

**COMPLIANCE STATEMENT TO SPECIFICATIONS FOR THE TWO-TIER UPS SOLUTION  
FOR ANALYTICAL INSTRUMENTATION IN LABORATORY**

**ALL Tenderers ARE REQUIRED TO FILL-UP THE 'OFFERED SPECIFICATIONS' COLUMN  
(Tenderer not filling-up this format will be rejected)**

<b>SPECIFICATIONS FOR 6 KVA ONLINE U.P.S. SYSTEM WITH SMF BATTERY AND GALVANIC ISOLATION BETWEEN MAINS &amp; CRITICAL INSTRUMENTATION</b>		
<b>PARAMETER</b>	<b>REQUIRED SPECIFICATION</b>	<b>OFFERED SPECIFICATION</b>
Topology	True Online Double Conversion Power Recreation	
Isolation	Regenerated Output Neutral for Galvanic Isolation between Mains and Load	
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.	
<b>INPUT</b>		
Voltage Range	170 to 270 V, Three Phase	
Frequency Range	47 to 53 Hz	
<b>OUTPUT</b>		
<b>Power Rating</b>	6 KVA 230 V, 1 Phase	
Output Current	Continuous Output Current @ 230 V AC = 26 A	
Voltage Regulation	+ 1%	
Frequency	50 Hz ± 0.05% Crystal Controlled	
Waveform	Sine Wave	
Harmonic Distortion	Less than 2% on linear load	
Power Factor	Unity to 0.7 lag within specified power ratings	
Load Crest Factor	3:1 without derating	
Overload Rating	125% for 10 minutes 150% for 1 minute 300% for 10 milliseconds  The UPS should not trip in case of Start-up of Main Machine	Specify Output Current @ 230 V and 125% load:  Specify Output Current @ 230 V and 150% load :  Specify Output Current @ 230 V and 300% load :

PARAMETER	REQUIRED SPECIFICATION		OFFERED SPECIFICATION	
<b>BATTERY</b>				
Type	Sealed Lead Acid Maintenance Free			
Back-up Time	20 Minutes on full load. Battery Required : For 6 KVA UPS : 4600 VAh Minimum		Specify No. Of Batteries : Specify Voltage of Each Battery : Ampere-Hour Rating of Each Battery :	
Battery Installation	For Safety of the user, the batteries should be built-in OR external Powder-coated battery cabinet should be supplied.			
<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 45 deg C (50 deg C Peak) for UPS Electronics			
Relative Humidity	Upto 95% Non-condensing			
Audible Noise	< 55 dB at 1 metre			
Ingress Protection	IP21			
Cooling	Forced Air Cooling			
<b>ONSITE WARRANTY</b>				
For UPS	5 years Minimum			
For Battery	5 years Minimum			

<b>SECOND TIER OF ONLINE UPS PROTECTION DEDICATED FOR AFM MACHINE</b>				
PARAMETER	REQUIRED SPECIFICATION		OFFERED SPECIFICATION	
Topology	True Online Double Conversion Power Recreation			
Physical Attribute	Portable, Highly Efficiency & Sleek			
Inverter Design	Advanced Sine-weighted High Frequency PWM using IGBT with Instantaneous Sine-wave Control			
Duty	Continuous Operation.			
<b>INPUT</b>				
Voltage Range	180 to 260 V, Three Phase			
Frequency Range	47 to 53 Hz			
<b>OUTPUT</b>				
Power Rating	3 KVA 230 V, 1 Phase			

Output Current	Continuous Output Current @ 230 V AC = 13 A			
Voltage Regulation	± 1%			
Frequency	50 Hz Nominal			
Waveform	Sine Wave			
Harmonic Distortion	Less than 2% on linear load			
Power Factor	Unity to 0.7 lag within specified power ratings			
Load Crest Factor	3:1 without derating			
High Efficiency Mode	Required to ensure lower Power Losses and Two-Tier UPS Redundancy to Laser Machine			
<b>BATTERY</b>				
Type	Sealed Lead Acid Maintenance Free			
Back-up Time	6 to 8 Minutes on full load. Battery Required : For 3 KVA UPS : 670 VAh Minimum		Specify No. Of Batteries :	Specify Voltage of Each Battery : Ampere-Hour Rating of Each Battery :
Provision for Future Battery Expansion	Required as a Standard			
Battery Installation	For Safety of the user & convenient portability, the batteries should be built-in. However, there should be a provision for installation of External batteries to UPS			
<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>PARAMETER</b>	<b>REQUIRED SPECIFICATION</b>		<b>OFFERED SPECIFICATION</b>	
<b>ENVIRONMENTAL</b>				
Operating Temperature	0 to 40 Deg C for UPS Electronics			
Relative Humidity	Upto 95% Non-condensing			
Audible Noise	< 55 dB at 1 metre			
Ingress Protection	IP21			
Cooling	Forced Air Cooling			
<b>ONSITE WARRANTY</b>				
For UPS	5 years Minimum			
For Battery	5 years Minimum			