



**KERALA AGRICULTURAL UNIVERSITY**  
**FARMING SYSTEMS RESEARCH STATION**  
**SADANANDAPURAM, KOTTARAKARA**  
Email: fsrskottarakkara@kau.in

No. FS (4) 461/22

Date: 17.10.2022

**TENDER NOTICE**

Sealed competitive tenders are invited for the supply of UPS and Tubular batteries required for the use of this station

**Specifications for UPS System**

The requirements of 10 kVA UPS systems are specified herein on system basis. The 10 kVA UPS shall be fully microprocessor based true on-line double conversion type, control and functions i.e., rectifier control, inverter control, system control and display shall be microprocessor based.

Manufacturer has to submit ISO 9001, ISO 14001, ISO 45001, ISO 50001 and valid e-waste management Certificate from Central Pollution Control Board.

The Built-In Isolation Transformer based IGBT UPS have to be supplied with 100 AH Batteries. Total VAH rating shall be 19,200. Battery shall be SMF type, preferably of Exide/Quanta Batteries.

The design, manufacture, inspection testing and installation of the UPS system covered under this specification shall conform to the latest editions of relevant codes and standards as applicable IEEE, ANSI, IEC and Indian Standards and their equipment.

The UPS equipment and the complete system shall have surge withstand capability (SWC) to meet the requirements of ANSI C 37.90a, IEEE standard 472-1974. All components of UPS system shall be capable of withstanding all possible short circuit current.

**TECHNICAL SPECIFICATION OF UPS SYSTEM**

Sl. No	Description	Requirement	Compliance
	<b>ENVIRONMENTAL:</b>		
1	Operating Temperature	0 to 40 Deg.C	
2	Maximum Temperature	40 Deg. C (Ambient)	
3	Storage Temperature	-25 to: 70 Deg.C	
4	Relative Humidity	95%	
5	Altitude	Up to 200 mtrs MSL	
	<b>INPUT</b>		
6	Standard Voltage	380/ 400 / 415V Three Phase	
7	Voltage tolerance	320 V – 480 V	
8	Frequency	50Hz	
9	PF	0.9 at rated full load	
10	THD	<3%	
11	Frequency tolerance	+5% (Without UPS tripping)	
12	Power Walk in	0-30 sec (user settable)	

	<b>OUTPUT</b>		
13	Output rating	10KVA	
14	Voltage	220 VAC	
15	Frequency	50 Hz	
16	Voltage Stability	±1% typical	
17	Overload	110% for 60 mins. 125% for 10 mins. 150% for 1 min.	
18	Non-linear load permissible	Yes	
19	Voltage stability	±5%	
20	Frequency Stability	50 Hz +/-0.25 Hz	
21	Crest Factor	3:1 (Minimum)	
22	Output voltage distribution with Linear Load (100%)	1% typical	
23	Non-linear load (100%)	<5%	
24	Transfer time	0(Zero) M Sec	
25	Isolation Transformer	Built-In at the Output	
	<b>DC CHARCTRISTICS</b>		
26	DC Bus	192 V or above	
27	Type of Battery	VRLA/SMF	
28	VAH Rating	19200 or above	
29	Per Battery AH Rating	100 or below	
30	Float Charge voltage	2.25 V/cell	
31	Ripple voltage (with battery Disconnected)	<2%	
32	Warranty for SMF Battery	2 Years	

	<b>PROTECTION</b>		
33	Battery circuit breaker (BCB)	For automatic isolation of battery line in case of battery under voltage and over current conditions.	
34	Static switch	Fully rated at the inverter output	
35	Serial Port for computer Compatibility	RS 232 / RS 485	
36	Diagnostics and monitoring	Microprocessor based	
37	Isolating input & output	Isolators required	
38	Isolation Transformer	Built-In at the Inverter output	
39	Fuse link protection	For input	
40	Over temperature/fire	Protection required	
	<b>ENCLOSURE</b>		
41	The enclosure shall be Class of insulation	Compliance with IP20 Class II	
	<b>CABINET FINISH</b>		
42	Painting: Colour:	As per OEM	
	<b>CABLE ENTRY</b>		
43		Bottom	
	<b>BATTERY Stand</b>		
44		Battery shall have open MS rack enclosure with proper stacking arrangement and painted with same colour of UPS cabinet.	
	<b>Documentary Evidence</b>		
45	Certificates to be produced	ISO 9001, ISO 14001, ISO 45001, ISO 50001 and valid e-waste management Certificate from Central Pollution Control Board.	
46	GST Certificate	Local GST registration not newer than three Years	
47	AMC Copies		
48	Approved / Preferred Make	ABB/Vertiv/Legrand/Powerone/Keltron /APC/Riello/Eaton	
49	Warranty & AMC	3 years for UPS and 2 Years for batteries and three years AMC for UPS to be quoted separately.	

## Terms and conditions

- Tender forms can be downloaded from KAU website (<http://www.kau.in/tender>). Cost of the tender form is 0.25% of the cost of tender rounded to the nearest multiple of 100, subject to a minimum of Rs. 400/- and a maximum of Rs. 1500/- and 18% GST on tender form is applicable. Cost of tender form and 18% GST of tender form should be submitted as two separate DD's.
- Tenders not stipulating period of firmness of rates and with price variation clause and/or subject to prior sale condition are liable to be rejected.
- The items should be delivered at the expenses of the successful bidder.
- Rate quoted should be inclusive of all charges such as packing, forwarding, freight, loading/unloading/handling and Government duties leviable, if any.
- Documents to be submitted:
  - Tender form: Each and every pages of the tender form should be attested after reading the conditions provided.
  - Copy of up-to-date GST registration certificate & PAN of the bidder
  - Authorization certificate if the bidder is a dealer.
  - EMD @ 1% of the quoted amount (Minimum EMD amount Rs. 1500/-) should be submitted as a separate DD drawn in favour of **Professor and Head, Farming Systems Research Station, Kerala Agricultural University, Sadanandapuram**, "payable at **State Bank of India, Pulamon Junction Branch, Kottarakara, Kollam** along with an agreement executed in Kerala stamp paper worth Rs. 200/- should be enclosed with the tender. Valid EMD exemption certificate from the Store Purchase Department, Govt. of Kerala, if the firm is exempted from payment of EMD. The format of the agreement can be downloaded from the website <http://www.kau.in/tender> .
  - Undertaking to the effect that the bidder is not Debarred/ Blacklisted or Banned from any University/ Government Institute / PSU.
- The cost of tender form, GST for tender form (18 %), EMD may be drawn by way of three separate DD's in favour of "**Professor and Head, Farming Systems Research Station, Kerala Agricultural University, Sadanandapuram**, "payable at **State Bank of India, Pulamon Junction Branch, Kottarakara, Kollam** should be enclosed. .
- The tender along with relevant documents should be sent to "**Professor and Head, Farming Systems Research Station, Kerala Agricultural University, Sadanandapuram, Pin: 691531**" in sealed envelope by registered post/speed post before the date and time of opening of technical bid. Otherwise tender will be strictly rejected without any notice.
  - The sealed envelope containing the hard copy should bear the superscription "**Tender on Supply of UPS and Tubular batteries to FSRS, Sadanandapuram**", the cover should contain three separate DD's for tender form, GST for tender form, EMD and the agreement as mentioned above.
  - The tender notice number, name of the items for which the rate is quoted and date of opening of tender should also be mentioned on the top of the envelope.
  - Late tenders will not be accepted.
- In case, the article is sent by railway; the railway receipt should be sent separately, and not along with the tender since the tender will be opened only on the appointed day and demurrage will have to be paid if the railway parcels are not cleared in time.
- **Quoting of Items:** Only the best items the specification must be quoted.

- Vendors if quoted for lower end model while the same manufacturer is having better items meeting the above tender specifications, the purchase committee shall take decision to disqualify.
- The products should be nationally branded and ISI certified.
- The items should be delivered and installed at the “**Professor and Head, FSRS Sadanandapuram, Sadanandapuram.P.O, Kottarakkara – 691 531**” at your own expenses and any packing, forwarding, freight, loading/unloading/handling will be met by the firm.
- Details required for e-payment (Details of bank account having core banking facility and email address of the bidder) shall be furnished along with the tender.
  - Payments will be made only after the supply is actually verified and taken to stock.
- Tenders not accompanied by these details will be rejected.
- Professor and Head, Farming Systems Research Station, Sadanandapuram shall have no obligation to convey reason for rejection of any bid. It shall be open for Professor and Head, Farming Systems Research Station, Sadanandapuram to reject even the lowest bidder in the interest of the University and no reason need be given therefore.
- On receipt of purchase order from this office, the tenderer should furnish a security deposit of 5% of the cost of the items quoted in the form of term deposit / bank guarantee / demand draft in favour of “**Professor and Head, Farming Systems Research Station, Sadanandapuram**” payable at **State Bank of India, Pulamon Junction Branch, Kottarakara, Kollam (IFSC Code: SBIN0070272)**.
- Withdrawal from the tender after it is accepted or failure to supply within a specified time or according to specifications will entail cancellation of the order.
- All subsequent Government orders connected to tenders and any revision in the rate so taxes would also be applicable to this tender'
- In addition to these all other General conditions annexed in the Store Purchase Manual of Government of Kerala are also applicable to this tender.

The tender should reach this office on or before **2.30 pm on 01.11.2022** and will be opened at **3.00 pm** on the same day in the presence of such of the tenderers or their authorized representatives. The tenders received after the stipulated date and time will not be accepted in any circumstances. All terms and conditions prescribed for Government tenders as amended from time to time are applicable in this case also. The under signed has the right to accept or reject any or all tenders without assigning any reason thereof.

Further details can be had from the under signed during the office hours between 10.00 am and 5.00 pm **0474 2663535** and also through KAU web site.

Sd/-  
Professor and Head

  
Administrative Assistant