

**Indian Institute of Technology Kanpur
Department of Electrical Engineering**

Enquiry No.: IITK/EE/SG/2015/01

Enquiry Date: 11/08/2015

Closing Date: 25/08/2015

Sealed quotations are invited for a 10kVA UPS with the following specifications:

Configuration:

10 KVA Stand Alone UPS with Sealed Maintenance Free (SMF) battery bank.

1. Technology	
a.	True On Line UPS with double conversion technology based on (DSP) Digital Signal Processor
b.	UPS should be with Intelligent Battery Management for longer battery life
c.	UPS should be with input power factor > 0.95
d.	IGBT based rectifier and inverter.
e.	Phase Neutral reversal protection – In the event of reversal in phase sequence, the UPS should automatically adjust itself and should get synchronized with the input phase.
f.	UPS should have Cold Start facility.

2. Power rating	
10 KVA/8-9kW	

3. Input	
a. Nominal Voltage	380V/400V/415 VAC, 3 phase
b. Voltage Range	305-478 VAC at full load
c. Frequency Range	50 Hz \pm 10%
d. Power Factor at full load	>0.95
e. Current harmonic (THDi)	< 5% on available campus voltage quality

4. Output	
a. Voltage Range	220/230/240 VAC, single phase
b. Output waveform	Pure sine wave
c. Voltage regulation	\pm 1% (0-100% linear load)
d. Voltage Harmonic Distortion (Rated input voltage, rated input frequency)	< 2% (Linear Load) < 5% (non-Linear Load)
e. Frequency	50Hz on battery; synchronized with bypass
f. Power Factor	0.8
g. Crest Factor	3:1
h. Bypass	Both automatic and manual
i. Inverter Overload	125% for 1 min, 150% for 10 sec
j. Galvanic Isolation	Inbuilt galvanic isolation transformer at output

5. Battery	
a. Type	Sealed Maintenance Free, Valve Regulated Lead Acid / SMF Ni Cad (12V batteries)
b. Preferred battery makes	Exide, Quanta, Panasonic, Amaron
c. Standard Back Up time	Please provide separate quotations for 60 minutes at full load and 30 minutes at full load
d. VAH Required	For 60 minutes back up– minimum 18720 VAH For 30 minutes back up—minimum 12096 VAH
e. Charger	Constant voltage, constant current
f. Tray for keeping battery bank should be provided by the vendor	
g. All cabling from battery bank to UPS is in vendor's scope.	

6. Protections desired
-Surge protective device to be provided at the input of the UPS system. -Transient Voltage Surge should be suppressed within > 0.5 nano seconds with RFI/EMI attenuation 40dB.

7. Environmental and others	
a. Overall efficiency	> 85% (with inbuilt galvanic isolation transformer)
b. Audible Noise	< 55dB
c. Operating temperature	0- 40degree C
d. Alarm Indications	Mains On, Inverter On/Off/ Faulty indication Battery level, Static Bypass ON, Load level, Over temperature Audible Alarm – Mains failure, Low Battery, Over Load, Load On Bypass On
e. Communication	RS-232/USB port for software interface SNMP card for remote monitoring (software for monitoring should be provided free of cost)

8. LCD Display
Load percentage, UPS internal fault, Battery charging percentage, Battery fault, Over load, etc.

9. Warranty
a. Minimum 3 years comprehensive warranty for UPS on site from the date of installation
b. Minimum 24 months replacement warranty for UPS from the date of installation.
c. Minimum 2 years warranty for batteries from the date of installation.

10. Quantity
One

11. Credentials and Approvals

- a. Manufacturer Should be ISO 9001:2000 certified
- b. Manufacturer Should be ISO 14001
- c. Manufacturer should have manufacturing facility in India
- d. Test reports from Govt. accredited labs on the same model quoted.

Terms and conditions:

1. Local service should be available and OEM (manufacturer) should have at least one authorized service provider (ASP) in Kanpur/Lucknow with adequate service persons, spare and standby UPS facilities.
2. The bidder must be authorized by the manufacturer or OEM to supply, install and maintain the system. Specific authorization by the manufacturer for participating in this tender has to be enclosed with the technical bid.
3. The vendor should have a good service support locally, which should be supported by installations in the recent past (attach proof).
4. UPS should be warranted for minimum 24 months replacement warranty from the date of installation.
5. Vendor may be asked to give demo of the unit along with full load testing at IIT Kanpur.

Note:

- Quote should be made in two parts: Technical bid and Financial bid separately in sealed envelopes
- Financial bids for the product whose technical bid is not acceptable will not be opened. Any quote with the financial bid included in the technical bid will be summarily rejected.
- The sealed envelopes with the quotes should be superscribed with the Inquiry number and whether it is a technical or financial bid.
- The institute reserves the right of accepting and rejecting any quotation without assigning any reason.
- The indenter reserves the right to cancel the tender without being answerable.
- **Company's printed brochure must be enclosed as a proof of technical specifications.** Anything not mentioned on the brochure may be treated as not present in the product.
- Attach compliance sheet and complete details of the products.
- Quotations should not be an exact copy of the specifications mentioned above.
- The delivery period should be specifically stated (preferably not more than 4 weeks) and the delivery should be at IIT Kanpur.
- The warranty period should be clearly stated.
- Payment terms will be as per IIT Kanpur terms: 90% on installation and 10% on satisfactory report.
- Maximum educational discounts should be applied – this equipment will be used in a laboratory that will support research as well as teach and train students.
- Price must include all taxes, VAT, delivery and installation charges. All prices are to be FOR IIT Kanpur
- Quotes should have a minimum validity of 90 days.

Address quotations to

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