

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

Digitally signed by:
Shashi Kiran Sud
Email Id:
sksud@dgsnd.com.in

Rate Contract no. ON-LINEUPS/IT-4/RC-D3070000/1111/84/04511/1430
Dated 26-NOV-10

To,

IGA TECH INDUSTRIAL ELECTRONICS (P) LTD., KOCHI
XII/230, Morarji Road, Kakkanad (W), P.O. Kochi
Kochi

Sub: Rate Contract for supply of On-Line UPS For IT Applications
Validity: From 01-DEC-10 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,

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

SCHEDULE - A

1. Rate Contract No.: -ON-LINEUPS/IT-4/RC-D3070000/1111/84/04511/1430
Dated 26-NOV-10 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 :-

IGA TECH INDUSTRIAL ELECTRONICS (P) LTD.,
KOCHI
XII/230, Morarji Road, Kakkanad (W), P.O. Kochi
Kochi
KERALA - 682 030
Tel. No. -
Fax -
Email -

(b) Name and Full Address of Manufacturer :-

IGATECH INDUSTRIAL ELECTRONICS PVT. LTD.
XII / 230, Morarji Road, Vazhakkala, Kakkanad (W)
Cochin- 682030

(c) Brand: IGA TECH

4. Validity of Rate Contract: 01-DEC-10 To 30-NOV-11

5. Description of Item, Specification, Unit, Rate

Item Model No. No.	Store Description	Unit	Rate (in Rs.)
42 IGA TECH	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.	39817.31 Rs. THIRTY-NINE THOUSAND EIGHT HUNDRED SEVENTEEN AND PAISE THIRTY-ONE ONLY
43 IGA TECH	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.	53519.23 Rs. FIFTY-THREE THOUSAND FIVE HUNDRED NINETEEN

				AND PAISE TWENTY- THREE 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
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
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
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
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
99	Freight Charges for On-Line UPS	Battery VAH: More than 96000 VAH,Distance Slabs/ REgions/ Destinations: 50 KMS Free	NOS.	0 Rs. ZERO ONLY

6-Terms of Delivery:

The prices are for free delivery within a radius of 50 Kms. Beyond 50 Kms, the extra freight charges per unit will be payable as per item no. 62 to 103.

7-Excise Duty:

Inclusive @10.3%

8-Sales Tax:

CST/VAT Extra @4%

9-Delivery Period:

Within 2 to 3 weeks from the date of receipt of confirmed order.

10(a)-Annual Turnover:

Without Limit

(b)-Monetary Limit:

Without Any Limit

11-Payment Terms:

As Per schedule B

12-Slab Discount Clause:

NIL

13-Prices:

FIXED

14-Quantity Offered:

Not Applicable

15-Minimum Quantity in Single Supply Order:

Without Limit

16-Minimum order Value in Single Supply Order:

Without Limit

17-Status of the RC Holding Firm:

SSI

18-Paying Authority:

The Deputy Controller of Accounts, Deptt. of Supply
Shastri Bhawan, 26, Haddows Road
Chennai - 600006

19-Inspection Authority:

For Civil

ADG(QA),Jeevan Tara Building,Parliament Street
New Delhi

20-Quality Assurance Officer:

For Civil
Office of the Director Quality Assurance,
4th floor, Shastri Bhavan,
26, Haddows Road,
Chennai
TAMIL NADU -600006

21-Place where the Stores are to be Tendered
for Inspection:

XII / 230, Morarji Road, Vazhakkala, Kakkanad (W), Cochin.

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

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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. 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.
2. R/C shall be governed by standard terms & conditions as contained in Form DGS&D-1001 which is procurable from DGS&D on payment of Rs. 50/-
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 indenter 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 indenter/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 indenter/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 Indenter/consignee.
- (b) On receipt of the above request from the supplier, the indenter/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 indenter/consignee.
- (d) All cases of abnormal delay in providing requisite details/ documents by the supplier or issue of Road permit/Way bill by indenter/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.

(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

Sr.No.	NAME & FULL ADDRESS OF FIRM	R/C NO & DATE
1	AZ ELECTRONICS A-402, Rizvi Palace, Hill Road, Bandra (W) Mumbai- 400050 Mumbai MAHARASHTRA 400050	ON-LINEUPS/IT-4/RC- D3070000/1111/84/O0295/1423 26-NOV-10
2	SUPRA HI TECH ELECDTRO EQUIPEMENTS PVT LTD, COHIN Thammanam (P.O), Kochi, Cochin, Kerala- 32 KERALA 682 032	ON-LINEUPS/IT-4/RC- D3070000/1111/84/04837/1424 26-NOV-10
3	HYKON POWER ELECTRONICS (P) LTD KERALA IX/52/1. College Road,Kuttanellur P.O. Thrssur Thrisur KERALA 680 014	ON-LINEUPS/IT-4/RC- D3070000/1111/84/04826/1425 26-NOV-10
4	AXIS POWERTRONICS (P) LTD RH-4/8, GURUDEV HOUSING SOCEITY, BAJAJ NAGAR, MIDC, WALUJ, AURANGABAD, MAHARASHTRA Ph: 0240-2552428 / 2552418 Ph- 011-27493212 / 27493539 MAHARASHTRA 431001	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05731/1426 26-NOV-10
5	ELECTRONICS & CONTROLS POWER SYSTEMS PVT. LTD. No. 29/A, 2nd Phase, Opp. Asian Paints Godown, PIA, Bangalore Bangalore KARNATAKA 560058	ON-LINEUPS/IT-4/RC- D3070000/1111/84/01088/1427 26-NOV-10
6	AUTORONICA 403, Indl. Area, Phase-2, Panchkula Panchkula HARYANA	ON-LINEUPS/IT-4/RC- D3070000/1111/84/N0028/1428 26-NOV-10
7	DELTRON CONTROL SYSTEMS 150-A, Sant Nagar ,East of Kailash ,New Delhi-65 Tele No. 011-41623871-72-73. 26219359	ON-LINEUPS/IT-4/RC- D3070000/1111/84/02850/1429 26-NOV-10

- | | | |
|----|---|--|
| 7 | <p>Fax No.: 011-41623870
 New Delhi
 DELHI 110065</p> | <p>ON-LINEUPS/IT-4/RC-
 D3070000/1111/84/02850/1429
 26-NOV-10</p> |
| 8 | <p>IGA TECH INDUSTRIAL ELECTRONICS (P)
 LTD., KOCHI
 XII/230, Morarji Road, Kakkanad (W), P.O. Kochi
 Kochi
 KERALA 682 030</p> | <p>ON-LINEUPS/IT-4/RC-
 D3070000/1111/84/04511/1430
 26-NOV-10</p> |
| 9 | <p>RADETRON
 27/b, malviya industrial area, Jaipur
 Jaipur
 RAJASTHAN 302017</p> | <p>ON-LINEUPS/IT-4/RC-
 D3070000/1111/84/NA065/1431
 26-NOV-10</p> |
| 10 | <p>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</p> | <p>ON-LINEUPS/IT-4/RC-
 D3070000/1111/84/03517/1456
 07-JAN-11</p> |
| 11 | <p>NUMERIC POWER SYSTEMS LIMITED,
 CHENNAI
 No. 33/1, Sedarapet Industrial Estate,
 PONDICHERRY- 605111

 TAMIL NADU 605111</p> | <p>ON-LINEUPS/IT-4/RC-
 D3070000/1111/84/03683/1452
 07-JAN-11</p> |
| 12 | <p>KBS COMPUTERS PVT LTD.,
 KBS House, Plot No. EL-118, MIDC, Mahape,
 Navi Mumbai: 400 710.

 Mr. Manish Kejriwal : 09820808480
 Mr. Manoj Kejriwal : 09820055773
 NAVI MUMBAI
 MAHARASHTRA 400710</p> | <p>ON-LINEUPS/IT-4/RC-
 D3070000/1111/84/01542/1457
 07-JAN-11</p> |
| 13 | <p>ENERTECH UPS PRIVATE LTD.
 Bhare, P.O.Ghotawade(Near Pirangut) Tal. Mulshi,
 Pune
 PUNE
 MAHARASHTRA 412 111</p> | <p>ON-LINEUPS/IT-4/RC-
 D3070000/1111/84/02386/1472
 07-JAN-11</p> |
| 14 | <p>AAR KEY INDUSTRIES
 Pocket C Plot no 109 Sector -2 DSIDC Bawana
 Industrial Area, Delhi- 110039
 Mr. Virender Kumar Goel: 9868206531/
 8527626257 / 09868466737</p> | <p>ON-LINEUPS/IT-4/RC-
 D3070000/1111/84/05871/1453
 07-JAN-11</p> |

14	Fax No. 011-27679551 Tele No: 011-24510342 / 27682109 Bawana DELHI 110039	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05871/1453 07-JAN-11
15	TECHSER POWER SOLLUTIONS PVT. LTD. 42, Ramachandrapura, Jalahalli, Bangalore Bangalore KARNATAKA 560013	ON-LINEUPS/IT-4/RC- D3070000/1111/84/04988/1473 07-JAN-11
16	SAMTEK ELECTRONICS F-256A, Street No.4, Pandav Nagar, Delhi, DELHI 110019	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05484/1454 07-JAN-11
17	BHAWANI DIGITAL SYSTEMS PVT. LTD. 38, Blue Rose Indl. Estate, Next to Jaya Petrol pump, Borivali(E),Mumbai Mumbai MAHARASHTRA 400066	ON-LINEUPS/IT-4/RC- D3070000/1111/84/04185/1461 07-JAN-11
18	ELEGANT ELECTRONICS PVT. LTD. A-18 Wazirpur Group Industrial Area, Delhi Delhi DELHI 110052	ON-LINEUPS/IT-4/RC- D3070000/1111/84/02672/1450 07-JAN-11
19	NPS POWER INDUSTRIES C-38, J-1, PARK, Mahanagar Extension, Lucknow UTTAR PRADESH 226006	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05231/1455 07-JAN-11
20	LUMINOUS POWER TECHNOLOGIES PVT. LTD. Sar House,WZ 106/101, Rajouri Garden Extension, New Delhi New Delhi DELHI 110027	ON-LINEUPS/IT-4/RC- D3070000/1111/84/03319/1464 07-JAN-11
21	POWERNET SOLUTIONS PRIVATE LIMITED No1754, 18th Main,9th Cross,J.P.Nagar,2nd Phase, BANGALORE BANGALORE KARNATAKA 560078	ON-LINEUPS/IT-4/RC- D3070000/1111/84/04399/1465 07-JAN-11
22	TOTAL POWER CONDITIONERS PVT. LTD., #32, 2nd Main, Siddartha Goutham School Road, kamakshipalya Ind.Extn, BANGALORE BANGALORE KARNATAKA 560079	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05838/1466 07-JAN-11

23	KUKREJA TRANSFORMER MFG. CO A-9, Wazirpur Industrial Area, Delhi Delhi DELHI 110052	ON-LINEUPS/IT-4/RC- D3070000/1111/84/02629/1463 07-JAN-11
24	NPP ENERGY LIMITED 1961/3, Arya Samaj Road, Near HDFC Bank, Narela Delhi DELHI 110040	ON-LINEUPS/IT-4/RC- D3070000/1111/84/02524/1467 07-JAN-11
25	NATIONAL ENGINEERING WORKS 56, Foundry nagar Extension, Near Ram Prakash Public School Foundry Nagar, Agra Agra UTTAR PRADESH 282006	ON-LINEUPS/IT-4/RC- D3070000/1111/84/NA386/1446 07-JAN-11
26	TRITRONICS (INDIA) PVT. LTD. 794/1A, JOSHI ROAD, KAROL BAGH, DELHI- 10005 DELHI 110005	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05451/1468 07-JAN-11
27	PREMIER ENTERPRISES, 44-B, Pocket-B, Sidharth Extension, New Delhi- 110014 Mr. Pankaj Garg: 09810034802 DELHI 110014	ON-LINEUPS/IT-4/RC- D3070000/1111/84/03863/1448 07-JAN-11
28	MILLENIUM ELECTRONICS PLOT NO. 35E, SECTOR -2, PARWANOO, HP PARWANOO HIMACHAL PRADESH 220	ON-LINEUPS/IT-4/RC- D3070000/1111/84/04867/1469 07-JAN-11
29	KARVIN POWER SYSTEMS PVT. LTD 134, Blue Rose Industrial Estate, Next to Jaya Petrol Pump, Off. W.E. Highway, Borivali(E),MUMBAI MUMBAI MAHARASHTRA 400066	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05779/1470 07-JAN-11
30	RS POWER SYSTEMS, A-42,JAI AMBEY NAGAR, TONK ROAD,JAIPUR JAIPUR RAJASTHAN 302018	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05399/1445 07-JAN-11
31	INVAPOWERSYSTEMS P.LTD.G-582 RIICO INDL.AREASITAPURA JAIPUR.	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05866/1447

31	G-582 RIICO INDUSTRIALAREA,SITAPURAJAIPUR, JAIPUR JAIPUR RAJASTHAN 302033	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05866/1447 07-JAN-11
32	AARGEE EQUIPMENTS PRIVATE LTD., 1105, Kambi Complex, OTC Road,BANGALORE BANGALORE KARNATAKA 560 002	ON-LINEUPS/IT-4/RC- D3070000/1111/84/04576/1471 07-JAN-11
33	ORBIT POWERTRONICS PVT LTD A-24, Gali No.22, Mahindra Park, Adarsh Nagar, New Delhi-110033 DELHI 110033	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05489/1458 07-JAN-11
34	UNILINE ENERGY SYSTEMS (P) LTD. 198/23,Ramesh market, East of Kailash New Delhi DELHI 110065	ON-LINEUPS/IT-4/RC- D3070000/1111/84/03350/1449 07-JAN-11
35	POWERTEK ELECTRONICS RZF-2/89, Gali No. 4, Mahavir Enclave, Palam, New Delhi, DELHI 110045	ON-LINEUPS/IT-4/RC- D3070000/1111/84/05569/1451 07-JAN-11
36	INTEGRATED POWER CONVERSION PVT. LTD. Flat No. C-2, IIIrd Floor, A-108, Jawahar Park, Khanpur, New Delhi- 110062 Mr. Jitender Kumar & Mr. Pradeep Kumar Mob: 09910065907, 09971822772 DELHI 110062	ON-LINEUPS/IT-4/RC- D3070000/1111/84/04175/1459 07-JAN-11
37	EMMANUEL ELECTRONICS 121, CIEM Indl. Estate, Kanchpada ,Malad (West), MUMBAI MUMBAI MAHARASHTRA 400064	ON-LINEUPS/IT-4/RC- D3070000/1111/84/04103/1462 07-JAN-11

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 confirmed 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% overload 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 corelation 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.

On-Line UPS with isolation transformer suitable for Three Phase AC Input and Single Phase AC Output, Floor Mounted Type

Specification :-

On-line UPS with isolation transformer & with PWM

technology, floor

mounted type suitable for three-phase AC input voltage 300V to 450V, 50 +/-1.5 Hz and

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

enclosure made of M.S sheet 1.2 mm (minimum) thick, aesthetically finished, duly pretreated and powder coated.

On Line UPS , Solid State, Single Phase Input Single Phase Output without Isolation Transformer

Specification :-

On-line UPS, Solid State, without 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 .

LIST OF ALL AMENDMENTS

For RC No. ON-LINEUPS/IT-4/RC-D3070000/1111/84/04511/1430

Sr No.	Amendment No.	Amendment Date	Effective From	Amendment In
1	ON-LINEUPS/IT-4/RC-D3070000/1111/84/04511/1430/34310	07-JAN-11	04-JAN-11	Amendment in Rate