

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS FOR 3KVA /5KVA TRUE ON-LINE DOUBLE CONVERSION UPS SYSTEM

S.NO.	SPECIFICATIONS	OUR REQUIREMENT
	RATING	3KVA / 5KVA
1.	TECHNOLOGY -	IGBT / PWM , Micro Controller based online Double Conversion.
2.	INPUT -	
(a)	Voltage :	230 VAC415 AC
(b)	(i) Nominal (ii) Range	-35%, +20% (Ensure that product quoted Voltage window in this range is to be available bank shall under no circumstances provide stabilizer input, in rural /or any other branch)
(c)	Frequency :	50 Hz
(d)	(i) Nominal (ii) Range	+/- 3 Hz
	Input Phase & Power Factor	Single Phase & Better than (0.80)
	DG Compatibility :	Should Be Provided
3.	Battery Backup: (i) Backup Period (ii) Battery Type (iii) Battery leads from battery to UPS .	As in price bid to ensure minimum vah requirement. Sealed Maintenance Free (Make – Amaraja/Exide) in configuration of 42 ,65 and 100ah only Shall be Uninyvin cable of suitable rating.
4.	Charger Type (a) Voltage Regulation (b) Ripple (without batteries) (c) Battery Recharge time from	Constant Voltage, Constant current +/- 1 % < 1 % Should not exceed 10 Hrs.

	fully discharged condition to 100 % charged condition.	(Charger Current should be 10 % of Battery Rating)
5.	OUTPUT :	
(a)	Output Voltage	230V AC, Single Phase
(b)	Regulation :	
	(i) Steady State	+/- 1%
	(ii) Transient Response	+/- 5% with 100% Non Linear Step Load
(c)	Frequency :	50 Hz
(d)	Regulation :	
	(i) Free Running	50 Hz +/- 0.25 HZ
	(ii) Sync. Mode	+/- 3Hz
(e)	Over Load Capacity :	- 150% of Rated Load for 1 Minute. - 125 % of Rated Load for 10 Minutes.
(f)	Waveform :	Pure Sine Wave
(g)	Total Harmonic Distortion	< 2 % for Linear Load < 5 % for Non Linear Load ,
(h)	Crest Factor :	Minimum 3: 1 at Full Load
(i)	Power Factor :	Minimum or above 0.8 lag to Unity within KVA & KW Rating
6.	STATIC SWITCH -	Should Be Provided & should take care of 100 % Uninterrupted transfer of load from UPS.
7.	MANUAL BY - PASS SWITCH -	Built in Manual By-pass should be provided 3KVA STATIC BYPASS ONLY
8.	EFFICIENCY -	
	Inverter Efficiency	>92%
	Overall Efficiency (AC to AC)	>88%
9.	ISOLATION TRANSFORMER	At Output (UPS should be galvanically isolated)

10.	DISPLAY PANEL	Built in LCD/ LED Display : Input Voltage, Output Voltage, Heat Sink Temperature, Battery Voltage, Output Current (%) Output Frequency etc.
11.	PROTECTION FOR (Audible Alarms should be provided for important Protections.)	Input MCB, Rectifier Over Voltage, Battery MCB Battery Low, Battery Charging Current Limit, Output Under Voltage, Output Over Voltage, Inverter Over Temperature, Output Overload, Output Short Circuit etc.
12.	COMMUNICATION : (Optional)	1. Provision for Serial Port & UPS Monitoring Software. 2. SNMP Communication to be provided.
13.	ENVIRONMENTAL :	
(a)	Operating Temperature :	0 - 45 deg. C (Continuous)
(b)	Storage Temperature:	0 - 70 deg. C
(c)	Humidity :	10 - 90 % (Non Condensing)
(d)	Audible Noise Level :	< 52 dB at Full Load
14	Fire Supression	Provision to provide tube type fire suppression system.
15	AFTER SALES SUPPORT	Vendor should have Support Infrastructure For "4 Hrs Service.
16	CERTIFICATION	ISO 9001 2000/ ETDC /ERTL etc

TECHINACAL SPECIFICATIONS FOR 10 KVA TRUE ON-LINE DOUBLE CONVERSION UPS SYSTEM

<i>S.NO.</i>	<i>SPECIFICATIONS</i>	<i>OUR REQUIREMENT</i>
	RATING	10 KVA (8KW)
1.	TECHNOLOGY-	IGBT /PWM, Micro Controller based online Double Conversion.
2.	INPUT –	
(a)	Voltage :	
	(i) Nominal	415 AC
	(ii) Range	-20%, +15% (Ensure that product quoted Voltage window in this range is to be available bank shall under no circumstances provide stabilizer input, in rural /or any other branch)
(b)		
	Frequency :	
	(i) Nominal	50 Hz
(c)	(ii) Range	+/- 3Hz
(d)	Input Phase & Power Factor :	Three Phase & better Than 0.8 lag
	DG Compatibility :	Should Be Provided
3.	BATTERY BACKUP :	
	(i) Backup Period	As in price bid to ensure minimum vah requirement.
	(ii) Battery Type	Sealed Maintenance Free (Make – Amaraja/Exide) in configuration of 42 ,65 and 100ah only.
	(iii) Battery leads from battery to UPS .	Shall be Uninyvin cable of suitable rating.

4.	CHARGER TYPE	Constant Voltage, Constant current
(a)	Voltage Regulation	+/- 1%
(b)	Ripple (Without batteries)	< 1 %
(c)	Battery Recharge time from fully discharged condition to 100% charged condition.	Should not exceed 10 Hrs. (Charger Current should be 10 % of battery Rating)
5.	OUTPUT :	
(a)	Output Voltage	230 VAC, Single Phase
(b)	Regulation :	
(i)	Steady State	+/- 1 %
(ii)	Transient Response	+/- 5% with 100% Non Linear Step Load
(c)	Frequency :	50 Hz
(d)	Regulation :	
(i)	Free Running	50 Hz +/- 0.25 Hz
(ii)	Sync. Mode	+/- 3 Hz
(e)	Over Load Capacity :	- 150% of Rated Load for 1 Minute - 125% of Rated Load for 10 Minutes.
(f)	Waveform :	Pure Sign Wave
(g)	Total Harmonic Distortion :	<2% for Linear Load <5% for Non Linear Load
(h)	Crest Factor :	Minimum 3 : 1 at Full Load
(i)	Power Factor:	0.8 lag to Unity within KVA & KW Rating
6.	STATIC SWITCH -	Should Be Provided & should take care of 100 % uninterrupted transfer of load from UPS.
7.	MANUAL BY – PASS SWITCH	Built in Manual By-pass should be provided.

8.	EFFICIENCY – Inverter Efficiency Overall Efficiency (AC to AC)	 > 90% > 85%
9.	ISOLATION TRANSFORMER	At Output (UPS Should be galvanically isolated)
10.	DISPLAY PANEL	Built in LCD / LED Display : Input Voltage, Output Voltage, Heat Sink Temperature, Battery Voltage, Output Current (%), Output Frequency etc.
11.	PROTECTION FOR (Audible Alarm should be provided for important protection.)	Input MCB, Rectifier Over Voltage, Battery MCB, Battery Low, Battery Charging Current Limit, Output Under Voltage, Output Over Voltage, Inverter Over Temperature, Output Overload, Output short Circuit etc.
12.	COMMUNICATION :	1. Provision for Serial Port & UPS Monitoring Software. 2. SNMP Communication to be provided.
13.	ENVIRONMENTAL :	
(a)	Operating Temperature :	0 – 45 deg. C (Continuous)
(b)	Storage Temperature :	0 – 70 deg. C
(c)	Humidity :	10 - 90 % (Non Condensing)
(d)	Audible Noise Level :	< 62 dB at full Load
14.	AFTER SALES SUPPORT	Vendor should have support Infrastructure for 24 Hrs. Service.
15	Fire Suppression	Provision to provide tube type fire suppression system
15.	CERTIFICATION :	ISO 9001 : 2000/ ETDC etc.