

ESP-001-2A Rev.00		PROJECT ENGINEERING & SYSTEMS DIVISION (Technical Specification of Battery Chargers for 110V, 200Ah & 110V, 40Ah Batteries)		Std. / Doc. Number	
				PY55362	
				Rev. No.	03
				Sheet 01 of 06	

COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company.	TECHNICAL SPECIFICATION OF BATTERY CHARGERS FOR 110V, 200AH & 110V, 40AH BATTERIES PROJECT:ELECTRIFICATION WORKS FOR BIRLANAGAR - ETAWAH, BHANDAI -UDI,FARRUKHABAD- SHIKOHABAD INCLUDING MAINPURI - ETAWAH SECTIONS OF NORTH CENTRAL RAILWAY 386 RKM/440 TKM				

Revisions: Refer to record of revisions	Prepared by :	Checked by :	Approved by :	Date :
	-Sd- K SRINIVASA RAO	-Sd- G SESHU KIRAN	-Sd- ABU MALICK	23.02.2019

**PROJECT ENGINEERING & SYSTEMS DIVISION**
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1.0 INTENT OF SPECIFICATION:

This specification applies to cover the design, manufacture, method of test and other requirements of a) 110V Battery Chargers for 110V Battery, 40Ah & b) 110V Battery Chargers for 110V Battery, 200Ah for installation in the control room at un-attended 132/25kV or 220/25kV traction sub stations and at un-attended sectioning and paralleling posts (SPs) and sub-sectioning and paralleling posts (SSPs).

This specification is intended to cover the design, manufacture, assembly, testing at manufacturer's works, supply & delivery, properly packed for transport of 110V Battery Chargers complete with all fittings, accessories and auxiliary equipment for efficient and trouble-free operation.

2.0 TECHNICAL REQUIREMENTS:

All the technical requirements of 110V Battery Chargers shall be as per the following enclosed specifications:

Sl.No.	Description of Specification	RDSO Specification No.
1.	Specification of Battery Charger for 110V Battery, 40Ah	ETI/PSI/1(6/81)
2.	Specification of Battery Charger for 110V Battery, 200Ah	ETI/PSI/24(6/81)

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3.0 SCOPE:

- 3.1. Supply of a) 110V Battery Chargers for 110V Battery, 40Ah & b) 110V Battery Chargers for 110V Battery, 200Ah complete with all parts & accessories necessary for efficient operation.

4.0 DOCUMENTATION:

4.1 To be submitted along with bid

- Schedule of Guaranteed performance, Technical and other Particulars of 110V Battery Chargers
- RDSO approval certificate for manufacture of 110V Battery Chargers.
- Type Test Certificates
- Duly filled unpriced price schedule as per Annexure-1
- No Deviation schedule as per Annexure-2

As Bidder is RDSO approved vendor, No technical deviation is acceptable against RDSO Specifications (Please refer at Cl. No: 2.0 above for further details of specifications), RDSO approved drawing & RDSO approved Quality plan.

- Check list for Bid Submission as per Annexure-4
- Latest RDSO approved Quality assurance plan as per above RDSO specifications of Battery Charger.

Documents at Sl. no. a, b & d above shall be submitted in line with RDSO Specifications (Please refer at Cl.No: 2.0 above for further details of specifications) for review. **In case Type test reports and RDSO approval certificate as per RDSO specification are not available or are found not meeting the specification requirements, the bidder's offer will be rejected.**

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4.2 To be submitted in after award of contract

Bidder to submit the following documents as per RDSO Specifications (Please refer at Cl.No: 2.0 above for further details of specifications) for approval of Purchaser/ RDSO within 1 week after release of LOI/PO whichever is earlier.

- i. Outline General Arrangement (in three views) along with mounting dimensions.
- ii. Schematic diagrams of connections along with technical details of components.
- iii. Cross-sectional views (showing location of major components)
- iv. Table of Guaranteed and other technical Particulars of 110V Battery Chargers

4.3 Final As-Built documentation

Final documentation in 12 sets in bound volumes along with a softcopy (CD) shall be submitted within 1 week of inspection of equipment to BHEL and 3 sets of hard copies with a soft copy (CD/DVD) shall be sent along with equipment to site and it shall consist of following:

- a) Index sheet/Master documentation list
- b) Final Technical Data Sheets
- c) Final Approved Drawings (Covering all items mentioned in Cl. No. 4.2)
- d) QA reports
- e) Test Reports of all tests conducted
- f) Test Certificates of all bought out items
- g) O & M Manuals
- h) Contact details

The bidder may note that the drawings, data and manual listed herein are minimum requirements only. The bidder shall ensure that all other necessary write-ups, curves, calculations and information required to fully describe the equipment offered are submitted.

5.0 INSPECTION & TESTING

5.1 Stage & Final Inspection shall be done by Purchaser/End user/Third party appointed by Purchaser or End user as per RDSO approved QAP. Twenty days advance notice along with three sets of drawing approved by BHEL with factory test reports shall be furnished along with the inspection call.

5.2 Testing of 110V Battery Chargers shall be as per RDSO specifications (Please refer at Cl.No: 2.0 above for further details of specifications)

6.0 PACKING & DISPATCH

Packing and Dispatch of 110V Battery Chargers shall be as per RDSO specifications (Please refer at Cl.No: 2.0 above for further details of specifications)

7.0 APPROVED MAKES FOR SUB COMPONENTS

Approved makes of all sub-components of 110V Battery Charger shall be as per RDSO specifications (Please refer at Cl.No: 2.0 above for further details of specifications)

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8.0 TABLE-1: MATERIAL CODES

Var. No.	Description	Material code
00	110V Battery Charger (LMLA,40AH BATT-TDS)	PY9755362002
01	110V Battery Charger (LMLA,200AH BATT-TDS)	PY9755362010



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Revision Details

Revised By

Approved By

00

23.02.2019

Original Revision

(Sd/-)

Abu Tahir Malick

01

01.04.2019

Quantity of Battery Chargers is increased as per RDSO spec/Layout

(Sd/-)

K Srinivasa Rao

(Sd/-)

Abu Tahir Malick

02

31.12.2020

Battery Charger Quantity revised in Annexure-1

(Sd/-)

K Srinivasa Rao

(Sd/-)

Saroj Kumar

03

16.01.2021

Battery Charger Quantity revised in Annexure-1

K Srinivasa Rao

Saroj Kumar

ESP-001-2A Rev.00		PROJECT ENGINEERING & SYSTEMS DIVISION (PRICE FORMAT)	Std. / Doc. Number	
			ANNEXURE-1 TO PY55362	
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ESP-001 - 3A Rev.00		PROJECT ENGINEERING & SYSTEMS DIVISION (PRICE FORMAT) (ANNEXURE-1 TO SPECIFICATION PY55362 REV00)								Std. / Doc. Number		
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PROJECT:				BHEL ENQUIRY NO.:								
CUSTOMER: M/s				ITEM: 110V BATTERY CHARGERS								
SUPPLIER: M/s				QUOTATION REF. NO. & DATE:								

BREAK UP OF EPS PRICE BID OF BATTEREIS												
LIST OF ITEMS				THESE COLUMNS SHALL APPEAR AND SHALL BE FILLED IN EPS BID ALSO								
SL. NO.	DESCRIPTION 1	HSN CODE (8 DIGIT)	Quantity	MU	UNIT PRICE for Line ITEM (RS.) [Ex-Works]	TOTAL PRICE (RS.) [Ex-Works]	P&F Charges (In Rs. <u>OR</u> in % <u>OR</u> Inclusive)	Freight Charges (In Rs. <u>OR</u> in % <u>OR</u> Inclusive)	Total Price (in Rs.)	Weightag e of Line Item (%)	GST (%)	GST Amount (in Rs.)
		(A)	D	(E)	(F)	(G) = (DxF)	(H)	(I)	(J) = (G)+(H)+(I)		(K)	(L)
1	MATERIAL CODE: PY9755362002: Supply of 110V Battery Chargers for 110V Battery, 40Ah		20	SET						60		
2	MATERIAL CODE: PY9755362010: Supply of 110V Battery Chargers for 110V Battery, 200Ah		4	SET						40		

NOTES:

i) THE TENDER SHALL BE EVALUATED ON **OVERALL L1 BASIS** EXCLUDING GST.

ii) BIDDER TO ATTACH **UN-PRICED BID** WITHOUT DISCLOSING RATES/ PRICE BUT MENTIONING ONLY '**QUOTED**' AGAINST EACH ITEM IN **PART-I**. **PRICE BID SHALL BE FILLED IN THE ABC PROCURE SYSTEM ALONG WITH THIS BREAK UP - TO BE ATTACHED IN PART-2 BID.**

iii) IF ANY ITEM IS LEFT 'BLANK' OR 'UNQUOTED' FOR A PACKAGE IN THE UN-PRICED BID, THE OFFER WILL BE LIABLE FOR REJECTION.

iv) VENDOR SHALL ALSO FILL UP **8-DIGIT HSN CODE** AGAINST EACH OF THE ITEM IN THE **UN-PRICED PRICE FORMAT**.

SIGNATURE & STAMP OF VENDOR

ESP-001-2A Rev.00		PROJECT ENGINEERING & SYSTEMS DIVISION (DEVIATION SCHEDULE)		Std. / Doc. Number	
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NO DEVIATION SCHEDULE
(ANNEXURE-2 TO SPECIFICATION PY55362)



PROJECT ENGINEERING & SYSTEMS DIVISION (DEVIATION SCHEDULE)

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NO DEVIATION FORMAT:

(TO BE FILLED-IN BY VENDOR AND FURNISHED ALONG WITH OFFER)

PROJECT:

Enquiry No.:

Item:

Name of Bidder:

Offer Ref. No.:

Sl. No.	Clause no. & Spec. no.	Description as per specification	Deviation taken	Nature of Deviation	Remarks

NOTES:

1. Technical offer of the bidder will be evaluated only on the basis of No Deviation Schedule. Schedule constitutes this Sheet (with these Notes) duly signed & stamped by bidder.
2. As bidder is RDSO approved manufacturer, deviations are not accepted against RDSO standard specification, approved drawings & approved quality assurance plan. Accordingly, No deviation schedule shall be filled and submitted along with technical offer.
3. No price implications shall be entertained by BHEL during technical scrutiny & order execution stage. Hence, in no case there will be consideration of price implications.
4. Bidder to submit the "No Deviation Schedule" by writing "NO Deviations" in this format.
5. If the "No Deviation Schedule" is not submitted along with the offer, the bidder's offer is likely to be rejected without any further interaction with the bidder.

SIGNATURE
OF BIDDER

NAME

DESIGNATION

COMPANY SEAL
DATE

**PACKAGE EXECUTION MILESTONES/ SCHEDULE
(ANNEXURE-3 TO SPECIFICATION PY55362)**

PROJECT ENGINEERING & SYSTEMS DIVISION
(PACKAGE EXECUTION MILESTONES/ SCHEDULE)

S/N	Event	Schedule
		For GA , SLD Drawings & Scheme Drawings
1	<i>Drawings submission</i>	Within 1 week of P.O. / L.O.I. date (Note-1)
2	<i>BHEL Comments / Approval for Manufacture Clearance</i>	Within 1 week from receipt of the revised Drawings
3	<i>Revised Drawings submission</i>	Within 1 week from BHEL's comments date
4	<i>BHEL Approval on Revised Drawings</i>	Within 1 week from receipt of the revised Drawings

NOTES:

1. It is Vendor's responsibility to submit the Drawings in line with the contractual requirement else the drawings will be rejected. Delays on account of this will be attributed to the Vendor.

ESP-001-2A Rev.00		PROJECT ENGINEERING & SYSTEMS DIVISION (CHECKLIST FOR BID SUBMISSION)		Std. / Doc. Number	
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ESP-001-2A Rev.00	 HYDERABAD	PROJECT ENGINEERING & SYSTEMS DIVISION (CHECKLIST FOR BID SUBMISSION)	Std. / Doc. Number	
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CHECKLIST FOR BID SUBMISSION
(TO BE FILLED BY BIDDER AND SUBMITTED ALONG WITH OFFER)

Sl. No.	Description	Bidder Confirmation (Yes/No)	Comments /Remarks
1.	Bidder has read <i>each</i> Clause of the Main Technical Specification (PY55362) and RDSO specifications with Document Numbers: ETI/PSI/1(6/81) and ETI/PSI/24(6/81).		
2.	Bidder has <i>explicitly provided</i> No Deviation Schedule at Anneuxe-2		
3.	Bidder confirms that Bill of materials/List of equipment furnished in the offer is only for information. Vendor shall supply all the necessary materials to meet the performance & technical requirement as per Specification PY55362 & its annexures.		
4.	Bidder confirms that they have read the provisions of the No Deviation Schedule and have included the Schedule in the Offer after agreeing to the said provisions.		
5.	Bidder confirms that Prices for all items mentioned in the Price Format have been quoted; Unpriced and Priced Schedules included in the Techno-commercial Offer and Priced Offer respectively.		
6.	Bidder confirms that complete set of relevant test certificates have been included in the Offer.		
7.	Bidder confirms to the Sub-vendor List / Make of component as per Main Technical Specification (PY55362).		
8.	Bidder confirms that all the documents are submitted with offer as per Cl. No. 4.1 of Main Technical Specification (PY55362).		
9.	Bidder confirms that all the documents shall be submitted during detailed engineering as per Cl. No. 4.2 of Main Technical Specification (PY55362).		
10.	Mandatory spare, Commissioning spare and O&M spare list with unit rate is submitted as per enclosed BHEL price format.		

Notes: Offer received without affirmative confirmation against any of the above points may not be considered for evaluation.

(Signature and stamp of bidder with date)

ESP-001-2A Rev.00		PROJECT ENGINEERING & SYSTEMS DIVISION (SITE LOCATION AND CONDITIONS)		Std. / Doc. Number	
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SITE LOCATION AND CONDITIONS
(ANNEXURE-5 TO SPECIFICATION PY55362)

Site Conditions:

Site conditions shall be as per RDSO specifications with Document Numbers: ETI/PSI/1(6/81) and ETI/PSI/24(6/81).

Location Details of Battery & Battery Chargers

A. Location of Traction Sub Stations:

Allahabad Division (Farukhabad-Shikohabad & Mainpuri-Etawah section)-GR-241

Sl. No.	Location of TSS	Number of Battery Chargers sets for 200Ah Batteries
1	Bhogoan	2 Number
2	Safai	2 Number

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B. Locations of Sectioning Post (SP) & SSP (Sub Sectioning Post):

Jhansi Division (Birlanagar-Etawah section) GR-239

Sl.No.	Location	Type of Switching Post	Number of Battery Chargers sets for 40Ah Batteries
1	Bhadroli	SP	1 Number
2	Sanichara	SSP	1 Number
3	Rithaura Kalan	SSP	1 Number
4	Gohad Road	SSP	1 Number
5	Sondha Road	SSP	1 Number
6	Soni	SP	1 Number
7	Itehar	SSP	1 Number
8	Phuphu	SSP	1 Number
9	Oodi	SSP	1 Number

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Allahabad Division (Farukhabad-Shikohabad & Mainpuri-Etawah section) GR-241

Sl.No.	Location	Type of Switching Post	Number of Battery Chargers sets for 40Ah Batteries
1	Aron-H	SP	1 Number
2	Kosma	SSP	1 Number
3	Manpuri,	SSP	1 Number
4	Mota	SSP	1 Number
5	Baba Lakhmi Daspuri-H	SSP	1 Number
6	Ugarpur	SSP	1 Number
7	Shrimad Dwarkapuri-H	SP	1 Number
8	Keerathpur	SP	1 Number
9	Karhal	SSP	1 Number
10	Baid Pura	SSP	1 Number
11	Etawah	SP	1 Number

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