



Ministry of Culture  
Government of India



## National Council of Science Museums

33 Block GN, Saltlake Sector V

Bidhannagar, Kolkata 700 091

I-18012/7/23(01)

### Technical Specification

#### 1) 3 KVA Online UPS with 30 Min Backup battery, rack and connector cables – 8 Nos.

Parameter	Required Specifications
Configuration	3 KVA On-Line UPS Should have IGBT BOTH INVERTER & RECTIFIER STAGE , inbuilt cold start function
Technology	HIGH FREQUENCY DOUBLE CONVERSION DESIGN , EMI /RFI NOISE FILTER
Capacity & Output Power Factor	3 KVA & 0.80
Operating Voltage Range	110-300 VAC (Based on load at 50%), 160-300 VAC (Based on load at 100%)
Operating Frequency Range ( HZ)	46 - 54 ±0.5Hz OR 56 -65 ±0.5Hz AUTO SENSING
Output Voltage	220/230/240 ±1%
Output Frequency	50 Hz/ 60 Hz ±0.2% ON BATTERY MODE
Overload Capacity	>110% , 30 SECNDS TURN TO BYPASS MODE ,>150% 300 MILI SECNDS TURN TO BYPASS MODE
Crest Factor	3:1

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<b>Noise (Db)</b>	<b>&lt;45 DB , (1 METER)</b>
<b>Efficiency</b>	> 91%
<b>Harmonic Distortion</b>	<2 % THD (Linear Load); <5 % THD (Non-linear Load)
<b>TEMPERATURE &amp; RH</b>	Temp: 0–40 Deg C
	Relative Humidity: 0 to 95% non-condensing
<b>Audible Alarms</b>	Battery low voltage , abnormal power supply , ups failure , over load
<b>LCD INDICATION</b>	LCD DISPLAY INDICATING (input & out voltage / input & out frequency , load watt/ va percent , inverter temperature ) OPERATION MODE SUCH AS : ONLINE , ON BATTERY , ON BYPASS
<b>Battery Back-up &amp; Other Details</b>	The system must be capable of providing requisite battery back-up time of 30 minutes using Sealed Maintenance Free Batteries along with Rack & Links. Single bank
	Minimum VAH Required: 2490 VAH

## STANDARDS & CERTIFICATION

The UPS and all associated equipment and components shall be manufactured in accordance with the following applicable standards:

Safety Requirements: IEC 62040-1 and also the UPS must have BIS Certification as per MeitY CRS Registration scheme for Indian Manufacturer .

Electromagnetic Compatibility Requirements: IEC 62040-2

Test & Performance Requirements: IEC 62040-3

The UPS shall be CE marked and RoHS Certification for the offered product.

The Quality System for the engineering and manufacturing facility certificated to conform to Quality System Standard ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 27001:2013, ISO 50001:2011 for the design and manufacturing.

UPS must have certification of compliance for FCC & also for UL from an Indian based certification agency.

Copies of the above certificate are mandatory to submit with technical bids.

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·Required 2 years warranty onsite on UPS and battery. (Eastern and north eastern India ,specially Manipur)

Documentary proof for OEM that relates to being in UPS business for a period of minimum 10 years or more.  
Incorporation Certificate to be enclosed.

Must have centralized helpline number (Toll-Free Number) for service call login and complaint center and proper resolution process (Escalation Matrix )

## **Make & Model offered**

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(To be entered by bidder)

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## 2) Technical Specifications 10KVA On-Line UPS 30 Min Backup battery, rack and connector cables – 6 Nos.

### Technical Parameter Details

<b>INPUT</b>	
Nominal Voltage	220/230/240VAC, 1-Ph
Operating voltage range	120 ~300VAC Load Dependant
Operating frequency range	50Hz: 45~55Hz (auto sensing)
<b>OUTPUT</b>	
Output voltage & Regulation	220/230/240VAC, 1-Ph & ±1%
Output frequency	+/- 1%, +/- 2%, +/-3%, +/- 4%, +/- 5%, +/- 10% of the rated frequency(optional); 50Hz±0.2% on Battery mode
Power Factor	0.8
Output voltage(THDv)	<=2% (linear load), <=5% (Non Linear Load)
Crest Factor	3:1(max)
Efficiency	≥90%
<b>BATTERY</b>	
DC Voltage	192V DC
Charge Current	Should have 1 ~ 10A charging current as standard auto settable
Typical recharge time	6~8 Hours(to 90% of full capacity)
Back up time required	Minimum 30Mins under full load condition
Minimum VAH	Should be minimum as 12480VAH for required back up time
Type	SMF VRLA
Make	Exide/Quanta/OEM Approved
Recharge Time	6~8 Hrs for 90% after complete discharge

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Cell cut-off voltage	10.5V for 12V Monobloc
<b>SYSTEM FEATURES</b>	
LCD indication	AC Mode, DC Mode, Battery Low, Overload, Input voltage & frequency, Output voltage & frequency, Battery voltage & Load percentage
LED indication	Line mode, Backup mode, Battery low, Overload & UPS fault
Overload capability	1. Load <= 110% for 10mins; 2. Load <= 125% for 1 min
Protections	Battery low voltage, Abnormal power supply, UPS failure, Overload, Short Circuit & Over temperature
<b>ENVIRONMENTAL</b>	
Operating temperature	0~40°C
Storage Temperature	-25~55 °C
Humidity range	0%~95% (non-condensing)
Altitude	<1000m No derating
Noise Level	<50dB
Warranty	2 Years on UPS & SMF Batteries
<b>OEM Eligibility Criteria</b>	
Documentary proof for OEM that relates to being in UPS business for a period of minimum 10 years or more. Incorporation Certificate to be enclosed.	
Must have centralized helpline number (Toll-Free Number) for service call login and complaint center and proper resolution process (Escalation Matrix )	
Must have all over India service center. List to be submitted	
Other Submittals: All mentioned certificates to be submitted with technical bid. ISO 9001, ISO 14001, ISO 45001:2018, ISO 50001, CE (EN 62040-2:2006, EN 61000-3-12:2011, EN 61000-3-11:2000, EN 60950-1:2006, EN 62040-1, EN 61000-2-2) , RoHS , FCC , BIS, Type Test Certificate from NABL/Govt. Lab & ISO27001	

## Make & Model offered

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