

Price Rs. 1180 /-

JAIPUR METRO RAIL CORPORATION LTD.

No. - F2(21)/JMRC/O&S/S&T/VRLA BATTERY/2018-19

Dated:27.02.2019

"Supply, Installation, Testing, Commissioning & Dismantling of Maintenance Free Valve Regulated Lead Acid Batteries for UPS Installed at JMRC"



Jaipur Metro Rail Corporation Ltd.

3rd Floor, OCC Admin Building,

Mansarovar Depot, Jaipur (Rajasthan) - 302020

Website: <u>http://transport.rajasthan.gov.in/jmrc</u>



TABLE OF CONTENTS

| 1. | Notice Inviting Bids | 4 |
|-----------------------|---|----|
| 2. | Instruction to Bidders | 7 |
| 2.1 | Sale of Bidding Document/Bid Document | 7 |
| 2.2 | Cost of Bid Document and Bid Security/EMD | 8 |
| 2.3 | Changes in the Bidding Document. | |
| 2.4 | Period of Validity of Bids | |
| 2.5 | Eligibility Criteria | |
| 2.6 | Format and Signing of Bids | 10 |
| 2.7 | Submission of Bids | 10 |
| 2.8 | Cost & Language of Bids | 13 |
| 2.9 | Alternative/Multiple Bids | 13 |
| 2.10 | Deadline for the submission of Bids | 13 |
| 2.11 | Receipt and Custody of Bids | 13 |
| 2.12 | Withdrawal, Substitution and Modification of Bids | |
| 2.13 | Opening of Bids | |
| 2.14 | Selection Method | |
| 2.15 | Clarification of Bids | |
| 2.16 | Evaluation of Bids | |
| 2.17 | Negotiations | |
| 2.18 | Correction of Arithmetic Errors in Financial Bids | |
| 2.19 | Acceptance of the successful Bid and Issuance of Purchase Order | |
| 2.20 | Procuring entity's right to accept or reject any or all Bids | |
| 2.21 | Performance Security Deposit | |
| 2.22 | Pre Bid Conference. | |
| 3. | General Conditions of Contract | |
| 3.1 | Terms & Conditions | |
| 3.1.1 | Contract Documents | |
| 3.1.2 | Scope of Supply | |
| 3.1.3 | Delivery | |
| 3.1.4 | Inspection | |
| 3.1.5 | Rejection | |
| 3.1.6 | Payments | |
| 3.1.7 | Liquidated Damages (LD) | |
| 3.1.8 | Termination | |
| 4. | Special Terms and Conditions of Bid & Contract | |
| 4.1 | Bidders to Bid for all items | |
| 4.2 | Payment Terms and Schedule | |
| 4.3 | Warrenty | |
| 4.4 | Other Special Terms | |
| 4.5 | Variation | |
| - .5 5. | Scope of Work | |
| 5.1 | Introduction | |
| J.1 | | 20 |
| 6. | Bid Forms | 31 |
| 6.1 | Form A: Form of Bid | 31 |
| 6.2 | Form B: Bidder's Profile | 33 |
| | | |



| 6.3 | Form C: Format of Bank Guarantee for Performance Security | 4 |
|------|---|---|
| 6.4 | Form D: Bidder's Authorization Certificate {to be filled by the BIDDERS} | |
| 6.5 | Form E: Format of Power of Attorney | |
| 6.6 | Form F: Self Declaration { to be filled by the Bidder } | |
| 6.7 | Form G: Certificate of Conformity/No Deviation {to be filled by the Bidder}40 | С |
| 6.8 | Form H: Annexure:- A Compliance with the Code of Integrity and No conflict of | |
| | Interest | 1 |
| 6.9 | Form H: Annexure:- B Declaration by the Bidder regarding Qualifications4 | 2 |
| 6.10 | Form H: Annexure:- C Grievance Redressal during Procurement Process | 3 |
| 6.11 | Form I: [See rule S3]4 | 5 |
| 6.12 | Form K4 | 6 |
| 6.13 | Form L: Bank Details | 7 |
| 6.14 | Form M: Contract Agreement | 8 |
| 6.15 | Form N: Black List Certificate | 1 |
| 6.16 | Form-O5 | 2 |
| 6.17 | Bill of Quantities | 3 |
| 6.18 | Capacity of applicant | 4 |
| 6.19 | Check List | 5 |
| 6.20 | Annexure-2 | 7 |
| 6.21 | Annexure-3 | 2 |



1. NOTICE INVITING BIDS

- 1.1 Jaipur Metro Rail Corporation (JMRC) Ltd. invites Request for proposal (**Two stage Two envelope method**)Supply, Installation, Testing, Commissioning &Dismantling of Maintenance Free Valve Regulated Lead Acid Batteries for UPS Installed at JMRC through e-tendering process.
- 1.2 The complete Bid document can be downloaded for online submission from the state e-procurement website <u>https://eproc.rajasthan.gov.in</u> and the interested Bidders will have to submit their offer in electronic formats both for technical and financial Bid on this website with their digital signatures. The complete Bid document can also be seen on Corporation's website <u>http://transport.rajasthan.gov.in/jmrc</u> and state procurement portal <u>www.sppp.rajasthan.gov.in.</u>
- 1.3 Bidders who wish to participate in this Bidding process must register on <u>https://eproc.rajasthan.gov.in</u>. To participate in online Bids, as per Information Technology Act, 2000, Bidders will have to obtain Digital Signatures (class-2 / class-3 category) issued by a licensed Certifying Authority for e-Biding portal. Bidders who already have a Valid Digital Signature Certificate need not obtain a new Digital Signature Certificate. This DSC will be used to sign the Bids submitted online by the Bidder. Unsigned Bids will not be entertained and will be rejected outright.

| a) | Designation and address of inviting authority | ED (S&T), Jaipur Metro Rail Corporation Ltd., JAIPUR | |
|----|--|---|--|
| b) | NIB/Bid No | F2(21)/JMRC/O&S/S&T/VRLA BATTERY/2018-19 Dated:27/02/2019 | |
| c) | Name of Work | "Supply, Installation, Testing, Commissioning& Dismantling of Maintenance Free Valve Regulated Lead Acid Batteries for UPS Installed at JMRC.". | |
| d) | Cost of Bid Form | Rs. 1180/- (includes 18 %GST),) in the form of Banker's Cheque/ Demand Draft of a Scheduled Commercial Bank in favour of "Jaipur Metro Rail Corporation Ltd." payable at Jaipur Cost of Bid Form is not refundable | |
| e) | E- Bid Processing Fee (Non- Refundable) | Rs. 1180/- (By demand draft/ Banker's cheque payable in favour of 'Managing Director, RISL' payable at Jaipur) | |
| f) | Estimated Cost | Rs. 39,01,800 /- (Including GST) | |
| g) | Earnest Money Deposit (EMD) / Bid Security. | Rs. 78,036/- (2 % of the Estimated Cost) in the form of Banker's Cheque/ Demand Draft of a Scheduled Commercial Bank in favour of "Jaipur Metro Rail Corporation Ltd." payable at Jaipur. | |
| h) | Last Date & Time for Physical submission of original DD / BC for BID fee, EMD / Bid Security and e- BID Processing Fee in JMRC office | 11:00Hrs. dated 04.03.2019 | |

1.4 KEY DETAILS:



| i) | Performance Security | 5 % of the contract amount in the form of Banker's Cheque/ Demand Draft/ Bank guarantee of a Scheduled Commercial Bank in favour of "Jaipur Metro Rail Corporation Ltd." payable at Jaipur. | |
|----|--|--|--|
| j) | Name of website (s) for download of Bid document and clarification (s) / Modification (s), if any | https://eproc.rajasthan.gov.inBidisalsoavailableonhttp://transport.rajasthan.gov.in/jmrcwww.sppp.rajasthan.gov.in | |
| k) | Websites for Online RFP submission | https://eproc.rajasthan.gov.in | |
| I) | Bid Download Start Date / Time | 17:00 Hrs. dated 28.02.2019 | |
| m) | Date, Time & Venue of Pre Bid meeting | Dated: 15/03/2019 & 11:00 Hrs. Venue - JAIPUR METRO RAIL CORPORATION LTD, Room No.317, 3rd floor, Admin Building Bhrigu path, Mansarovar, Jaipur – 302020 | |
| n) | Last date of receiving query/ clarification | 13:00 Hrs. Dated: 25/03/2019 | |
| o) | Uploading of reply to query/ clarification | Dated: 26/03/2019 | |
| p) | Bid Submission start date/ Time | 10:00 Hrs. dated 01.03.2019 | |
| q) | Last Date & Time for Submission of Bid | 13:00 Hrs. dated 04.04.2019 | |
| r) | Opening of Technical Bid | 15:00 Hrs. dated 04.04.2019 | |
| s) | Opening of Financial Bid | Subsequent to Technical Bid opening (Date to be intimated later to the Technically qualified Bidders through e-procurement website) | |
| t) | Venue of Submission and Opening of Bid | Room No.317, 3 rd floor, Admin Building Mansarovar Depot, Bhrigu path, Mansarovar, Jaipur – 302020 | |
| u) | Validity of Bid | 90 days from the last date of submission of Bid. | |
| v) | Completion period | Subject to the conditions of the contract, the work shall be executed within 5 month from the Date of P.O /LOA or earlier | |
| w) | Minimum Eligibility Criteria: A. Bidder should have valid GST registration certificate issued by competent authority and shall enclose GST certificate along with bid submission. B. Applicant should have valid PAN certificate/ card issued by the Income Tax Dept. of GOI and enclose PAN certificate. C. Bidder should submit declaration as per format at Form-O. D. The bidder firm should have an experience of successful completion of Contract related to Supply/ Installation/Testing and Commissioning of VRLA Batteries or similar work in Metros,PSUs, Railways within India. The Bidder shall submit the details of the same as per Form-K. | | |
| | E. The bidder firm should have | satisfactorily and successfully completed such | |



| contracts(as in point-D) during last five financial years should be either of the |
|---|
| following |
| i. Three such completed contracts each of contract value not be less than the |
| amount equal to RS. 15,60,720/- |
| OR |
| ii. Two such completed contracts each of contract value not be less than the |
| amount equal to RS. 23,41,080/- |
| OR |
| iii. One such completed contracts each of contract value not be less than the |
| amount equal to RS. 31,21,440/- |
| Bidder is required to submit the details as per Form-K along with supporting |
| documents as mentioned below:- |
| 1.Certificate(s)/documents(s) of completion of the contract/work(s) issued by the |
| authorized signatory of the contract/work awarding agency, mentioning Period of |
| the contract/work and Amount paid for the contract/work. |
| |
| F. He shall not be blacklisted by Central Government, any State Government or any |
| Government agency or Public sector undertaking (PSU). He shall submit an |
| undertaking to this effect as per Form-N. |
| |
| G. <u>Turnover</u> :-The bidder should have average annual financial turnover of RS. |
| 1,17,05,400/- in last three financial years (2015-16, 2016-17 and 2017-18). The Bidder is |
| required to present the data as per Annexure-1 along with supporting documents for |
| last three years as mentioned below:- |
| Audited profit and loss A/c and /or audited balance sheet showing the required |
| turnover, certified by a Chartered Accountant with stamp and signature |
| OR |
| Complete Income Tax Return (ITR) showing the required turnover, certified by a |
| Chartered Accountant with stamp and signature. |
| <u>OR</u> |
| Turnover statements, certified by a Chartered Accountant. |

Note:

- 1. All bidders or their authorized representative may attend the opening of Bid.
- 2. All above events will be held at JMRC, Admin Building, Mansarovar Depot, Bhrigu Path, Jaipur-302020
- 3. Corrigendum, Addendums and subsequent clarifications on bid terms, if any, can be down loaded from the Website <u>https://eproc.rajasthan.gov.in</u>. Intimation for change in the schedule of Bid opening etc. shall be published on above mentioned websites only. Keep visiting these websites for any subsequent clarifications & modifications.
- 4. In case of any further details required, the same can be collected from the office Of ED(S&T) Executive Director (S&T)

JAIPUR METRO RAIL CORPORATION LTD,



Room No.314, 3rd floor, Admin Building Bhrigu path, Mansarovar, Jaipur – 302020 Tel: **0141-2822106** Email: edst@jaipurmetrorail.in

NOTE: In case of any query regarding this Bid, same may please be made with DGM (S&T), Landline no. 0141-2822123, Email Id- <u>dgmsnt@jaipurmetrorail.in</u>

2. INSTRUCTION TO BIDDERS

2.1 Sale of Bidding/ Bid Documents

- 2.1.1 The sale of bidding documents shall be commenced from the date of publication of Notice Inviting Bids (NIB). The complete Bid document can be downloaded for online submission from the web-site *https://www.eproc.rajasthan.gov.in*.
- 2.1.2 The Bidder may obtain further information/clarification, if any, in respect of these Bid documents from the office of ED/S&T/JMRC, Jaipur Metro Rail Corporation, B- Wing, Admin Building, 3rd Floor, Mansarovar Depot, Bhrigu Path, Jaipur- 302020. Bidders who wish to participate in this Bidding process must register on *https://eproc.rajasthan.gov.in*. To participate in online Bids, as per Information Technology Act, 2000, Bidders will have to obtain Digital Signatures (class-2 / class-3 category) issued by a licensed Certifying Authority for e-Biding portal. Bidders who already have a Valid Digital Signature Certificate need not obtain a new Digital Signature Certificate. This DSC will be used to sign the Bids submitted online by the Bidder. Unsigned Bids will not be entertained and will be rejected outright.
- 2.1.3 Cost of Bid Document (BID fee) is Rs. 1180 (includes 18 %GST) which shall be paid in the form of Demand Draft / Bankers Cheque of Scheduled Bank drawn in favour of 'Jaipur Metro Rail Corporation Ltd.', payable at Jaipur. The Bid fee is non-refundable.
- 2.1.4 In addition, E-BID processing fee of Rs. 1180/- per Bid shall be paid in the form of banker's cheque / DD of Scheduled Bank drawn in favour of 'Managing Director, RISL', payable at Jaipur.
- 2.1.5 In addition Bid Security as per clause 2.2 below shall be paid.
- 2.1.6 Bids submissions will be made online after uploading the mandatory scanned documents towards cost of BID, Bid Security, e-Bid processing fee and other document as stated in the RFP document.
- 2.1.7 Any Bid not accompanied by valid Earnest Money Deposit/ Bid Security, the cost to-wards Bid document and e-Bid processing fee, in acceptable form will be liable to be treated as being non-responsive.
- 2.1.8 Late Bids (received after date and time of submission of Bid) shall not be accepted under any circumstances.
- 2.1.9 JMRC reserves the right to accept or reject any or all proposals without assigning any reasons.
- 2.1.10 No Bid shall have any cause of action or claim against the JMRC for rejection of his proposal.
- 2.1.11 The JMRC reserves the right to verify all statements, information and documents sub-mitted by the Bidder in response to the Bid Document. Any such verification or lack of such verification by the JMRC shall not relieve the Bidder of its obligations or liabilities hereunder nor will it affect any rights of the JMRC there under.
- 2.1.12 Bids received after the last time and date for depositing Bid shall not be considered. Bids sent



by FAX, post or e-mail will not be considered.

2.2 Cost of bid document and Bid Security/EMD

- 2.2.1 The cost of bid document which is Rs.1180/- (includes 18 %GST) shall be paid in the form of Demand Draft /Banker Cheque of a scheduled Commercial bank drawn in favour of 'Jaipur Metro Rail Corporation Ltd.', payable at Jaipur and shall form part of the Bid.
- 2.2.2 Bid security shall be 2% of the estimated value of subject matter of procurement put to bid. In case of Small Scale Industries of Rajasthan it shall be 0.5% of the quantity offered for supply and in case of sick in industries other than Small Scale Industries, whose cases are pending with Board of Industrial and Financial Reconstruction; it shall be 1% of the value of bid. In lieu of bid security, a bid securing declaration shall be taken from Departments' of the State Government and Undertakings, Corporations, Autonomous bodies, Registered Societies, Cooperative Societies which are owned or controlled or managed by the State Government and Government Undertakings of the Central Government. (Please refer rule 42 of RTPPR i.e. Rajasthan Transparency in Public Procurement Rules, 2013.
- 2.2.3 EMD can be deposited in the form of Demand Draft/ Bankers Cheque of Rs 78,036/- (Rupees Seventy Eight Thousand Thirty Six only) drawn in favour of Jaipur Metro Rail Corporation Ltd., payable at Jaipur, shall form part of the bid. Scanned copy of DD/BC of EMD/Bid security, Bid fee and e-Bid processing fee needs to be submitted online along with the bid document.
- 2.2.4 The EMD/ Bid Security of successful Bidder may be adjusted on request against Performance Security Deposit or discharged/ returned after deposition of the Security Deposit, as the case may be.
- 2.2.5 The Bid Security / Earnest Money of unsuccessful bidders shall be returned promptly after final acceptance of successful bid and signing of agreement submitting performance security or the earliest of the following events, namely:
 - a) The expiry of validity of Bid;
 - b) The cancellation of the procurement process
- 2.2.6 The Bid Security taken from a bidder shall be forfeited, if any, in the following cases, namely:
 - a) When the bidder withdraws or modifies its bid after opening of bids;
 - b) When the Bidder fails to commence the supply of the goods or service or execute work as per supply/ work order within the time specified;
 - c) When the Bidder does not deposit the performance security and failed to signed agreement within specified period after the supply/ work order is placed; and
 - d) If the Bidder breaches any provision of code of integrity, prescribed for Bidders, specified in the bidding document.
- 2.2.7 Notice will be given to the Bidder with reasonable time before Bid Security (EMD) deposited is forfeited.
- 2.2.8 No interest shall be payable on the Bid Security (EMD).
- 2.2.9 In case of non submission of EMD, the bid will be summarily rejected.



- 2.2.10 The procuring entity shall promptly return the Bid Security of the successful Bidder after the earliest of the following events, namely:
 - a) The expiry of validity of Bid;
 - b) Issue of LOA for procurement, signing of agreement and performance security is furnished by the successful Bidder;
 - c) The cancellation of the procurement process; or
 - d) The withdrawal of bid prior to the deadline for presenting bids, unless the bidding documents stipulate that no such withdrawal is permitted.

2.3 Changes in the Bidding Document

- 2.3.1 At any time, prior to the deadline for submission of Bids, the procuring entity may for any reason, whether on its own initiative or as a result of a request for clarification by a Bidder, modify the bidding documents by issuing an addendum in accordance with the provisions below.
- 2.3.2 In case, any modification is made to the bidding document or any clarification is issued which materially affects the terms contained in the bidding document, the procuring entity shall publish such modification or clarification.
- 2.3.3 In case, a clarification or modification is issued to the bidding document, the procuring entity may, prior to the last date for submission of Bids, extend such time limit in order to allow the bidders sufficient time to take into account the clarification or modification, as the case may be, while submitting their Bids.
- 2.3.4 Such modification shall form integral part of The Bid document.

2.4 Period of Validity of Bids

- 2.4.1 Bids submitted by the Bidders shall remain valid during the period specified in the NIB/ bidding document. A Bid valid for a shorter period may be rejected by the procuring entity as non-responsive Bid.
- 2.4.2 Prior to the expiry of the period of validity of Bids, the procuring entity, in exceptional circumstances, may request the Bidders to extend the bid validity period for an additional specified period of time. A Bidder may refuse the request and such refusal shall be treated as withdrawal of Bid and in such circumstances Bid Security shall not be forfeited.

2.5 Eligibility Criteria

- 2.5.1 Bidder should have valid GST registration certificate issued by competent authority and shall enclose GST certificate along with bid submission.
- 2.5.2 Applicant should have valid PAN certificate/ card issued by the Income Tax Dept. of GOI and enclose PAN certificate.
- 2.5.3 Bidder should submit declaration as per format at Form-O .
- 2.5.4 The bidder firm should have an experience of successful completion of Contract related to Supply, Installation, Testing and Commissioning of VRLA Batteries or similar work in



Metros, PSUs, Railways within India. The Bidder shall submit the details of the same as per Form-K.

- 2.5.5 The bidder firm should have satisfactorily and successfully completed such contracts(as in point-D) during last five financial years should be either of the following:
 - I. Three such completed contracts each of contract value not be less than the amount equal to RS. 15,60,720/-

II. Two such completed contracts each of contract value not be less than the amount equal to RS. 23,41,080/-

III. One such completed contracts each of contract value not be less than the amount equal to RS. 31,21,440/-

The Bidder is required to submit the details as per Form-K along with supporting documents as mentioned below:-

- 1. Certificate(s)/documents(s) of completion of the contract/work(s) issued by the authorized signatory of the contract/work awarding agency, mentioning Period of the contract/work and Amount paid for the contract/work.
- 2.5.6 He shall not be blacklisted by Central Government, any State Government or any Government agency or Public sector undertaking (PSU). He shall submit an undertaking to this effect as per Form-N.
- 2.5.7 **Turnover**:-The bidder should have average annual financial turnover of RS. 1,17,05,400/-in last three financial years(2015-16,2016-17 and 2017-18).Bidders is required to present the data as per Annexure-1 along with supporting documents for last three years as mentioned below:-

Audited profit and loss A/c and /or audited balance sheet showing the required turnover, certified by a Chartered Accountant with stamp and signature

Complete Income Tax Return (ITR) showing the required turnover, certified by a Chartered Accountant with stamp and signature.

Turnover statements, certified by a Chartered Accountant.

2.6 Format and Signing of Bids

- 2.6.1 The Bidder shall prepare one original set of the bidding documents called Bid in the manner as specified in the bidding document.
- 2.6.2 All pages of the bid shall be signed by the Bidder or a person duly authorised to sign on behalf of the Bidder pursuant to Clause 6.5, Form E, in token of acceptance of all the terms and conditions of the bidding documents.
- 2.6.3 Any corrections in the bid such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the person signing the bid.



2.7 Submission of Bids

- 2.7.1 The Bidder shall, on or before the date and time given in the table under notice Inviting Bid of this RFP submits his Bid online on e-tendering website https://eproc.rajasthan.gov.in. Bids sent by Post, FAX or e-mail or presented in person will not be considered.
- 2.7.2 Only 'Cost of Bid Document', 'Bid Security' and 'e- Bid Processing Fee' shall be submitted in originals in one separate sealed envelopes(in physical form) mentioned following along with his Name and address mentioned on above envelopes respectively:
- 2.7.2.1 Bid Reference No F2(21)/JMRC/O&S/S&T/VRLA BATTERY/2018-19, Supply, Installation, Testing, Commissioning& Dismantling of Maintenance Free Valve Regulated Lead Acid Batteries for UPS Installed at JMRC.
- 2.7.2.2 The above envelope to be submitted before date and time as per schedule mentioned in the table under Notice Inviting Bid of this RFP at the address mentioned below:

To, ED/S&T/JMRC, Jaipur Metro Rail Corporation Limited, 3th Floor, Admin Building, Mansarovar Depot, Bhrigu Path Jaipur 302020

- 2.7.3 Bid Security, e- Bid Processing Fee and cost of Bid document submitted after due date and time shall not be accepted and online Bids of such Bidders shall liable to be rejected summarily.
- 2.7.4 JMRC will not be responsible for Bid Security, e- Bid Processing Fee and Cost of Bid Document delivered to any other place/person in JMRC other than the designated officer and does not reach the designated officer before the deadline for submission.
- 2.7.5 Any Bid not accompanied by valid Bid Security, e- Bid Processing Fee and Cost of Bid Document in acceptable form will be liable to be treated as being non- responsive & shall be rejected.
- 2.7.6 JMRC will not be responsible for delay in online submission due to any reason. For this, Bidders are requested to upload the complete Bid well advance in time so as to avoid last minute issues like slow speed; choking of web site due to heavy load or any other unforeseen problems.
- 2.7.7 Utmost care to be taken to name the files /documents to be uploaded on portal. There should not be any special character or space in the name of file, only underscores are permissible.

A two-stage two envelope selection procedure shall be adopted. The Bid shall contain:

a) Part-A : Technical Bid

This Part should contain the Technical Bid consisting of a pdf copy of this Request for Proposal with each page digitally signed by the Bidder in acceptance of the terms and conditions therein, along with scanned copy of all Annexures/Forms duly filled. DD/BC and all the



required document in support of eligibility, EMD/Bid security, Bid fee and e-Bid processing fee and other documents as per clause 6.19 of this bid document.

Apart from being digitally signed, all the documents should be physically signed and stamped on each page by the authorized representative of the Bidder.

All the applicable Annexure/Forms shall be duly filled, physically signed & scanned (in pdf format) and digitally signed on each page and to be submitted online as part of technical Bid.

Financial proposal should not be indicated at any place in the Technical Bid, otherwise the Bid shall be summarily rejected.

b) Part-B: Financial Bid (BOQ)

This Part should contain the Financial Bid in the prescribed Format as per clause 6.17 (BOQ). Rate quoted should be all inclusive for carrying out all activities as detailed in the scope of work and will be deemed to include all incidental charges, remittance, supervision, transport, contractor's profit and establishment/overheads, all risks and other obligations set out or implied in the contract, complete as required excluding GST which is being considered in BOQ separately. The effective rate of GST shall be as applicable on the date of billing.

Utmost care should be taken to upload the Financial Bid. Any change in the format of Financial Bid file shall render it unfit for Bidding. Following Steps may be followed in submission of Financial Bid:

- i. Download format of Financial Bid in XLS/ XLSX format (Password protected file).
- ii. This XLS/ XLSX file is password protected file. Don't unprotect the file. Price has to be filled in this file.
- iii. Fill Bidder's Name and relevant prices/GST and other details as asked in down loaded Financial Bid format (BoQ) as specified (in XLS/ XLSX format only or Modify accordingly).
- iv. Validate the sheet and Save filled copy of downloaded financial Bid file in your computer and remember its name & location and upload correct file (duly filled in).
- 2.7.8 The Bidder shall ensure that a receipt/acknowledgement is obtained for the submission of his online Bid, such receipt being issued free of charge.
- 2.7.9 The JMRC may, at his discretion, extend the deadline for submission of Bids by issuing an amendment, in which case all rights and obligations of the JMRC and the Bidder previously subject to the original deadline will thereafter be subject to the deadline as extended.

2.8 Cost & Language of Bidding

2.8.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the procuring entity shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.



2.8.2 The Bid, as well as all correspondence and documents relating to the Bid exchanged by the bidders and the procuring entity, shall be written only in English/ Hindi Language. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in English/ Hindi language, in which case, for purposes of interpretation of the Bid, such translation shall govern.

2.9 Alternative/ Multiple Bids

2.9.1 Alternative/ Multiple Bids shall not be considered at all.

2.10 Deadline for the submission of Bids

2.10.1 Bids shall be submitted online till the time and date specified in the NIB.

2.11 Receipt and Custody of Bids

2.11.1 The bids shall be submitted online as per the schedule mentioned in the table under Notice inviting Bid of this RFP along with the physical deposition of Cost of Bid document, e-tender processing fee and EMD/Bid security in the originals at Room No. 317, 3rd Floor, Admin Building, Mansarovar Depot, Bhrigu Path, Jaipur-302020 in a manner as specified in this RFP.

2.12 Withdrawal, Substitution, and Modification of Bids

- 2.12.1 Except where expressly permitted by these instructions, the Bidder shall not make or cause to be made any alteration, erasure or obliteration to the text of the documents prepared by the JMRC and submitted by the Bidder with or as part of his Bid
- 2.12.2 The Bid submitted online will be taken as a final Bid.
- 2.12.3 No Bid shall be allowed to be modified by the Bidder after the deadline for submission of Bids.

2.13 Opening of Bids

- 2.13.1 The Bids will be opened online on website at the time, date and place as specified in the Notice Inviting Bids of this RFP in the presence of Bidders or their authorized representatives who choose to attend the opening of Bid. The Bidders or their authorized representatives who are present to witness the Bid opening shall sign an attendance sheet / register evidencing their attendance as a witness to the Bids opening process. In the event of the specified date of Bid opening being declared a holiday, the Bids will be opened on the next working day at the same time and place or on any other day/time, as intimated by the JMRC.
- 2.13.2 Only Technical Bids will be opened first and Jaipur Metro Rail Corporation(JMRC) will evaluate technical Bids as per criteria set forth in this RFP document.
- 2.13.3 Bidders can also see the Technical Sheets (check-list) of other Bidders after completion of opening process by logging into the web-site.



- 2.13.4 Financial Bids will remain unopened until the time of opening of the Financial Bids.
- 2.13.5 The Financial Bids of only those Bidders who clear Technical evaluation stage will be opened & evaluated. The time and date of opening of Financial Bid shall be communicated to technically qualified Bidders through state e-procurement website. The technically qualified Bidders may attend the opening of the Financial Bid, if they so desire.
- 2.13.6 The Financial Bids of only those Bidders who clear the Technical evaluation stage will be evaluated. The Bidders or their authorized representatives who are present to witness the Financial Bid opening shall sign an attendance sheet / register evidencing their attendance as a witness to the Financial Bid opening process. In the event of the specified date of Financial Bid opening being declared a holiday, the Financial Bids will be opened on the next working day at the same time and place or on any other day/time, as intimated by the JMRC.

2.14 Selection Method

- 2.14.1 The selection method is Least Cost Based Selection (LCBS) as detailed below:
- 2.14.2 The bid will be opened on scheduled time and date as per NIB.
- 2.14.3 The ranking of L1, L2, L3 etc, will be done on basis of Total Cost, with L1 being the Bidder whose Total Cost is the lowest, L2 being the second lowest and so on.
- 2.14.4 The contract will be award to most advantageous responsive bidder of financial bid (L1) as per column 9 of BOQ subject to fulfilment of eligibility criteria as per clause 2.5.

2.15 Clarification of Bids

- 2.15.1 To assist in the examination, evaluation, comparison and qualification of the Bids, the bid evaluation committee may, at its discretion, ask any Bidder for a clarification regarding its Bid. The committee's request for clarification and the response of the Bidder shall be in writing.
- 2.15.2 Any clarification submitted by a Bidder with regard to its Bid that is not in response to a request by the committee shall not be considered.
- 2.15.3 No substantive change to qualification information or to a submission, including changes aimed at making an unqualified Bidder, qualified or an unresponsive submission, responsive shall be sought, offered or permitted.
- 2.15.4 No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the committee in the evaluation of the financial Bids.
- 2.15.5 All communications generated under this rule shall be included in the record of the procurement proceedings.



2.16 Evaluation of Bids

2.16.1 Preliminary Examination of Bids

- 2.16.1.1 Envelopes containing Bid security, Cost of Bid documents and e-Bid Processing fee will be opened first. Bids of those Bidders who have not submitted valid Bid security, e-Bid Processing fee and cost of Bid documents shall be considered as non-responsive and liable to be rejected summarily.
- 2.16.1.2 On opening of the Bids, JMRC will first check the Bid Security, e-Bid Processing Fee and cost of Bid documents through online mode by cross verifying with the hardcopy submitted. If the documents do not meet the requirements of Bid, a note will be recorded accordingly by the Bid Opening Authority and if any deviation found then Bid will be summarily rejected.
- 2.16.1.3 Further the bid evaluation committee constituted by the procuring entity shall conduct a preliminary scrutiny of the opened bids to assess the prima-facie responsiveness and ensure that the:
 - a. bid is submitted, sealed and signed, as per the requirements listed in the bidding document;
 - b. bid is valid for the period, specified in the bidding document;
 - c. bid is unconditional and the Bidder has agreed to give the required performance security and;
 - d. other conditions, as specified in the bidding document are fulfilled.

2.16.2 Determination of Responsiveness

- 2.16.2.1 The bid evaluation committee shall determine the responsiveness of a Bid on the basis of bidding document and the provisions of pre-qualification/ eligibility criteria of the bidding document.
- 2.16.2.2 A responsive Bid is one that meets the requirements of the bidding document without any material deviation, reservation, or omission where:
 - a. "deviation" is a departure from the requirements specified in the bidding document;
 - b. "reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the bidding document; and
 - c. "Omission" is the failure to submit part or all of the information or documentation required in the bidding document.
- 2.16.2.3 A material deviation, reservation, or omission is one that,
 - a. if accepted, shall:-
 - 1. affect in any substantial way the scope, quality, or performance of the subject matter of procurement specified in the bidding documents; or
 - 2. limits in any substantial way, inconsistent with the bidding documents, the procuring entity's rights or the Bidder's obligations under the proposed contract; or
 - b. If rectified, shall unfairly affect the competitive position of other Bidders presenting responsive Bids.



- 2.16.2.4 The bid evaluation committee shall examine the technical aspects of the Bid in particular, to confirm that all requirements of bidding document have been met without any material deviation, reservation or omission.
- 2.16.2.5 The procuring entity shall regard a Bid as responsive if it conforms to all requirements set out in the bidding document, or it contains minor deviations that do not materially alter or depart from the characteristics, terms, conditions and other requirements set out in the bidding document, or if it contains errors or oversights that can be corrected without touching on the substance of the Bid.

2.16.3 Non-material Non-conformities in Bids

- 2.16.3.1 The bid evaluation committee may waive any non-conformity in the Bid that does not constitute a material deviation, reservation or omission, the Bid shall be deemed to be substantially responsive.
- 2.16.3.2 The bid evaluation committee may request the Bidder to submit the necessary information or document like GST certificate, PAN certificate etc. within a reasonable period of time. Failure of the Bidder to comply with the request may result in the rejection of its Bid.
- 2.16.3.3 The bid evaluation committee may rectify non-material nonconformities or omissions on the basis of the information or documentation received from the Bidder under above.
- 2.16.3.4 Bids shall be evaluated based on the documents submitted as a part of bid. Bidders are expected to quote for all the items. Similarly, in case the proposal of a Bidder is non-responsive for any item, the Bidder shall be summarily rejected.
- 2.16.3.5 The evaluation shall include all costs and all taxes and duties applicable to the Bidder as per law of the Central/ State Government/ Local Authorities, and the evaluation criteria specified in the bidding documents shall only be applied;
- 2.16.3.6 The offers shall be evaluated and marked L1, L2, L3 etc. L1 being the lowest offer quoting least value of Total Cost in financial bid as per column 9 of BOQ. A list of L1, L2....will be prepared accordingly.
- 2.16.3.7 The contract will be award to most advantageous responsive bidder of financial bid (L1).

2.16.4 Buyback

Buyback price (per cell) for each type of cell is to be given as per BOQ of this bid document compulsorily.

2.17 Negotiations

2.17.1 Negotiations may, however, be undertaken with the lowest Bidder or most advantageous bidder, when the rates have been quoted by the bidders for the subject matter of procurement; or when the rates quoted vary considerably and considered much higher than the prevailing market rates.



- 2.17.2 The bid evaluation committee shall have full powers to undertake negotiations. Detailed reasons and results of negotiations shall be recorded in the proceedings.
- 2.17.3 The lowest Bidder shall be informed in writing either through messenger or by registered letter and e-mail (if available).
- 2.17.4 A minimum time of Seven days shall be given for calling negotiations. In case of urgency the bid evaluation committee, after recording reasons, may reduce the time, provided the lowest or most advantageous Bidder has received the intimation and consented to regarding holding of negotiations.
- 2.17.5 Negotiations shall not make the original offer made by the Bidder inoperative. The bid evaluation committee shall have option to consider the original offer in case the Bidder decides to increase rates originally quoted or imposes any new terms or conditions.
- 2.17.6 In case of non-satisfactory achievement of rates from lowest Bidder, the bid evaluation committee may choose to make a written counter offer to the lowest Bidder and if this is not accepted by him, the committee may decide to reject and re-invite Bids or to make the same counter-offer first to the second lowest or most advantageous Bidder, then to the third lowest or most advantageous Bidder and so on in the order of their initial standing and work/ supply order be awarded to the Bidder who accepts the counter-offer. This procedure would be used in exceptional cases only.
- 2.17.7 In case the rates even after the negotiations are considered very high, fresh Bids shall be invited.

2.18 Correction of Arithmetic Errors in Financial Bids:

- 2.18.1 The bid evaluation committee shall correct arithmetical errors in substantially responsive Bids, on the following basis, namely: -
- 2.18.2 If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the bid evaluation committee there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;
- 2.18.3 If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail.

2.19 Acceptance of the successful Bid and Issuance of LOA

2.19.1 Prior to the expiry of the period of validity of the bid, the successful bidder shall be notified through a Letter of Acceptance (LoA) sent through email to be confirmed in writing by Registered / Speed Post / By hand that its Bid has been accepted.



- 2.19.2 Upon receipt of the 'LOA', the successful bidder(s) shall return one copy of the LOA duly signed and accepted and stamped by its authorized signatory within 3 working days from the date of issue of LOA and submit the performance security as specified in the NIB and signing of contract agreement within 20 days from the date of issue of LOA.
- 2.19.3 Contract Agreement on a non-judicial stamp paper of appropriate value as per stamp act, as per format at Form-M (Draft Template)shall be executed between the successful bidder and JMRC within 20 days of issue of LoA and shall be subsequent to the successful reception of the performance security deposit by JMRC. The original copy of the agreement shall be retained by JMRC and the copy shall remain with agency.
- 2.19.4 The selected bidder shall not be entitled to seek any deviation, modification or amendment in the Contract Agreement.
- 2.19.5 Till the signing of the Contract Agreement, the LoA shall form a binding contractual agreement between JMRC and the successful bidder as per terms of this RFP.
- 2.19.6 The cost of stamp duty for execution of Contract agreement and any other related legal documentation charges / incidental charges shall be borne by the successful bidder only.
- 2.19.7 JMRC shall retain the right to withdraw the LoA in the event of the successful bidder's failure to accept the LoA within the limit specified in the above clause. In that event, JMRC shall forfeit the Bid Security of the successful bidder. The bidder shall not seek any claim, compensation, damages or any other consideration whatsoever on this account.
- 2.19.8 If the bidder fails to execute the agreement within the specified period without any intimation to JMRC, such failure will be treated as a breach of the terms and conditions of the tender and may result in forfeiture of the Earnest Money Deposit (Bid Security) in part, or in full at the discretion of JMRC.

2.20 Procuring entity's right to accept or reject any or all Bids

2.20.1 The Procuring entity reserves the right to accept or reject any Bid, and to annul (cancel) the bidding process and reject all Bids at any time prior to award of contract, without thereby incurring any liability to the Bidders as per RTPP Act and Rules.

2.21 Performance Security Deposit

2.21.1 Prior to execution of work order, Performance security shall be solicited from successful Bidder except the departments of the State Government and undertakings, corporations, autonomous bodies, registered societies, co-operative societies which are owned or controlled or managed by the State Government and undertakings of the Central Government. However, a performance security declaration shall be taken from them. The State Government may relax the provision of performance security in particular procurement or any class of procurement.



- 2.21.2 The amount of performance security shall be 5% of the amount of contract.
- 2.21.3 Performance security shall be furnished in any one of the following forms: -
- 2.21.4 Bank Draft or Banker's Cheque of a scheduled bank;
- 2.21.5 Bank guarantee/s of a scheduled bank. It shall be got verified from the issuing bank. Other conditions regarding bank guarantee shall be same as mentioned in the bidding document for Bid Security.
- 2.21.6 Fixed Deposit Receipt (FDR) of a scheduled bank. It shall be in the name of procuring entity on account of Bidder and discharged by the Bidder in advance. The procuring entity shall ensure before accepting the FDR that the Bidder furnishes an undertaking from the bank to make payment/ premature payment of the FDR on demand to the procuring entity without requirement of consent of the Bidder concerned. In the event of forfeiture of the performance security, the Fixed Deposit shall be forfeited along with interest earned on such Fixed Deposit.
- 2.21.7 Performance security furnished in the form specified in clause 2.21.4, 2.21.5 above shall remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the Bidder, including warranty obligations and maintenance and defect liability period, if any.
- 2.21.8 Forfeiture of Performance Security: Security amount in full or part may be forfeited, including interest, if any, in the following cases:
 - a) When any terms and condition of the contract is breached.
 - b) When the Bidder fails to make complete supply satisfactorily.
 - c) If the Bidder breaches any provision of code of integrity, prescribed for Bidders, specified in the bidding document.
 - d) If bidder fails to achieve compatibility of the supplied Batteries under this bid with existing system in JMRC as per Form O.
- 2.21.9 Notice will be given to the Bidder with reasonable time before Performance Security deposited is forfeited.
- 2.21.10 No interest shall be payable on the Performance Security Deposit.

2.22 PRE-BID CONFERENCE

2.22.1 For the purpose of providing an familiarize themselves with the proposed arrangements & all activities necessary in this regard before pre-bid conference.



- 2.22.2 Queries / request for clarification should be submitted through e-mail or in writing by the date & time prescribed in Notice Inviting Bids and the same received after the date & time prescribed may not be taken into consideration.
- 2.22.3 The post conference queries regarding this RFP, may be addressed to :

ED (S&T),

Jaipur Metro Rail Corporation, Mansarovar Train Depot, 3rd Floor, Admin Buiding, Mansarovar, Jaipur-302020. Tel. No.0141- 2822106 , Email: edst@jaipurmetrorail.in,

3 General Conditions of Contract

3.1 Terms & Conditions

3.1.1 **Contract Documents:**

Subject to the order of precedence set forth in the Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory.

3.1.2 **Scope of Supply**

Subject to the provisions in the bidding document and contract, the execution of complete scope of work in this Bid shall be as specified in the purchase order/LOA which will be issued by JMRC to the successful bidder. The successful bidder must execute the contract agreement as per Form-M of this bid within 20 days to the issuance of LOA/PO.

3.1.3 **Delivery**

- a. Subject to the conditions of the contract, the supply shall be executed within 5 month from the Date of P.O /LOA or earlier .
- b. The above material shall be delivered at Mansarovar , Metro railway station and Sindhi Camp metro stations UPS room.
- c. The Batteries supplied shall be inspected by RDSO and all the charges for the same are to be borne by bidder. The documentary evidence for the same is to be submitted before supply of Batteries to JMRC.
- d. Articles not approved during inspection or testing by RDSO shall be rejected and will have to be replaced by the Contractor at his own cost within the time fixed by the Procuring entity.



3.1.4 Inspection

The Batteries supplied shall be inspected by RDSO and all the charges for the same are to be borne by bidder. The documentary evidence for the same is to be submitted before supply of Batteries to JMRC.

3.1.5 **Rejection**

Articles not approved during inspection or testing shall be rejected and will have to be replaced by the Contractor at his own cost within the time fixed by the Procuring entity.

The rejected articles shall be removed by the supplier/ Bidder/ Contractor within 15 days of intimation of rejection, after which Purchase Officer shall not be responsible for any loss, shortage or damage and shall have the right to dispose of such articles as he thinks fit, at the Contractor's risk and on his account.

3.1.6 Payments

Advance Payment will not be made. Payment of the work executed shall be made only when the work completed as specified in this bid, and the work is found to be satisfactory and accepted by the inspecting authority of JMRC.

3.1.7 Liquidated Damages (LD)

In case of extension in the delivery period with liquidated damages the recovery shall be made on the basis of following percentages of value of Stores with the Bidder has failed to supply/ install/ complete:-

- delay up to one fourth period of the prescribed work completion period: 2.5% of contract value.
- delay exceeding one fourth but not exceeding half of the prescribed work completion period: 5.0% of contract value.
- delay exceeding half but not exceeding three fourth of the prescribed work completion period: 7.5% of contract value.
- delay exceeding three fourth of the prescribed work completion period: 10% of contract value.

Fraction of a day in reckoning period of delay in supplies shall be eliminated if it is less than half a day.

The maximum amount of liquidated damages shall be 10% of the contract value.

If the supplier requires an extension of time in completion of contractual supply on account of occurrence of any hindrance, he shall apply in writing to the authority, which has placed the supply order, for the same immediately on occurrence of the hindrance but not after the stipulated date of completion of supply.



Delivery period may be extended with or without liquidated damages if the delay in the supply of goods and related services/work is on account of hindrances beyond the control of the Bidder.

3.1.8 **Termination**

Termination for Default

The Bid sanctioning authority of JMRC may, without prejudice to any other remedy for breach of contract, by a written notice of default of at least 30 days sent to the supplier/ Contractor, terminate the contract in whole or in part: -

- a. If the supplier/ Contractor fails to deliver any or all quantities of the service within the time period specified in the contract, or any extension thereof granted by JMRC; or
- b. If the supplier/ Contractor fails to perform any other obligation under the contract within the specified period of delivery of service or any extension granted thereof; or
- c. If the supplier/ Contractor, in the judgment of the Purchaser, is found to be engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the contract.
- d. If the supplier/ Contractor commits breach of any condition of the contract.

If JMRC terminates the contract in whole or in part, amount of Performance Security Deposit may be forfeited.

Before cancelling a contract and taking further action, advice of senior most finance person available in the office and of legal adviser or legal assistant posted in the office, if there is one, may be obtained.

Note: In addition to the conditions specified above, the approved GCC are applicable and available on the JMRC website. The successful bidder shall submit a declaration for acceptance of the terms and conditions mentioned the GCC {clause 6.6 Form F (j) }.



4 SPECIAL TERMS AND CONDITIONS OF BID & CONTRACT

4.1 Bidders to Bid for all Items

Bidder must quote for all the items mentioned in the BOQ(Bill of Quantities). In case, a Bidder does not quote for any item, the bid shall be summarily rejected.

4.2 Payment Terms and Schedule

- 4.2.1 Payment schedule: Payments to the Contractor, after successful completion of the specified work as per PO/LOA, would be made as under: -
- 4.2.2 Due payments will be made promptly, after submission of an invoice or request for payment by the supplier/ Contractor, and the purchaser has accepted it.

| Milestones | Deliverables | Payment Schedule |
|----------------|--|------------------|
| Items/Services | Dismantling of existing Battery Banks followed by Supply, installation, testing & commissioning of New Battery Banks & Submission of Work Completion Report and RDSO certification as per scope of work | |
| | from nominated official of JMRC | |

- 4.2.3 The currency or currencies in which payments shall be made to the supplier/ Contractor under this Contract shall be Indian Rupees (INR) only.
- 4.2.4 All remittance charges will be borne by the supplier/ Contractor.
- 4.2.5 Payment of the work executed shall be made only when the work completed as specified in this bid, and the work is found to be satisfactory and accepted by the inspecting authority .
- 4.2.6 If bidder fails to submit performance security, execution of contract within specified time, no payment shall be made for the work, if any done after issuance of LOA/PO.

4.3 Warranty

4.3.1 Warranty period shall be minimum 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier.



4.3.2 Warranty Period should be clearly mentioned in invoice and in the handover note of the items at the time of supply for JMRC.

4.4 Other Special Terms

- 4.4.1 In case the Bidder fails to supply the final deliverables within stated timelines, the LD as per clause 3.1.7 "liquidated damage" would be applicable.
- 4.4.2 In case of any errors/ inaccuracies remain in supply and services even after the final approval of design from the purchaser then the (including all related expenditure on any such Bidders has to take corrective actions on Bidders part measures). In such cases, due to delay in delivery schedule, the LD as per clause "liquidated damage" would be applicable.
- 4.4.3 Bidders are advised to carry out extensive survey and site visit and analysis at their on cost, before submitting the bid as per JMRC extent procedures and permission.
- 4.4.4 The successful Bidders shall get the design of battery bank approved from JMRC after the issuance of LOA and before commencing the production for supply within 15 days.
- 4.4.5 Buy back Price (per cell) for each type of cell is to be given as per BOQ of this bid document compulsorily.
- 4.4.6 The Successful Bidder shall commence all the installation work as required to complete the Scope of work as defined in Clause 5 of this RFP after the approval to the Final Design by JMRC in accordance with sequence of work laid down at clause 5.1.1 and shall be completed within the period specified in this Bid.
- 4.4.7 The Batteries supplied shall be inspected by RDSO and all the charges for the same are to be borne by bidder. The documentary evidence for the same is to be submitted before supply of Batteries to JMRC. Articles not approved during inspection or testing by RDSO shall be rejected and will have to be replaced by the Contractor at his own cost within the time fixed by the Procuring entity.
- 4.4.8 All Executing Works shall be done under the supervision of an authorized representative of JMRC.
- 4.4.9 Accidents It shall be the entire responsibility of the contractor to adopt all the safety measures in deploying personnel who are adequately trained in safety. If any accident occurs due to negligence on the part of the contractor's personnel, it shall be the full responsibility of the contractor.
- 4.4.10 Contractors employees and representatives shall wear Identification Badges (cards), uniforms, helmets, gum boots other safety/protection wear as directed and to be provided by the Contractor or his representative. Badges shall identify the Contractor and show the employees name and number and shall be worn at all times while at site.
- 4.4.11 Contractor shall be responsible for insurance and safety of the labor involved in executing the scope of work of this RFP.
- 4.4.12 The Contractor shall maintain commissioning spares at the installation site in advance and JMRC shall not be responsible and no extra charges shall be charged from JMRC for any such requirement arisen at the time of commissioning.
- 4.4.13 The contractor shall make sure that no harm or damage is made to JMRC property and assets while executing the scope of work of this RFP. The performance security/payment shall



be forfeited or shall be refunded/ made only after making the adjustments for any such damage made by the contractor and his staff.

- 4.4.14 The Contractor shall inform 3 days in advance to JMRC before commencing the execution of the Scope of Work of this RFP for arranging the staff of JMRC regarding the same.
- 4.4.15 The contractor shall complete all the formalities like getting PTW by CSS etc. before executing the Scope of Work of this RFP. No access to the site at JMRC premises shall be made without prior permission of JMRC. Address of CSS is

Communication System Supervisor (CSS)

JAIPUR METRO RAIL CORPORATION LTD,

Room No.413, 4th floor, Admin Building

Bhrigu path, Mansarovar, Jaipur - 302020

Tel: 0141-2822147 Email ID-css@jaipurmetrorail.in

4.5 VARIATION

4.5.1 The quantities are shown in BOQ are approximate, and liable to vary during the actual execution of the work. The provision laid down in rule 73 of RTPPR-2013 shall be applicable to this effect.



5 SCOPE OF WORK:

5.1 INTRODUCTION

Jaipur Metro Rail Corporation Ltd. (JMRC) is a wholly owned company of Government of Rajasthan and it was formed to implement and operate the Jaipur Metro Rail Project in Jaipur city. JMRC started its operations on the East-West Corridor from Mansarovar to Chandpole from 03/06/2015, with a total length of 9.63 kms under Phase-IA with eight elevated and one underground station, at approximately one km intervals. Phase 1B, a 2.4 Km stretch from Chandpole to Bari Chopar (underground), is under construction at present.For uninterrupted power supply to cater the power requirement of Signalling ,Telecom and AFC equipment's, Emerson Network Power make UPS systems(30KVA & 60KVA) are installed at all 09 station and Mansarovar Metro Depot (120KVA). These UPS are having 3-phase AC 415V input supply source with two UPS placed at a site in parallel mode configured on Load Sharing basis and a Battery Backup System. The Battery Backup system consists of two Battery Banks connected to individual UPS's having 240 maintenance free Valve Regulated Lead Acid (MF-VRLA) cells in each bank.

JMRC is having 2V, 120 AH as well as 2V, 320AH rating of VRLA cells in battery banks for the UPS systems installed at various locations. Out of the above mentioned 10 locations at i.e. Mansarovar Metro Station, Metro Railway Station & Sindhi Camp Metro Station Battery Banks is to be replaced for which JMRC now intends to procure battery banks. The battery bank shall consist of Maintenance Free Valve Regulated Lead Acid (MF-VRLA) cells and shall be used in redundant configuration.

The scope of work will include the following:

(a)Dismantling:-Dismantling of existing Battery Banks at Mansarovar Metro Station, Metro Railway Station & at Sindhi Camp Metro Station and handover of the released items at Mansarovar Depot Telecom Store, JMRC.

(b)Supply:-Supply of Four Battery banks, having Maintenance Free Valve Regulated Lead Acid (MF-VRLA) cells, Two Banks(Each Bank having 240 Nos. of cells) with rating of **2V,150AH** or better for Sindhi Camp Metro Station, One Bank(having 240 Nos. of cells) of **2V,350AH** or better for Mansarovar Metro Station and One Bank(having 240 Nos. of cells) of **2V,350AH** or better For Metro Railway Station with all accessories and fixture compatible with existing UPS of Emerson make and existing HBL make cell booster installed in JMRC through this bid. The Batteries supplied shall be RDSO certified and all the charges for the same are to be borne by bidder.

(c) Installation, Testing, Commissioning:- Installation of Four Battery banks, having Maintenance Free Valve Regulated Lead Acid (MF-VRLA) cells, Two Banks(Each Bank having 240 Nos. of cells) with rating of **2V,150AH** or better for Sindhi Camp Metro Station, One Bank(having 240 Nos. of cells)of **2V,350AH**



or better for Mansarovar Metro Station and One Bank(having 240 Nos. of cells)of **2V,350AH** or better For Metro Railway Station with all accessories and fixture through this bid.

Commissioning will include interconnection of supplied battery bank with existing UPS system (Emerson Network Power) and existing HBL make cell booster. The testing of load on these batteries for a minimum 3 hours to justify capacity of batteries. The supplied Battery Banks has to be compatible with the existing UPS system of JMRC, the configuration and other details of the existing system are mentioned under Annexure-2&3 of this bid.

(d) RDSO certification:- The Batteries supplied shall be inspected by RDSO and all the charges for the same are to be borne by bidder to this account. The documentary evidence for the same is to be submitted before supply of Batteries to JMRC. Articles not approved during inspection or testing by RDSO shall be rejected and will have to be replaced by the Contractor at his own cost within the time fixed by the Procuring entity.



| 1.1 The above scope of work will be executed as per sequence of work:- | | | | |
|--|--|--|--|--|
| S.NO. | Description | | | |
| 01 | Submission of preliminary design of maintenance free Valve Regulated Lead Acid (MF-VRLA) Battery 2V, 350AH or better & 2V,150AH or better at Mansarovar Metro Station , Metro Railway Station & Sindhi Camp metro Station UPS Room. | | | |
| 02 | Preliminary Design Approval | | | |
| 03 | Submission of Final design | | | |
| 04 | Final Design Approval | | | |
| 05 | Dismantling of maintenance free Valve Regulated Lead Acid (MF-VRLA) Battery 2V, 350AH (01 No. Set) at Mansarovar Metro Station, 2V, 150AH (02 Nos. Sets) Sindhi Camp metro Station and 2V, 350AH (01 No. set) at Metro Railway Station UPS Room | | | |
| 06 | Inspection of batteries by RDSO and Submission of RDSO certification thereto. | | | |
| 07 | Supply, Installation, Commissioning and Testing of maintenance free Valve Regulated Lead Acid (MF-VRLA) Battery of 2V , 350AH or better at Mansarovan Metro Station (01 No. battery bank) and Metro Railway Station(01 No. battery bank) and 2V , 150AH or better at Sindhi Camp metro Station (02 Nos. battery bank) UPS Room | | | |



5.1.2 Supply of four battery bank below mention quantity:-

| S.NO | Description of item | Required Qty in Nos. | STATION NAME | Remarks |
|------|--|--|------------------------------|--|
| 01 | 2V,350AH or Better VRLA Batteries conforming to the following standards: (a) IRS-96 or latest, TEC Specification No. TQ 510G 92 or latest. (b) IEC 60896-21&22 or latest | 01 Nos. battery Bank (240 cells for each bank) includes all standard accessories | Mansarovar Metro Station | Compatible to 60 KVA UPS (Emerson Make) and existing HBL make cell booster Model .:- Liebert NXr |
| | and to be designed for the available space (303 cm X 199 cm) for installation and having sufficient space for easy maintenance and replacement of the cells. | | | |
| | 2V,150AH or Better VRLA Batteries conforming to the following standards: (a) IRS-96 or latest, TEC Specification No. TQ 510G 92 or latest. | 2 Banks (each 240 cells) includes all standard accessories | Sindhi Camp Metro Station | Compatible to 30 KVA UPS (Emerson Make) and existing HBL make cell booster Model :- Liebert NXr |
| 02 | (b) IEC 60896-21&22 or latest and to be designed for the available space (422 cm X 34cm) for installation and having sufficient space for easy maintenance and replacement of the cells. | | | |
| 03 | 2V,350AH or Better VRLA Batteries conforming to the following standards: (a) IRS-96 or latest, TEC Specification No. TQ 510G 92 or latest. | 1 Bank (240 cells) includes all standard accessories | Metro Railway Station | Compatible to 60 KVA UPS (Emerson Make) and existing HBL make cell booster Model .:- Liebert NXr |



| (b) IEC 60896-21&22 or latest | | |
|--|--|--|
| and to be designed for the available space (554 cm X | | |
| 54 cm) for installation and | | |
| having sufficient space for | | |
| easy maintenance and replacement of the cells. | | |

5.1.3 Governing Specifications

| VRLA BATTERIES | | | | | |
|--|-----------------------------|-------------------------------|---|-----|-----------------------------|
| | | | RDSO Specification No. IRS-96 or latest, T SPECIFICATION No. TQ 510G 92 or latest. | | |
| Stationary Valve | lead-acid regulated type | batteries s –Methods of te | | 21: | IEC 60896-21-2004 or latest |
| Stationary lead-acid batteries Valve regulated types – Requirements | | | | 22: | IEC 60896-22-2004 or latest |

F2(21)/JMRC/O&S/S&T/VRLA BATTERY/2018-19



6 BID FORMS

6.1 Form A: Form of Bid

Note:

- a. The Appendix forms part of the Bid
- b. Bidders are required to fill up all the blank spaces in this Form of Bid and Appendix.

Name of Work:_____

То

Executive Director (S&T), Jaipur Metro Rail Corporation Limited, Room no.-314,3nd Floor, Admin Building, Mansarovar Metro Train Depot, Bhrigu path, Mansarovar, Jaipur-302020

 Having visited the site and examined the General Conditions of Contract as well as Special Conditions of Contract, Specifications, Instructions to Bidders, for the execution of above named works, we the undersigned, offer to execute and complete such works and remedy defects therein in conformity with the said Conditions of Contract, Specifications, and Addenda for the sum of Rs. as mentioned in BOQ_______ (Amount in figures and words) for F2(21)/JMRC/O&S/S&T/VRLA BATTERRY/2018-19 or such

(Amount in figures and words) for F2(21)/JMRC/O&S/S&T/VRLA BATTERRY/2018-19 or such other sum as may be ascertained in accordance with the said conditions.

| 1 | Name of the Bidder | | |
|---|---|-----|----|
| 2 | Name and Designation of Authorized signatory | | |
| 3 | Registered Office Address of Bidder | | |
| 4 | Address, Phone numbers, Fax No. and e-mail of Authorized signatory | | |
| 5 | Checklist | Yes | NO |
| i | Certificate of Authorization from Fortinet | | |

- 2. We acknowledge that the Appendix forms an integral part of the Bid.
- 3. We undertake, if our Bid is accepted, to commence the works immediately from the issue of the purchase order.



- 4. If our Bid is accepted, we will furnish at our option a Bank Guarantee for Performance as security for the due performance of the Contract. The amount and form of such guarantee or bond will be in accordance with clause 2.21 of this bid document.
- 5. We have independently considered the amount as per the as per Bid liquidated damages and agree that they represent a fair estimate of the damages likely to be suffered by you in the event of the work not being completed in time.
- 6. We agree to abide by this Bid for a minimum period of 90 days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiry of that period or any extended period mutually agreed to.
- 7. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
- 8. We declare that the submission of this Bid confirms that no agent, middleman or any intermediary has been, or will be engaged to provide any services, or any other item of work related to the award and performance of this Contract. We further confirm and declare that no agency commission or any payment, which may be construed as an agency commission has been, or will be, paid and that the Bid price does not include any such amount.
- 9. We acknowledge the right of the Employer, if he finds to the contrary, to declare our Bid to be non-compliant and if the Contract has been awarded to declare the Contract null and void.
- 10. We understand that you are not bound to accept the lowest or any Bid you may receive.
- 11. If our Bid is accepted we understand that we are to be held solely responsible for the due performance of the Contract.

Dated this......day of...... 2019 Signature Name...... in the capacity of Duly authorized to sign Bids for and on behalf of..... Address Witness – Signature Name Address

Occupation



6.2 Form: B Bidder's Profile

| 1. | Name & Address of The Bidder | |
|-----|---|--|
| 2. | Location of Corporate Head Quarters | |
| 3. | Details of Contact person (Name, designation, address etc.) Telephone Number, Fax Number, e-mail | |
| 4. | Is the firm a registered company? If yes, submit documentary proof. Year and Place of the establishment of the Company | |
| 5. | Is the firm registered with sales tax department? If Yes, submit valid sales tax registration certificate. | |
| 6. | Number of offices in Rajasthan and in India | |
| 7. | Authorized Signatory | |
| 8. | GSTIN Number with enclosed certificate | |
| 9. | PAN Details with copy of PAN Card | |
| 10. | Details of court litigations, including (but not limited to) – Have you filed any claim against any Company / Institutions /PSU/JMRC for such type of project? If so, give details like case no., court dispute involved and present status. Has any Company/ Institution / PSU/JMRC filed any claim/case against you, if so, furnish full details. Has any of your customer or clients filed any case against you in a court? If so, furnish details. | |



6.3 Form: C Format of Bank Guarantee for Performance Security

This deed of Guarantee made this day of ______ between Bank of ______ (hereinafter called the "Bank") of the one part, and Jaipur Metro Rail Corporation Limited (hereinafter called "the Employer") of the other part.

Whereas Jaipur Metro Rail Corporation Limited has awarded the contract 'Supply, Installation, Testing, Commissioning &Dismantling of Maintenance Free Valve Regulated Lead Acid Batteries for UPS Installed at JMRC.' Bid No. F2(21)/JMRC/O&S/S&T/VRLA Battery/2018-19 dated....... (here in after called "the contract") to M/s ______ (here in after called "the Contractor").

AND WHEREAS the Contractor is bound by the said Contract to submit to the Employer a Performance Security for a total amount of Rs. ______(Amount in figures and words).

Now we the Undersigned______(Name of the Bank)being fully authorized to sign and to incur obligations for and on behalf of and in the name of______(Full name of Bank), hereby declare that the said Bank will guarantee the Employer the full amount of Rs._____ (Amount in figures and Words) as stated above.

After the Contractor has signed the aforementioned Contract with the Employer, the Bank is engaged to pay the Employer, any amount up to and inclusive of the aforementioned full amount upon written order from the Employer to indemnify the Employer for any liability of damage resulting from any defects or shortcomings of the Contractor or the debts he may have incurred to any parties involved in the Works under the Contract mentioned above, whether these defects or shortcomings or debts are actual or estimated or expected. The Bank will deliver the money required by the Employer immediately on demand without delay without reference to the Contractor and without the necessity of a previous notice or of judicial or administrative procedures and without it being necessary to prove to the Bank the liability or damages resulting from any defects or shortcomings or debts of the Contractor. The Bank shall pay to the Employer any money so demanded notwithstanding any dispute/disputes raised by the Contractor in any suit or proceedings pending before any Court, Tribunal or Arbitrator/s relating thereto and the liability under this guarantee shall be absolute and unequivocal.

2.21.1 This Guarantee is valid for a period of _____days from the date of signing. (The initial period for which this Guarantee will be valid must be for at least 60 days beyond the date of completion of all contractual obligations of the Bidder, including warranty obligations and maintenance and defect liability period.).

At any time during the period in which this Guarantee is still valid, if the Employer agrees to grant a time extension to the Contractor or if the Contractor fails to complete the Works within the time of completion as stated in the Contract, or fails to discharge himself of the liability or damages or debts as stated under above para, it is understood that the Bank will extend this Guarantee under the same conditions for the required time on demand by the Employer and at the cost of the Contractor



The Guarantee hereinbefore contained shall not be affected by any change in the Constitution of the Bank or of the Contractor.

The neglect or forbearance of the Employer in enforcement of payment of any moneys, the payment whereof is intended to be hereby secured or the giving of time by the Employer for the payment hereof shall in no way relieve the bank of their liability under this deed.

The expressions "the Employer", "the Bank" and "the Contractor" hereinbefore used shall include their respective successors and assigns.

In witness whereof I/We of the bank have signed and sealed this guarantee on the ______day of ______ (Month) 2019 being herewith duly authorized.

| For and on behalf of the | Ba | ank. |
|--------------------------|----|------|
| | 2 | |

Signature of authorized Bank official

| Name: |
|-------------------------|
| Designation : |
| I.D. No. : |
| Stamp/Seal of the Bank: |

Signed, sealed and delivered for and on behalf of the Bank by the above named______

| In the presence of: |
|---------------------|
| Witness 1. |
| Signature |
| Name |
| Address |
| |

| Witness 2. | |
|------------|--|
| Signature | |
| Name | |
| Address | |



6.4 Form D: Bidder's Authorization Certificate {to be filled by the BIDDERS}

Τo,

Executive Director(S&T) Jaipur Metro Rail Corporation Room no. 314, 3rd floor Admin Building, Mansarovar Metro Depot, Bhrigu path, Mansarovar, Jaipur – 302020

I/ We {Name/ Designation} hereby declare/ certify that {Name/ Designation} is hereby authorized to sign relevant documents on behalf of the company/ firm in dealing with NIB reference No.
 ______ dated ______. He/ She is also authorized to attend meetings & submit technical & commercial information/ clarifications as may be required by you in the course of processing the Bid. For the purpose of validation, his/ her verified signatures are as under.

Thanking you,

Name of the Bidder: -

Verified Signature:

Authorized Signatory: -

Seal of the Organization: -

Date:

Place:



6.5 Form E: FORMAT OF POWER OF ATTORNEY

| e of |
|------|
| |
| 7 |
| son |
| |
| |
| |
| Ý |

....., as our true and lawful attorney (hereinafter referred to as the "Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Bid for 'Supply, Installation, Testing, Commissioning &Dismantling Maintenance Free Valve Regulated Lead Acid Batteries for UPS Installed at JMRC.'(No. F2(21)/JMRC/O&S/S&T/VRLA BATTERY/2018-19 Dated:-_____) including but not limited to signing and submission of all applications, Bids and other documents and writings, participate in Bidders and other conferences and providing information / responses to the Authority, representing us in all matters before the Authority, signing and execution of all contracts including the Contract Agreement and undertakings consequent to acceptance of our Bid, and generally dealing with the Authority in all matters in connection with or relating to or arising out of our Bid for the said Project and/or upon award thereof to us and/or till the entering into of the Contract Agreement with the Authority.

AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

For.....

(Signature, Name, Designation and Address)

Accepted

(Signature, Name, Designation and Address of Attorney)

Witnesses:

1. XXX

Note:

2. ABC

Signature of Authorized Signatory along with seal



- 1. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, lay down by the applicable law and the charter documents of the executants(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
- 2. This should be executed on non-judicial stamped paper, stamped in accordance with the stamp act.



6.6 Form F: Self-Declaration {to be filled by the Bidder}

Τo,

Executive Director (S&T)

Jaipur Metro Rail Corporation

Room no. 314, 3rd floor Admin Building Mansarovar metro train depot,

Bhrigu path, Mansarovar, Jaipur - 302020

In response to the NIB Ref. No. ______ dated ______ for {Project Title}, as an Owner/ Partner/ Director/ Auth. Sign. of ______, I/ We hereby declare that presently our Company/ firm ______, at the time of bidding,: -

- a) possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entity;
- b) have fulfilled my/ our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the Bidding Document;
- c) is having unblemished record and is not declared ineligible for corrupt & fraudulent practices either indefinitely or for a particular period of time by any State/ Central government/ PSU/ UT.
- d) does not have any previous transgressions with any entity in India or any other country during the last three years
- e) does not have any debarment by any other procuring entity
- f) is not insolvent in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and is not the subject of legal proceedings for any of the foregoing reasons;
- g) does not have, and our directors and officers not have been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
- h) does not have a conflict of interest as mentioned in the bidding document which materially affects the fair competition.
- i) will comply with the code of integrity as specified in the bidding document.
- j) Agree to all terms and conditions of the General Conditions of Contract (GCC).

If this declaration is found to be incorrect then without prejudice to any other action that may be taken as per the provisions of the applicable Act and Rules thereto prescribed by GoR, my/ our security may be forfeited in full and our bid, to the extent accepted, may be cancelled.

Thanking you,

Name of the Bidder: -

Authorized Signatory: - Seal of the Organization: -

Date: _____

Place: _____



6.7 Form G: Certificate Of Conformity/No Deviation {to be filled by the Bidder}

Τo,

Executive Director (S&T) Jaipur Metro Rail Corporation Mansarovar Metro Train Depot, Bhrigu Path, Mansarovar, Jaipur – 302020

CERTIFICATE

This is to certify that, the specifications of Services / Items which I/ We have mentioned in the Technical bid, and which I/ We shall supply if I/ We am/ are awarded with the work, are in conformity with the minimum specifications of the bidding document and that there are no deviations of any kind from the requirement specifications.

Also, I/ we have thoroughly read the bidding document and by signing this certificate, we hereby submit our token of unconditional acceptance to all the terms & conditions of the bidding document without any deviations.

I/ We also certify that the price I/ we have quoted is inclusive of all the cost factors involved in the end-to-end implementation and execution of the project, to meet the desired Standards set out in the bidding Document.

Thanking you,

Name of the Bidder: -

Authorized Signatory: -

Seal of the Organization: -

Date:_____

| Place: | _ |
|--------|---|
|--------|---|



6.8 Form- H, Annexure A Compliance with the Code of Integrity and No Conflict of Interest

ANNEXURE A TO ANNEXURE C AS PER INSTRUCTIONS OF CIRCULAR NO. 3/2013 DATED 04-02-2013 FINANCE (G&T) DEPARTMENT, GOVT. OF RAJASTHAN

Any person participating in a procurement process shall -

- (a) Not offer any bribe, reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process;
- (b) Not misrepresent or omit that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation;
- (c) Not indulge in any collusion, Bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process;
- (d) Not misuse any information shared between the procuring Entity and the Bidders with an intent to gain unfair advantage in the procurement process;
- (e) Not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process;
- (f) Not obstruct any investigation or audit of a procurement process;
- (g) Disclose conflict of interest, if any; and
- (h) Disclose any previous transgressions with any Entity in India or any other country during the last three years or any debarment by any other procuring entity.

Conflict of Interest:-

The Bidder participating in a bidding process must not have a Conflict of Interest. A Conflict of Interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations.

- i. A Bidder may be considered to be in Conflict of Interest with one or more parties in abiding process if, including but not limited to:
- a. have controlling partners/ shareholders in common; or
- b. receive or have received any direct or indirect subsidy from any of them; or
- c. have the same legal representative for purposes of the Bid; or
- d. have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Procuring Entity regarding the bidding process; or
- e. The Bidder participates in more than one Bid in a bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the Bidder is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one Bid; or
- f. the Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Goods, Works or Services that are the subject of the Bid; or
- g. Bidder or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as engineer-in-charge/consultant for the contract.



6.9 Form-:H, Annexure-:B Declaration by the Bidder regarding Qualifications

I/we hereby declare under Section 7 of Rajasthan Transparency in Public Procurement Act, 2012, that:

- 1. I/we possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entity;
- 2. I/we have fulfilled my/our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the Bidding Document;
- 3. I/we are not insolvent, in receivership, bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my/our business activities suspended and not the subject of legal proceedings for any of the foregoing reasons;
- 4. I/we do not have, and our directors and officers not have, been convicted of any criminal offence related to my/our professional conduct or the making of false statements or misrepresentations as to my/our qualifications to enter into a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings.
- 5. I/we do not have a conflict of interest as specified in the Act, Rules and the Bidding Document, which materially affects fair competition;

Date:

Place:

Signature of bidder Name Designation: Address:



6.10 Form-:H, Annexure-:C Grievance Redressal during Procurement Process

The designation and address of the First Appellate Authority is) Director (O&S), JMRC, JAIPUR.

The designation and address of the Second Appellate Authority is Managing Director, JMRC, JAIPUR.

1. Filing an appeal

If any Bidder or prospective bidder is aggrieved that any decision, action or omission of the Procuring Entity is in contravention to the provisions of the Act or the Rules or the Guidelines issued there under, he may file an appeal to First Appellate Authority, as specified in the Bidding Document within a period of ten days from the date of such decision or action, omission, as the case may be, clearly giving the specific ground or grounds on which he feels aggrieved:

Provided that after the declaration of a Bidder as successful the appeal may be filed only by a Bidder who has participated in procurement proceedings:

Provided further that in case a Procuring Entity evaluates the Technical Bids before the opening of the Financial Bids, an appeal related to the matter of Financial Bids may be filed only by a Bidder whose Technical Bid is found to be acceptable.

- 2. The officer to whom an appeal is filed under Para(1) shall deal with the appeal as expeditiously as possible and shall endeavour to dispose it of within thirty days from the date of the appeal.
- **3.** If the officer designated under para (1) fails to dispose of the appeal filed within the period specified in para (2), or if the Bidder or prospective bidder or the Procuring Entity is aggrieved by the order passed by the First Appellate Authority, the Bidder or prospective bidder or the Procuring Entity, as the case may be, may file a second appeal to Second Appellate Authority specified in the Bidding Document in this behalf within fifteen days from the expiry of the period specified in para (2) or of the date of receipt of the order passed by the First Appellate Authority, as the case may be.

4. Appeal not to be in certain cases

No appeal shall lie against any decision of the Procuring Entity relating to the following matters, namely:-

- (a) determination of need of procurement;
- (b) provisions limiting participation of Bidders in the Bid process;
- (c) the decision of whether or not to enter into negotiations;
- (d) cancellation of a procurement process;
- (e) Applicability of the provisions of confidentiality.
- 5. Form of Appeal



- (a) An appeal under para (1) or (3) above shall be in the annexed Form along with as many copies as there are respondents in the appeal.
- (b) Every appeal shall be accompanied by an order appealed against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee.
- (c) Every appeal may be presented to First Appellate Authority or Second Appellate Authority, as the case may be, in person or through registered post or authorized representative.

6. Fee for filing appeal

- (a) Fee for first appeal shall be rupees two thousand five hundred and for second appeal shall be rupees ten thousand, which shall be non-refundable.
- (b) The fee shall be paid in the form of bank demand draft or banker's cheque of a Scheduled Bank in India payable in the name of Appellate Authority concerned.

7. Procedure for disposal of appeal

- (a) The First Appellate Authority or Second Appellate Authority, as the case may be, upon filing of appeal, shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing.
- (b) On the date fixed for hearing, the First Appellate Authority or Second Appellate Authority, as the case may be, shall,
 - i. Hear all the parties to appeal present before him; and
 - ii. Peruse or inspect documents, relevant records or copies thereof relating to the matter.
- (c) After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the Appellate Authority concerned shall pass an order in writing and provide the copy of order to the parties to appeal free of cost.
- (d) The order passed under sub-clause (c) above shall also be placed on the State Public Procurement Portal.



6.11 Form: I [See rule S3]

Before the..... (First / Second Appellate Authority)

- 1. Particulars of appellant:
- i. Name of the appellant
- ii. Official address, if any:
- iii. Residential address:

2. Name and address of the respondent(s):

- i. ii.
- iii.
- 3. Number and date of the order appealed against and name and designation of the officer / authority who passed the order (enclose copy), or a statement of a decision, action or omission of the Procuring Entity in contravention to the provisions of the Act by which the appellant is aggrieved:
- 4. If the Appellant proposes to be represented by a representative, the name and postal address of the representative:
- 5. Number of affidavits and documents enclosed with the appeal:

Place.....

Date

Appellant's Signature



6.12 Form-: K, WORK EXPERIENCE

| S. No. | Period (From- To) | Detail of work handled | Total cost of work in Rs. | Reference No. of work order/LOA | Reference No. of completion certificate | Placed on Page |
|--------|----------------------|------------------------------|---------------------------------|--|--|-------------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |

Note:

- 1. Bidder shall submit the details in the above format only. Detail submitted in any other Performa will not be considered.
- 2. Bidder must submit the copy of work order/ Letter of acceptance (LOA) and the latest completion certificate issued by the client for all the work mentioned in the Performa, without which the work mentioned in the Performa, shall not be taken into consideration.
- 3. Additional page may be attached if required.
- 4. All the pages must be signed by the authorized signatory by the bidder.



6.13 Form-: L (BANK DETAILS)

Beneficiary Name:

Beneficiary Address:

| Line 1 | |
|----------------|----------|
| Line 2 | |
| District/ City | State UT |
| Pin Code | Tele/Fax |
| Mobile Alert | I |
| 1 | |
| 2 | |

Bank Details:

| Bank Name | |
|---------------------------|-----------------|
| Branch Address | |
| Beneficiary A/C No: | |
| Beneficiary A/C Type: | Saving/ Current |
| Beneficiary A/C Name: | |
| 9 Digit Branch MICR Code: | |
| IFSC Code of Branch: | |

Stamp & Signature of Authorize Signatory of Bidder.

Stamp & Signature of Authorized Signatory of bank.



Note:- Bank details should be verified by the bank on its letter head, duly signed and stamped & should be supported with once cancelled cheque.

6.14 Form-: M, CONTRACT AGREEMENT

CONTRACT NO.

Dated.....

WHEREAS the Contractor has offered a Bid for 'Supply, Installation, Testing, Commissioning &Dismantling of Maintenance Free Valve Regulated Lead Acid Batteries for UPS Installed at JMRC' and agrees to undertake performance of such services under the terms and conditions set forth in this Contract.

Both parties hereby agree as follows:

Clause 1

JMRC agrees to hire and the Contractor agrees to be hired as a for 'Supply, Installation, Testing, Commissioning &Dismantling of Maintenance Free Valve Regulated Lead Acid Batteries for UPS Installed at JMRC' under the terms and conditions specified in this Contract Agreement and the other Contract Documents attached hereto as follows:

- The RFP document with all its Annexure /Forms
- Letter of Acceptance
- Contractor's Proposal with all its Annexures/Forms
- Any other documents forming part of the Contract

All of the foregoing documents, together with this Contract Agreement, as referred to herein as the Contract Documents also incorporated into these Contract Documents, and made part hereof, are all codes, standard specifications, and similar requirements that are referred to therein. In the event of a conflict, ambiguity or discrepancy between the contents of the Contract Documents, the contractor will seek clarification from the JMRC, whose decision shall be final.

Clause 2 Obligation of the Contractor:

The Contractor agrees, subject to the terms and conditions of the Contract Documents to perform efficiently and faithfully all of the for 'Supply, Installation, Testing, Commissioning &Dismantling of 2V 120AH,2V 320AH Maintenance Free Valve Regulated Lead Acid Batteries for 30KVA,60KVA UPS Installed at Sindhi camp and Mansarovar metro stations of Jaipur Metro Rail Corporation Ltd.' and in carrying out all



duties and obligations imposed by the Contract Documents. The Contractor agrees to pay the amount and penalty specified, if any, to the JMRC at the rates and terms and in the manner set forth in the Contract Documents.

Clause 3 Obligation of the JMRC:

The JMRC agrees, subject to the terms and conditions of the Contract Documents, to provide unobstructed access wherever it is required for providing the Services as per the Scope of Work and terms and in the manner set forth in the Contract Documents.

Clause 4 Contract Price:

The JMRC / Contractor (as applicable) agrees to pay for the services under the Scope of this contract and the Contractor / JMRC (as applicable) agrees to accept the sums mentioned below, as part of his obligations, responsibilities and liabilities under and according to the provisions and obligations imposed on him by the Contract.

Clause 5 Notices:

All notices called for by the terms of the Contract Documents shall be in writing in the English language and shall be delivered by hand or by registered mail, acknowledgement due, to the parties' addresses given below. All notices shall be deemed to be duly made when received by the party to whom it is addressed at the following addresses or such other addresses as such party may subsequently notify to the other:

ED/S&T/JMRC,

Jaipur Metro Rail Corporation Limited,

Room No. 314, 3rd Floor, Admin Building,

Mansarovar Depot,

Bhrigu Path

Jaipur-302020

Clause 6 Obligation of tax law



Both the parties shall ensure full compliance with tax laws of India with regard to this contract and shall be responsible for the same. Either party shall keep the other party fully indemnified against his liability of tax, interest, penalty, etc. in respect thereof which may arise.

Clause 7 Integration

The JMRC agrees that this Contract Agreement, together with the other Contract Documents, expresses all of the agreements, understandings, promises, and covenants of the parties, and that integrates, combines, and supersedes all prior and contemporaneous negotiations, understandings, and agreements, whether written or oral and that no modification or alteration of the Contract Documents shall be valid or binding on either party, unless expressed in writing and executed with the same formality as this Contract Agreement, except as may otherwise be specifically provided in the Contract Documents.

Clause 8 Governing Law

This Contract is enforceable and construed under the laws of the Republic of India.

Clause 9 Language

This Contract Agreement and the other Contract Documents are made in the English language.

Clause 10 Jurisdiction of court

All claims, matters and disputes are subject to the exclusive jurisdiction of the Competent Courts in Jaipur only.

In WITNESS THEREOF, The parties have caused this Contract to be signed in their respective names as of the day and year first written above.

JMRC, The JMRC The contractor

Jaipur Metro Rail Corporation Limited ------

(.....)

WITNESS



6.15 Form-: N, Black list certificate

We hereby certify that our organization has neither been black listed nor our contracts have been terminated /foreclosed by any company/ Government Department / Public Sector organization during last 3 financial years ending 31.03.2017 and during current financial year till date of bid submission, due to non-fulfillment of contractual obligations or any other reason.

Date: Place: Signature of bidder Name Designation: Address:

Note: Additional pages, duly signed may be attached wherever necessary.



6.16 Form: O-Declaration by the Bidder regarding compatibility of Batteries to be supplied (Technical specifications and standards & its functioning with existing JMRC system)

Proposed make/model to be supplied against this Bid by the bidder_____ **Declaration**:

It is certified that the goods and related services of the above mentioned make which is proposed to be supplied against this bid is technically compatible with existing JMRC system, meet the current specifications and ensure its proper functioning with existing system

Signature of Firm's Representative

(With Seal)



6.17 BILL OF QUANTITIES (BOQ)

FINANCIAL BID FORM

| VELCE | 1111 | 440 |
|--------------------|----------|-----|
| Tender Inviting Au | therity: | |

Item Rate BoQ

Name of Work: Supply, In existion, Texting Distancing & Commissioning of 14 (SUN1, 24 (SUN1, 24

Near: 1. Star general should be all in durive for camping our all activities as detailed in the scope of work and will be deemed to induke all incidence id angue, rentrance, supervision, transport, contractor's profit and esoblishmentowerheads, all risks andrying our all activities as dealled in the contract, complex as required excluding GT witch is being considered in DOD separately. The effective rate of GGT what has application the date of billing.

2. We recept partial shall be informed in another from the dates of complex hands the add supply which were is sardie. 3. Applying that would be required to complex the back and of our partial shall be added and the same that the same shall be added by the successful bidder. 4. The Criteria of explanation complex the back and of our partial shall be added by the successful bidder. 4. The Criteria of explanation complex the back and of the same shall be added by the successful bidder.

| | (This BOO semples must not be modified replaced by the bidder and the same sho | ould be uploaded after | | RICE SCHEDULE levers columns, els | a the bidder is libble to be re | jected for this tender. D | idders are allowed to | enter the Dikkler Nar | ne and Values only) | |
|------------|--|------------------------|--------|--------------------------------------|--|--|-----------------------|--|---------------------|------------------------|
| NUMBER # | TEXT = | NUMBER # | TEXT # | TEXT # | NUMBER # | NUMBER | NUMBER | NUMBER | NUMBER # | TOT : |
| SI. No. | Texm Description | Quanty | Units. | Outred Currency in INR | BASIC RATE in Figure. To be entered by the Bildler Ra. P | Applicable GGT To be entered by the Bidder (In Percent %) | GSTAmoune (In RL) | TOT AL AMOUNT Without Tates In Ra. P | | TOTAL AMOU In Words |
| | | | 4 | 5 | 6 | , | | • | 10 | - 11 |
| 4 | Supply | | | | | | | | | |
| 1.01 | Supply d'n aircreance fee Valve Raguland Lead ù dd (NF-NFLL) Sarary compañis with aircing UPS of Smaran make (Rarig 37, r 2004 or Sarag à said trop VBL más Call Sociar with al contact accessive and four ear Sinch Cang Nero Sardon UPS room | 490 Nos | | INR | | | 0.00 | 0.00 | 0.00 | NR Zeo Only |
| 1.02 | Supply of midnemons that Value Regulared Lead & dd (NE-VRLU) Samury compatible with using UPS of Temano make (Teatry 37, 2021 K or barrey & autistics (VEL make Call Society with Lancede a Cocastile and Notwe as Marse our and Marso Failway Neurabelon, Teatry, Clansmolog & Commissioning | 460 Nos | | INR | | | 0.00 | 000 | 0.00 | NR Zeo Only |
| 2.01 | Diamand institution, Testing, and commissioning of maintenance free Value | 1 66 | | | | | | | | |
| | Caranan ng instalaso, iasang, ang cominision ng orinananasa aka yana Ragutasi Lasad del (INF-VIL) (Brany Saki (prod 15 Nice.) i compatibi with autoring UP3 d'Emeson maks (Rating 3/, 500H orbeste) Bentishing HBL make Cel Boostar with all standard accessories and fiscue, a Sinch Cang Niero Station UPS nom | 1 20 | | INR | | | 0.00 | 00.0 | 0.00 | NR Zeo Only |
| 2.02 | Dismanting Insulation, Teating and commissioning of maintenance, the Valve Regulated Lead Oct (IR-VRLA) Starts (Stark (port 2 in Nex.) compatible with existing UPS of Emerson make (Startg 2), SOBH or branch dealthing HEL, make Califacear with all sometric access of early of force at Manageore and Marco Raiway Startion UPS room | 1 jab | | INR | | | 0.00 | 00.0 | 0.00 | NR Zeo Only |
| 8 | Dury Dack | | | | | | | | | |
| 9.01 | Suy Back Price for 2V, 1500 H HBL Male, maintenance fee Value Regulated Lead & did (MEV/RLd) | 490 Nos | | INR | | | 0.00 | 0.00 | 0.00 | NR Zeo Only |
| 9.02 | Suy Back Price for 2V, SSOLH HEL Male, maintenance fee Value Regulated Lead & dd (MEV/RLA) | KEO Nos. | | INR | | | 0.00 | 0.00 | 0.00 | NR Zeo Only |
| In Dame | | | | | | | | 0.00 | | NR Zep Only |

The above image is for reverence purposes. Original BOQ may be downloaded form <u>http:/eproc.rajasthan.gov.in</u>.



6.18 Annexure-1 CAPACITY OF THE APPLICANT

| S. No. | Financial Year | Turnover (Rs. In Lacs) |
|--------|--|------------------------|
| 1 | 2015-16 | |
| 2 | 2016-17 | |
| 3 | 2017-18 | |
| | AGE TURNOVER FOR ABOVE IREE FINANCIAL YEARS | |

Turnover is to be certified by Chartered Accountant.

Note: Attach documents as per clause 2.5.7 of RFP.

Date

Signature

Place

Name

Designation

Seal of Authorized Signatory (bidder)



| 6.19 CH | IECK LIST | |
|---------|---|---------------------|
| S. No. | Proposal will contain the following documents : | Whether enclosed |
| 1. | All pages of this RFP along with all Annexures/Forms duly signed by the Authorized Signatory of the Bidder firm separately (as asked in RFP) | Yes/No |
| 2. | Form A : Form of Bid | Yes/No |
| 3. | Form B: Bidder's Profile duly filled and signed | Yes/No |
| 4. | Form D : Bidder's Authorization Certificate | Yes/No |
| 5. | Form E : Power of Attorney | Yes/No |
| 6. | Form F: Self-Declaration | Yes/No |
| 7. | Form G: Certificate Of Conformity/No Deviation | Yes/No |
| 8. | Form- H, Annexure A Compliance with the Code of Integrity and No Conflict of Interest | Yes/No |
| 9. | Form-:H, Annexure-:B Declaration by the Bidder regarding Qualifications | Yes/No |
| 10. | Form-:H, Annexure-:C Grievance Redressal during Procurement Process | Yes/No |
| 11. | Form: I [See rule S3] | Yes/No |
| 12. | Form-:K, Work Experience | |
| 13. | Form-:L, Bank Details | Yes/No |
| 14. | Form: N, Undertaking of not being blacklisted by Central Government, any State Government or any Government agency or Public sector undertaking (PSU). | Yes/No |
| 15. | Form-O -Declaration by the Bidder regarding compatibility of Batteries to be supplied | Yes/No |
| 16. | Annexure-1 Capacity of Applicant | Yes/No |



| 17. | Cost of Bid document(DD/Banker Cheque) | Yes/No |
|-----|--|--------|
| 18. | Bid Security (DD/Banker Cheque) | Yes/No |
| 19. | e-Bid Processing fee (DD/Banker Cheque) | Yes/No |
| 20. | Financial Bid Form duly filled in and signed | Yes/No |

F2(21)/JMRC/O&S/S&T/VRLA BATTERY/2018-19



6.20 ANNEXURE-2

| | 2×60 k | xVA, 415VAC | ., 50HZ, 5-1 | rase | |
|----------------|----------------------|--|---------------------|---|-----------------|
| | | NXR U.P.S. | SYSTEM | | |
| | | For | | | |
| | IN | TERLOCKIN | | N | |
| | Createres | EIDCOM | | MITED | a a |
| | Custom | er: FIBCOM | INDIA LII | VIIIED | |
| | | End User: J | AIPUR MI | ETRO | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| REV. TITLE: | DESCRIPTION | TITLE SHEET | | DRG. NO. A1611/TIT | REMARKS _E |
| | Emerson N | etwork Power (India 19, Wagle Industrial Estate, th |) Private Limited | SHEET No. 1 OF APPD. S.H.D. CHKD. G.N.S | 1 00 DRG 32E |
| EMERS | ON Plot c-20, Road 1 | 19, Wagle Industrial Estate, th | ane (W) Maharashtra | DRAWN A.R.M. | A4 |



| MECHANICAL | UNITS | SPECIFICATION | |
|---|--|--|-------------|
| CHARACHTERISTIC | 01115 | 60 kVA, 3Ph, 415V A | C |
| Height | mm | 1400 | |
| Width | mm | 600 | |
| Depth | mm | 800 | |
| Weight | kg | 180(approx.) | |
| Colour | Kg | RAL 7021 (Charcoal | 0 |
| Protection Grade | | IP20 | Grey) |
| Cable Entry | | Bottom | |
| | | Dottom | |
| ENVIRONMENTAL | | | |
| CHARACTERISTICS | | | |
| Operating Temperature | °C | 0-40 °C | |
| Relative humidity | - | 0 to 95% Non Conder | ising |
| Altitude | - | ≤ 1000 m above sea le | |
| Storage temperature | °C | -20 to 70 °C | |
| Recommended Battery Storage | °C | -20°C to 30°C (20°C | for optimum |
| Temperature | | battery storage) | |
| De rating factor for altitude | .% | 1% per 100m between 2000m | 1000m and |
| Table 1-2 Input rating | - | | 3 |
| INPUT RATINGS Rated AC Input Voltage (*) | UNITS | 60 kVA, 3Ph, 415V A | .C |
| Rated AC Input Voltage (*) | Vac | 380/400/415 V(three- | phase and |
| | | sharing neutral with th | ie bypass |
| Input voltage range (#) | N | input) | |
| mput voltage lange (#) | Vac | 305V~477V, 304V~2 | |
| Frequency (#) | Hz | derating lower than 70 |)%) |
| Power Factor | kW/kVA, full | 50 0.99 | |
| | load | 0.99 | |
| Input power under normal operating condition | kVA rated | 111.975 | |
| 1 0 | (maximum) | 111.575 | |
| Input current approximately | Amps | 155.78 | |
| | (maximum @) | | |
| THD | THDI % FL | 3 | |
| Duration of progressive power | sec | 10 seconds to reach fu | ll rated |
| walk-in | | current (selectable 5 th seconds in 5 second in | rough 30 |
| Rectifier operates at any of the rated supply voltag #. At 305V input mains, the UPS maintains the speci charged battery. @. EN 62040-3 / 50091-3: at rated load and input vo | fied output voltage at ra Itage 400V, battery cha | ated load without discharg | |
| Overload capacity as 110% added. transient state voltage stabil | litv modified as per customer co | mments | |
| | | | |
| | | | |
| | | | |
| V. DESCRIPTION | | | |
| V. DESCRIPTION TLE : | 1 | DATE | REMARKS |
| | DRG. NO | | REVISION |
| TECHNICAL SPECIFICATIONS OF U | JPS A1 | 611/SP/UPS | 04 |
| | | | 01 |
| | SHEET | | |
| Emerson Network Power (In | ndia) Drivato Lim | APPD. SHD | DRG.SPE |
| MERSON Network Prove | iula) FIIVale Lim | CHKD. G.N.S. | |



| OUTPUT RATING | UNITS | 60kVA, 3Ph, 415V AC |
|---|------------------------------------|--|
| Voltage | Vac | 415 V |
| Frequency | Hz | 50 |
| Output Load | KVA | 60 |
| Rated O/P p.f. | | 0.8 lag |
| Rated O/P kW Overload | Kw - | 48 kW at 40°C 110% for 60 Min,125% for 10 |
| Overtoad | - | min, 150% for 1 min. |
| Inverter short circuit current limit | A | 1.55 x Rated Current |
| Maximum permissible non-linear load | % | 100 |
| Voltage stability – steady state | % | ±1 |
| Voltage stability – transient state | % | ±3 |
| Recovery time (to within 1% nominal) | msec | < 20 |
| Synchronizing window | Hz | ±2 |
| Frequency stability – unsynchronized Rate of change of frequency | Hz Hz/sec | ± 0.1 |
| Output voltage distortion linear load | % | 0.1Hz/sec ≤ 1 |
| Output voltage distortion – non linear load (3:1 crest factor) | % | ≤ 5 |
| Transfer time from bypass to UPS in sync | msec | <1 |
| Transfer time from bypass to UPS in un sync | msec | N.A. |
| Transfer time from UPS to bypass in sync | msec | <1 |
| Transfer time from UPS to bypass in un sync | msec | 15 |
| Acoustic noise at rated load (1.5 meter from the UPS to ISO3746) | dBA | < 65 dB |
| | | |
| 3 | | |
| | | |
| 1 Overload capacity as 110% added, transient state voltage stability modified | as per customer o | omments |
| Overload capacity as 110% added. transient state voltage stability modified a | as der customer d | comments |
| 1 Overload capacity as 110% added. transient state voltage stability modified a | as der customer d | comments |
| Overload capacity as 110% added. transient state voltage stability modified a | as ber customer d | comments |
| | as ber customer d | somments |
| V. DESCRIPTION | | DATE REMARKS |
| IV. DESCRIPTION TLE : | DRG. N | DATE REMARKS O. REVISION |
| V. DESCRIPTION | DRG. N | DATE REMARKS |
| EV. DESCRIPTION TTLE : | DRG. N A SHEET rivate Lir | 0. 1611/SP/UPS 2_of_301 |



| Table 1 – 4 – Interme | ediate DC circuit | | | | | | |
|---|---|-------------------|--------|----------------|----------|--------|---------|
| INTERMEDIATE DC CIRCUIT | | UNITS | 60kV | A, 3Ph, 4 | 15V AC | | |
| Voltage limits of inverter operation | | Vdc | 400V | ~ 616V | | | 1 |
| Number of lead acid cells | | No | 40 Blo | ocks (i.e. | 2V each) | | 1 |
| Nominal DC BUS Voltage | | Vdc | 480 | | | | |
| Float voltage lead acid cells (VRLA) | | Vdc | 540 | | | | |
| Boost voltage lead acid cells (VRLA) | | Vdc | N.A. | | | | |
| End of discharge voltage lead acid cell | | Vdc . | 408 | | | | |
| DC voltage stability | | % | ±1 | | | | |
| DC Ripple | | % | ≤1 | | | | |
| . Table 1-5 – Bypass o | circuit | | | • | | • | _ |
| BYPASS CIRCUIT | | UNITS | | A, 3Ph, 4 | 15V AC | | -1 |
| Voltage | | VAC | 415 | | | | |
| Input Voltage variation | | % | ±10 | | | | |
| Frequency | | Hz | 50 | | | | 2 |
| | | | | | | • | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 01 Overload capacity as 110% added. transier | ent state voltage stability modified as | s per customer co | mments | - | | | - |
| | | | - | | | | |
| | | | | | | | _ |
| | | | 1 | | | | _ |
| | | | | | - | | _ |
| REV. DESCRIPTION | | DRG. NO | D. | | DATE | REMARK | |
| TITLE: TECHNICAL SPECIFICA TECHNICAL SPECIFICA EMERSON Hetherk Pose | TIONS OF UPS | | 611 | /SP/U 3 of_ | JPS 3 | 01 | TH |
| Emerson Netwo | rk Power (India) Pr | | | APPD. | SHD | DR | aspe 12 |
| | | | liteu | CHKD. | G.N.S. | | 1110 |



| 1. | | Parameter | | Specification |
|-----|-------------------------------------|---|------|---|
| | Inpu | ut Voltage | 240 | / AC |
| 2. | Out | put Tolerance | ±109 | //o |
| 3. | Inpu | ut Frequency | 50H | Z |
| 4. | Free | quency Tolerance | ±3% | |
| 5. | Inpu | ut Switch Gear | DP | MCB 10KA |
| 6. | Out | put Wattage (W) | 144 | N |
| 7. | Out | put Voltage | 12V | DC . |
| 8. | Out | put Current | 12A | |
| 9. | | put Switch Gear | DP | MCB 10KA |
| 10. | | | Con | out Voltage Adjustment Through Manual trolled Variac |
| п. | Met | ering | Outr | t Voltage- Analog AC Voltmeter but Voltage-Analog DC Voltmeter but Current-Analog DC Ammeter |
| 12. | | cation . | Inpu | t ON but ON |
| 13. | | | | * |
| 1 | <u>. No.</u> 1. | Colour | | Specification RAL-7021 |
| 1 | : No. 1. 2. | Parameter Colour Protection Grade | | RAL-7021 IP-20 |
| 1 | . No. 1. 2. 3. | Parameter Colour Protection Grade Ventilation | | RAL-7021 IP-20 Louvers |
| 1 | • No. 1. 2. 3. 4. | Parameter Colour Protection Grade Ventilation Cable Entry | | RAL-7021 IP-20 Louvers From Bottom |
| 1 | . No. 1. 2. 3. | Parameter Colour Protection Grade Ventilation | | RAL-7021 IP-20 Louvers |
| 1 | • No. 1. 2. 3. 4. | Parameter Colour Protection Grade Ventilation Cable Entry | | RAL-7021 IP-20 Louvers From Bottom 5 Meter Long Copper Conductor, PVC Insulate Cable For AC Input Supply & DC Output To |
| Sr | . No. 1. 2. 3. 4. 5. | Parameter Colour Protection Grade Ventilation Cable Entry | | RAL-7021 IP-20 Louvers From Bottom 5 Meter Long Copper Conductor, PVC Insulate Cable For AC Input Supply & DC Output To Battery |
| Sr | . No. 1. 2. 3. 4. 5. | Parameter Colour Protection Grade Ventilation Cable Entry Input & Output Cable | 1 | RAL-7021 IP-20 Louvers From Bottom 5 Meter Long Copper Conductor, PVC Insulate Cable For AC Input Supply & DC Output To Battery |

F2(21)/JMRC/O&S/S&T/VRLA BATTERY/2018-19



6.21 ANNEXURE-3

| | 2×30 kVA, 415VAC, 50Hz, | 3-F II | ase | | |
|-------|---|-------------------------|---------------------------|---------------|----------|
| | NXR U.P.S. SYSTEM | | | | |
| | For | | | | |
| | SECONDARY STATION | | | | |
| | Customer: FIBCOM INDIA LI | MIT | ED | | |
| | End User: JAIPUR METH | RO | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| ITLE: | DESCRIPTION | | | REMA | RKS |
| | TITLE SHEET | DRG. NO. SHEET N | A1610/ | Autor Service | REV. |
| MERS | Emers on Network Power (India) Private Limited N Plot c-20,Road 19, Wagle Industrial Estate, thane (W) Maharashtra | APPD. CHKD. DRAWN | S.H.D. SEEMA A.R.M. | | DRG. SZE |



| MECHANICAL | U | NITS | SPECIFICATI | | |
|---|------------------------|--|----------------------------------|------------|-----------------|
| CHARACHTERISTIC | | | 30 kVA, 3Ph, 4 | 15V AC | |
| Height | m | | 1400 | | |
| Width | | m | 600 | | |
| Depth | . m | | 800 | | |
| Weight | kį | 3 | 180(approx.) | | |
| Colour Protection Grade | | | RAL 7021 IP20 | | |
| Cable Entry | - | | Bottom | | |
| Cable Linity | | | Dottom | | |
| ENVIRONMENTAL | | | | | |
| CHARACTERISTICS | | | | | |
| Operating Temperature | °(| 2 | 0-40 °C | | |
| Relative humidity | | | 0 to 95% Non | | |
| Altitude | - | 1. | $\leq 1000 \text{m abov}$ | e sea leve | 1 |
| Storage temperature | • •(| | -20 to 70 °C | (0000 0 | |
| Recommended Battery Storage | °(| | -20°C to 30°C battery storage | | r optimum |
| Temperature De rating factor for altitude | % | | 1% per 100m | hetween 1 | 000m and |
| | | | 2000m | | |
| T-11-1-21 | | | | | |
| Table 1-2 Input rating | | | | | |
| INPUT RATINGS | UNITS | | 30 kVA, 3Ph, | 415V AC | |
| Rated AC Input Voltage (*) | Vac | | 380/400/415 N | /(three-ph | ase and |
| | | | sharing neutra | l with the | bypass |
| | | | input) | | |
| Input voltage range (#) | Vac | | 305V~477V, | | |
| P (1)) | TT | | derating lower | than 70% | <u>()</u> |
| Frequency (#) Power Factor | Hz kW/kV/ | A 6.11 | 50 0.99 | | |
| Fower Factor | load | - x , 1011 | 0.33 | | |
| Input power under normal operating condition | kVA rat | ed | 27.2 | | |
| | (maxim | CONTRACT OF THE OWNER | | | |
| Input current approximately | Amps | | 39 | | |
| | (maxim | | | | |
| THD | THDI % | Ó | 3 | | |
| Duration of progressive power walk-in | sec | | 10 seconds to current (select | | |
| waik-in | | | seconds in 5 s | | |
| | | | 1 seconds m 5 s | coond mit | |
| *. Rectifier operates at any of the rated supply volta | | | | | |
| #. At 305V input mains, the UPS maintains the spec | cified output vo | Itage at rat | ed load without | dischargi | ng a previously |
| charged battery. @, EN 62040-3 / 50091-3; at rated load and input ve | oltage 400V h | attery chor | ning at maximu | m rated or | ower |
| e. En szere er ever a artaled load and input w | | and y on an | ang at maximu | | |
| | | | | | |
| 01 Overload capacity as 110% added transient state voltage stal | bilitv modified as per | r customer com | nmnet | | |
| | | | | | |
| | | | and the second second | | |
| | | | | | |
| | | | | DATE | REMARKS |
| | | DRG. NO. | | DATE | REVISION |
| REV. DESCRIPTION | | DRG. NO. | | | |
| FITLE : | UPS | | 610/SP/I | IPS | |
| | UPS | | 610/SP/U | JPS 3 | 01 |



| TITLE: DRG. NO. REVISI TECHNICAL SPECIFICATIONS OF UPS A 1610/SP/LIPS | | UTPUT RATING | UNITS | 30kVA, 3Ph | , 415V AC | |
|---|-----|---|--------------------|--------------|--------------|-----------|
| Output Load KVA 30 Rated O/P p.f. 0.8 lag Rated O/P kW Kw 24 kW at 40°C Overload - 110% for 60 min125% for 10 m Inverter short circuit current limit A 1.55 x Rated Current Maximum permissible non-linear load % 100 Voltage stability - steady state % ± 1 Voltage stability - steady state % ± 3 Recovery time (to within 1% nominal) msec <20 | | | | | | |
| Rated O/P p.f. 0.8 lag Rated O/P AW Kw 24 kW at 40°C Overload - 110% for 60 min125% for 10 m Inverter short circuit current limit A 1.55 x Rated Current Maximum permissible non-linear load % 100 Voltage stability - steady state % ± 1 Voltage stability - transient state % ± 0.1 Recovery time (to within 1% nominal) msec < 20 | | | | | | |
| Rated OP kW Kw 24 kW at 40°C Overload - 110% for 60 min 125% for 10 m Inverter short circuit current limit A 1.55 x Rated Current Maximum permissible non-linear load % 10 Voltage stability – steady state % ± 1 Voltage stability – steady state % ± 1 Recovery time (to within 1% nominal) msec < 0.1 | | | KVA | | | |
| Overload - 110% for 0 min 125% for 10 min 125% for 11 min. Inverter short circuit current limit A 1.55 x Rede Current Maximum permissible non-linear load % 10 Voltage stability - transient state % ± 1 Voltage stability - transient state % ± 1 Voltage stability - unsynchronized Hz ± 2 Prequency stability - unsynchronized Hz ± 0.1 Rate of change of frequency Hz/sec 0.1Hz/sec Output voltage distortion incar load (3:1 crest factor) % ≤ 5 Transfer time from bypass to UPS in sync msec <1 | | | Kw | | PC | |
| 11 Overload canacity as 110% added transiert state voltage stability medifed as per customer commet 150% for 1 min. 11 Voltage stability - transiert state % 100 Voltage stability - transiert state % 4.1 Recovery time (to within 1% nominal) msec <20 | | | | | | for 10 mi |
| Maximum permissible non-linear load % 100 Voltage stability - transient state % ± 1 Voltage stability - transient state % ± 3 Recovery time (to within 1% nominal) msec <20 | | | | 150% for 1 r | nin. | ior ro mi |
| 1 Overload canacity as 110% added transient state voltage stability – unsynchronized % ± 1 Recovery time (to within 1% norminal) msec < 20 | II | werter short circuit current limit | A | 1.55 x Rated | Current | |
| Voltage stability – transient state % ± 3 Recovery time (to within 1% nominal) msec <20 | | | % | 100 . | | |
| Voltage stability – transient state % ± 3 Recovery time (to within 1% nominal) msec <20 | V | oltage stability – steady state | % | ±1 | | |
| Synchronizing window Hz ± 2 Prequency stability – unsynchronized Hz ± 0.1 Rate of change of frequency Hz/sec 0.1Hz/sec Output voltage distortion linear load (3:1 crest factor) % ≤ 5 Transfer time from bypass to UPS in sync msec 1 Transfer time from UPS to bypass in sync msec 1 Transfer time from UPS to bypass in sync msec 15 Acoustic noise at rated load (dBA < 65 dB | V | oltage stability – transient state | % | | | |
| Synchronizing window Hz ± 2 Frequency stability – unsynchronized Hz ± 0.1 Rate of change of frequency Hz/sec 0.1Hz/sec Output voltage distortion – non linear load (3:1 crest factor) % ≤ 5 5 Transfer time from bypass to UPS in sync msec <1 | | | msec | | | |
| Prequency stability - unsynchronized Hz ± 0.1 Rate of change of frequency Hz/sec 0.1Hz/sec Output voltage distortion - non linear load (3:1 crest factor) % ≤ 1 Output voltage distortion - non linear load (3:1 crest factor) % ≤ 5 Transfer time from bypass to UPS in sync msec < 1 | | | Hz | | | |
| Rate of change of frequency Hz/sec 0.1Hz/sec Output voltage distortion linear load (3:1 crest factor) % < 1 | | | Hz | | | |
| Output voltage distortion linear load % ≤ 1 Output voltage distortion – non linear load (3:1 crest factor) % ≤ 5 Transfer time from bypass to UPS in un sync msec <1 | | | | | a contractor | |
| Output voltage distortion – non linear load (3:1 crest factor) % ≤ 5 Transfer time from bypass to UPS in sync msec <1 | 0 | utput voltage distortion linear load | | | | |
| 1 Overload capacity as 110% added transient state voltage stability modified as per customer comment Image: market state voltage stability modified as per customer comment 1 Overload capacity as 110% added transient state voltage stability modified as per customer comment Image: market state voltage stability modified as per customer comment 1 Overload capacity as 110% added transient state voltage stability modified as per customer comment Image: market state voltage stability modified as per customer comment 1 Overload capacity as 110% added transient state voltage stability modified as per customer comment Image: market state voltage stability modified as per customer comment 1 Overload capacity as 110% added transient state voltage stability modified as per customer comment Image: market state voltage stability modified as per customer comment 1 Overload capacity as 110% added transient state voltage stability modified as per customer comment Image: market state voltage stability modified as per customer comment 1 Overload capacity as 110% added transient state voltage stability modified as per customer comment Image: market state voltage stability modified as per customer comment 1 Image: market state voltage stability modified as per customer comment Image: market state voltage stability modified as per customer comment 1 Image: market state voltage stability modified as per customer comment Image: market state voltage stability stability stab | | | % | | in Gibblin | |
| Image: Transfer time from UPS to bypass in sync msec N.A. Transfer time from UPS to bypass in sync msec 1 Transfer time from UPS to bypass in sync msec 15 Acoustic noise at rated load dBA < 65 dB | T | ransfer time from bypass to UPS in sync | msec | | | |
| Transfer time from UPS to bypass in un sync msec 1 Transfer time from UPS to bypass in un sync msec 15 Acoustic noise at rated load dBA < 65 dB | | | | | | |
| 1 Overload capacity as 110% added transient state voltage stability modified as per customer comment 1 Overload capacity as 110% added transient state voltage stability modified as per customer comment 1 Overload capacity as 110% added transient state voltage stability modified as per customer comment REV. DESCRIPTION TITLE : TECHNICAL SPECIFICATIONS OF UPS Mathematical Emerson Network Power (India) Private Limited APPD, 540 | T | ransfer time from UPS to bypass in sync | | | | |
| Acoustic noise at rated load dBA < 65 dB | | | | | | |
| 01 Overload caoacity as 110% added transient state voltage stability modified as per customer communet 01 Overload caoacity as 110% added transient state voltage stability modified as per customer communet REV. DESCRIPTION TITLE : TECHNICAL SPECIFICATIONS OF UPS DRG. NO. A1610/SP/UPS SHEET 2 | | | | | | |
| REV. DESCRIPTION DATE REMART TITLE : TECHNICAL SPECIFICATIONS OF UPS A1610/SP/UPS 0' SHEET 2 or 3 0' Emerson Network Power (India) Private Limited APPD SHD | (1 | .5 meter from the UPS to ISO3746) | | | | |
| REV. DESCRIPTION DATE REMAR TITLE : DRG. NO. DATE REMAR TECHNICAL SPECIFICATIONS OF UPS A1610/SP/UPS SHEET _2_OF_3_O1 Emerson Network Power (India) Private Limited APPD. SHD CHAR SHD | | | | | | |
| REV. DESCRIPTION DATE REMAR TITLE : DRG. NO. DATE REMAR TECHNICAL SPECIFICATIONS OF UPS A1610/SP/UPS SHEET _2_OF_3_O1 Emerson Network Power (India) Private Limited APPD. SHD CHAR SHD | | | | | | |
| REV. DESCRIPTION DATE REMAR TITLE : TECHNICAL SPECIFICATIONS OF UPS A1610/SP/UPS 0' SHEET 2 oF 3 0' Emerson Network Power (India) Private Limited APPD SHD | | | | | | |
| TITLE: DRG. NO. REVISIONS OF UPS A 1610/SP/UPS OF SHEET 2 OF 3 OF SHID CHARDER OF SHID CHARDER OF SHID CHARD S | | | | | | |
| TITLE: TECHNICAL SPECIFICATIONS OF UPS TECHNICAL SPECIFICATIONS OF UPS SHEET TECHNICAL SPECIFICATIONS OF UPS TECHNICAL SPECIFICATIONS OF UPS SHEET TECHNICAL SPECIFICATIONS OF UPS SHEET SHEET SHEET SHEE S | 01 | Overload capacity as 110% added .transient state voltage stability modified a | is per customer co | mmnet | | |
| TITLE: TECHNICAL SPECIFICATIONS OF UPS TECHNICAL SPECIFICATIONS OF UPS SHEET TECHNICAL SPECIFICATIONS OF UPS TECHNICAL SPECIFICATIONS OF UPS SHEET TECHNICAL SPECIFICATIONS OF UPS SHEET SHEET SHEET SHEE S | | Overload capacity as 110% added transient state voltage stability modified a | is Der customer co | mmnet | | |
| TITLE: TECHNICAL SPECIFICATIONS OF UPS TECHNICAL SPECIFICATIONS OF UPS SHEET 2 OF 3 OT SHID Emerson Network Power (India) Private Limited APPD SHD | 01 | Overload capacity as 110% added .transient state voltage stability modified a | is per customer co | mmnet | | |
| Emerson Network Power (India) Private Limited APPD. SHD | REV | DESCRIPTION | is per customer co | mmnet | DATE | REMAR |
| Emerson Network Power (India) Private Limited | REV | DESCRIPTION | | | DATE | REMAR |
| | REV | description LE : | DRG. NG A1 | 610/SP/ | JPS | |



.

| INTERMEDIATE DC CIRCUITUNITS30kVA, 3Ph, 41Voltage limits of inverter operationVdc400V ~ 616VNumber of lead acid cellsNo40 Blocks (i.e.2)Nominal DC BUS VoltageVdc480Float voltage lead acid cells (SMF)Vdc540Boost voltage lead acid cells (SMF)Vdc408DC voltage stability $\%$ ± 1 DC Ripple $\%$ ± 1 Table 1-5 – Bypass circuitBYPASS CIRCUITUNITS30kVA, 3Ph, 41VoltageVAC415Input Voltage variation $\%$ ± 10 FrequencyHz50 | V each) | |
|---|-----------|------|
| Number of lead acid cellsNo40 Blocks (i.e.2)Nominal DC BUS VoltageVdc480Float voltage lead acid cells (SMF)Vdc540Boost voltage lead acid cells (SMF)VdcN.A.End of discharge voltage lead acid cellsVdc408DC voltage stability% ± 1 DC Ripple% ≤ 1 Table 1-5 – Bypass circuitBYPASS CIRCUITVoltageVAC415Input Voltage variation% ≤ 10 ≤ 10 | | |
| Nominal DC BUS Voltage Vdc 480 Float voltage lead acid cells (SMF) Vdc 540 Boost voltage lead acid cells (SMF) Vdc N.A. End of discharge voltage lead acid cells Vdc 408 DC voltage stability % ± 1 DC Ripple % ≤ 1 Table 1-5 – Bypass circuit BYPASS CIRCUIT UNITS 30kVA, 3Ph, 41 Voltage VAC 415 Input Voltage variation '% ± 10 | | |
| Boost voltage lead acid cells (SMF) Vdc N.A. End of discharge voltage lead acid cells Vdc 408 DC voltage stability % ± 1 DC Ripple % ≤ 1 Table 1-5 – Bypass circuit BYPASS CIRCUIT UNITS 30kVA, 3Ph, 41 Voltage VAC 415 Input Voltage variation '% ± 10 | .5V AC | |
| End of discharge voltage lead acid cellsVdc408DC voltage stability $\%$ ± 1 DC Ripple $\%$ ≤ 1 Table 1-5 – Bypass circuitBYPASS CIRCUITVoltageVAC415Input Voltage variation'% ± 10 | .5V AC | |
| DC voltage stability $\%$ ± 1 DC Ripple $\%$ ≤ 1 Table 1-5 – Bypass circuitBYPASS CIRCUITVoltageVACVoltageVAC415Input Voltage variation $\%$ ± 10 | 15V AC | |
| DC Ripple % ≤ 1 Table 1-5 – Bypass circuit BYPASS CIRCUIT UNITS 30kVA, 3Ph, 41 Voltage VAC 415 Input Voltage variation 1% ± 10 | 15V AC | |
| Table 1-5 – Bypass circuit BYPASS CIRCUIT UNITS 30kVA, 3Ph, 41 Voltage VAC 415 Input Voltage variation '% ± 10 | 5V AC | |
| BYPASS CIRCUITUNITS30kVA, 3Ph, 41VoltageVAC415Input Voltage variation'%± 10 | 15V AC | |
| Voltage VAC 415 Input Voltage variation '% ± 10 | | |
| Input Voltage variation % ± 10 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| 01 Overload capacity as 110% added transient state voltage stability modified as per customer communet | | |
| | | |
| | | |
| | DATE REMA | |
| TITLE : DRG. NO. TECHNICAL SPECIFICATIONS OF UPS A1610/SP/UI | REVIS | SION |



| Sr. | | | | | |
|------|---------------------------------------|---|--|---|---------|
| No. | | Parameter | Specificatio | on | |
| | 1. Inp | ut Voltage 24 | OV AC | | - |
| | 2. Out | put Tolerance | 0% | | - |
| | 3. Inp | It Frequency |)Hz | | - |
| | 4. Fre 5. Inp | quency Tolerance ± | 3% | | |
| | 6. Out | It Switch Gear D | P MCB 10KA | | |
| | | | 34W | | |
| | B. Out | | 2V DC | | _ |
| | 9. Out | | 2A DC | | _ |
| | 10. Cor | | P MCB 10KA | Chrough Manual | - |
| - | | | utput Voltage Adjustment T ontrolled Variac | nrougn Manual | 12 |
| 1 | 11. Met | ering Ir | put Voltage- Analog AC Vo utput Voltage-Analog DC V utput Current-Analog DC A | /oltmeter | |
| 1 | 12. Indi | cation | put ON | | 2 |
| | 13. | | utput ON | 1 | _ |
| | echanic Sr. No. 1. 2. | Al Specifications: Parameter Colour Protection Grade | Speci RAL-7021 IP-20 | ification | |
| | <u>Sr. No.</u> 1. | Parameter Colour | RAL-7021 | Conductor, PVC Ins | sulated |
| | Sr. No. 1. 2. 3. 4. 5. | Parameter Colour Protection Grade Ventilation Cable Entry Input & Output Cable | RAL-7021 IP-20 Louvers From Bottom 5 Meter Long Copper C Cable For AC Input Su | Conductor, PVC Ins | sulated |
| | Sr. No. 1. 2. 3. 4. 5. | Parameter Colour Protection Grade Ventilation Cable Entry | RAL-7021 IP-20 Louvers From Bottom 5 Meter Long Copper C Cable For AC Input Su | Conductor, PVC Ins | То |
| | Sr. No. 1. 2. 3. 4. 5. | Parameter Colour Protection Grade Ventilation Cable Entry Input & Output Cable | RAL-7021 IP-20 Louvers From Bottom 5 Meter Long Copper C Cable For AC Input Su Battery | Conductor, PVC Ins ipply & DC Output | REMAR |
| REV. | Sr. No. 1. 2. 3. 4. 5. | Parameter Colour Protection Grade Ventilation Cable Entry Input & Output Cable | RAL-7021 IP-20 Louvers From Bottom 5 Meter Long Copper C Cable For AC Input Su Battery | Conductor, PVC Ins pply & DC Output | REMAR |