



Indian Association for the Cultivation of Science

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No. EI/174/ Adm/ 12

Date: 31/05/2012

PURCHASE ENQUIRY NOTICE

Sub : Purchase Enquiry for 1 no. 5KVA (1-Phase to 1-Phase) DOUBLE CONVERSION TYPE ON-LINE UPS with 60 minutes battery Back-Up time for STM laboratory at Room no. (9) under Prof. A.J. Pal of SSP Department of IACS, Jadavpur.

Dear Sir,

Sealed item rate Tender in **two bid system (Technical bid & Financial bid)** is invited for purchase of subject mentioned UPS from Nationally/ Internationally established manufacturers having marketing and servicing establishment all over India including Kolkata (it is a must to qualify a bidder in the technical bid) or from their authorized distributors/dealers who have supplied at least 10 Nos. of UPS of similar capacity or above to Government Organization/Government Research Institute or Highly Reputed Private Organization for Industrial/Research Application etc. during the last 3 years reckoned from the date of issue of this purchase enquiry notice . Therefore, interested parties may please send their offer ("**Technical Bid**" & "**Financial bid**" in two sealed envelopes which should be covered by a third envelop) to the office of the undersigned on or before **15.06.2012** (up to 2 p.m) mentioning **the item of purchase, Enquiry no. & due date on the top of the envelope**, which (**Technical Bid**) will be opened on the same day at 3.30 p.m. in presence of the intending bidders under the following terms & conditions. If holiday is declared on the schedule date of opening, the Technical Bid will be opened on the next working day at 3.30 P.M. **The price bid in respect of technically qualified bidder shall only be opened with prior intimation to the technically qualified bidders at an appropriate time.**

*The Technical bid shall contain the credential to fulfill the eligibility criterion as asked for in this purchase enquiry notice, earnest money deposit (EMD), printed product literature/technical specification of the product to be offered, VAT registration certificate, PAN, Dealership /Distributorship Certificate (in case of dealer or distributor) issued by the manufacturer, client list, warranty provision, test certificate etc along with this tender document duly filled in all respect and properly signed & sealed in all pages and any other document considered to be essential to establish their credibility **EXCEPT THE PRICED OFFER. THE PRICE BID SHALL INCLUDE THE PRICED OFFER ONLY.*** The sealed envelopes should bear **the name of work; NIT no. and due date of opening on the top of the envelopes and should reach the Registrar, IACS, Jadavpur, Kolkata 700032 on or before 15.06.2012. (upto 2 p.m.). A Pre-bid meeting will be held at IACS, Jadavpur at 3.30 PM. on 11.06.2012**

1. The offer should be valid for minimum 30 days for acceptance of the same. **The quoted rate should be inclusive of all taxes, delivery charges etc. but exclusive of central excise duty for which exemption to be obtained from your end against our relevant documents issued by the Government for exemption to be forwarded to you on demand.** Nothing extra will be paid except to the accepted rate. However, **Post Warrantee Comprehensive Annual Maintenance Contract (AMC) rate** should be mentioned with this offer **for the next 5 years** (which will include preventive maintenance of UPS and health check-up of battery once in a period of 3 months generally and break down maintenance for every time) duration in order to provide coverage of AMC (if required) after the expiry of warrantee period. Tender will be evaluated based on the cost of the supply of UPS & battery etc. and the cost of AMC for the next 5 years as stated above. However, the AMC order may be issued after expiry of the warranty of the UPS based on satisfactory performance/response to attend fault (if any) during the warranty period.

2. Delivery at site at your cost and risk within 21 (Twenty One) days from the date of issue of Purchase Order, failing which penalty will be imposed @ 1% per week or part thereof but not exceeding 5% of the order value of work. However, any further delay beyond this limit may prompt IACS to cancel the order forfeiting the EMD.
3. Payment is likely to be cleared within 30 (thirty) days against successful delivery, installation, testing & trial run/commissioning.
4. An **Earnest Money Deposit (EMD)** of **Rs. 2,000/-** (Rupees Two thousand only) to be enclosed with the quotation favoring “**Indian Association for the Cultivation of Science**” through **pay order/ demand draft/ banker’s cheque** on local Bank which will be released to the unsuccessful bidders on demand after 15 days of the quotation opening and EMD for successful bidder it will be adjusted with the security deposit.
5. i) 90% payment of the work order value will be made against successful delivery, installation testing & trial run/commissioning. ii) 10% of the Purchase Order value duly adjusted with the EMD shall be retained with IACS as Security Deposit, which will be released after 6 (six) months on satisfactory performance of the equipments.
6. The UPS to be supplied should have warranty of not less than 12 months from the date of successful trial run or 18 months from the date of successful delivery which ever is earlier. However, the Warranty of Battery should not be less than 2 years from the date of successful supply of the Battery.
7. The quotation should be enclosed with printed **technical literatures** of the product to be offered along with a list of credentials and other relevant documents fit to be essential to establish your position.
8. The bid must carry the signature (with company seal) of authorized signatory of the company/firm on each page of this purchase enquiry document along with other documents as asked for to be submitted with their bid.
9. Installation, Testing & Commissioning: Should be included with the offered price
10. There will be no price escalation except for any changes or imposition of Govt. levies from the date of opening of tender.
11. Complete Purchase Enquiry Document will also be available at www.iacs.res.in and can be downloaded for submission. **Conditional offer including conditional rebates shall be summarily rejected.** In case of any discrepancies, the office copy will be referred and shall be binding to the bidders.
12. The compliance list as provided with this purchase enquiry document must be filled in all respect and to be submitted with the offer.
13. The IACS authority reserves the right to reject any or all the offers without assigning any reason thereof.
14. “**Test Certificate**” of the UPS must accompany the offer. The Test Certificate should be issued by any Govt. Laboratory / NABL approved laboratory towards compliance of the specifications as asked for in the NIT within the cost of the UPS.

Thanking you.

Yours faithfully,

S.Bose
T.O. (Elect)

Copy to:

- 1) Prof. A.J. Pal, SSP Dept.
- 2) Registrar
- 3) F&A.O.
- 4) Sr. System Analyst.-He is requested to Up-load this notice to IACS, Website.
- 5) Sr. Security Officer,
- 6) Receiving & Despatch Section

**SPECIFICATIONS OF 5KVA (1-PHASE TO 1-PHASE) DOUBLE CONVERSION TYPE
ON-LINE UPS WITH 60 MINUTES BATTERY BACK-UP: -**

The Uninterrupted Power Supply (UPS) System should be designed and manufactured with latest high Power Transistors in high frequency Pulse width Modulation (PWM) Switching mode of IGBT based fully automatic controlled micro computer based designed & housed in a compact rigid stylish cabinet with following features and specification complying with CEI, IEC, BS and ISO standard.

Input:

1. Voltage Supply: 230V, 1 Phase, AC Voltage.
2. Voltage Range: +10% -15%
3. Supply Frequency: 50 Hz
4. Frequency Range: $\pm 5\%$ on 50 Hz

Output:

1. Power Capacity: 5 KVA / 4KW (Continuous) at 0.8 p.f.
2. Terminal Voltages: 220V, 1Ph & N.
3. Voltage Regulation: $\pm 1\%$
4. Power Factor: 0.6 (lag)~Unity
5. Frequency: 50 Hz
6. Permissible Variation: $\pm 0.5\%$
7. Crest Factor: 3:1
8. Wave Form: Pure Sine Wave
9. Total Harmonic Distortion: $\leq 5\%$ at full load
10. Efficiency: overall efficiency $\geq 85\%$
11. Soft starting: 0-100% in 10 Sec with ability to Cold start directly on battery
12. Over load Capacity: should be suitable for 110% for 60 minutes, 125% for 10minutes & 150% for 1 minute.

Battery:

1. Type: 12V, VRLA type Sealed maintenance free (SMF)
2. Back up duration: 60 minutes (VAH=8064 Minimum)
3. D.C. ripple: $\leq 1.5\%$ RMS
4. Brand: Exide or Amara Raja or Rocket or similar superior make as per choice of IACS.

Bypass:

1. Switch: Static, Line Synchronized
2. Transfer Time: Zero-no-break
3. Manual: For maintenance Purpose

Protections:

1. Input / Output- Over Voltage
2. Input-Under Voltage
3. Output : Over load/Short Circuit
4. Battery Under Voltage etc.
5. Support for 100% phase unbalanced load

Indication: Mimic with large LED for flow of power and status information with bar graph for load and battery incorporated with low battery / Fault and load on bypass Alarm etc.

Environmental:

1. Altitude ≤ 1000 Mtr. above MSL

2. Operating Temp = 0~40°C
3. Storage Temp = 0~70°C
4. Noise level: 65dB
5. Humidity = $\leq 95\%$
6. Ventilation = by internal intake fans.
7. Enclosure = IP-20
8. Cable Entry: Back side (Bottom) Preferred.

Other Features:

1. Automatic Boost charger
2. Computer interface RS-232/C
3. Front access for maintenance
4. Input harmonic filter
5. Phase Reversal Protection.
6. PVC insulated Copper flexible Cable loops (7.5 Mtrs each for input & output) of required size are to be provided with the UPS with adequate protection as per I.E. Rule for input & output power supply including battery supply.
7. The UPS enclosure should be attached with heavy duty trolley mounted base for easy shifting & maintenance work

S. Bose
T.O. (Elect)

LIST OF COMPLIANCE

Parameters	IACS's Spec.	Bidder's Spec.	Complied or not	Remarks
Input:				
Voltage Supply	230V, 1-Ph.			
Voltage Range	+10% - 15% (min)			
Supply Frequency	50Hz			
Frequency Range	+ - 5% on 50Hz			
Output:				
Power Capacity:	5KVA/4KW at 0.8 P.F.			
Terminal Voltage:	220V, 1-Ph. & Neutral			
Voltage Regulation:	+ - 1%			
Power Factor:	0.6 (lag) to Unity			
Frequency:	50 Hz			
Permissible Variation:	+ - 0.5%			
Crest Factor:	3 : 1			
Wave Form:	Pure Sine Wave			
Total Harmonic Distortion:	≤ 5% at full Load			
Efficiency:	Over all efficiency ≥ 85%			
Soft Starting:	0 – 100% in 10 sec. with ability to cold start on battery.			
Over Load Capacity:	110% for 60 minutes, 125% for 10 minutes and 150% for 1 minute.			
Battery:				
Type:	12V, VRLA type SMF battery			
Back-Up:	60 minutes			
VAH Value:	8064 (minimum)			
D. C. ripples:	≤ 1.5% RMS			
Make:	Exide or Amara Raja or Rocket or Similar Superior make as per choice of IACS.			
Bypass:				
Switch:	Static Line Synchronized			
Transfer time:	Zero No break			
Manual:	To be supplied			
Protections:				
Input / Out put	Over Voltage			
Input	Under Voltage			
Out put	Over Load/Short Circuit			
Battery:	Under Voltage			
Support for:	100% phase Unbalanced load			
Indication:	Mimic with large LED for flow of power and status information with bar graph for load and battery incorporated with low battery/fault and load on bypass alarm etc.			

Environmental:				
Altitude:	≤ 1000 Mtr. above MSL			
Operating:	Temp = 0~40 C			
Storage:	Temp = 0~70 C			
Noise Level:	65 DB			
Humidity:	≤ 95%			
Ventilation:	By internal intake fans			
Enclosure:	IP-20			
Cable Entry:	Back side (Bottom) preferred.			
Other Features:				
	Automatic Boost Charge			
	Computer interface RS-232/C			
	Front access for maintenance			
	Input harmonic filter			
	Phase Reversal Protection			
	PVC insulated copper flexible cable loops (7.5 Mtrs each for input & output) of required size are to be provided with the UPS with adequate protection as per I.E. rule for input & output power supply including battery supply.			
	The UPS enclosure should be attached with heavy duty trolley mounted base for easy shifting & maintenance work.			