quoted prices for difference of payment period.
16. **Packing:** The supplier shall be responsible for the goods being properly and adequately packed so as to prevent any loss, damage or deterioration during transit and indicate packing charges, if any, separately.
17. **Part/ Split Ordering:** BHEL reserves right to Order part of the item/ quantity of the enquiry and split the order among qualified vendors.
18. In case the goods enquired are on Rate Contract basis with any other unit of BHEL, such fact should be clearly indicated in the quotation giving full particulars of Rate Contract number, validity and price and also your willingness to comply with order if placed against such Rate Contract. A true copy of Rate contract signed by the supplier should be sent with the quotation.
19. **Inspection:** On receipt, the goods shall be subjected to inspection and also test, if necessary, and our decision regarding the acceptability of the goods shall be final and binding on the suppliers.
20. **Consequences of Failure To Deliver:** The time stipulated for delivery of goods shall be deemed to be the essence of the contract and delivery must be completed within the stipulated date/s. In the event of supplier's failure to supply the goods by the stipulated date/s, BHEL shall be entitled to levy a penalty of ½% per week for the delayed no of weeks or part thereof for the undelivered portion of PO subject to a maximum of 10% total order value.
21. **Withdrawal from the Contract:** In case the supplier withdraws the quotation after its acceptance by BHEL or fails to supply the goods as per the terms and conditions of contract, or at any time repudiated the contract wholly or in part, BHEL shall be at liberty to cancel the Purchase Order and to recover from the supplier the extra cost and other loss incidental to the breach of contract on the part of the supplier.
22. **Guarantee/ Warranty certificate and Manufacturer's Test report:** Invariably in all cases where it is so stipulated, the supplier should furnish Guarantee/ Warranty certificate valid for a period of 18 months from date of supply or 1 year from the date of receipt, acceptance and commissioning(or more, if provide by oem) whichever earlier and manufacturer's Test report along with the goods, failing which, BHEL shall have the right to reject the goods.
23. All ferrous/ non-ferrous items shall be colour coded as per bureau of Indian standards/ or IS standards/ BHEL Standards.
24. **Recovery of Dues:** BHEL shall recover any amount due from the supplier or any amount outstanding to the credit of the supplier with BHEL R&D unit or any other BHEL unit(s) and/or by legal action.
25. **Arbitration & Forum for Legal Proceedings:** All disputes arising in connection with indigenous/ foreign supplies shall be settled through arbitration held at Hyderabad, AP, India and arbitration shall be appointed by Arbitration Tribunal of the Federation of Andhra Pradesh Chambers of Commerce and Industry, Hyderabad, AP, India. The Courts at Secunderabad/ Hyderabad, AP, India shall have jurisdiction in respect of any suit or other legal proceeding arising from or relating to this contract

The rights and remedies of BHEL stated in these General terms and conditions shall be in addition and supplemental to its rights and remedies under law and custom or usage of trade or business and shall in no way be deemed to limit, curtail, supercede or derogate from its said rights and remedies.



ANNEXURE “AA  
BHARAT HEAVY ELECTRICALS LIMITED  
CORPORATE RESEARCH & DEVELOPMENT DIVISION  
VIKASNAGAR, HYDERABAD – 500 093. INDIA

**MATERIALS MANAGEMENT DEPARTMENT**  
(Information for Technical & Commercial bids with general terms)

ENCLOSURE TO ENQ No:

DATE:

- a) Please indicate(  ) for applicable or (  ) for not applicable against each clause of the enquiry
- b) Vendor shall confirm their compliance for applicable clauses (  ) in their offer without deviation.

**1) Technical offer:-**

- a) Vendors to confirm compliance to all points of specifications, attached if any. Deviations if any should be specified in the offer.
- b) Vendors shall furnish relevant technical Documents / Catalogues. Drawings and Quality plan duly taking care of Purchase Specification and Quality requirements along with their offer in duplicate for Purchaser’s review / Verification.

**2) Two Part Bid:-**

Vendor shall submit their offer in 2 parts.

**2.1 Technical Bid:-** Containing relevant technical data, drawings, catalogues, Quality Plan etc, along with Commercial Terms and Conditions and a copy of the price bid with the price columns left blank (unpriced price bid). If the price bid was found later to be different from the unpriced price bid in any way, the offer will be rejected.

**2.2 Price Bid:-** Containing the Price(s) quoted. Installation and or commissioning charges shall be spelt out in absolutely lucid terms taking into account the total charges rather than quoting vaguely such as charges as per man day or charges per Engineer per day etc.,

Technical bids will be opened on the due date of the enquiry or any other date fixed by BHEL. Further, vendor should furnish clarifications, if any, required within seven days after the same is sought by Purchaser. If no clarifications/reply received within 7 days, it will be construed that vendor is not interested in the tender and Purchaser will finalise tender accordingly. Price bids received on due date along with technical offers will be recorded and opened subsequently with due intimation to vendors after finalising of technical scope of supply.

These bids shall be submitted in separate sealed covers superscribing the nature of the offer (technical bid or price bid). BHEL Enq No. Due date etc.

**Note: In case of non-compliance with the TWO\_-PART-BID ie.. clause number 2 and subclauses 2.1 and 2.2. Purchaser reserves the right to summarily reject all such offers.**

**3) Delivery:-**

**Vendor shall confirm supply of materials as per the delivery schedule indicated in the enquiry.**

**4) Negotiations:-**

**Vendor shall quote competitive price and best delivery to avoid negotiations.**

**5) Commercial Terms & Conditions:-**

**Terms of Delivery:**

- a) **Vendors shall clearly indicate terms of delivery Viz: Ex-Works/FOR Despatching station/FOR Despatching station FOR Destination/FOB port of loading/FAS Port of loading in their offer. If the terms of delivery is Ex-Works, then vendors shall clearly indicate the following:**
  1. **Packing and forwarding charges.**
  2. **Documentation / Handling charges if any**
  3. **FOB FAS charges (Inland Freight & Insurance charges from vendor works to port of Loading).**
- b) **All Indian Vendors shall clearly specify the Excise Duty in percentage applicable for their supplies. Offers containing expressions such as “Extra as applicable” or “As applicable at the time of Delivery” will be summarily rejected.**
- c) **CST/Local Sales Tax in percentage shall be clearly indicated.**

**6) Validity of Quotation:-**

**Validity of offer should be 90 days after the opening of price bid.**

**7) Part or split ordering:-**

**Purchaser reserves the right to order part of item / quantity of the enquiry.**

**8) For clauses not mentioned in this document see the enclosed “GENERAL TERMS AND CONDITIONS OF ENQUIRY AND CONTRACT FOR THE PURCHASE OF GOODS”**

- 9) **In case your terms of payment are different from our standard payment terms, interest at the rate of 10.5% per annum (or BHEL’s standard rate of interest) will be loaded to your prices for the difference of period of payment.**



**BHARAT HEAVY ELECTRICALS LIMITED**  
**CORPORATE R&D Division**  
**Vikasnagar, Hyderabad – 500093, India.**

**Suppliers' compliance statement to basic conditions of enquiry**

**(In case Order to be placed on Indian supplier in Indian currency)**

<b>Condition</b>	<b>BHEL R&amp; D's terms</b>	<b>Supplier's compliance</b> (indicate Yes/No. if 'No', state terms desired)
1) Validity of offer	90 days from the tender opening date	
2) Delivery requirements	Free delivery at our stores or FOR destination (as indicated in the enquiry)	
3)Warranty	Unless specifically mentioned in the enquiry, all supplied items to be provided with warrantee for one year (or more, if provided by the OEM) from the date of acceptance/commissioning. In case of equipment involving erection and commissioning, warrantee shall be for 18 months from the date of dispatch or 12 months from the date of commissioning, whichever is earlier	
4) Terms of payment	Full payment will be made within thirty days after receipt, inspection and acceptance of the material at BHEL R&D (and where involved, erection and commissioning of the material/equipment at BHEL/destination), by Crossed Cheque and no Bank commission charges are admissible.	
5) Taxes & Duties	Unless specifically mentioned in the enquiry, we do not provide 'C' or 'D' form. Supplier to specify rates of taxes and duties element wise and related percentages.	
6) Penalty for late delivery	0.5% per week beyond the delivery date as mentioned in the Purchase order on undelivered portion subject to a maximum of 10% of the total order value	

\* BHEL R&D reserves the right to reject any offer due to non-compliance with the above conditions and/or non-receipt of this form in duly filled condition

\* Any other elements of cost in addition to the above may please be specified in detail

**(Signature and Stamp/Seal of Vendor)**



**BHARAT HEAVY ELECTRICALS LIMITED**  
**CORPORATE R&D Division**  
**Vikasnagar, Hyderabad – 500093.**

**IMPORTED**

**Suppliers' compliance statement to basic conditions of enquiry**

**(In case Order to be placed on the Principal and foreign currency)**

<b>Condition</b>	<b>BHEL R&amp; D's terms</b>	<b>Supplier's compliance (indicate Yes/No. if 'No', state terms desired)</b>
01) Validity of offer	90 days from the tender opening date ( or as per enquiry)	
02) Delivery requirements	FCA – Nearest International Airport (or as indicated in the enquiry)	
03) Warranty	Unless specifically mentioned in the enquiry, all supplied items to be provided with warrantee for one year (or more, if provided by the OEM) from the date of acceptance/ commissioning. In case of equipment involving erection and commissioning, warrantee shall be for 18 months from the date of dispatch or 12 months from the date of commissioning, whichever is earlier	
04) Terms of payment	Sight draft. All bank charges inside India will be to BHEL R&D account and out side India will be to suppliers account. Documents through State Bank of India, HAL Complex, Balanagar, Hyderabad, AP, India-500 042.	
05) Agency commission	PI specify percentage charges, if any. Indian agency/agent commission will be in Indian Currency only.	
06) Erection/ Commission	As per enquiry	
07) Documentation	As per enquiry	
08) Insurance	BHEL will arrange Insurance based on intimation to our Insurance agency, United India Insurance Co., DO-2, Secunderabad, AP, India.	
09) Penalty for late delivery	0.5% per week beyond the delivery date as mentioned in the Purchase order on undelivered portion subject to a maximum of 10% of the total order value	

\* BHEL R&D reserves the right to reject any offer due to non-compliance with the above conditions and/or non-receipt of this form in duly filled condition

\* Any other elements of cost in addition to the above may please be specified in detail

**(Signature and Stamp/ Seal of Vendor)**



BHARAT HEAVY ELECTRICALS LTD.  
Corp. R&D DIVISION  
VIKAS NAGAR,  
HYDERABAD-500 093 (INDIA)

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**VENDOR REGISTRATION FORM**  
[FORM TO BE SUBMITTED\* BY THE BIDDER ALONG WITH TECHNICAL-BID]

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Before filling please refer to instructions on page-4

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1.0 VENDOR PROFILE:

1.1 & 1.2 Name and address of the vender: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone Nos.:

Fax No.:

Email:

1.4 Local representative of the vender in India/ Hyderabad:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone Nos.:

Fax No.:

Email:

Contact person:

Mobile No.:

2.0 & 2.1 Type of Organisation:

PROPRIETORSHIP	COMPANY	SISTER CONCERN	ANY OTHER (Please specify)
PARTNERSHIP	CORPORATION	Small Scale Industry	

3.0 Annual Turn Over:

Name and address of the Banker:

Sr.No.	Bank	Address

4.0 REGISTRATION PARTICULARS

4.1 IT Permanent Account No.(PAN):

4.2 & 4.3 State and central sales tax Registration No.:

4.4 ED/ Service Tax Registration No.:

PF Account No.:

Labour Licence No.:

ESI Account No.:

5.2 Contact person:

Mobile No. :

5.3 Total Number of employees:

Graduates (Engr./Scientists/Mgmt/Fin.)	Consultants	Workers		
		Sup./Skilled	Semiskilled	Unskilled

6.0 Wish to register for supplies/ services other than one bidding for :

<u>Sr.No.</u>	<u>Service/Supplies</u>	<u>Capacity</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
<u>6</u>		
<u>7</u>		

6.1 Reference list :

(Only recognized public and private sector companies, attach if printed copy available)

<u>Sr.No.</u>	<u>Customer</u>	<u>Volume / Year</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
<u>6</u>		
<u>7</u>		

7.0 & 8.0 Infrastructure / facilities :

<u>Sr.No.</u>	<u>Facility (with specifications)</u>	<u>Age/ Year procured</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
<u>6</u>		
<u>7</u>		
<u>8</u>		
<u>9</u>		
<u>10</u>		

9.0 Registration with other BHEL Unit/Units:

<u>Sr.No.</u>	<u>9.1.1 Unit</u>	<u>9.1.2 Registration No.</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		

Any Other information :

Declaration:

The information furnished above is true and authentic.

**(CEO / Proprietor)**

**SEAL:**

**Date:**

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The competent authority reserves the right to accept or reject the registration. Registered vendors will be informed by mail / email, as convenient. Contact Sr.DGM (MM) for clarification/ additional information on registration.  
A separate communication will be sent to you in case of non-registration, citing reasons thereof.

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### **Instructions**

1. Answer all items, use NA for items not applicable.
2. BHEL units do not require this registration.
3. Submit the form in duplicate.
4. Use additional sheets for want of space if required.
5. Attach copies of latest documents in respect of items 4.0 (Registration no.s)
6. Photographs of registered office and the chief executive/proprietor shall be furnished.
7. Use A4 sheets for this document and the enclosures.

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\* REGISTERED BIDDERS, HAVING BHEL (R&D) REGISTRATION NO./ HAVE SUBMITTED THIS FORMAT EARLIER, NEED NOT FURNISH THIS INFORMATION SECOND TIME (UNLESS DESIRE TO UPDATE IT).



**BHEL CORPORATE R & D**  
**VIKAS NAGAR- HYDERABAD - 500 093**  
**ANDHRA PRADESH – INDIA**  
**SUPPLIER REGISTRATION FORM**

(FOREIGN SUPPLIER)

ALL COLUMNS SHOULD BE PROPERLY FILLED IN THE SPACE PROVIDED FOR. WHEREVER IT IS NOT APPLICABLE PLEASE WRITE “NOT APPLICABLE”. INCOMPLETE OR INCORRECT FORMS MAY NOT BE CONSIDERED.

**1.0 GENERAL INFORMATION:**

1.1....NAME OF COMPANY

1.2....DETAILS OF HEAD OFFICE:

ADDRESS :  
TELEPHONE :  
FAX :  
.EMAIL :  
.WEB SITE :

1.3....DETAILS OF FACTORY/WORKS:

ADDRESS :  
TELEPHONE :  
FAX :  
.EMAIL :  
.WEB SITE :

1.4....DETAILS OF MARKETING AGENT

ADDRESS :  
TELEPHONE :  
.FAX :  
.EMAIL :  
.WEB SITE :

1.5 CHIEF EXECUTIVE

NOTE: PLEASE ATTACH SEPARATE SHEETS, IF SPACE FOUND IS INADEQUATE

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AUTHORISED SIGNATORY

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**BHEL CORPORATE R & D**  
**VIKAS NAGAR – HYDERABAD – 500 093**  
**ANDHRA PRADESH – INDIA**

**SUPPLIER REGISTRATION FORM**

(FOREIGN SUPPLIER)

- 1.6 CONTACT PERSON(S)  
FOR PRODUCT OFFERED  
NAME(S)  
OFFICIAL CAPACITY  
ADDRESS:  
TELEPHONE  
FAX  
E-MAIL
- 1.7 YEAR OF ESTABLISHMENT
- 1.8 PRODUCTION CAPACITY PER ANNUM
- 1.9 PARTICULARS OF PRODUCT INCLUDING  
SPECIFICATION AND RANGE OFFERED  
FOR REGISTRATION  
( ATTACH BROCHERS AND CATALOGUE)
- 1.10 NAME(S) OF BANKERS
- 1.11 BANKER'S CERTIFICATE
- 1.12 PORT OF LOADING
- 1.13 NEAREST AIRPORT
- 1.14 NAME OF THE INDIAN AGENT, IF ANY  
WITH AUTHORISATION LETTER
- 1.15 ANY OTHER INFORMATION:

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AUTHORISED SIGNATORY

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**BHEL CORPORATE R & D**  
**VIKAS NAGAR – HYDERABAD – 500 093**  
**ANDHRA PRADESH – INDIA**

**SUPPLIER REGISTRATION FORM**

(FOREIGN SUPPLIER)

**2.0 FINANCIAL INFORMATION**

2.1...TOTAL CAPACITY

2.2...ANNUAL TURN OVER FOR LAST 3 YEARS

2.3...WHEHER CREDIT LICENSE ACCEPTABLE      YES/NO

**3.0 QUALITY MANAGEMENT SYSTEMS**  
ENCLOSED FORMAT PART-B

3.1 EXPERIENCE LIST FOR SAME/SIMILAR ITEMS  
TO BE ENCLOSED

**4.0.....FUTURE EXPANSION PLANS:**  
(GIVE DETAILS)

**5.0 LIST OF ENCLOSURES:**  
INCLUDING BROUCHERS, CATALOGUES, TECHNICAL  
LITERATURE etc...

**6.0 ANY OTHER INFORMATION**

SIGNATURE OF SUPPIER

NAME

DESIGNATION

DATE

.....OFFICIAL SEAL

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AUTHORISED SIGNATORY

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