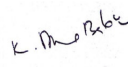


ESP-001 - 2A Rev.00		PROJECT ENGINEERING & SYSTEMS DIVISION		Std. / Doc. Number	
				PY 56523	
				Rev. No.	00
				Sheet 1 of 8	

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 SUPPLY/WORKS OF S&T Signaling Item-01 (RAILWAYS ELECTRICIFICATION)

PROJECT	ELECTRIFICATION WORKS FOR BIRLANAGAR - ETAWAH, BHANDAI -UDI,FARRUKHABAD- SHIKOHABAD INCLUDING MAINPURI - ETAWAH SECTIONS OF NORTH CENTRAL RAILWAY
----------------	---

Revisions: Refer to record of revisions	Prepared by :	Checked by :	Approved by :	Date :
	 Vineet Kumar	 Kamal Kumar T.	 K. Anand Babu	17.11.2020



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.

TABLE OF CONTENTS

Sl. No.	Description
1.0	INTENT OF SPECIFICATION
2.0	TECHNICAL REQUIREMENTS
3.0	MATERIAL CODES
4.0	DOCUMENTATION
5.0	NO DEVIATION FORMAT
6.0	GENERAL
7.0	INSPECTION & TESTING
8.0	PACKING AND DISPATCH
9.0	TECHNICAL DATASHEET
10.0	DISPATCH INSTRUCTIONS

**1.0 INTENT OF SPECIFICATION:**

This specification governs the requirements of design, manufacture, testing and packing at manufacturer's work and delivery at site and complete in all respects of this specification.

2.0 TECHNICAL REQUIREMENTS:

All the technical requirements of Items/Works and Accessories shall be as per This technical specification and applicable RDSOs (As applicable) as indicated in the table-1.

3.0 MATERIAL CODES:

Bidder to offer materials as per enquiry and Below Table:

TABLE-1
MATERIAL CODE-PY9756523000

S.No.	Description	Unit	Quantity	RDSO
1.	DC-DC CONVERTORS (24-32 V 5A)	Nos	16	IRS:S 96/2000
2.	DC-DC CONVERTORS (24-32 V 10A)	Nos	8	IRS:S 96/2000
3.	DC-DC CONVERTORS (12-28 V 5A)	Nos	8	IRS:S 96/2000
4.	Relay (QN1)	NO's	16	BRS:931A
5.	Relay (QNA1)	NO's	24	BRS:931A
6.	Relay (QNA1K)	NO's	18	BRS:931A
7.	Relay (QECX)	NO's	12	BRS:931A
8.	Relay (QSPA1)	No's	18	BRS:931A
9.	Relay (Universal Lamp)	NO's	6	BRS:931A
10.	Relay (Timer)	NO's	6	BRS:931A
11.	Relay (110V AC LED ECR)	No's	6	STS/E/Relays/ECR
12.	Relay (Key Lock Check Relay)	NO's	6	BRS:931A
13.	B-type choke	No's	35	IRS: S 65 / 1983
14.	80AH Secondary cell	No's	105	IRS: S-88/2004
15.	Supply of Adjustable Track feed Resistance disc type 30 ohm	No's	35	RDSO Drg no. SA-20166 /M
16.	MS strip	No's	60	Note-1



17.	Relays(QNA1)	No's	72	BRS:931 BRS:939A
18.	Relays(QBAT)	No's	4	Note-1
19.	Relays(QTA2)	No's	72	Note-1
20.	ARA terminals(6 way)	No's	100	IRS:S-75/2006(Rev-2)
21.	ARA terminals(1 way)	No's	100	IRS:S-75/2006(Rev-2)
22.	Junction Box	NO's	6	Note: 1
23.	Location Box - Full case	No's	6	Sketch no- RE/ST/ALD/SK2/19/182
24.	Location Box - Half case	No's	2	Sketch no- RE/ST/ALD/SK2/19/182
25.	Wooden board of 1.5 inch thickness with black paint for placing batteries in LB	No's	2	Note-1
26.	Wiring material (16 Sq.mm cable for batteries)	Mtr	500	Note-1

1. Item shall be as per RDSO /IRS Standard and Item to be sourced from RSDO/Railways approved vendors only.
2. The list of RDSO specifications are available at page number 7 of 225 to 12 of 225 in RDSO approved vendor directory (issued half yearly).
3. If there is any discrepancy in the above mentioned RDSO specification number against each item, the RDSO vendor directory mentioned standards should be followed.

**4.0 DOCUMENTATION:****4.1.1 To be submitted along with bid**

a	Technical data sheets (for information).
b	RDSO approval certificate for manufacturing.
c	Type Test Certificates (for information).
d	RDSO Approved Quality Assurance plan.
e	Bidder shall furnish NO DEVIATION SHEET as per Clause .No 5.0 .
f	Check list for Bid Submission as per Clause .No 6.0
g	Duly filled unpriced price schedule as per Annexure-1

Document at Sl. no. "a" to "d" above shall be submitted in line with Applicable & latest RDSOs as mentioned in Table-1 against each material codes.

In case RDSOs approval certificate for the company to manufacture of the enquiry items is/are **not available, the bidder's offer will be rejected. Hence, OEM should have a valid RDSO approved certificate.**

4.1.2 To be submitted in 6 sets after award of contract

Sl. No.	Description
a	Completely filled in technical data sheets as per railways practices suitable for information & inspection (<i>Separately typed vendor datasheets are NOT acceptable</i>).
b	Type Test Certificates for review
c	Storage Instruction including handling of material at Site.

6 set of all Drawings & document shall be submitted as per latest applicable RDSO within 1-week time after release of LOI/PO whichever is earlier.

BHEL shall provide comments/approval within 10 days of receipt of drawings. Vendor shall incorporate comments (if any) and submit revised documents/drawings within 7 days for final approval. Vendor is responsible for completion of approval cycle and minimizing number of revisions.

**5.0 NO DEVIATION FORMAT**

ENQUIRY NUMBER _____

NAME OF BIDDER _____

ITEM _____

OFFER REF
NUMBER _____

S/N	Clause/ Spec Number	Description	Deviation	Nature of Deviation	Remarks
1					
2					
3					
4					
5					

NOTES:

1. **Technical offer of the bidder will be evaluated only on the basis of No Deviation Schedule. No**

Deviation Schedule constitutes this sheet (with these Notes) duly signed and stamped.

2. Deviations are not accepted against RDSO standard specification, RDSO approved drawings & RDSO 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 _____

DATE _____

COMPANY SEAL

ESP-001- 2A Rev.00		PROJECT ENGINEERING & SYSTEMS DIVISION	Std. / Doc. Number	
			PY 56523	
			Rev. No.	00
			Page 7 of 8	

6.0 **GENERAL:**

6.1 CHECKLIST FOR BID SUBMISSION

(TO BE FILLED BY BIDDER AND SUBMITTED ALONG WITH OFFER)

Sl. No.	Description	Bidder Confirmation	Comments/ Remarks
1	Technical offer is conforming to technical specification PY 56523 & its associated Annexures (if any), pre-bid clarifications (if any) etc., Bidder to confirm (Yes / No).		
2	Bidder confirms that they have read the provisions of the Deviation Schedule and have included the deviation Schedule in the Offer after agreeing to the said Provisions (Yes/No).		
3	Bidder confirms that Prices for all items have been Quoted. Unpriced & Priced Schedules are included in the Techno-commercial Offer and Priced Offer respectively.(Yes/NO)		

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)

6.2 Quantities mentioned are tentative requirement. Based on the actual requirement, quantity can be increased or decreased by about 15% on overall qty. Final BOQ will be informed before price bid opening. Unit rates quoted by bidder shall be applicable for the revised BOQ also.

7.0 **INSPECTION & TESTING**

- 7.1 Testing of Items and accessories shall be as per Number: latest RDSOs as applicable.
- 7.2 Stage and final Inspection including document review shall be carried out by RDSO/CORE/ their representative and BHEL at vendor works as per RDSO approved QAP.
- 7.3 Vendor shall furnish RDSO approved Quality Assurance plan for information to the purchaser”

8.0 **PACKING & DISPATCH**

Packing and Dispatch of Items and accessories shall be as per Number: latest RDSOs (As applicable).

9.0 **TECHNICAL DATA SHEET**

Technical data sheet shall be provided considering the technical requirement of the Applicable Latest RDSO specifications (As indicated against each material codes in table-1 of this specification). The technical data sheet should suitable for review & inspections. Standard format suitable for current railway practices are accepted with detailed information.

10.0 **DISPATCH INSTRUCTIONS**

1. Items and accessories to be manufactured after data sheet approval from BHEL / Railway Authority.
2. Dispatch location and corresponding lot quantities will be intimated during drawing approval stage.
3. BHEL will reserve right to modify the location (with in section), right to change the quantities.

[illegible]