

## Rate Contract

Government of India  
Directorate General of Supplies & Disposals  
Jeevan Tara Building, 5 Sansad Marg  
New Delhi-110001  
Tel Number 23360610/23360537

Rate Contract no. ON-LINEUPS/IT-4/RC-D3070000/1111/84/03517/1456  
Dated 07-JAN-11

To,

VSM ENTERPRISES PRIVATE LIMITED  
Plot No. 21/1381 1st Floor Hari singh Nalwa street, Karol Bagh, New Delhi-  
110005

Ashwani Narang 9810161148 / 09310161148

Sub: Rate Contract for supply of On-Line UPS For IT Applications  
Validity: From 07-JAN-11 To 30-NOV-11 .

Ref:(1) This Office Tender Enquiry No. ON-LINEUPS/IT-4/RC-D3070000/1111/84  
Opened on 27-OCT-10.  
(2) Your Quotation No. And Dated

Dear Sir,

You are hereby informed that your above referred tender read with subsequent letters mentioned above for the Stores specified in the Schedules annexed has been accepted. This rate contract will be governed by the terms and conditions brought in the Form no. DGS&D 1001 available from dgs&d sales counter on payment of Rs. 50/- .The Rate Contract and the schedules annexed here to shall be the sole repository of this Rate Contract/Transaction.

### SCHEDULES ANNEXED

- 1.Schedule "A" Description of stores,prices,duties/taxes.
- 2.Schedule "B" special conditions of contract / Other information.
- 3.Schedule "C" Information to DDOs about parallel rate contracts.
- 4.Annexure - Technical Specification

Yours Faithfully,

( )

Assistant Director(S)/Section Officer/Dy.Director  
For and on behalf of the purchaser named in the Form DGS&D 1001.

**COPY TO:**

- 1.The Chief Controller of Accounts,Department of commerce,New Delhi/  
COA Mumbai/COA Kolkata,COA Chennai.  
(Through authentication cell) This issues with the approval of competent authority.
- 2.Deputy Director General of Supplies & Disposals,Chennai -10 copies each
- 3.Deputy Director General of Supplies & Disposals,Kolkata -10 copies each
- 4.Deputy Director General of Supplies & Disposals,Mumbai -10 copies each
- 5.Deputy Director General (QA),Kolkata -10 copies each
- 6.Deputy Director General (QA),Chennai -10 copies each
- 7.Deputy Director General (QA),Mumbai -10 copies each
- 8.Deputy Director General (QA),DGS&D -10 copies each
- 9.Inspection Authority ADG(QA) DGS&D New Delhi - 110001.
- 10.Quality assurance Officer Director (QA) Delhi Directorate/ Mumbai,Chennai/Kolkata.
- 11.Concurrent Audit
- 12.MIS Cell
- 13.Ledger clerk
- 14.O.L.Section
- 15.All Direct Demanding Officers as per mailing list maintained by DGS&D.

( )

Assistant Director (S) / Section Officer / Deputy Director  
FOR DIRECTOR GENERAL OF SUPPLIES & DISPOSALS

## SCHEDULE - A

1. Rate Contract No.: -ON-LINEUPS/IT-4/RC-D3070000/1111/84/03517/1456  
Dated 07-JAN-11 For the Supply of On-Line UPS For IT Applications

2. Advance Rate Contract No.: - Nil  
Dated

3.(a) Name and Full Address of the Firm :-

VSM ENTERPRISES PRIVATE LIMITED  
Plot No. 21/1381 1st Floor Hari singh Nalwa street, Karol  
Bagh, New Delhi- 110005

Ashwani Narang 9810161148 / 09310161148

DELHI - 110005  
Tel. No. - 011-32947112,9310161148  
Fax -  
Email -

(b) Name and Full Address of Manufacturer :-

VSM Enterprises Pvt. Ltd.  
16/5, Karkhana Bagh, Near Indian Gas Agency  
Faridabad ( HR)

(c) Brand: VENUS

4. Validity of Rate Contract: 07-JAN-11 To 30-NOV-11

5. Description of Item, Specification, Unit, Rate

Item Model No. No. Rs.)	Store Description	Unit	Rate (in
34	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 1.0KVA, Indicative Back-up time: 30 Minutes NOS.	19533.66 Rs. NINETEEN THOUSAN D FIVE HUNDRED THIRTY- THREE AND PAISE SIXTY-SIX ONLY
35	On-Line UPS with isolation transformer suitable for single phase	Rating of UPS: 1.0KVA, Indicative Back-up time: 60Minutes NOS.	23809.52 Rs. TWENTY-

	AC input & single phase AC output, Floor Mounted Type			THREE THOUSAN D EIGHT HUNDRED NINE AND PAISE FIFTY- TWO ONLY
36	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 1.0KVA,Indicative Back-up time: 120 Minutes	NOS.	33238.1 Rs. THIRTY- THREE THOUSAN D TWO HUNDRED THIRTY- EIGHT AND PAISE TEN ONLY
38	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 2.0 KVA,Indicative Back-up time: 30 Minutes	NOS.	32644 Rs. THIRTY- TWO THOUSAN D SIX HUNDRED FORTY- FOUR ONLY
39	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 2.0 KVA,Indicative Back-up time: 60Minutes	NOS.	41352.39 Rs. FORTY- ONE THOUSAN D THREE HUNDRED FIFTY- TWO AND PAISE THIRTY- NINE ONLY
40	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 2.0 KVA,Indicative Back-up time: 120 Minutes	NOS.	56190.47 Rs. FIFTY- SIX THOUSAN D ONE HUNDRED NINETY AND PAISE

41	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 2.0 KVA, Indicative Back-up time: 240 Minutes	NOS.	FORTY-SEVEN ONLY 92285.72 Rs. NINETY-TWO THOUSAND TWO HUNDRED EIGHTY-FIVE AND PAISE SEVENTY-TWO ONLY
42	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 3.0 KVA, Indicative Back-up time: 30 Minutes	NOS.	40276.19 Rs. FORTY THOUSAND TWO HUNDRED SEVENTY-SIX AND PAISE NINETEEN ONLY
43	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 3.0 KVA, Indicative Back-up time: 60 Minutes	NOS.	53809.52 Rs. FIFTY-THREE THOUSAND EIGHT HUNDRED NINE AND PAISE FIFTY-TWO ONLY
44	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 3.0 KVA, Indicative Back-up time: 120 Minutes	NOS.	76552.38 Rs. SEVENTY-SIX THOUSAND FIVE HUNDRED FIFTY-TWO AND PAISE THIRTY-EIGHT ONLY
46	On-Line UPS with	Rating of UPS: 5.0 KVA, Indicative Back-up	NOS.	61904.76

	isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	time: 30 Minutes		Rs. SIXTY-ONE THOUSAND NINE HUNDRED FOUR AND PAISE SEVENTY-SIX ONLY
47	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 5.0 KVA, Indicative Back-up time: 60 Minutes	NOS.	79047.62 Rs. SEVENTY-NINE THOUSAND FORTY-SEVEN AND PAISE SIXTY-TWO ONLY
48	On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type	Rating of UPS: 5.0 KVA, Indicative Back-up time: 120 Minutes	NOS.	119523.8 Rs. ONE LAKHS NINETEEN THOUSAND FIVE HUNDRED TWENTY-THREE AND PAISE EIGHTY ONLY
62	Freight Charges for On-Line UPS	Battery VAH: Upto 6400 VAH, Distance Slabs/ REgions/ Destinations: NE Region and J & K State	NOS.	0 Rs. ZERO ONLY
63	Freight Charges for On-Line UPS	Battery VAH: Upto 6400 VAH, Distance Slabs/ REgions/ Destinations: Port Blair and Lakshdweep	NOS.	0 Rs. ZERO ONLY
64	Freight Charges for On-Line UPS	Battery VAH: Upto 6400 VAH, Distance Slabs/ REgions/ Destinations: 50 KMS Free	NOS.	0 Rs. ZERO ONLY
65	Freight Charges for On-Line UPS	Battery VAH: Upto 6400 VAH, Distance Slabs/ REgions/ Destinations: 51 to 250 KMS	NOS.	0 Rs. ZERO ONLY
66	Freight Charges for On-Line UPS	Battery VAH: Upto 6400 VAH, Distance Slabs/ REgions/ Destinations: 251 to 500KMS	NOS.	0 Rs. ZERO ONLY
67	Freight Charges for On-Line UPS	Battery VAH: Upto 6400 VAH, Distance	NOS.	0

	Line UPS	Slabs/ REgions/ Destinations: 501 to 1000 KMS		Rs. ZERO ONLY
68	Freight Charges for On-Line UPS	Battery VAH: Upto 6400 VAH,Distance Slabs/ REgions/ Destinations: More than 1000 KMS.	NOS.	0 Rs. ZERO ONLY
69	Freight Charges for On-Line UPS	Battery VAH: More than 6400 VAH and upto 12800 VAH,Distance Slabs/ REgions/ Destinations: NE Region and J &K State	NOS.	0 Rs. ZERO ONLY
70	Freight Charges for On-Line UPS	Battery VAH: More than 6400 VAH and upto 12800 VAH,Distance Slabs/ REgions/ Destinations: Port Blair and Lakshdweep	NOS.	0 Rs. ZERO ONLY
71	Freight Charges for On-Line UPS	Battery VAH: More than 6400 VAH and upto 12800 VAH,Distance Slabs/ REgions/ Destinations: 50 KMS Free	NOS.	0 Rs. ZERO ONLY
72	Freight Charges for On-Line UPS	Battery VAH: More than 6400 VAH and upto 12800 VAH,Distance Slabs/ REgions/ Destinations: 51 to 250 KMS	NOS.	0 Rs. ZERO ONLY
73	Freight Charges for On-Line UPS	Battery VAH: More than 6400 VAH and upto 12800 VAH,Distance Slabs/ REgions/ Destinations: 251 to 500 KMS	NOS.	0 Rs. ZERO ONLY
74	Freight Charges for On-Line UPS	Battery VAH: More than 6400 VAH and upto 12800 VAH,Distance Slabs/ REgions/ Destinations: 501 to 1000 KMS	NOS.	0 Rs. ZERO ONLY
75	Freight Charges for On-Line UPS	Battery VAH: More than 6400 VAH and upto 12800 VAH,Distance Slabs/ REgions/ Destinations: More than 1000 KMS.	NOS.	0 Rs. ZERO ONLY
76	Freight Charges for On-Line UPS	Battery VAH: More than 12800 VAH and upto 32000 VAH,Distance Slabs/ REgions/ Destinations: NE Region and J &K State	NOS.	0 Rs. ZERO ONLY
77	Freight Charges for On-Line UPS	Battery VAH: More than 12800 VAH and upto 32000 VAH,Distance Slabs/ REgions/ Destinations: Port Blair and Lakshdweep	NOS.	0 Rs. ZERO ONLY
78	Freight Charges for On-Line UPS	Battery VAH: More than 12800 VAH and upto 32000 VAH,Distance Slabs/ REgions/ Destinations: 50 KMS Free	NOS.	0 Rs. ZERO ONLY
79	Freight Charges for On-Line UPS	Battery VAH: More than 12800 VAH and upto 32000 VAH,Distance Slabs/ REgions/ Destinations: 51 to 250 KMS	NOS.	0 Rs. ZERO ONLY
80	Freight Charges for On-Line UPS	Battery VAH: More than 12800 VAH and upto 32000 VAH,Distance Slabs/ REgions/ Destinations: 251 to 500 KMS	NOS.	0 Rs. ZERO ONLY
81	Freight Charges for On-Line UPS	Battery VAH: More than 12800 VAH and upto 32000 VAH,Distance Slabs/ REgions/ Destinations: 501 to 1000 KMS	NOS.	0 Rs. ZERO ONLY
82	Freight Charges for On-Line UPS	Battery VAH: More than 12800 VAH and upto 32000 VAH,Distance Slabs/ REgions/ Destinations: More than 1000 KMS.	NOS.	0 Rs. ZERO ONLY

83	Freight Charges for On-Line UPS	Battery VAH: More than 32000 VAH and upto 48000 VAH,Distance Slabs/ REgions/ Destinations: NE Region and J &K State	NOS.	0 Rs. ZERO ONLY
84	Freight Charges for On-Line UPS	Battery VAH: More than 32000 VAH and upto 48000 VAH,Distance Slabs/ REgions/ Destinations: Port Blair and Lakshdweep	NOS.	0 Rs. ZERO ONLY
85	Freight Charges for On-Line UPS	Battery VAH: More than 32000 VAH and upto 48000 VAH,Distance Slabs/ REgions/ Destinations: 50 KMS Free	NOS.	0 Rs. ZERO ONLY
86	Freight Charges for On-Line UPS	Battery VAH: More than 32000 VAH and upto 48000 VAH,Distance Slabs/ REgions/ Destinations: 51 to 250 KMS	NOS.	0 Rs. ZERO ONLY
87	Freight Charges for On-Line UPS	Battery VAH: More than 32000 VAH and upto 48000 VAH,Distance Slabs/ REgions/ Destinations: 251 to 500 KMS	NOS.	0 Rs. ZERO ONLY
88	Freight Charges for On-Line UPS	Battery VAH: More than 32000 VAH and upto 48000 VAH,Distance Slabs/ REgions/ Destinations: 501 to 1000 KMS	NOS.	0 Rs. ZERO ONLY
89	Freight Charges for On-Line UPS	Battery VAH: More than 32000 VAH and upto 48000 VAH,Distance Slabs/ REgions/ Destinations: More than 1000 KMS.	NOS.	0 Rs. ZERO ONLY
90	Freight Charges for On-Line UPS	Battery VAH: More than 48000 VAH and upto 96000 VAH,Distance Slabs/ REgions/ Destinations: NE Region and J &K State	NOS.	0 Rs. ZERO ONLY
91	Freight Charges for On-Line UPS	Battery VAH: More than 48000 VAH and upto 96000 VAH,Distance Slabs/ REgions/ Destinations: Port Blair and Lakshdweep	NOS.	0 Rs. ZERO ONLY
92	Freight Charges for On-Line UPS	Battery VAH: More than 48000 VAH and upto 96000 VAH,Distance Slabs/ REgions/ Destinations: 50 KMS Free	NOS.	0 Rs. ZERO ONLY
93	Freight Charges for On-Line UPS	Battery VAH: More than 48000 VAH and upto 96000 VAH,Distance Slabs/ REgions/ Destinations: 51 to 250 KMS	NOS.	0 Rs. ZERO ONLY
94	Freight Charges for On-Line UPS	Battery VAH: More than 48000 VAH and upto 96000 VAH,Distance Slabs/ REgions/ Destinations: 251 to 500 KMS	NOS.	0 Rs. ZERO ONLY
95	Freight Charges for On-Line UPS	Battery VAH: More than 48000 VAH and upto 96000 VAH,Distance Slabs/ REgions/ Destinations: 501 to 1000 KMS	NOS.	0 Rs. ZERO ONLY
96	Freight Charges for On-Line UPS	Battery VAH: More than 48000 VAH and upto 96000 VAH,Distance Slabs/ REgions/ Destinations: More than 1000 KMS.	NOS.	0 Rs. ZERO ONLY

6-Terms of Delivery: Free delivery at consignee's premises.

7-Excise Duty: Not Applicable

8-Sales Tax: CST/VAT Extra @5.25%, if billing is done from Faridabad, @5%, if billing is done from New Delhi and @4.5%, if billing is done from Dehradun



9-Delivery Period:	Within 8 to 12 weeks from the date of receipt of confirmed order.
10(a)-Annual Turnover:	Without Limit
(b)-Monetary Limit(In Rs.):	Without Any Limit
11-Payment Terms:	As per Schedule B
12-Slab Discount Clause:	Applicable
13-Prices:	FIXED
14-Quantity Offered:	Without Limit
15-Minimum Quantity in Single Supply Order:	Rs. 50,000/- except Delhi, NCR, Jaipur, Dehradun and Chandigarh.
16-Minimum order Value in Single Supply Order:	Rs. 50,000/- except Delhi, NCR, Jaipur, Dehradun and Chandigarh.
17-Status of the RC Holding Firm:	SSI
18-Paying Authority:	The Chief Controller of Accounts, Deptt. of Supply 16A, AKBAR ROAD New Delhi -110011
19-Inspection Authority:	For Civil ADG(QA),Jeevan Tara Building,Parliament Street New Delhi
20-Quality Assurance Officer:	For Civil Director(QA), Delhi Directorate, Jeevan Tara Building, 4th Floor, Sansad Marg New Delhi DELHI -110001
21-Place where the Stores are to be Tendered for Inspection:	16/5, Karkhana Bagh, Near Indian Gas Agency, Faridabad (HR)
22-R/C is DDOs Operated:	Yes

With effect from First October two thousand eight ( 01-10-2008 ),all supply order(s) against this Rate Contract must be placed by Direct Demanding Officer(s) on-line through D.G.S&D web site (www.dgsnd.gov.in) (indentor's page) only. Supply order(s) in any other form placed on or after 01-10-2008 shall not be valid and shall not be acted upon by the contractor or any other concerned agencies.

DDO shall download the supply order and send an ink signed copy to the concerned paying authority specified in the rate contract through Registered / speed post immediately after on-line placement of Supply Order(s).

23-Packing & Specification :	see annexure
------------------------------	--------------

( )  
Asstt. Director (S) / Section Officer / Dy. Director  
For and behalf of the purchaser named in the Form DGS&D 1001.

All the R/C particulars including prices in respect of individual R/Cs are available on DGS&D website which can be accessed by all. The DGS&D website is <http://dgsnd.gov.in>

## **SCHEDULE - B**

RC Specification: 1. Slab Discounts: The following discounts are:-

- 1% discount on single order value from Rs. 5,00,000/- to Rs. 10 Lakhs
- 1.5% discount on single order value from Rs. 10,00,001/- to Rs. 15 Lakhs
- 2% discount on single order value from Rs. 15,00,001/- to Rs. 20 Lakhs
- 2.25% discount on single order value from Rs. 20,00,001/- to and above.

2. On Line UPS System will conform to standard guarantee/warranty clause 18 of DGS&D-1001 effective for a period of 12 months from the date of receipt of stores by the consignee or 15 months from the date of dispatch which ever is earlier.

3. Delivery shall be covered by the DGS&D standard Octroi duty / Local levies / Entry tax clause as under:

Octroi Duty / Entry Tax: Normally, materials to be supplied to government Deptt. against government contracts are exempted from levy of town duty, Octroi duty, terminal tax and other levies of local bodies. The Local town/Municipal body regulations at times, however provide for such exemption only on production of such exemption certificate from any authorized officer. Wherever required, Contractor should obtain the exemption certificate from the purchase officer or indentor concerned, to avoid payment of such local taxes of duties. In case Local town/Municipal body regulations do not provide for such exemptions the octroi duty shall be payable at actual against documentary evidence of having paid such levies.

4. Supply of Road Permits/ Way bill by the indentor/consignees:

In all such cases where the requirement of Road Permit/Way Bills for entry of goods into a particular State is mandatory, the following provisions shall be strictly followed: -

(a) The supplier shall request the indentor/consignee for providing Road permit/ Way bill within 10 days of the receipt of the Supply order. The supplier shall furnish all the necessary information and documents in this regard to Indentor/consignee.

(b) On receipt of the above request from the supplier, the indentor/consignee concerned shall arrange to provide the Road permit/Way Bill in the prescribed form to the supplier within a maximum period of two weeks so that the same reaches the supplier before the dispatch of the stores. However, in cases where the Road permit/Way Bill is issued on proof of actual invoice of the material, the consignee shall arrange to provide the Road permit/Way Bill from appropriate authorities within a maximum period of 5 days from the receipt of invoice.

(c) The supplier shall not be held responsible for any delay in supply due to non- supply/delayed supply of Road permit/Way bill by the indentor/consignee.

(d) All cases of abnormal delay in providing requisite details/ documents by the supplier or issue of Road permit/Way bill by indentor/consignee, the same shall be reported to DGS&D.

### **5. PAYMENT TERMS:**

Payment will be made to the contractor on submission of bills in accordance with the procedure laid down under clause 19 of DGS&D-69 as amended up to date. The broad provisions are reproduced as under: -

(i) 98% of the price of the stores of each consignment thereof shall be paid on production of a valid inspection note and on the basis of provisional receipt certificate issued by the consignee for having received the stores in full and good conditions, duly endorsed either on copy of I. Note issued for advance 98% payment or in the standard format given below:-

"This is a provisional receipt, it only be taken as the receipt of the stores by the consignee and is without prejudice to his right of inspection and rejection under the general conditions of contract. It is issued on ` said to contain basis" the contractor remaining responsible for providing the total quantities actual delivered".

(ii) Balance 2% shall be paid on receipt of stores by the consignee in good condition

6. You shall furnish complete and satisfactory Type Test Certificate (TTC) except Environmental test for each rating with highest VAH, however, the environment test certificate only for the highest rating with highest VAH of the respective schedule to the Director QA concerned at the time of inspection of first lot. TTC shall be from Govt. laboratory. Suppliers, who have already got type test certificates for the existing rating, would not be required to obtain fresh type test certificate for the same rating.

7. Preparation of site along with cabling work of Input, Output Point and MCBs etc. shall be the responsibility of the Indentor/Consignee.

8. Battery for UPS shall be of the following makes:

Exide, Panasonic, Amar Raja, CSB, Global, Okaya, Rocket, Ritar, Base, Triumph (HBL) or DGS&D registered batteries or any other make duly Type Tested to JIS C 8702 from DGS&D approved lab.

( Shashi K. Sud )

Assistant Director (S)

For Director General of Supplies & Disposals

## SCHEDULE - C

### List of Parallel Rate Contract For On-Line UPS For IT Applications

<b>Sr.No.</b>	<b>NAME &amp; FULL ADDRESS OF FIRM</b>	<b>R/C NO &amp; DATE</b>
---------------	--	--------------------------

---

NOTE:

(1) Before placing supply order, DDOs are advised to check with DGS&D or on the website whether any further RCs have been awarded or amendments to Rate Contract have been issued.

(2) All the R/C particulars including prices in respect of individual R/C's are available on DGS&D website, which can be accessed by all. The access code of DGS&D website is <http://dgsnd.gov.in>.

## ANNEXURE

1. General
  - a. UPS shall be free from workmanship defects, sharp edges, nicks, scratches, burs, etc. All fasteners shall be fixed properly. The equipment shall be complete with all parts and all parts shall be functional.
  - b. UPS Enclosure's Degree of Protection IP2L1 as per appendix C of IS13947 (part 1)/1993 (reaffirmed 2004).
  - c. By-pass facility shall be provided for maintenance of UPS.
  - d. UPS shall supply output power and charging current at the same time.
  - e. Switching device shall be MOSFET or IGBT and the same shall be confirm in the offer.
  - f. Switching frequency shall be above 10 KHz and shall be declared in the offer.
  - g. KW rating of the UPS shall be 0.70 times the KVA rating.
2. Input (as applicable)
  - a. 160V-260V, 50 +/-3% Hz single phase AC or
  - b. 300V-450V, 50 +/-3%Hz three phase AC
3. Output (as applicable)
  - a. 230V +/-1% (with alternative setting for 220V +/-1%) 50 +/-0.5Hz, single phase.
  - b. 400V +/-1% (with alternative setting for 380V +/-1%) 50 +/-0.5Hz three phase. Voltage regulation from no load to full load shall be within +/-1% in both the cases. UPS shall also have facility for operation in synchronous mode in which output frequency shall be same as that of mains frequency.
4. Total harmonics distortion at output : 2% maximum for UPS up to 5KVA and 3% maximum for UPS above 5 KVA on resistive load. If total input harmonics are less than or equal to 10%.
5. Efficiency (at rated output KVA Rating, rated Pf ,rated voltage and frequency)
  - a. Overall efficiency (minimum) : 90%
6. UPS power factor at rated load : better than 0.9 lagging at input side .
7. Over load : UPS shall withstand 20% overload for 10 minutes and 50% over load for one minute.
8. Protections :

Following protection shall be provided in UPS:

  - a. Over voltage, short circuit, and overload at UPS output terminal.
  - b. Under voltage at battery terminal.
  - c. Over shoot and under shoot shall not be greater than 4% of rated voltage for

duration of 40m sec. (maximum)

9. Indicators and meters

a. Following indicators shall be provided:-

- (i) Mains presence.
- (ii) Battery charging and discharging
- (iii) Output overload
- (iv) Low battery voltage.

b. Digital meter shall be provided for monitoring the following parameters in UPS(not applicable for rack mounting):

- (i) Input AC voltage.
- (ii) Output AC Voltage, current and frequency
- (iii) Battery voltage and current.

10. Battery bank:

a. UPS shall be supplied with SMF VRLA battery only.

b. Tenderers shall declare battery AH capacity, battery voltage, number of batteries of each rating, make and model of batteries offered with each item of UPS.

c. Batteries for UPS shall be of the following makes:-

Exide, Panasonic, Amar Raja, Global, Rocket ,Base,Okaya.CSB, RITAR make or DGS&D

registered batteries or any other make duly type tested to JISC 8702 from government lab .

d. The UPS shall be complete with Trolley for battery bank and the firms shall also connect

the batteries with UPS and commission the same.

e. Minimum VAH rating of battery bank for different duration of back up time shall be as detailed below:

UPS rating in KVA	Min.VAH 30 minute back up	Min. VAH 60 minute back up	Min VAH 120 minute back up	Min. VAH 240 minute back up
0.5 KVA	400	800	1600	3200
1 KVA	800	1600	3200	6400
2 KVA	1600	3200	6400	12800
3 KVA	2400	4800	9600	19200
5 KVA	4000	8000	16000	32000
6 KVA	4800	9600	19200	38400
7.5 KVA	6000	12000	24000	48000
10 KVA	8000	16000	32000	64000
15 KVA	12000	24000	48000	96000
20 KVA	16000	32000	64000	128000
30 KVA	24000	48000	96000	192000

16. Testing requirement for UPS:

a. Type Tests : Following shall constitute type test and at least one sample shall be type tested for each rating with maximum backup time. Type testing shall be conducted either at an independent govt. lab or at the premises of the manufacturer in presence of an officer from concerned Directorate of Quality Assurance.

- (i) Visual examination.
- (ii) Verification of output power and frequency.

- (iii) Verification of voltage regulation.
- (iv) Verification of efficiency.
- (v) Verification of total harmonics distortion.
- (vi) Verification of overshoot, undershoot limits and over voltage protection.
- (vii) Test for insulation resistance, leakage current high voltage as per IS:616/86 (reaffirmed in 1991. Insulation resistance should not be less than 100 mega ohms.
- (viii) Verification of VAH as per Rate Contract.
- (ix) Environmental tests: Following environmental tests shall be carried out on the highest rating. Tests at Sl. No. i to iii above shall be repeated during the last half an hour of each environmental condition.

Tests at Sl. No. i to vi shall be repeated after completing the environmental tests sequence of the three conditions and recovery period of 1 to 2 hours.

There shall be no deterioration in any of these parameters when compared to the test results obtained before environmental tests.

(A) Dry Heat Test : shall be carried out in accordance with IS:9000 (part 3/sec.5)1977 (reaffirmed 2004) at 55 degree C for 16 hrs.

(B) Damp Heat : shall be carried out at upper Temperature of 40 degree C, two cycles of (12+12 hours) each in accordance with IS:9000 (part 5/sec.2)1981 (reaffirmed 2004).

(C) Cold Test : shall be carried out in accordance with IS:9000 (Part 2/Sec.4)1977 (Reaffirmed 2004) at -10 degree C for 4 hrs.

b. Acceptance Tests : Tests listed at Sl. No.i to viii shall constitute acceptance test. Acceptance test shall be carried out on all the items offered for inspection.

#### Quality Assurance Procedure

- 1) The firm shall furnish schematic diagram of UPS for each rating as and when they are offered first time for inspection against the rate contract .
- 2) Detail of isolation transformer shall be furnished by the firm when the product is offered for first inspection for each rating and the same shall be recorded in the inspection report after due verification by the QA Officer.
- 3) When the product is offered for first time for inspection the UPS shall be operated at full rated current as per its rated KVA rating and at the rated power factor for the temperature rise test and to evaluate its performance at rated current corresponding to KVA rating . After the evaluation of its performance the weight of the transformer shall be taken to compare with the weight furnished by the firm vide the questionnaire attached in the rate contract. After the completion of the temperature rise test, the UPS efficiency and input power factor shall be evaluated to assess its consistency with regards to temperature and continuous application of the rated KVA load. The temperature rise test shall not be terminated before 8 hours of continuous operation.



4) During each visit at least one rating of the UPS shall be tested for the verification of its capacity rating by conducting temperature rise test on rated KVA load. Selection of rating shall be such that it covers each rating offered for inspection. This is over and above the requirement of the clause as above when each rating is subjected for temperature rise test when UPS is offered first time. Machine should be subjected to 8 hours continuous operation for capacity verification.

5) Weight of the transformer shall be recorded in the inspection note for the verification by the consignee/user for the purpose of reference.

6) The firm shall have necessary facilities to test batteries for high rate discharge and for capacity rating tests. So that batteries can be verified for HRD & capacity verification test during each inspection. Method for the capacity rating is as per JIS C 8702. Sampling may be done as per IS: 7372

7) weight of the batteries, its brand, its voltage rating AH rating and no of batteries fitted with UPS shall be indicated in the inspection note for the verification by the consignee.

8) Firm shall furnish copy of the invoices and details of the serial no. of the batteries at the time of inspection for the correlation and records purpose of the QA Office.

On-Line UPS with isolation transformer suitable for single phase AC input & single phase AC output, Floor Mounted Type

---

Specification :-

On-line UPS with isolation transformer & with PWM

Technology, Floor

mounted type suitable for single phase AC input voltage 160V to 260V, 50+/-1.5Hz and

single phase AC output voltage 230+/-1%V, 50+/-0.5Hz. It shall be housed in a rugged

enclosure made of M.S Sheet 1.2 mm( minimum ) thick, aesthetically finished, duly

pretreated and powder coated.

Freight Charges for On-Line UPS

---

Specification :-

Freight charges for the supply of On line UPS as per the distance slab.

**LIST OF ALL AMENDMENTS**

**For RC No. ON-LINEUPS/IT-4/RC-D3070000/1111/84/03517/1456**

*NOTE: No Amendments issued till date 31-DEC-11*