

**TECHNICAL SPECIFICATIONS OF THE (1+1) PARALLEL ONLINE UPS SYSTEM**

TENDERERS ARE REQUIRED TO FILL-UP THE OFFERED SPECIFICATIONS' COLUMN. This should be accompanied with full technical specifications of every item quoted. In absence of supporting data, and a completely filled form, the technical bid may be rejected.

<b>SPECIFICATIONS FOR 2X10 KVA ONLINE UPS SYSTEM SYSTEM WITH ONE HOUR BACK-UP ON FULL LOAD ON EACH UPS</b>		
<b>PARAMETER</b>	<b>REQUIRED SPECIFICATION</b>	<b>OFFERED SPECIFICATION</b>
Topology	True Online Double Conversion Power Recreation	
Rectifier Design	Fully Controlled	
Charger Design	Low Ripple CVCC Battery Charging	
Inverter Design	Advanced Sine-weighted High Frequency PWM using IGBT with Instantaneous Sine-wave Control	
Duty	Continuous Operation on Full Rated Power	
<b>INPUT</b>		
Voltage Range	340 to 460 V AC, Three Phase	
Frequency Range	47 to 53 Hz	
Input Phase Sequence Reversal	UPS should keep working normally without draining the batteries	
Back-Feed Protection	Required	
<b>OUTPUT</b>		
Power Rating	10 KVA / 9 KW Continuous for Each UPS, The System shall be installed in 2X10KVA /9 KW configuration to achieve 20 KVA / 18 KW Output Capacity without Redundancy and 10 KVA/ 9 KW Output Capacity with (N+1) Redundancy	
Number of UPS, which can be connected in parallel to form a unified system with one output	Minimum Two (Each ups should be capable of working in standalone or parallel mode without any modifications)	
Voltage	230 V AC, Single Phase	
Voltage Regulation	± 1%	
Frequency	50 Hz ± 3Hz in Synchronized Mode 50 Hz±0.05Hz in Battery Mode / Unsynchronized Mode	
Waveform	Sine Wave	
Harmonic Distortion	Less than 2% on linear load Less than 5% on Non-linear Load	
Load Power Factor	Unity to 0.7 lag within specified power ratings	
Overload Rating	125% for 1 minute 150% for 30 seconds The UPS should not trip in case of Start/ Stop of the Load (s) within the Overload Ratings of the UPS	
<b>BATTERY</b>		
Type	Sealed Lead Acid Maintenance Free	
Back-up Time	One Hour on full load of 10 KVA / 9 KW Load on Each UPS. Battery Required : 18000 VAh Minimum with	

	each UPS	
Battery Cabinet	Powder-coated to be provided for safety of the User	
Ingress Protection for Battery Cabinet	IP10 or Better	
Battery Protection	MCCB / MCB of Suitable DC rating should be installed	
<b>PROTECTIONS</b>		
Input Over Current	Input Under/ Over Voltage	Output Under/ Over Voltage
Over Temperature	Battery Under/ Over Voltage	Output Overload & Short Circuit
<b>ENVIRONMENTAL</b>		
Operating Temperature	0 to 40 deg C (45 deg C Peak)	
Relative Humidity	Upto 95% Non-condensing	
Audible Noise	< 55 dB at 1 metre	
Ingress Protection	IP20	
Cooling	Forced Air Cooling	
<b>COMMUNICATION</b>		
RS-232	Each UPS Should have RS-232 Communication Interface with Software for Monitoring the various Parameters	
AS400 Interface	Each UPS should have AS400 Interface to facilitate external status interface with Panel / BMS etc.	
<b>PANEL FOR UPS INPUT, PARALLELING AND LOAD DISTRIBUTION</b>		
Paralleling Panel for 2X10KVA UPS Systems	Should be supplied with necessary Switches, Over-current Protection for Input, Output, Bypass with provision for connecting Incoming Three Phase Supply and Output Single Phase Supply of suitable Rating	
Input	Suitable MCB / MCCB of Reputed Brand (Specify the Brand and rating)	
Output	Minimum 2 No. using suitable MCB / MCCB/SFU (Specify the number and rating)	
Indications	Suitable Long-term Reliability LED Type	
Construction	Should be Wall Mounting Type as per IS Standard	
EPO	EPO Switch should be provided to Manually conduct Emergency Power Off	
Earth Fault Alarm	Earth Fault Alarm with Indication should be provided	
Individual UPS Isolation	If required, it should be possible to electrically disconnect any of the UPS from the output and input supply using the panel	
<b>WARRANTY</b>		
For UPS	5 years (Minimum)	
For Battery	5 years (Minimum)	
For Panel	5 years (Minimum)	