



Government of India
Bhabha Atomic Research Centre
Electromagnetic Applications & Instrumentation Division



Tender No. : EmA&ID/JI/2022/10M22A

Date: 10th March, 2022

Sub: Fabrication, testing and supply of high stability constant current power supply per annexure-A

Dear Sir/Madam,

1. Quotations are invited for the *execution of subject work*.
2. Taxes and Excise Duties shall be quoted separately. Form AF / H whichever is applicable shall be provided, if required.
3. The suppliers are shall submit the cost for Design, fabrication, assembly and testing. All necessary tools, instruments have to be arranged by the supplier.
4. The quotation must reach the undersigned on or before **24th March, 2022** and must be sent in a sealed envelope super-scribed with the *reference number & the due date* given above.
5. The quotations must reach us on or before the aforesaid date by India post (by speed post or ordinary post) only.
6. The address on the envelop should read:
The Head,
Electromagnetic Applications Section,
Electromagnetic Applications & Instrumentation Division
RCnD Bldg., North Site,
B.A.R.C, Trombay,
Mumbai - 400 085.
(Attn: Shri. Janvin Itteera)
7. The finished components with the test certificates as mentioned in the enclosures shall be delivered by the manufacturer after the award of the contract at BARC, Trombay, Mumbai - 400 085.
8. Delivery, packing & forwarding charges, if any, must be clearly mentioned in the offer.
9. Drawings / Sketches (if any) must be returned along with the offer
10. Quotation must indicate the PAN and GSTIN no of the vendor. Minimum validity of 60 days is preferred.
11. The quotation has to be duly signed by *authorized person with company seal*. *Unsigned offers shall be treated as invalid*.
12. For any technical clarifications, Please contact the undersigned vide email: janvin@barc.gov.in; Tel: +912225591492
13. All items delivered under this work order are developed solely for R&D purpose for use at EmA&ID, BARC, Trombay, hence, requisite exemptions shall be granted to successful contractor

(Janvin Itteera)
Scientific Officer(E), B.A.R.C
For & on Behalf of the President of India
(The Purchaser)

Technical Specification : Annexure-A

Supplier shall fabricate high stability constant current DC power supply as per the following specifications

1.0 Technical Specification

S No.	Specification	Value
1.	AC input supply voltage	400V, 3phase, 50Hz; power factor > 0.99
2	Operation mode	Constant Voltage /Constant Current
3	DC output current	0-340A _{DC}
4	DC Output voltage	0-40Vdc
5	Load regulation	<0.06% of rated value
6	Line regulation	<0.025% of rated value
7	Over-voltage protection	Adjustable 0-100%(rated value)
8	DC power	13.6kW(max.)
9	Protection	Over-temperature, short-circuit protection, input phase failure
10	Interface	Local: (a) Current control: 0-340A, in steps of 0.1A (b) Voltage control: 0-40V, in steps of 0.01V Remote: (a) USB communication, Ethernet based
11	Cooling	Air cooled
12	Operating temperature	0-50°C
13	Humidity	<80%, non-condensing
14	Parallel operation	Possible
15	Design topology	2-3 power boards cascaded for better redundancy
16	RMS Voltage ripple	< 30mV with resistive load

Table-1.0-technical

2.0 List of documents:

2.1) In addition to other mandatory tender documents for bidding, supplier has to furnish technical catalog of the product offered indicating the expected values under para 1.0.

2.2) During supply, contractor has to furnish material test certificate for the supplied product.

2.3) No post supply inspection will be permitted at purchaser's premises.

3.1) Acceptance tests:

(a) Load Test:

(i) The power supply to be tested at 100 % load capacity for 16hr with resistive load($\sim 0.117\Omega$): Recording of continuous voltage ripples(<0.06%)

(ii) The power supply to be tested at 50% load capacity for 16 Hr with resistive load(0.235Ω).Recording of continuous current ripples(<0.06%)

(b) Interlock tests:

All protection interlock to be tested as per S No.9 under technical specification

3.0) Deliverable: Quantity-01 No of power supply
