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ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	415V ACDB EXTENSION
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED
Subject to the condition that you are not absolved of the responsibility of workness of the materials supplied as per specification
Electrical Superintending Engineer (P)
Bihar State Power Transmission Limited

ABN Tower and Transmission Pvt. Ltd. KOLKATA

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph (0512)-2410004, Fax: (0512)-2410002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB EXTENSION TITLE SHEET

DRAWING NUMBER : ASPL/BSPTCL/24160L	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 1 OF 6
	DIMENSION TOLERANCE ± 10MM.				

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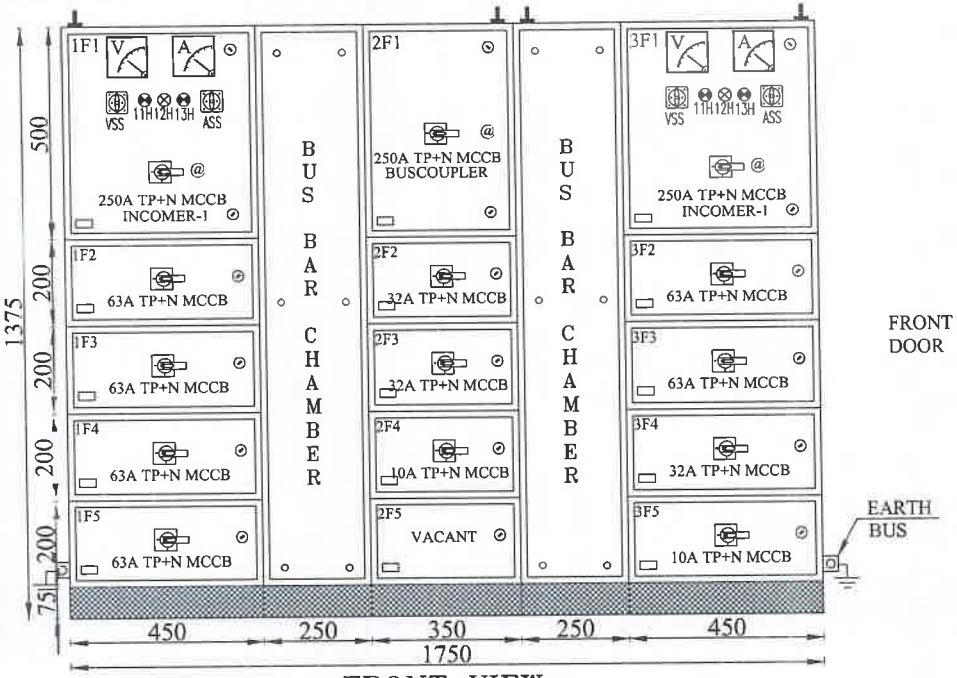
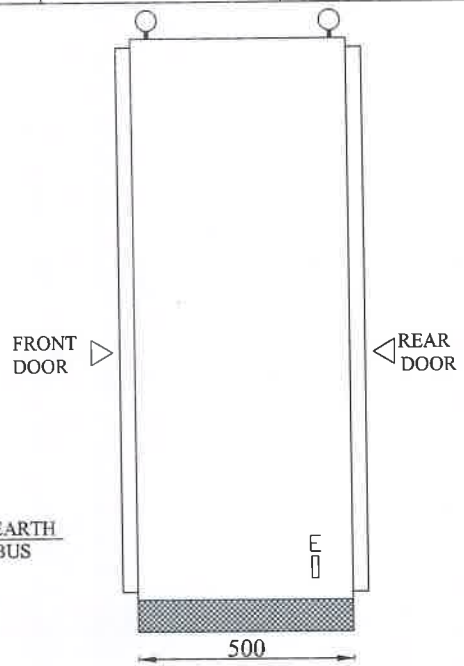
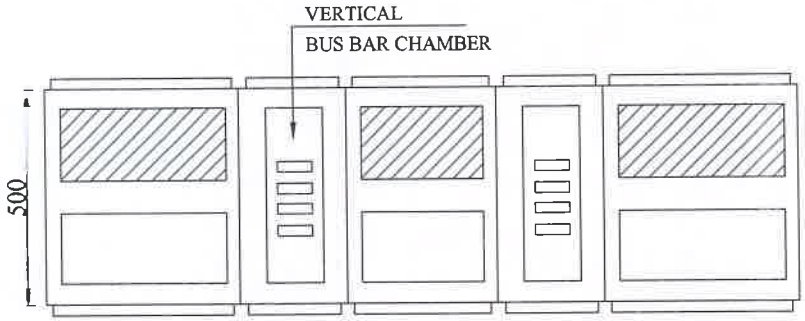


FRONT VIEW



SIDE VIEW



BOTTOM VIEW

MAIN BUS BAR SIZE:-

PHASE : 1x~~20~~25x10 Sq. mm./Eq. CU.
NEUTRAL : 1x~~20~~25x05 Sq. mm./Eq. CU.
EARTH : 1x20x05 Sq. mm./Eq. CU.

(as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

ABN Tower and Transmission Pvt Ltd * KOLKATA *

@:- MECHANICAL INTERLOCKED

CABLE ENTRY-BOTTOM

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph 0512-2410604, Fax: 0512-2410602 www.asianSwitchgear.com E-Mail: asiankan@gmail.Com		NAME	DATE	TITLE : 415V ACDB EXTENSION GENERAL ARRANGEMENT DRAWING		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160L		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 2 OF 6
		DIMENSION TOLERANCE ± 10MM.				

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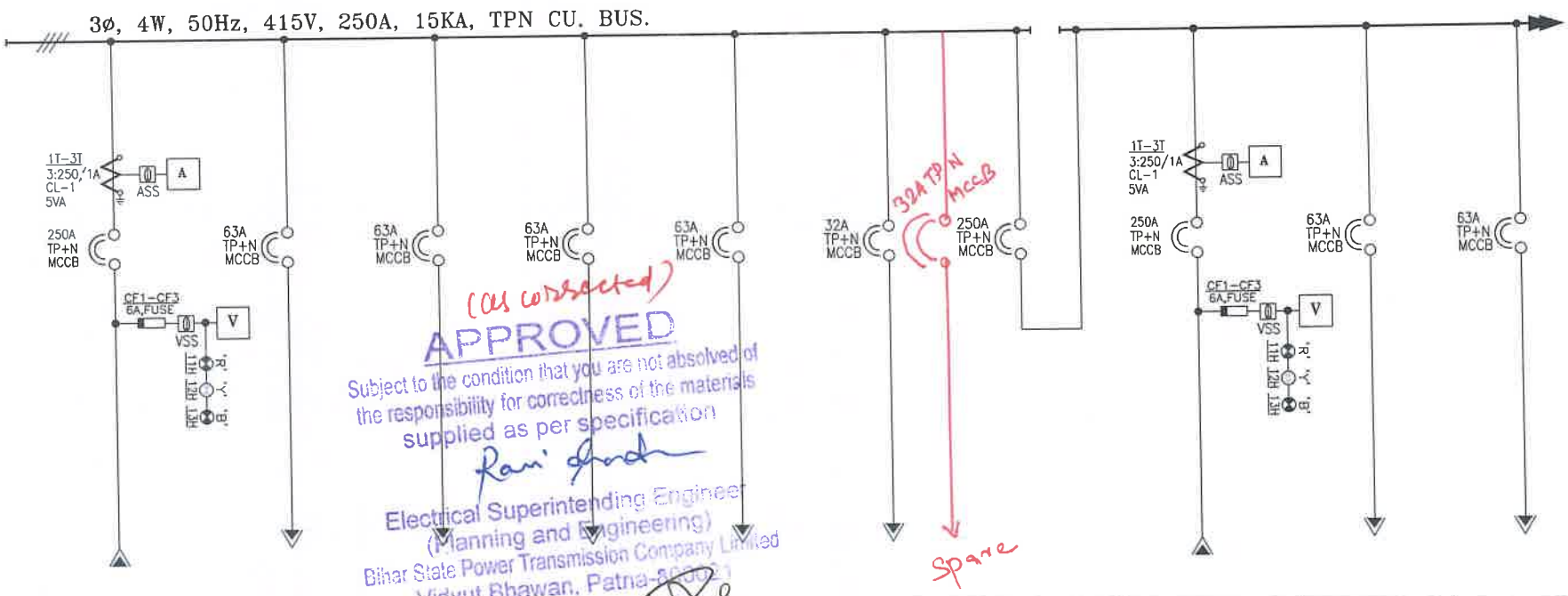

(as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Rani
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

FEEDER No.	1F1	1F2	1F3	1F4	1F5	2F2	2F1	3F1	3F3	3F3
FEEDER RATING	250A	63A	63A	63A	63A	32A	100A	250A	63A	63A
FEEDER DESCRIPTION	INCOMER-01	415V BMK FOR BAY NO.107	INDOOR LIGHTING CRB EXTENSION	415V BMK FOR FUTURE BAY	WELDING RECEPTACLE	SPARE	BUSCOUPLER	INCOMER-02	415V BMK FOR BAY NO.108	SPARE
CABLE SIZE IN mm2	1Rx3.5Cx300 AL.	1Rx4Cx16 AL.	1Rx4Cx16 AL.	1Rx4Cx16 AL.	1Rx4Cx16 AL.	--	**	1Rx3.5Cx300 AL.	1Rx4Cx16 AL.	--

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
4. RUEBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
6. EARTH STUD SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
   A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
   B. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
10. CABLE ENTRY AS PER G.A. DRAWING.
11. PAINT SHADE - SMOKE GREY (692 OF IS:5)

ABN Tower and Transmission Pvt. Ltd. KOLKATA

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt. Ltd. B-17 Rueena Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankanpur@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB EXTENSION SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160L	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 3 OF 6

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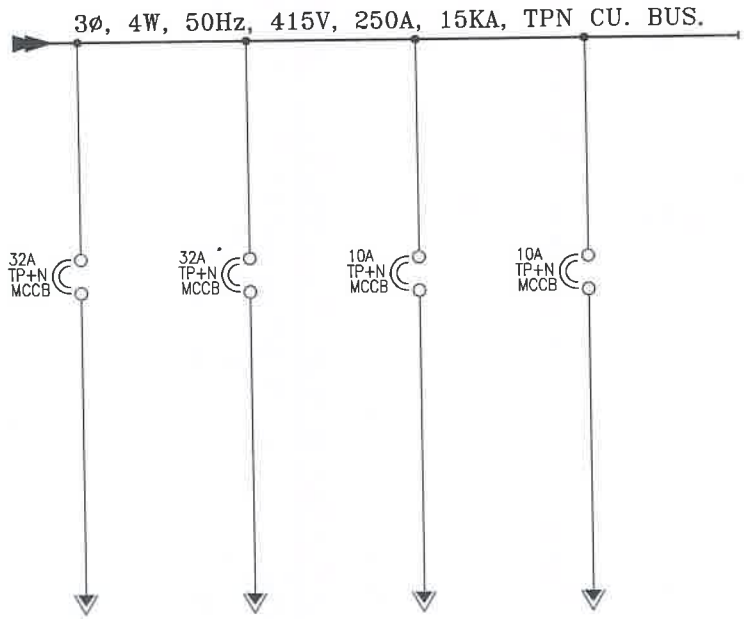

FEEDER No.	3F4	2F3	3F5	2F4
FEEDER RATING	32A	32A	10A	10A
FEEDER DESCRIPTION	OUTDOOR LIGHTING	AUX. SUPPLY 132KV CRP	AC AUX. SUPPLY 220V DCDB	SPARE
CABLE SIZE IN mm2	1Rx4Cx16 AL.	1Rx4Cx6 AL.	1Rx4Cx6 AL.	--

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Ranjan
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

ABN Tower and Transmission Pvt. Ltd. KOLKATA

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianknp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB EXTENSION SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160L	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 4 OF 6
	DIMENSION TOLERANCE ± 10MM.				

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BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
1	MCCB-250A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM & SPREADER	C&S	3
2	MCCB-63A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM	C&S	6
3	MCCB-32A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM	C&S	~~3~~ 4
4	MCCB-10A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM	C&S	2
5	ANALOG AMP METER 96Sq.mm, 90DEG. CTR-/1A , 0-250A	RISHABH/AE	2
6	ANALOG VOLT METER 96Sq.mm, 0-500V ,90DEG.	RISHABH/AE	2
7	AMMETER SELECTOR SWITCH 3POSITION WITH OFF ,6A	VAISHNO/SURDHI	2
8	VOLTMETER SELECTOR SWITCH 3POSITION WITH OFF ,6A	VAISHNO/SURDHI	2
9	CURRENT TRANSFORMER , 250/1A, CL-1,5VA RESIN CAST	AE/ASIAN	6
10	LED INDICATION LAMP, 230V AC ,DIA. 22.5mm- RED	C&S/VAISHNO/SURDHI	2
11	LED INDICATION LAMP, 230VAC ,DIA. 22.5mm- YELLOW	C&S/VAISHNO/SURDHI	2
12	LED INDICATION LAMP,230V AC ,DIA. 22.5mm- BLUE	C&S/VAISHNO/SURDHI	2
13	CONTROL FUSE BASE WITH HRC 6A	C&S	6

(CS corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Bhardwaj
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

ABN Tower and Transmission Pvt. Ltd. KOLKATA

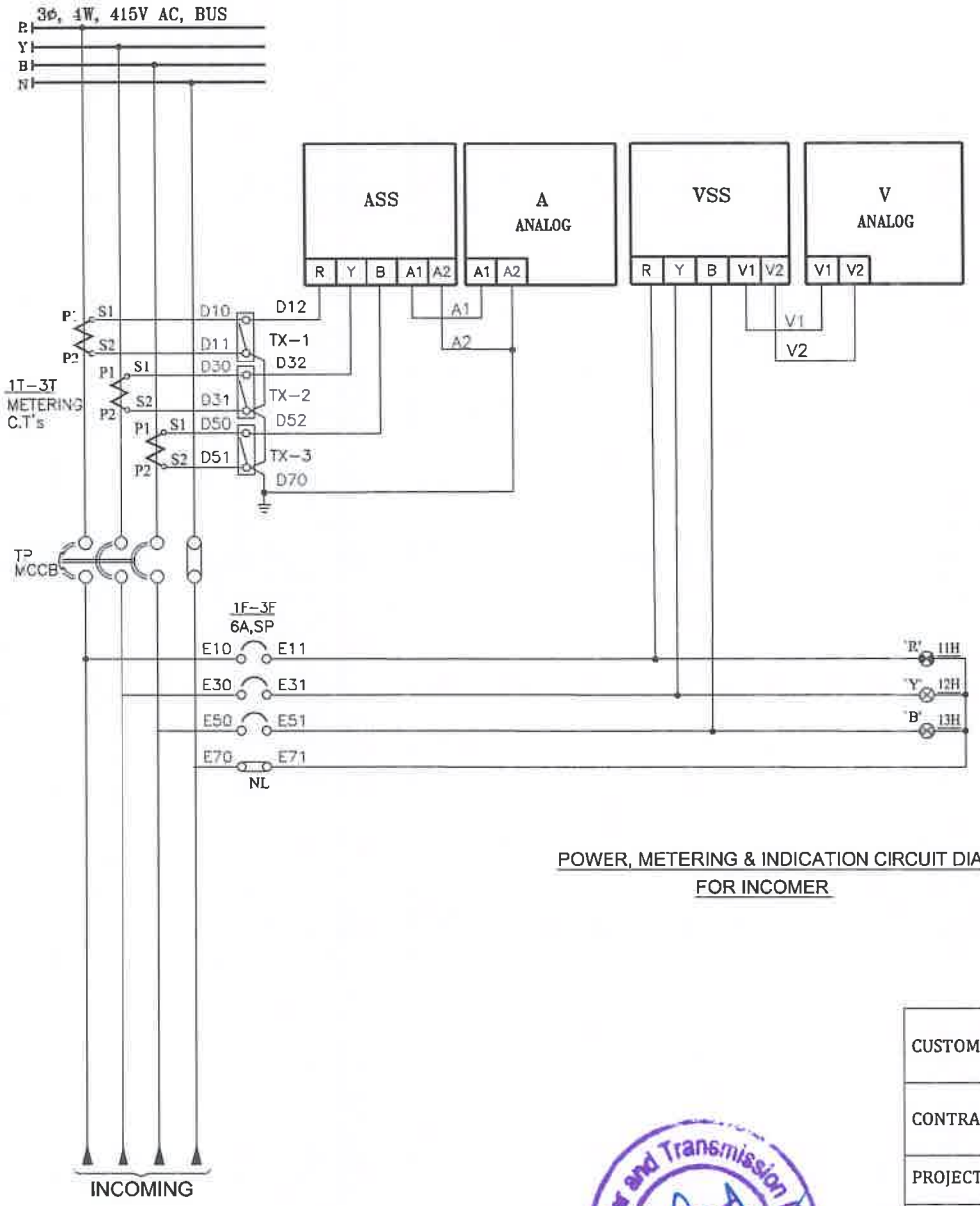
CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianknp@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB EXTENSION BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/24160L	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 5 OF 6
	DIMENSION TOLERANCE ± 10MM.				



POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR INCOMER

* Auto Changeover Scheme to be provided for ACDB incomers, Bus couplers & DG set.

* Protection & Metering scheme to be provided as per TS. i.e inclusion of UV/OV relays O/C & E/F relays etc as per TS & BoQ of NIT.

(as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Anand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

ABN Tower and Transmission Pvt. Ltd. KOLKATA

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. D-17 Kisana Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E- Mail: asianknp@gmail.Com		NAME	DATE	TITLE : 415V ACDB EXTENSION SCHEMATIC DIAGRAM		
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160L		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 6 OF 6
		DIMENSION TOLERANCE ± 10MM.				

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Asian Switchgear Pvt. Ltd.

ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	220V DCDB-EXTENSION
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

ABN Tower and Transmission Pvt. Ltd. KOLKATA

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410064, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 220V DCDB-EXTENSION TITLE SHEET

DRAWING NUMBER : ASPL/BSPTCL/24160M	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 1 OF 4
	DIMENSION TOLERANCE ± 10MM.				

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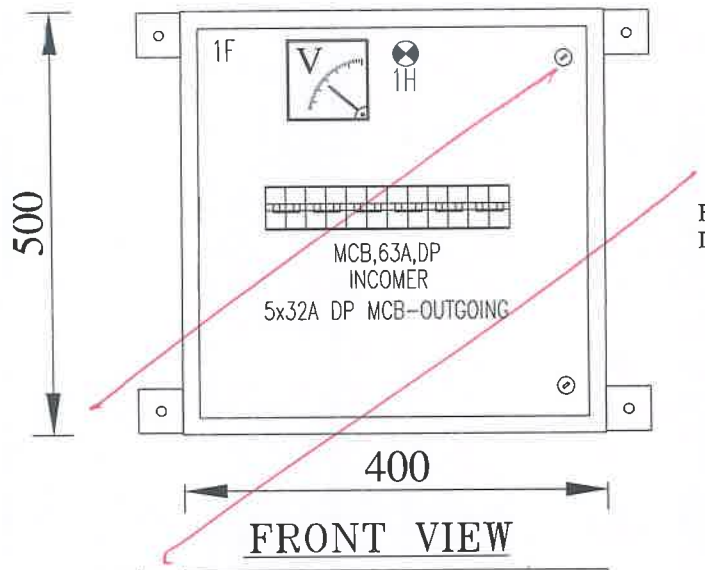
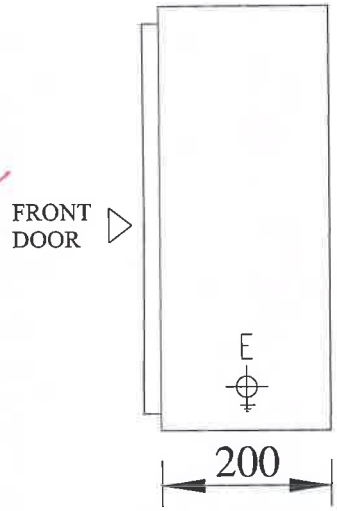
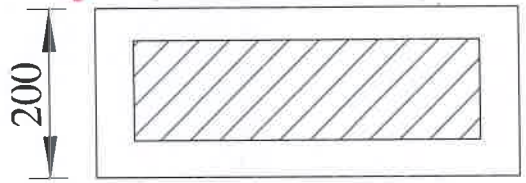


FRONT VIEW



SIDE VIEW



BOTTOM VIEW

Shall be revised as per comments.

(All corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

ABN Tower and Transmission Pvt. Ltd. KOLKATA

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
4. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH **ELECTROSTATIC POWDER COATING PAINT** AFTER NINE TANK PROCESS.
6. **EARTH STUD** SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED **COPPER FLEXIBLE WIRE** AND FOLLOWING COLOUR STANDARD.
   - A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
   - B. DC CONTROL CKT. - 1.5 SQ MM GRAY
   - C. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL **DOOR LOCK** SHALL BE PROVIDED ON EACH DOOR.
10. CABLE ENTRY AS PER G.A. DRAWING.
11. PAINT SHADE - SMOKE GREY (692 OF IS:5)

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410064, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianknp@gmail.Com		NAME	DATE	TITLE : 220V DCDB-EXTENSION GENERAL ARRANGEMENT DRAWING		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160M		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 2 OF 4
		DIMENSION TOLERANCE ± 10MM.				

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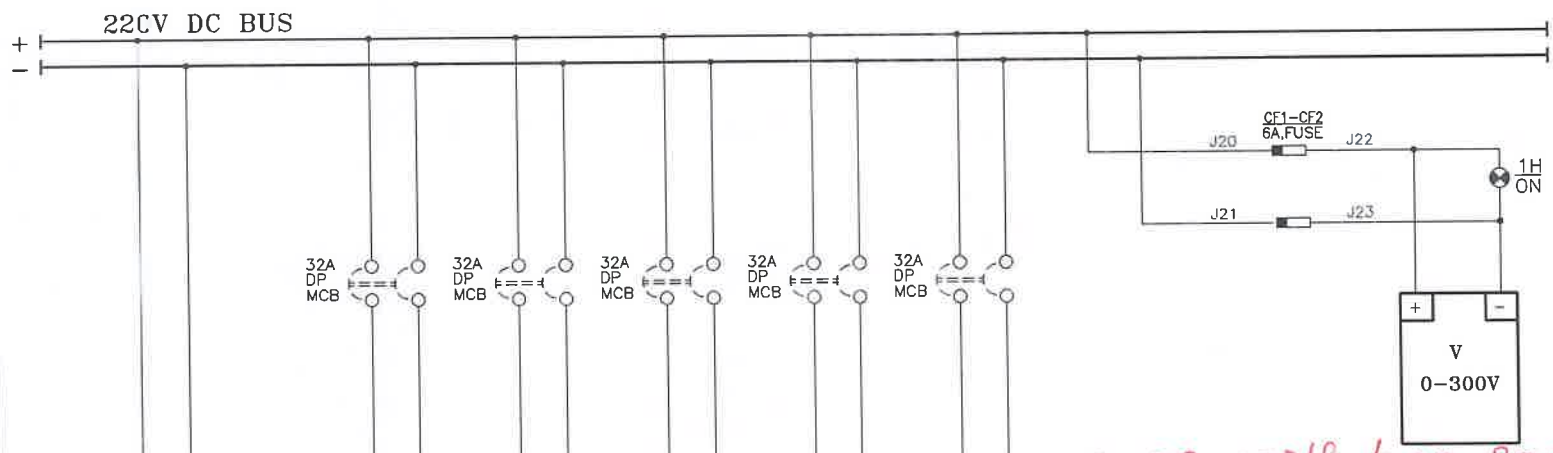

FEEDER No.	1F	1F	1F	1F	1F	1F
FEEDER RATING	63A	32A	32A	32A	32A	32A
FEEDER DESCRIPTION	INCOMER	132KV C&R PANEL SUPPLY–1	132KV C&R PANEL SUPPLY–2	TO FUTURE FO PANEL	SPARE	SPARE
CABLE SIZE IN mm2	**	**	**	**	**	**

(1) DCDB with two sections of buses with double incomer battery, charger, battery curative feeder and duplication of outgoing feeders in both sections to be provided with Air Break Switches

(2) Protection & Metering schemes to be provided as per TS & BoQ

(3) MCCB's, Air Break switch, MCBs to be provided as per comments

(4) Separate wiring & dedicated MCBs to be provided for each C&R panels & communication panels, DC ELPs etc with 50% spare feeders from each of both sections of DCDB

(as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Jaiswal
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

ABN Tower and Transmission Pvt. Ltd. KOLKATA

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt. Ltd. B-17 Ravina Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E- Mail: asiankanpur@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 220V DCDB-EXTENSION TWO LINE DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160M	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 3 OF 4
	DIMENSION TOLERANCE ± 10MM.				

This Drawing & any Information or descriptive matter set out hereon are the confidential property of ASIAN SWITCHGEAR Pvt. Ltd. & most not be disclosed, loaned, copied or used for manufacturing tendering or for any other purpose without their written permission

BILL OF MATERIAL

Sr. NO.	DESCRIPTION	MAKE	QTY.
01	MCB, 63A, DP ,DC	C&S	1
02	MCB, 32A, DP ,DC	C&S	5
03	ANALOG DC VOLTMETER 0-300V ,96SQ.MM	AE/RISHABH	1
04	INDICATION LAMP-RED 220V DC	C&S/VAISHNO/SURDHI	1
05	FUSE FITTING WITH HRC (20/6A)	C&S	2
06	POWER TERMINAL ,16SQ.MM.	CONNECTWELL	2
07	POWER TERMINAL ,10SQ.MM.	CONNECTWELL	10

Shall be modified as per comments.

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Ravi Kant
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

ABN Tower and Transmission Pvt. Ltd. KOLKATA

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Reema Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E- Mail: asianskp@gmail.Com		NAME	DATE	TITLE : 220V DCDB-EXTENSION BILL OF MATERIAL		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
Asian Switchgear Pvt. Ltd.	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160M		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm. NIT NO. :10/PR/BSPTCL/2023				SHEET NO. 4 OF 4
		DIMENSION TOLERANCE ± 10MM.				

Ref No. ABN/24-25/10/BSPTCL/RL-977 **Date: 05.11.2024**

To
The Chief Engineer (P&E),
Bihar State Power Transmission Company Limited,
4th Floor, Vidyut Bhawan,
Jawahar Lal Nehru Marg,
Patna (Bihar) PIN 800001.

Sub: Submission of revised drawing & GTP of LT Switchgear of M/s Asian Switchgear Pvt. Ltd. for approval.

Name of Work: Design, manufacture, testing at manufacture's works and delivery of equipments required for Construction of 2x50MVA, 132/33KV GSS Bhorey (Dist. Gopalganj) including residential quarter with Construction of its associated 02nos. 132KV Line bays at GSS Hathua & Construction of its associated 132KV D/C Bhorey-Hathua Tr. Line with ACSR Panther Conductor (Line length-60RKM) on turnkey basis.

Ref: N.I.T NO. 10/PR/BSPTCL/2023
NOA No. 12 & 13 Trans/Misc./P-I/21/2023 Dated 01.09.2023

Dear Sir,

This is in reference to the above subject. We are submitting the revised drawing & GTP of LT Switchgear of M/s Asian Switchgear Pvt. Ltd. for your kind approval.

The details are tabulated below:

Sl. No.	Description of Drawing	Drawing No.
1	STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK	-
2	STANDARD GUARANTEED TECHNICAL PERTICULARS FOR STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 220V DCDB & 48V DCDB	-
3	415V Main Switch Board	ASPL/BSPTCL/24160A
4	415V ACDB	ASPL/BSPTCL/24160B
5	415V MLDB	ASPL/BSPTCL/24160C
6	415V ELDB	ASPL/BSPTCL/24160D
7	220V DCDB	ASPL/BSPTCL/24160E
8	48V DCDB	ASPL/BSPTCL/24160F
9	LIGHTING PANEL (INDOOR) TYPE ACP-1	ASPL/BSPTCL/24160G
10	LIGHTING PANEL (OUTDOOR) TYPE ACP-2	ASPL/BSPTCL/24160H
11	LIGHTING PANEL (OUTDOOR) TYPE ACP-3	ASPL/BSPTCL/24160I
12	LIGHTING PANEL (INDOOR) TYPE DCP	ASPL/BSPTCL/24160J
13	132 KV BMK & 33 KV BMK	ASPL/BSPTCL/24160K
14	415V ACDB EXTENSION	ASPL/BSPTCL/24160L
15	220V DCDB-EXTENSION	ASPL/BSPTCL/24160M

Kindly give your approval for the same at the earliest. Your early action in this regard will be solicited.

Assuring you with the best of our service and attention at all times.

Thanks & Regards,
For **ABN Tower & Transmission Pvt. Ltd.**

Authorized Signatory

ABN Tower and Transmission Private Limited
CIN No.: U51109WB2005PTC104244

Godrej Genesis Building, Unit No. 609, Plot No. XI, Block EP & GP, Sector-V, Saltlake Kolkata - 700091
Phone No. : +91 33 4800 1325 I E-mail: info@abntower.com / Website: www.abntower.com

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Asian Switchgear Pvt. Ltd.
(Merged identity of Asian Switchgears)

STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

7. **Rated short-circuits Breaking capacity (Ics)** : 20KA (RMS)
8. **Rated short-circuits Making capacity** : 42KA (RMS)
9. **Short time withstands current for 1 sec. duration** : 20KA (RMS) For 1Sec.
10. **No. of Auxiliary contacts** : 4NO+4NC
11. **Operating Position** : Service-Test-Isolation
12. **Rated Voltage and pickup burden of**
    a. Trip coil : 220V DC/200W
    b. Closing coil : 220V DC/200W
13. **Voltage & Power consumption of Spring charging motor** : 200 W, 220V DC
14. **Indication of service / Test /Isolated Position** : Yes
15. **ACB Have trip free and Anti-pumping features** : Provided

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

MOULDED CASE CIRCUIT BREAKER (MCCB Motorized Type)

1. **Make** : C&S
2. **Type** : Thermal Release, Manual/Electrical Operated Type
3. **Nos. of Pole** : 4
4. **Operating Voltage and frequency** : 415V , 50Hz
5. **Rated operating duty** : As Per IS
6. **Rated current** : 250A/100A

ASIAN SWITCHGEAR PVT.LTD.
B-17 Rooma Industrial Estate Kanpur (U.P.)
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Asian Switchgear Pvt. Ltd.
(Merged identity of Asian Switchgear(s))

STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

7. **Rated short-circuits Breaking capacity (Ics)** : 20KA (RMS)
8. **Rated short-circuits Making capacity** : 42KA (RMS)
9. **No. of Auxiliary contacts** : 1NO+1NC
8. **Rated Voltage and pickup burden of**
   a. Trip coil : 220V DC/50VA
   b. Closing coil : 220V DC/50VA
9. **Voltage & Power consumption of Spring charging motor** : 200 W , 220V DC

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

MOULDED CASE CIRCUIT BREAKER (MCCB)

1. **Make** : C&S
2. **Type** : Thermal Release, Manual Operated Type
3. **Nos. of Pole** : 4/3
4. **Operating Voltage and frequency** : 415V , 50Hz
5. **Rated operating duty** : As Per IS
6. **Rated current** : As Per Drawing
7. **Rated short-circuits Breaking capacity (Ics)** : 20KA (RMS)
8. **Rated short-circuits Making capacity** : 42KA (RMS)

ASIAN SWITCHGEAR PVT.LTD.
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Asian Switchgear Pvt. Ltd.
(Merged identity of Asian Switchgears)

STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

POWER CONTACTOR

1. **Make** : C&S
2. **Type** : AC-1/3
3. **Nos. of Pole** : 3
4. **Operating Voltage** : 415V AC , Coil Voltage-230V AC
5. **Rated current** : As Per Drawing

MINIATURE CIRCUIT BREAKER (MCB)

1. **Make** : C&S
2. **Type** : C-CURVE , Manual Operated Type
3. **Nos. of Pole** : 3/2/1
4. **Operating Voltage** : 415V/230V AC , 10kA
5. **Rated current** : As Per Drawing

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-80000

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STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK

Drawing/GTP :-		
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NIT No.		10/PR/BSPTCL/2023

POWER BUSBAR AND INSULATORS

1. **Material of Bus Bar** : Copper
2. **Bare/Painted epoxy Insulated / sleeved** : Heat Shrink Sleeved
3. **Size** : As per Drawing
4. **Current Rating** : As Per Requirement
5. **Temp Rise above Ambient temp. (50 °C)** : 55 °C
6. **Bus Bar Clearance in Air**
   (a) **Between phases** : 20mm (Minimum)
   (b) **Between phases and earth** : 20mm (Minimum)

   (Note:-Clearance between Terminals at Components shall be as per Applicable Individual Standard for Components Manufacturer)
7. **Bus bar Support & Insulator** : SMC/DMC
8. **Voltage** : 415V AC
9. **1Minut H.V. Withstand Test** : 2.5KV AC

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Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800002

CURRENT TRANSFORMER(CT)

1. **Make** : AE/ASIAN
2. **Type** : Cast Resin, Bar primary (BPL)
3. **Rating** : As Per Requirement
4. **Accuracy Class/Voltage** : Cl-1/5P15/PS/415V AC

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STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK

Drawing/GTP :-		
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NIT No.		10/PR/BSPTCL/2023

5. **Class of Insulation** : E or Better
6. **CT Secondary Current Rating** : 1A

VOLTAGE TRANSFORMER(PT)

1. **Make** : V-CON/ASIAN
2. **Type** : Dry Type
3. **Rating** : 415/√3 V/110/√3 V
4. **Accuracy Class/Voltage** : Cl-0.5 ,50VA
5. **Method of connection Primary/Secondary** : Star/Star

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Vidyut Bhawan, Patna-800021

METERING

1. **Make** : RISHABH/AE
2. **Ammeter/Voltmeter Type** : Analog 96Sq.mm.
3. **Energy Meter Type(MFM)** : Digital 96Sq.mm.
4. **Rating** : 1A /415V AC
5. **Accuracy Class** : Cl-1/1.5

INDICATION

1. **Make** : C&S/VAISHNO/SURDHI
2. **Type** : Led Type
3. **Size** : 22.5 Sq.mm.
4. **Rating** : 64V AC/230V AC/220V DC

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STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK

Drawing/GTP :-		
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PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

5. **Colour** : As Per Drawing

RELAYS

1. **Make** : C&S/JVS
2. **Application** : Over current ,Earth fault , Under & Over Voltage
3. **Coil Burden** : 7.5 to 30VA
4. **Setting Range** : As per requirement

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

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Asian Switchgear Pvt. Ltd.
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STANDARD GUARANTEED TECHNICAL PERTICULARS FOR
STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 220V DCDB & 48V DCDB

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
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NIT No.		10/PR/BSPTCL/2023

GENERAL

1. **Manufacturer's Name** : **Asian Switchgear Pvt. Ltd. Kanpur**
2. **Rated Voltage** : 220V/48V DC
3. **Enclosure sheet metal details** : 2.0/1.6 mm. (14/16SWG CRCA)
4. **Painting shade**
   (a) **External surfaces** : SMOKE GREY (692 OF IS:5)
5. **Internal surfaces** : SMOKE GREY (692 OF IS:5)
6. **Ambient Temperature** : 50 °C
7. **Material of the support insulators** : SMC/DMC
8. **Panel Construction Type** : Indoor Type , Fixed Type

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

MOULDED CASE CIRCUIT BREAKER (MCCB)

1. **Make** : C&S
2. **Type** : Thermal Release, Manual Operated Type
3. **Nos. of Pole** : 2
4. **Operating Voltage** : 220V/48V DC
5. **Rated operating duty** : As Per IS
6. **Rated current** : As Per Drawing (100A)
7. **Rated short-circuits Breaking capacity (Ics)** : 4KA

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Asian Switchgear Pvt. Ltd.
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STANDARD GUARANTEED TECHNICAL PERTICULARS FOR
STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 220V DCDB & 48V DCDB

Drawing/GTP :-		
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CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
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NIT No.		10/PR/BSPTCL/2023

8.

Rated short-circuits Making capacity : 8.4KA

MINIATURE CIRCUIT BREAKER (MCB)

1. **Make** : C&S
2. **Type** : DC, Manual Operated Type
3. **Nos. of Pole** : 2
4. **Operating Voltage** : 220V/48V DC , 4kA
5. **Rated current** : As Per Drawing(32A, 16A, DP 4kA)

ISOLATING SWITCHES

1. **Make** : C&S
2. **Type** : Manual Operated Type
3. **Nos. of Pole** : 2
4. **Operating Voltage** : 220V/48V DC
5. **Rated operating duty** : As Per IS
6. **Rated current** : As Per Drawing (100A)

APPROVED
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Electrical Superintending Engineer
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STANDARD GUARANTEED TECHNICAL PERTICULARS FOR
STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 220V DCDB & 48V DCDB

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
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NIT No.		10/PR/BSPTCL/2023

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

POWER BUSBAR AND INSULATORS

1. **Material of Bus Bar** : Copper
2. **Bare/Painted epoxy Insulated / sleeved** : Heat Shrink Sleeved
3. **Size** : As per Drawing
4. **Current Rating** : As Per Requirement
5. **Temp Rise above Ambient temp. (50 °C)** : 55 °C
6. **Bus Bar Clearance in Air**
   (a) **Between +Ve & -Ve** : 20mm (Minimum)
   (b) **Between +Ve , -Ve and earth** : 20mm (Minimum)

(Note:-Clearance between Terminals at Components shall be as per Applicable Individual Standard for Components Manufacturer)

7. **Bus bar Support & Insulator** : SMC/DMC
8. **Voltage** : 220V/48V DC

METERING

1. **Make** : AE/RISHABH
2. **Ammeter/Voltmeter Type** : Analog 96Sq.mm.
3. **Rating** : 75mV , 220V/48V DC
4. **Accuracy Class/Voltage** : 1.5

ASIAN SWITCHGEAR PVT.LTD.
B-17 Rooma Industrial Estate Kanpur (U.P.)
E-Mail: info@asianswitchgear.com
E-Mail: asianknp@gmail.com
www.asianswitchgear.com

Asian Switchgear Pvt. Ltd.
(Merged identity of Asian Switchgears)

STANDARD GUARANTEED TECHNICAL PERTICULARS FOR
STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 220V DCDB & 48V DCDB

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

RELAYS

1. **Make** : C&S/JVS
2. **Application** : Under/over Voltage ,Battery Earth Fault
3. **Coil Burden** : 7.5 to 30VA
4. **Setting Range** : As per requirement

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

ASIAN SWITCHGEAR PVT.LTD.
B-17 Rooma Industrial Estate Kanpur (U.P.)
E-Mail: info@asianswitchgear.com
E-Mail: asianknp@gmail.com
www.asianswitchgear.com

Asian Switchgear Pvt. Ltd.
(Merged identity of Asian Switchgears)

STANDARD GUARANTEED TECHNICAL PERTICULARS FOR 415V MSB, 415V ACDB , MLDB , ELDB ,LIGHTING PANELS, & BMK

Drawing/GTP :-		
CLIENT		BIHAR STATE POWER TRANSMISSION CO. LTD.(BSPTCL)
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		DESIGN, MANUFACTURE, TESTING AT MANUFACTURE'S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
NIT No.		10/PR/BSPTCL/2023

GENERAL

1. **Manufacturer's Name** : **Asian Switchgear Pvt. Ltd. Kanpur**
2. **Rated Voltage & Frequency** : 415V± 10% AC & 50 Hz ± 5%
3. **Enclosure sheet metal details** : 2.0/1.6 mm. (14/16SWG CRCA)
4. **Painting shade**
   (a) **External surfaces** : SMOKE GREY (692 OF IS:5)
   (b) **Internal surfaces** : SMOKE GREY (692 OF IS:5)
5. **Ambient Temperature** : 50 °C
6. **Material of the support insulators** : SMC/DMC
7. **Panel Construction Type** : Indoor Type/ Outdoor Type , Fixed Type

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

AIR CIRCUIT BREAKER (ACB)

1. **Make** : C&S
2. **Type** : Air Break ,Thermal Release, Manual/Electrical Operated Type
3. **Nos. of Pole** : 3 (As Per Drawing)
4. **Operating Voltage and frequency** : 415V , 50Hz
5. **Rated operating duty** : As Per IS
6. **Rated current** : 630A

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ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	415V MAIN SWITCH BOARD
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2419004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com		NAME	DATE	TITLE : 415V MAIN SWITCH BOARD TITLE SHEET		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
	REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 1 OF 14	
	DIMENSION TOLERANCE ± 10MM.					

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GENERAL NOTES FOR LT SWITCH BOARD :-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
3. THE PANEL SHALL BE SUITABLE FOR 3Ø, 4W, 415V±10% AC, 50±5% HZ SUPPLY.
4. THE PANEL SHALL BE FABRICATED WITH
   - (i) BASE CHANNEL - ISMC-75
   - (II) STRUCTURE & MOUNTING PLATE - 2.0 mm. CRCA
   - (III) DOOR,COVER & PARTITION - 1.6 mm. CRCA
   - (IV) GLAND PLATE - 3.0 mm. CRCA
5. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
6. THE PANEL SHALL BE PAINTED WITH **ELECTROSTATIC POWDER COATING PAINT** AFTER NINE TANK PROCESS.
7. BUS BAR SHALL BE OF **ELECTROLYTIC GRADE COPPER** SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSON RESISTANCE, SMC/DMC INSULATORS.
8. BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
9. **EARTH BUS** SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
10. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED **COPPER FLEXIBLE WIRE** AND FOLLOWING COLOUR STANDARD.
    - A. AC VOLTAGE CIRCUIT - 1.5 SQ MM RED, YELLOW, BLUE, BLACK
    - B. CURRENT CIRCUIT - 2.5 SQ MM RED, YELLOW, BLUE, BLACK
    - C. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
    - D. DC CONTROL CKT. - 1.5 SQ MM GREY
    - E. GROUNDING - 2.5 SQ MM GREEN
11. THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:
    - A. BETWEEN PHASE TO PHASE - 25 MM
    - B. BETWEEN PHASE TO NEUTRAL - 25 MM
    - C. BETWEEN PHASE TO EARTH - 25 MM
    - D. BETWEEN NEUTRAL TO EARTH - 25 MM

    NOTE:-CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.
12. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
13. PANEL **DOOR LOCK** SHALL BE PROVIDED ON EACH DOOR.
14. **CABLE ENTRY** AS PER G.A. DRAWING.
15. PAINT SHADE - **SMOKE GREY (692 OF IS:5)**
16. AUX. SUPPLY 220V DC NOT IN ASPL SCOPE

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankanpur@gmail.com		NAME	DATE	TITLE : 415V MAIN SWITCH BOARD GENERAL NOTES		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
Asian Switchgear Pvt. Ltd.	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
	REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 2 OF 14	
	DIMENSION TOLERANCE ± 10MM.					

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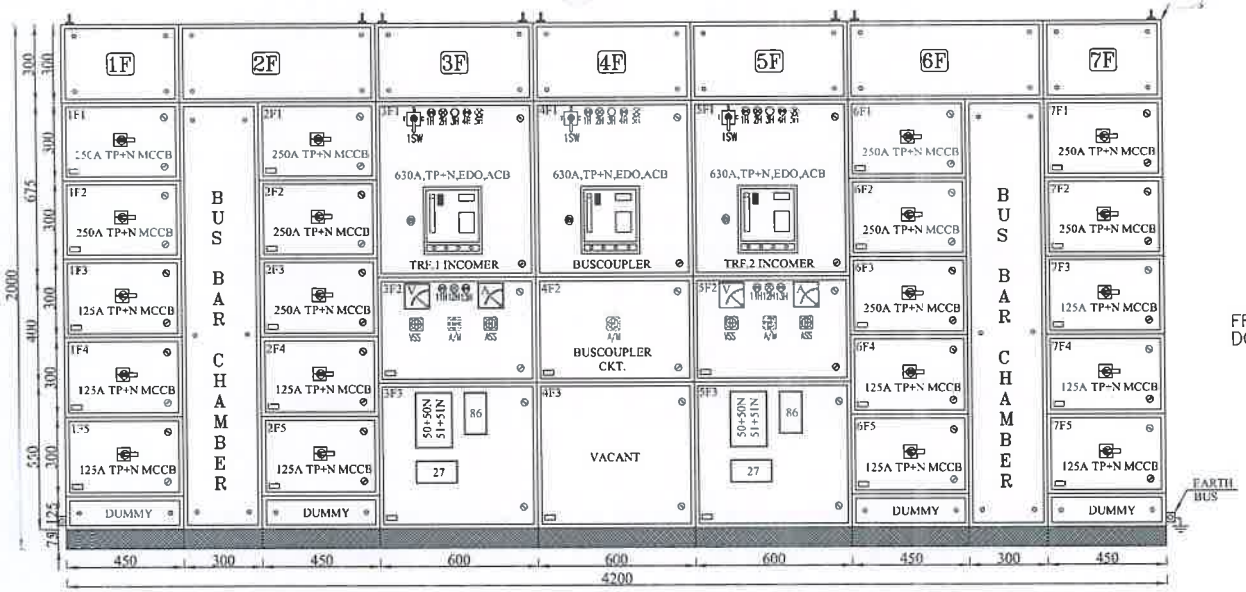
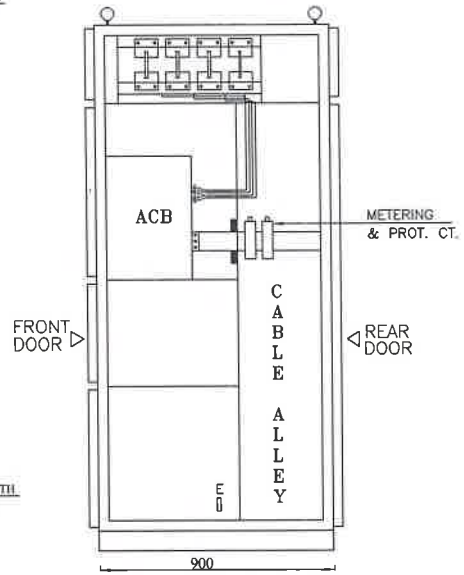
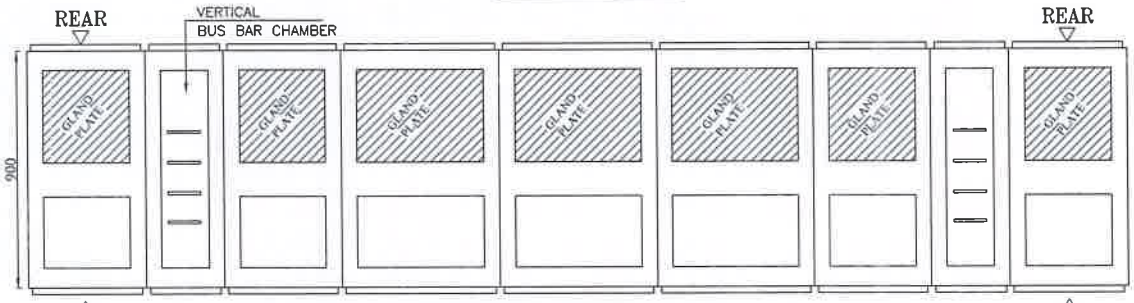


FRONT VIEW



SIDE SECTIONAL VIEW FOR INCOMER



BOTTOM VIEW

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

MAIN BUS BAR SIZE:-

PHASE : 1x63x10 Sq. mm./Eq. CU.
NEUTRAL : 1x63x05 Sq. mm./Eq. CU.
EARTH : 1x30x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

@ :-ELECTRICALLY & MECHANICAL INTERLOCKED

CUSTOMER :	BIHAR STATE POWER TRANSMISSION COMPANY				
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asiankrp@gmail.Com		NAME	DATE	TITLE : 415V MAIN SWITCH BOARD GENERAL ARRANGEMENT DRAWING	
	DRAWN	GANESH	08.08.2024		
	CHECKED	GANESH	08.08.2024		
Asian Switchgear Pvt. Ltd.	APPROVED				
DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 3 OF 14
	DIMENSION TOLERANCE ± 10MM.				

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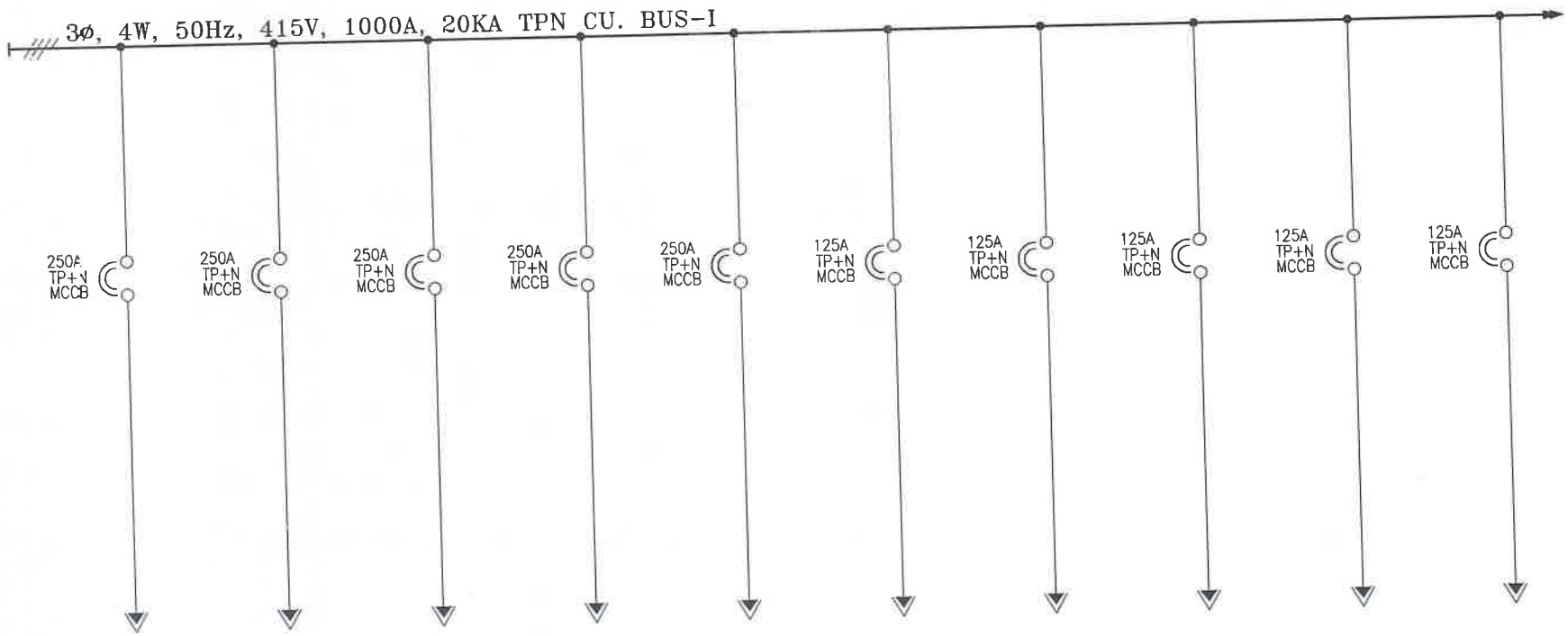


FEEDER No.	1F1	1F2	2F1	2F2	2F3	1F3	1F4	1F5	2F4	2F5
FEEDER RATING	250A	250A	250A	250A	250A	125A	125A	125A	125A	125A
FEEDER DESCRIPTION	50MVA TRAFO-1 OIL FILTRATION SUPPLY-1	50MVA TRAFO-2 OIL FILTRATION SUPPLY-1	COLONY AREA AUX. SUPPLY-1	415V ACDB SUPPLY-1	SPARE	MLDB TRF.1	CONTROL ROOM AIR CONDITION SUPPLY-1 BOARD	OUTDOOR RECEPTACLE SUPPLY-1	INDOOR RECEPTACLE SUPPLY-1	SPARE
CABLE SIZE IN mm2	1x3.5Cx300 AL.	1x3.5Cx300 AL.	1x3.5Cx300 AL.	2x3.5Cx300 AL.	--	1x3.5Cx300 AL.	1x3.5Cx300 AL.	1x3.5Cx95 AL.	2x3.5Cx35 AL.	--

* Separate Air Condition Supply board to be provided to distribute power to individual AC's with separate MCBs (as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER:
Asian Switchgear Pvt. Ltd.
B-17 Roorna Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianSwitchgear.com
E-Mail: asiankanpur@rediffmail.com
Asian Switchgear Pvt. Ltd.

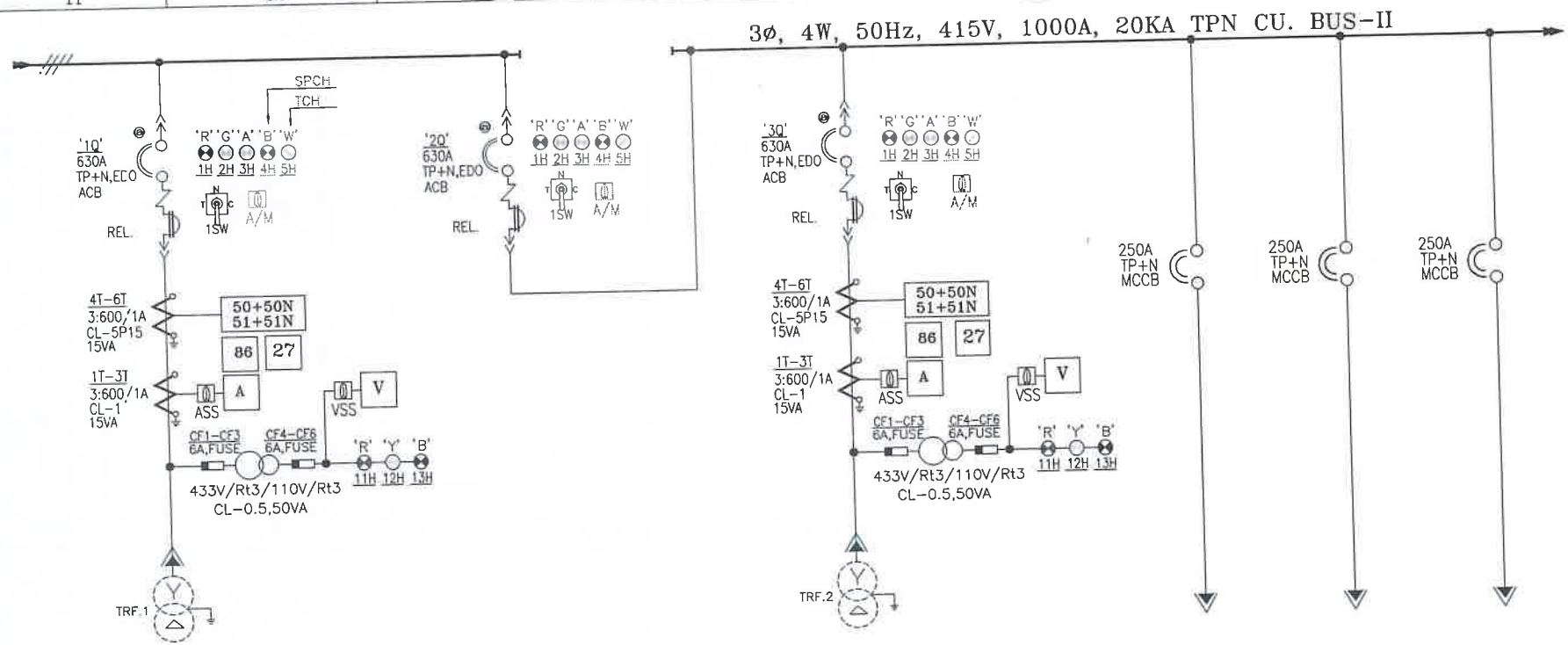
	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE:
415V MAIN SWITCH BOARD
SINGLE LINE DRAWING

DRAWING NUMBER: ASPL/BSPTCL/24160A	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 4 OF 14



FEEDER No.	3F1,3F2&3F3	4F1 ,4F2 ,& 4F3	5F1,5F2&5F3	6F1	6F2	6F3
FEEDER RATING	630A	630A	630A	250A	250A	250A
FEEDER DESCRIPTION	TRF.1 INCOMER (315kVA)	BUSCOUPLER	TRF.2 INCOMER (315kVA)	50MVA TRAFO-1 OIL FILTRATION SUPPLY-1	50MVA TRAFO-2 OIL FILTRATION SUPPLY-1	COLONY AREA AUX. SUPPLY-1
CABLE SIZE IN mm2	2Rx1CX630/PHASE 1Rx1CX630-NEUTRAL	--	2Rx1CX630/PHASE 1Rx1CX630-NEUTRAL	1x3.5Cx300 AL.	1x3.5Cx300 AL.	1x3.5Cx300 AL.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-8000...

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankan@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V MAIN SWITCH BOARD SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.	NIT NO. :10/PR/BSPTCL/2023		
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.
SHEET NO. 5 OF 14

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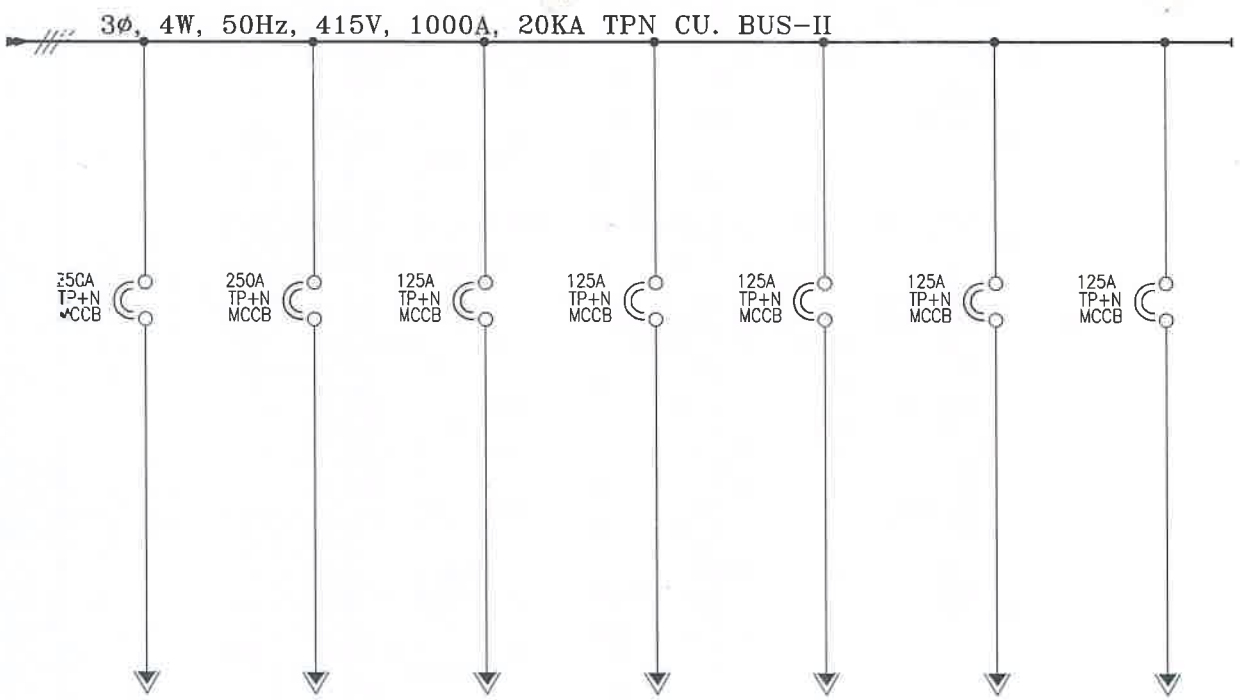

FEEDER No.	7F1	7F2	6F4	6F5	7F3	7F4	7F5
FEEDER RATING	250A	250A	125A	125A	125A	125A	125A
FEEDER DESCRIPTION	415V ACDB SUPPLY-2	SPARE	MLDB TRF.2	CONTROL ROOM AIR CONDITION SUPPLY-1 BOARD	OUTDOOR RECEPTACLE SUPPLY-1	INDOOR RECEPTACLE SUPPLY-1	SPARE
CABLE SIZE IN mm2	2x3.5Cx300 AL.	--	1x3.5Cx300 AL.	1x3.5Cx300 AL.	1x3.5Cx95 AL.	2x3.5Cx35 AL.	--

Same comment as in Sheet 04 of 14 (1F4)

(As corrected)
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianskanp@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V MAIN SWITCH BOARD SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.	NIT NO. :10/PR/BSPTCL/2023		
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 6 OF 14

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BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
1	ACB , 3P, 630A, EDO 20KA WITH THERMAL MAGNETIC RELEASE ,WITH FOLLOWING ACCESSORIES (i) MOTOR- 220V DC (ii) CLOSING COIL- 220V DC (iii) SHUNT TRIP COIL- 220V DC (iv) AUX(4NO–4NC) + TRIP CONTACT BLOCK (v) MECHANICAL LOCK	C&S	3
2	MCCB-250A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM, SPREADER	C&S	10
3	MCCB-125A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM, SPREADER	C&S	10
4	OVER CURRENT & EARTH FAULT RELAY(51+51N+50+50N) , CTR-/1A, FLUSH MOUNTED AUX. SUPPLY-220V DC	C&S/JVS	2
5	MASTER TRIP(HIGH SPEED TRIP) RELAY 220V DC FLUSH MOUNTING	C&S/JVS	2
6	UNDER VOLTAGE RELAY(27) WITH TIME DELAY , FLUSH MOUNTED, AUX. 220V DC	C&S/JVS	2
7	ANALOG AMP METER 96Sq.mm, 90DEG. CTR-/1A , 0-600A	RISHABH/AE	2
8	ANALOG VOLT METER 96Sq.mm, 0-500V ,90DEG .415VRt3/110V Rt3	RISHABH/AE	2
9	VOLTMETER SELECTOR SWITCH 3POSITION WITH OFF ,6A	VAISHNO/SURDHI	2
10	AMMETER SELECTOR SWITCH 3POSITION WITH OFF ,6A	VAISHNO/SURDHI	2
11	CURRENT TRANSFORMER , 600/1A, CL-1,15VA RESIN CAST	AE/ASIAN	6
12	CURRENT TRANSFORMER , 600/1A, CL-5P15,15VA RESIN CAST	AE/ASIAN	6
13	LT SINGLE PHASE POTENTIAL TRANSFORMER , 415V/Rt3/110V/Rt3 ,50VA CL-0.5 , DRY TYPE	V-CON/ASIAN	6
14	BREAKER CONTROL SWITCH (T/N/C)	KAYCEE/SURDHI	3
15	LED INDICATION LAMP, 64V AC ,DIA. 22.5mm- RED	C&S/VAISHNO/SURDHI	2
16	LED INDICATION LAMP, 64VAC ,DIA. 22.5mm- YELLOW	C&S/VAISHNO/SURDHI	2
17	LED INDICATION LAMP,64V AC ,DIA. 22.5mm- BLUE	C&S/VAISHNO/SURDHI	2
18	LED INDICATION LAMP, 220V DC ,DIA. 22.5mm- RED	C&S/VAISHNO/SURDHI	3
19	LED INDICATION LAMP, 220V DC ,DIA. 22.5mm- GREEN	C&S/VAISHNO/SURDHI	3
20	LED INDICATION LAMP,220V DC ,DIA. 22.5mm- AMBER	C&S/VAISHNO/SURDHI	3
21	LED INDICATION LAMP,220V DC ,DIA. 22.5mm- BLUE	C&S/VAISHNO/SURDHI	3
22	LED INDICATION LAMP(ILLUMINATED),220V DC ,DIA. 22.5mm- WHITE	C&S/VAISHNO/SURDHI	3
23	AUTO -MANUAL SELECTOR SWITCH , 6A, 2P,2W, OFF	VAISHNO/SURDHI	3
24	VOLTAGE MONITOR RELAY, 415V AC , 3P,4W	L&T/SELEC	2
25	ON DELAY TIMER-220V DC	L&T/SELEC	3
26	CONTROL FUSE BASE WITH HRC 6A	C&S	1SET
27	CONTROL CONTACTOR 230V AC/220V DC	C&S	1SET
28	SPACE HEATER WITH THEMOSTATE	REPUTED	2SET
29	BULB HOLDER WITH DOOR SWITCH	REPUTED	2SET
30	SWITCH & SOCKET 5/15A 3PIN	REPUTED	2SET

(as corrected) Legrand/Schneider/Siemens/Crabtree Crabtree

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Kant

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

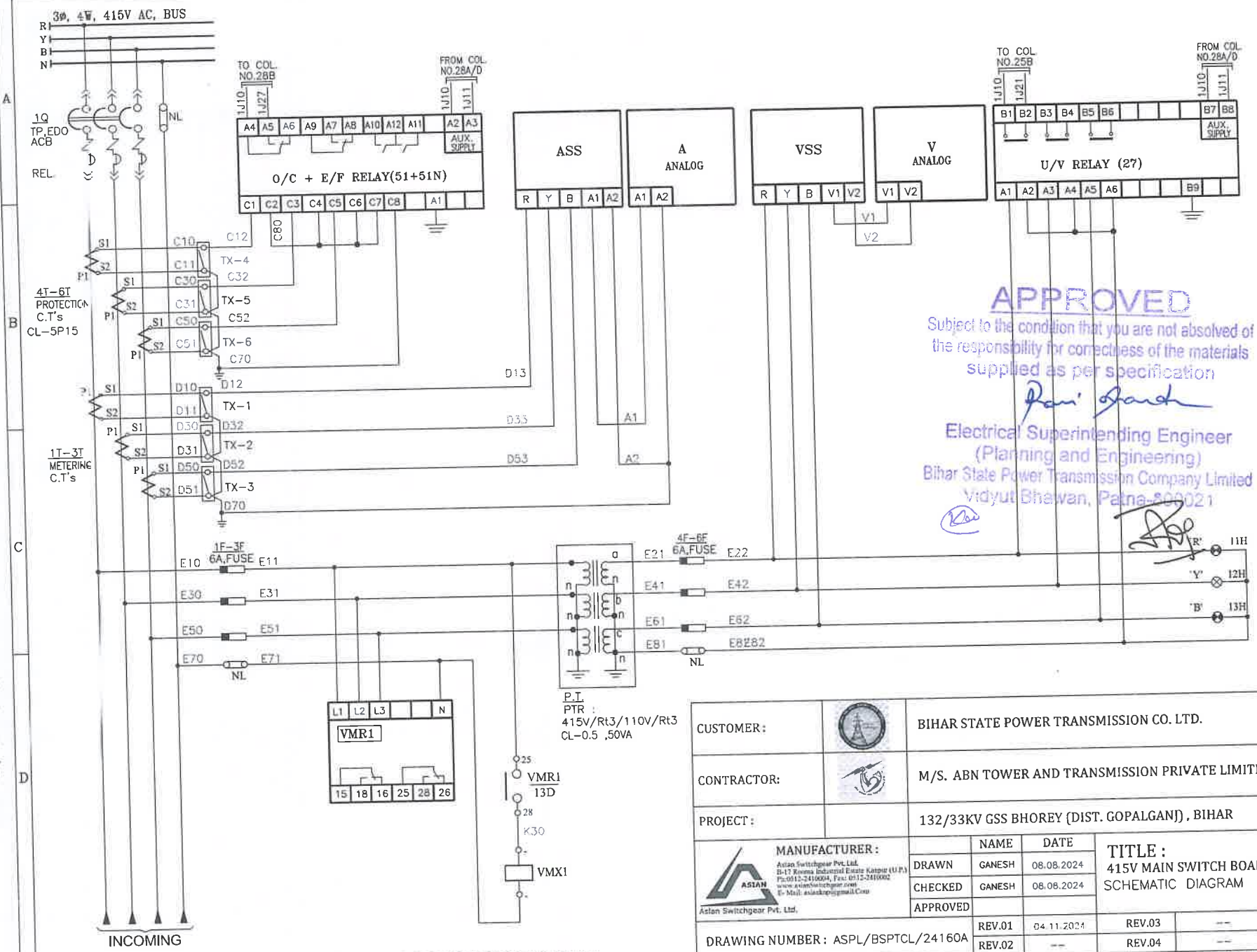
CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
B-17 Roorna Industrial Estate Kanpur (U.P.)
Ph.0512-2410004, Fax : 0512-2410002
www.asianswitchgear.com
E-Mail: asiankanpur@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
415V MAIN SWITCH BOARD
BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 7 OF 14
	DIMENSION TOLERANCE ± 10MM.				



APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR INCOMER-1

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Kosma Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asianknp@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
415V MAIN SWITCH BOARD
SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 8 OF 14
	DIMENSION TOLERANCE ± 10MM.				

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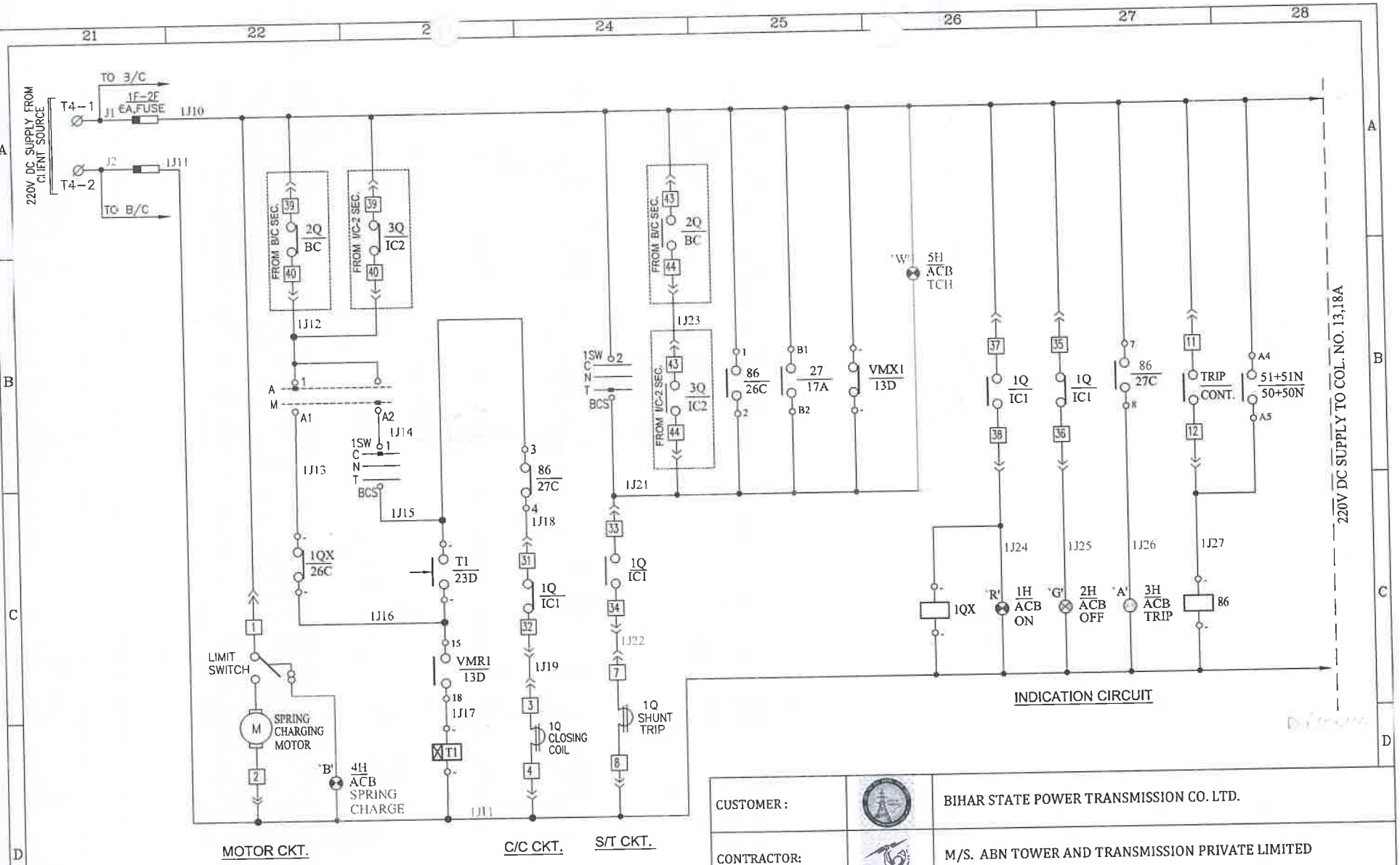

CONTROL CIRCUIT DIAGRAM FOR INCOMER -1

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) . BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianksp@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V MAIN SWITCH BOARD SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01 --	REV.03 --	SCALE N.T.S.
	REV.02 --	REV.04 --	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.	NIT NO. :10/PR/BSPTCL/2023	SHEET NO. 9 OF 14
	DIMENSION TOLERANCE ± 10MM.		

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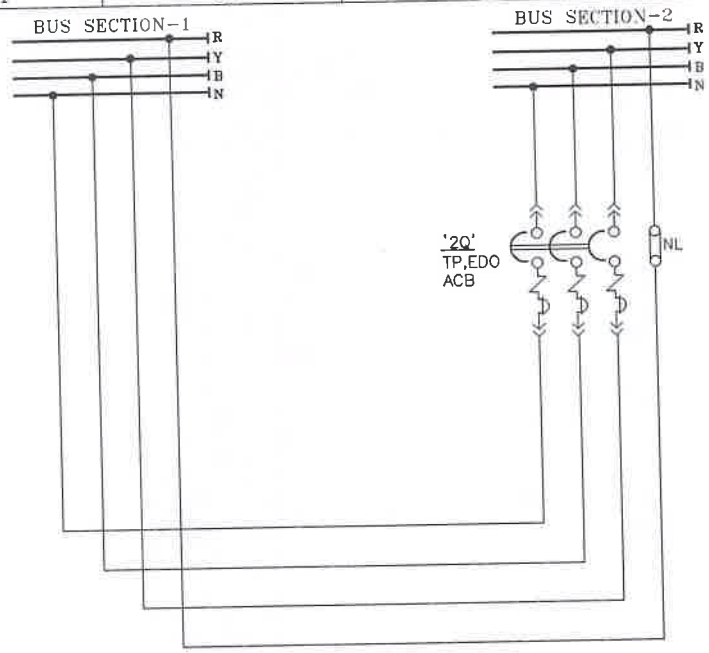


POWER CIRCUIT DIAGRAM
FOR BUSCOUPLER

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

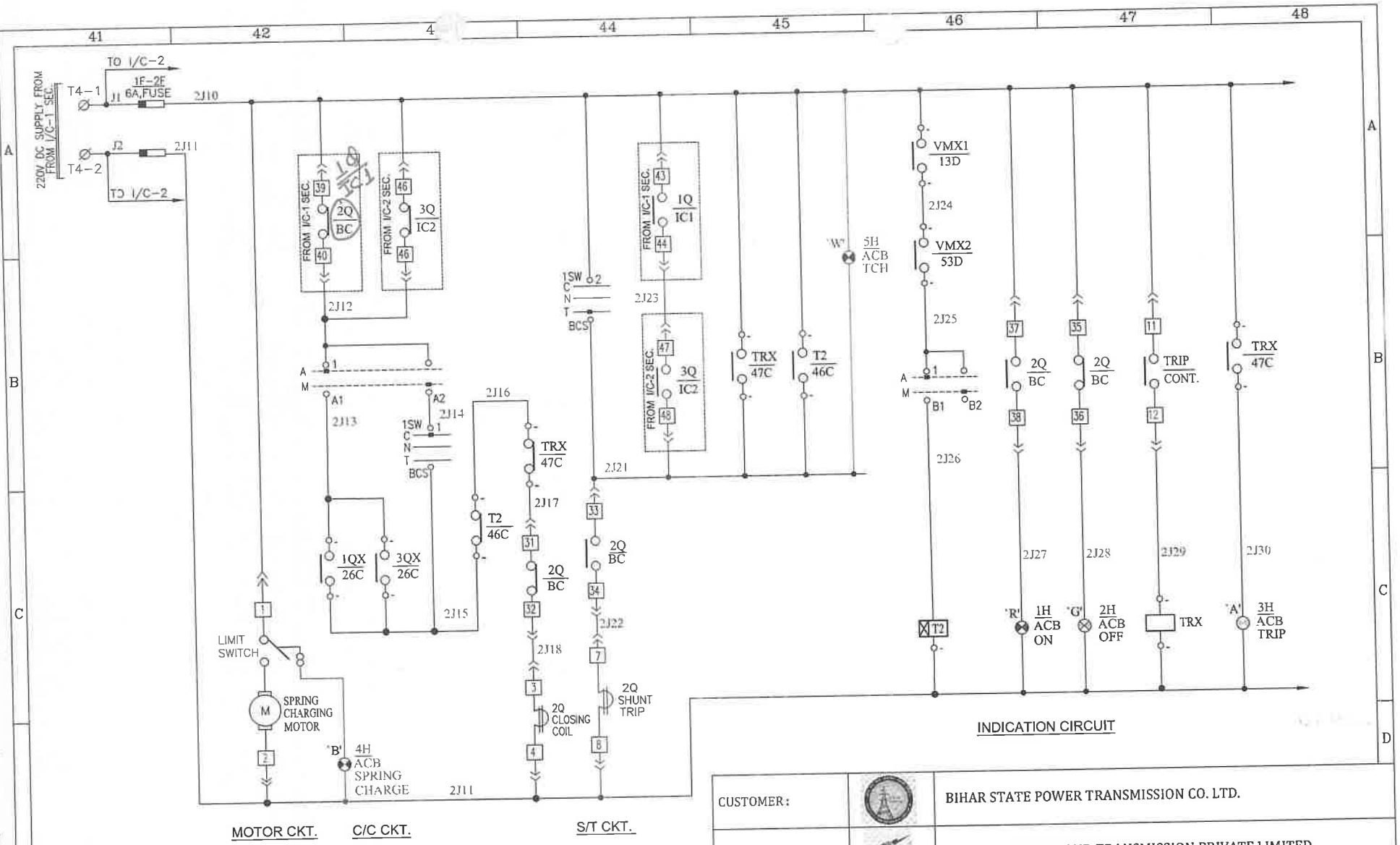
CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Rooma Industrial Estate Kanpur (U.P.)
Ph.0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asinkanp@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
415V MAIN SWITCH BOARD
SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01	--	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 10 OF 14
	DIMENSION TOLERANCE ± 10MM.				



CONTROL CIRCUIT DIAGRAM FOR BUSCOUPLER

(as corrected)

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianknp@gmail.com

Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V MAIN SWITCH BOARD SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01 --	REV.03 --		SCALE N.T.S.
	REV.02 --	REV.04 --		
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.	NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 11 OF 14
	DIMENSION TOLERANCE ± 10MM.			

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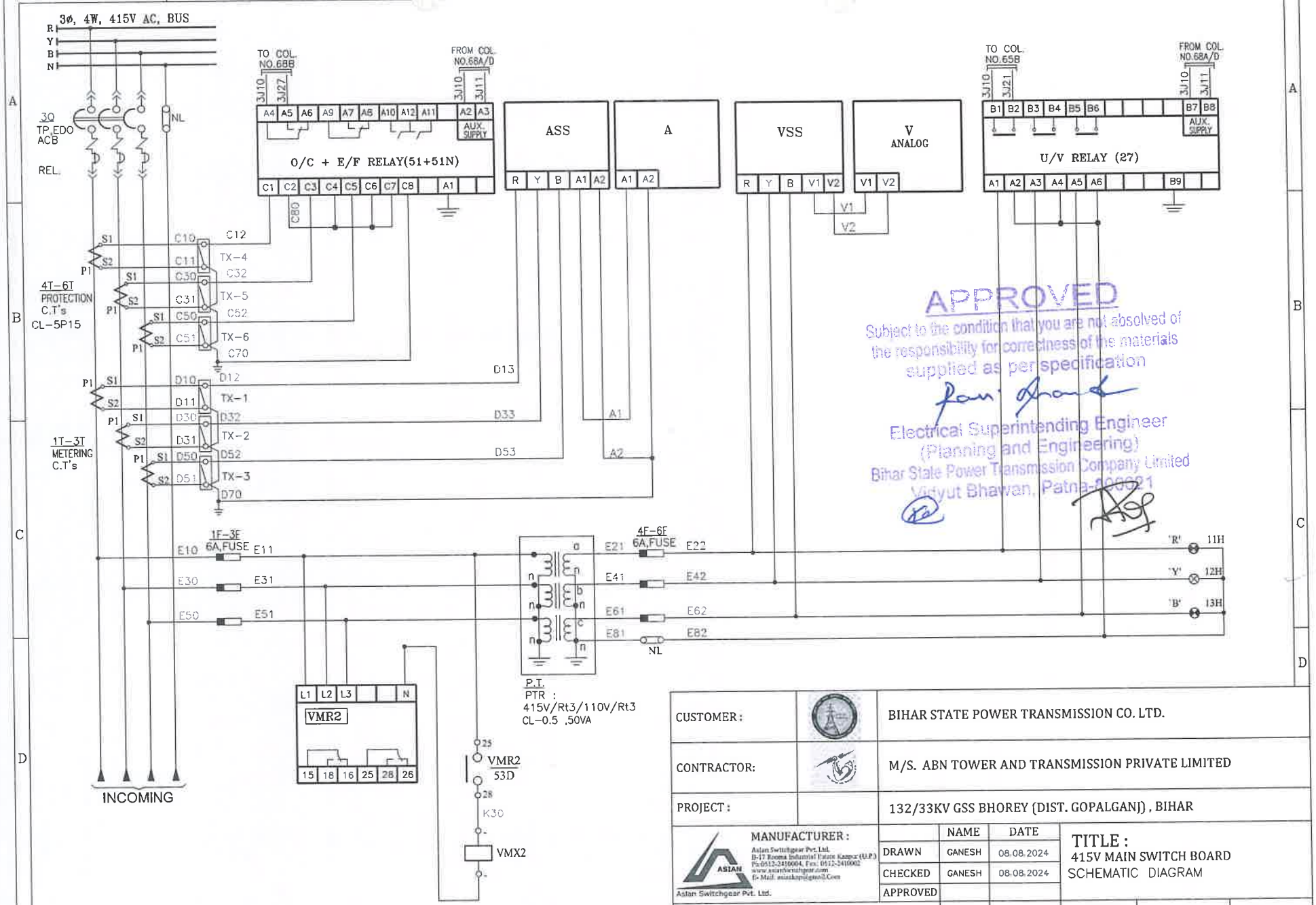

POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR INCOMER -2

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianknp@gmail.com		NAME	DATE	TITLE : 415V MAIN SWITCH BOARD SCHEMATIC DIAGRAM		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
Asian Switchgear Pvt. Ltd.	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160A		REV.01	--	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 12 OF 14
		DIMENSION TOLERANCE ± 10MM.				

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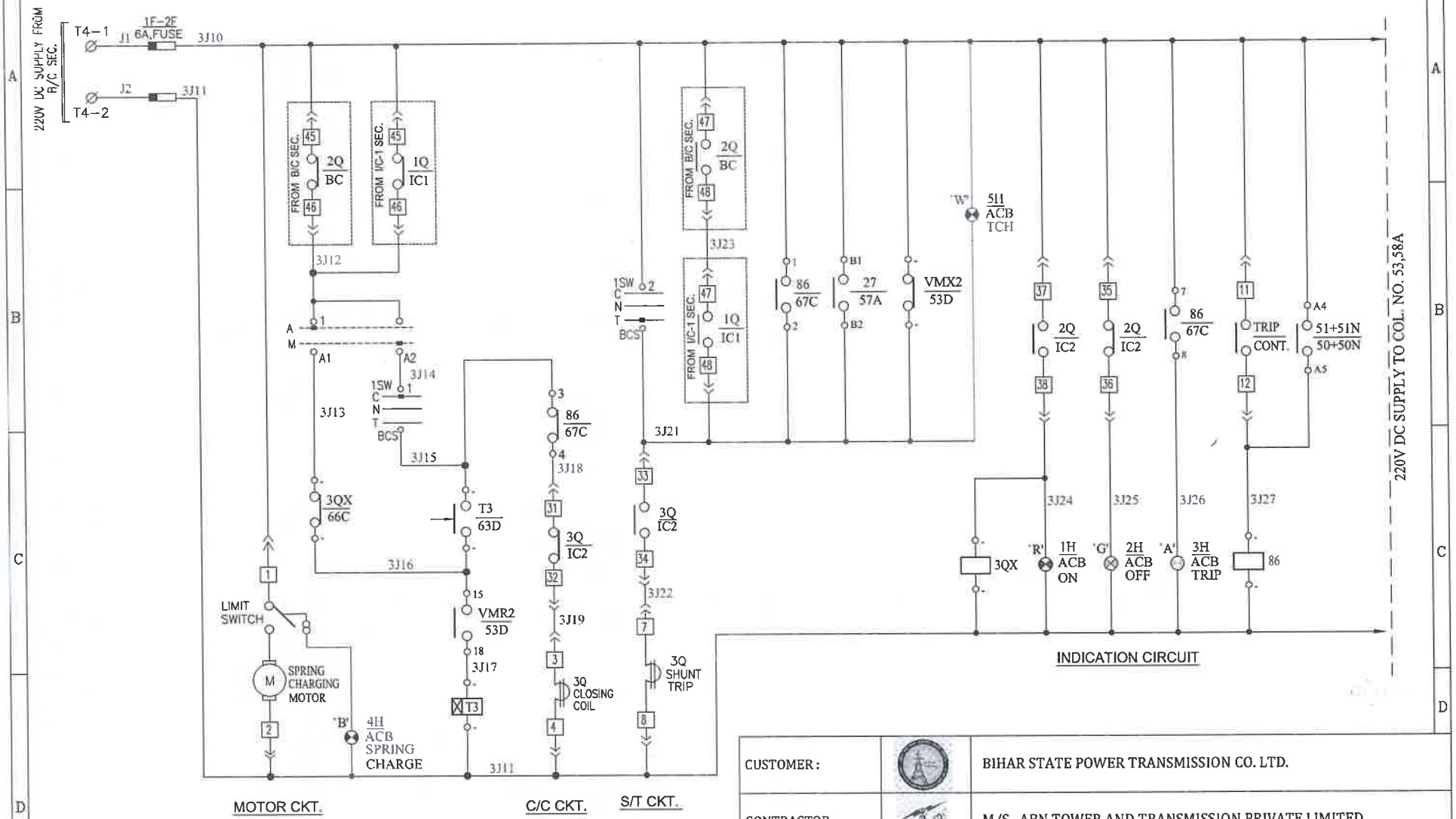


CONTROL CIRCUIT DIAGRAM FOR INCOMER-2

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

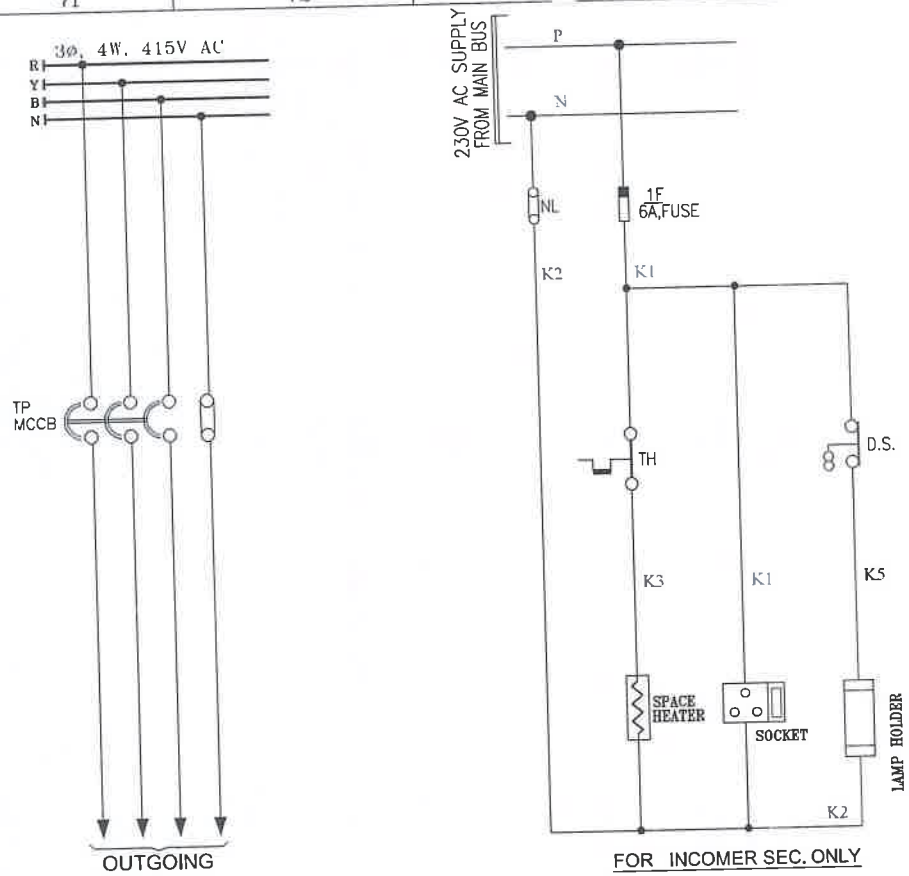
CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asinkanp@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V MAIN SWITCH BOARD SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01	--	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 13 OF 14
	DIMENSION TOLERANCE ± 10MM.				



APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

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CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.			
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR			
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianksp@gmail.Com		NAME	DATE	TITLE : 415V MAIN SWITCH BOARD SCHEMATIC DIAGRAM	
	DRAWN	GANESH	08.08.2024		
	CHECKED	GANESH	08.08.2024		
	APPROVED				
DRAWING NUMBER : ASPL/BSPTCL/24160A	REV.01	--	REV.03	--	SCALE N.T.S
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.	NIT NO.:10/PR/BSPTCL/2023			SHEET NO. 14 OF 14
	DIMENSION TOLERANCE ± 10MM.				

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ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	415V ACDB
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Pani Kanth
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE: 415V ACDB TITLE SHEET

DRAWING NUMBER: ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 1 OF 20
	DIMENSION TOLERANCE ± 10MM.				

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GENERAL NOTES FOR LT SWITCH BOARD :-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
3. THE PANEL SHALL BE SUITABLE FOR 3Ø, 4W, 415V±10% AC, 50±5% HZ SUPPLY.
4. THE PANEL SHALL BE FABRICATED WITH
   - (i) BASE CHANNEL - ISMC-75
   - (II) STRUCTURE & MOUNTING PLATE - 2.0 mm. CRCA
   - (III) DOOR,COVER & PARTITION - 1.6 mm. CRCA
   - (IV) GLAND PLATE - 3.0 mm. CRCA
5. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
6. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
7. BUS BAR SHALL BE OF ELECTROLYTIC GRADE COPPER SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSON RESISTANCE, SMC/DMC INSULATORS.
8. BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
9. EARTH BUS SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
10. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
    - A. AC VOLTAGE CIRCUIT - 1.5 SQ MM RED, YELLOW, BLUE, BLACK
    - B. CURRENT CIRCUIT - 2.5 SQ MM RED, YELLOW, BLUE, BLACK
    - C. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
    - D. DC CONTROL CKT. - 1.5 SQ MM GREY
    - E. GROUNDING - 2.5 SQ MM GREEN
11. THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:
    - A. BETWEEN PHASE TO PHASE - 25 MM
    - B. BETWEEN PHASE TO NEUTRAL - 25 MM
    - C. BETWEEN PHASE TO EARTH - 25 MM
    - D. BETWEEN NEUTRAL TO EARTH - 25 MM

    NOTE:-CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.
12. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
13. PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
14. CABLE ENTRY AS PER G.A. DRAWING.
15. PAINT SHADE - SMOKE GREY (692 OF IS:5)
16. AUX. SUPPLY 220V DC NOT IN ASPL SCOPE

APPROVED
Subject to the condition that you are not absolved of the responsibility for correciness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph.:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianskpu@gmail.Com		NAME	DATE	TITLE: 415V ACDB GENERAL NOTES		
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER: ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
	REV.02	--	REV.04	--		
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 2 OF 20	
	DIMENSION TOLERANCE ± 10MM.					

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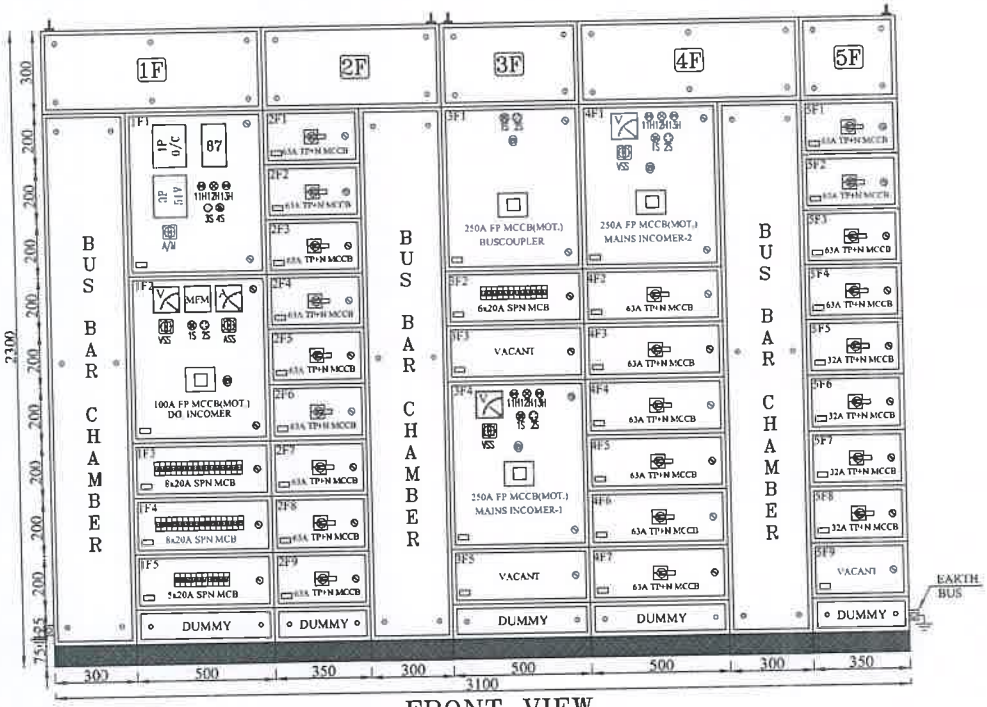
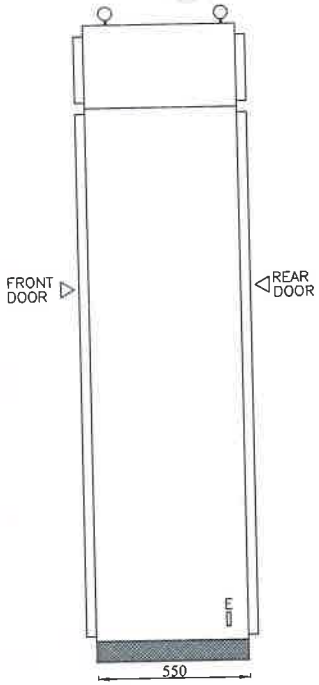
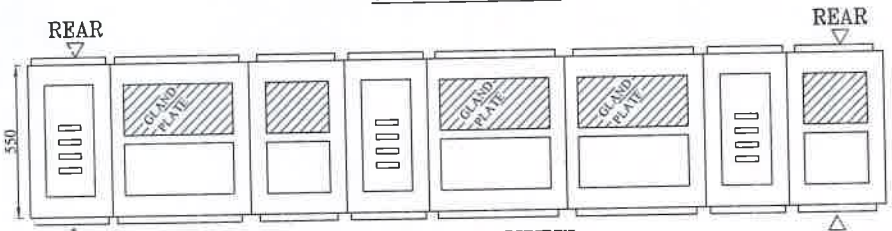


FRONT VIEW



SIDE VIEW



BOTTOM VIEW

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

It Shall be modified as per comments

MAIN BUS BAR SIZE:-

PHASE : 1x25x10 Sq. mm./Eq. CU.
NEUTRAL : 1x25x05 Sq. mm./Eq. CU.
EARTH : 1x20x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

@ :-ELECTRICALLY INTERLOCKED

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianskp@gmail.Com		NAME	DATE	TITLE : 415V ACDB GENERAL ARRANGEMENT DRAWING		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
	REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 3 OF 20	
	DIMENSION TOLERANCE ± 10MM.					

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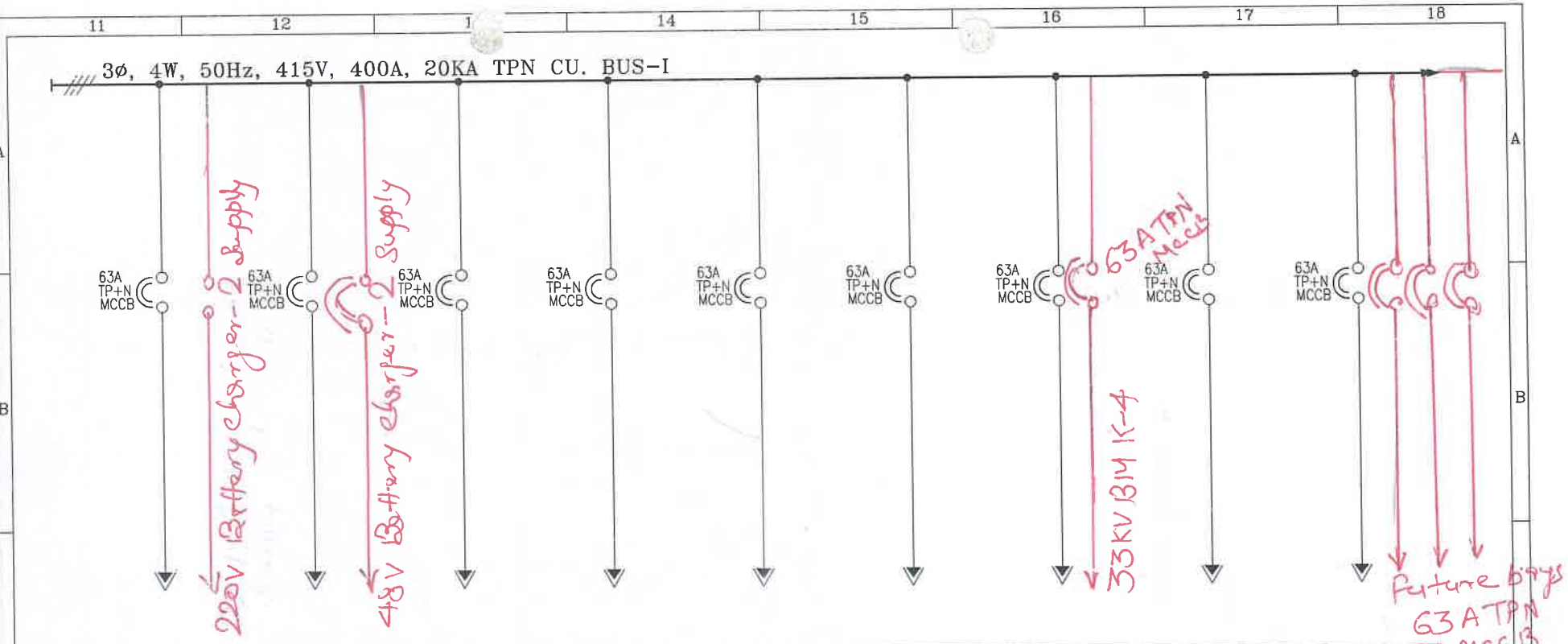

FEEDER No.	2F1	2F2	2F3	2F4	2F5	2F6	2F7	2F8	2F9
FEEDER RATING	63A	63A	63A	63A	63A	63A	63A	63A	63A
FEEDER DESCRIPTION	220V BATTERY CHARGER-1 SUPPLY	48V BATTERY CHARGER-1 SUPPLY	EMERGENCY LIGHTING DB SUPPLY	132KV BMK-1	132KV BMK-3	132KV BMK-5.	33KV BMK-~~1~~ 2	SPARE	SPARE
CABLE SIZE IN mm2	1x3.5Cx70 AL.	1x3.5Cx70 AL.	1x3.5Cx70 AL.	1x3.5Cx70 AL.	1x3.5Cx70 AL.	1x3.5Cx70 AL.	1x3.5Cx70 AL.	--	--

(as corrected)
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHORÈY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph.:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asiankanpur@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 4 OF 20
	DIMENSION TOLERANCE ± 10MM.				

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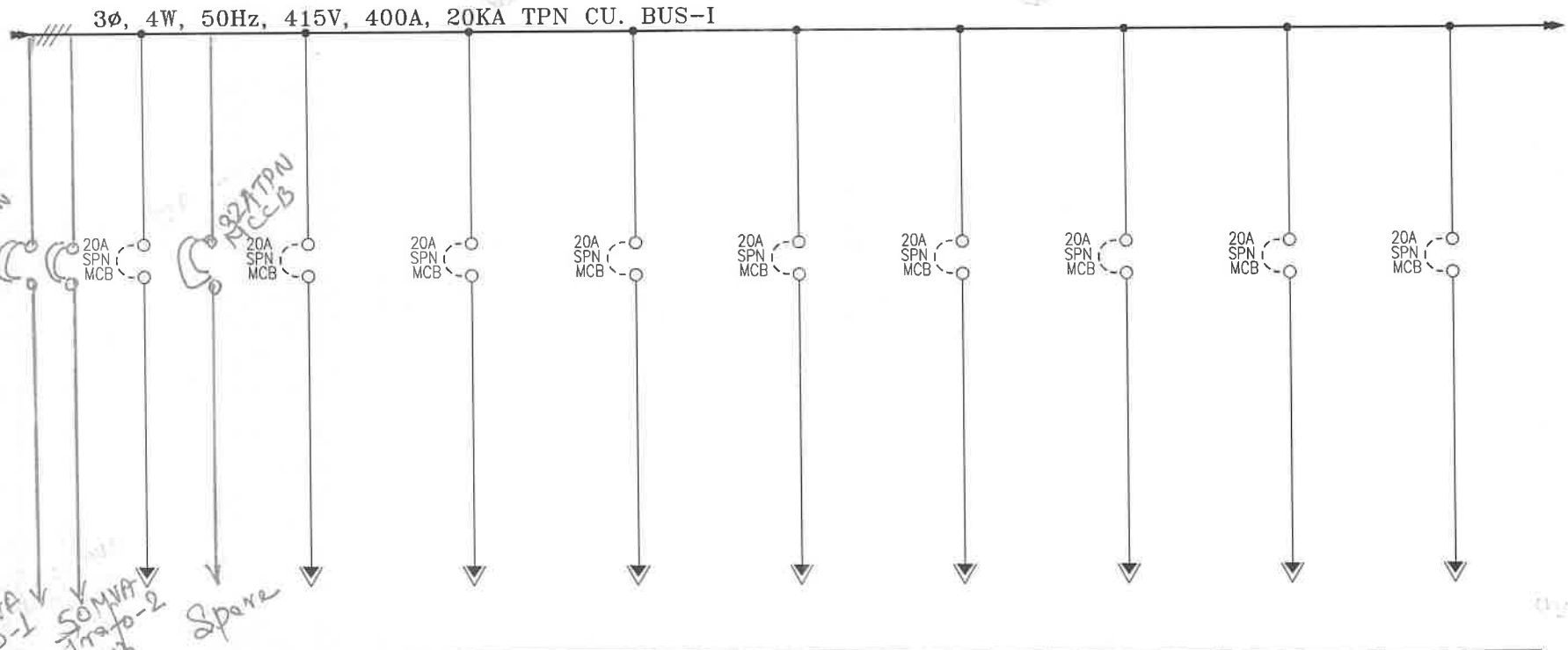

FEEDER No.	1F3	1F3	1F3	1F3	1F3	1F3	1F3	1F3	1F4
FEEDER RATING	20A	20A	20A	20A	20A	20A	20A	20A	20A
FEEDER DESCRIPTION	132KV C&R PANEL AUX. SUPPLY	33KV C&R PANEL AUX. SUPPLY	COMM. PANEL AUX. SUPPLY	RTU AUX. SUPPLY	INVERTER AUX. SUPPLY	2KVA UPS AUX. SUPPLY	EPABX AUX. SUPPLY	220V DCDB AUX. SUPPLY	48V DCDB AUX. SUPPLY
CABLE SIZE IN mm2	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.

(as corrected)
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Kosma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianksp@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 5 OF 20
	DIMENSION TOLERANCE ± 10MM.				

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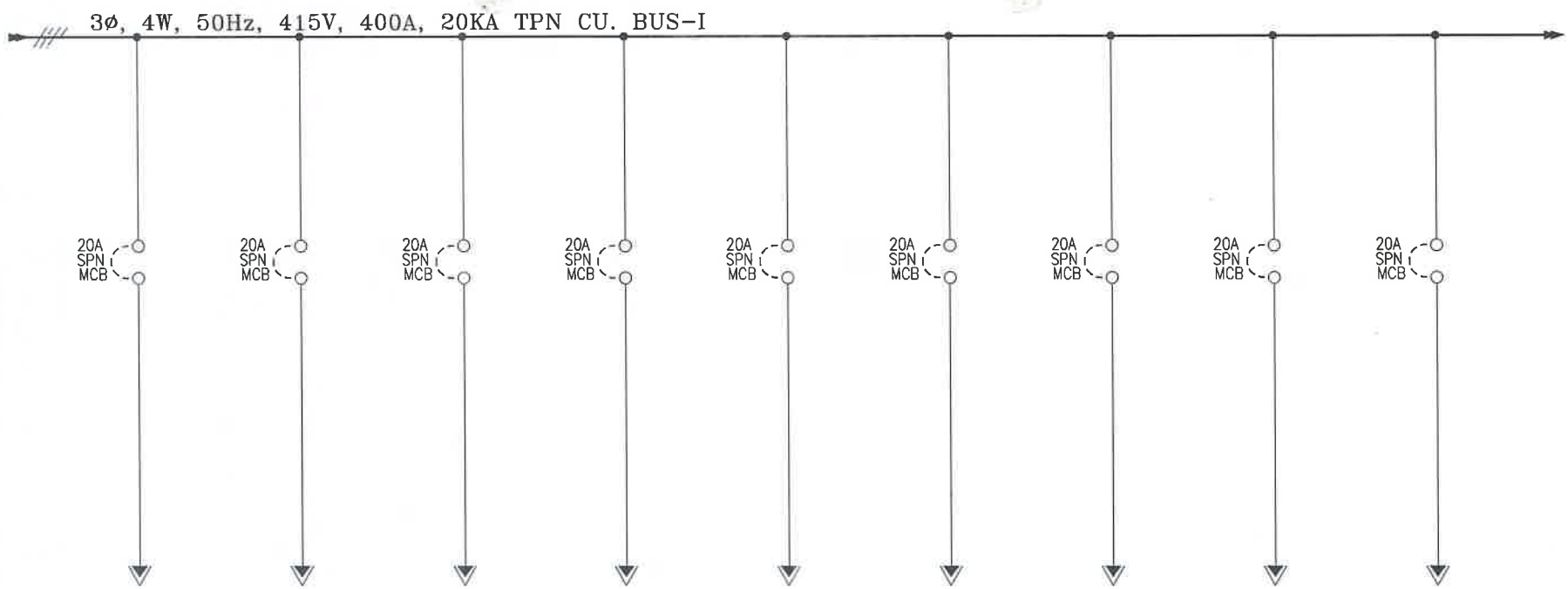

FEEDER No.	1F4	1F4	1F4	1F4	1F4	1F4	1F4	1F5	1F5
FEEDER RATING	20A	20A	20A	20A	20A	20A	20A	20A	20A
FEEDER DESCRIPTION	50MVA TRAFO-1RTCC AUX. SUPPLY	50MVA TRAFO-2RTCC AUX. SUPPLY	FDA PANEL AUX. SUPPLY	CCTV SYSTEM AUX. SUPPLY	DG. AMF PANEL AUX. SUPPLY	SPARE	SPARE	SPARE	SPARE
CABLE SIZE IN mm2	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	--	--	--	--

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Reema Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asiankanp@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
415V ACDB
SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL./2023		SHEET NO. 6 OF 20
	DIMENSION TOLERANCE ± 10MM.				

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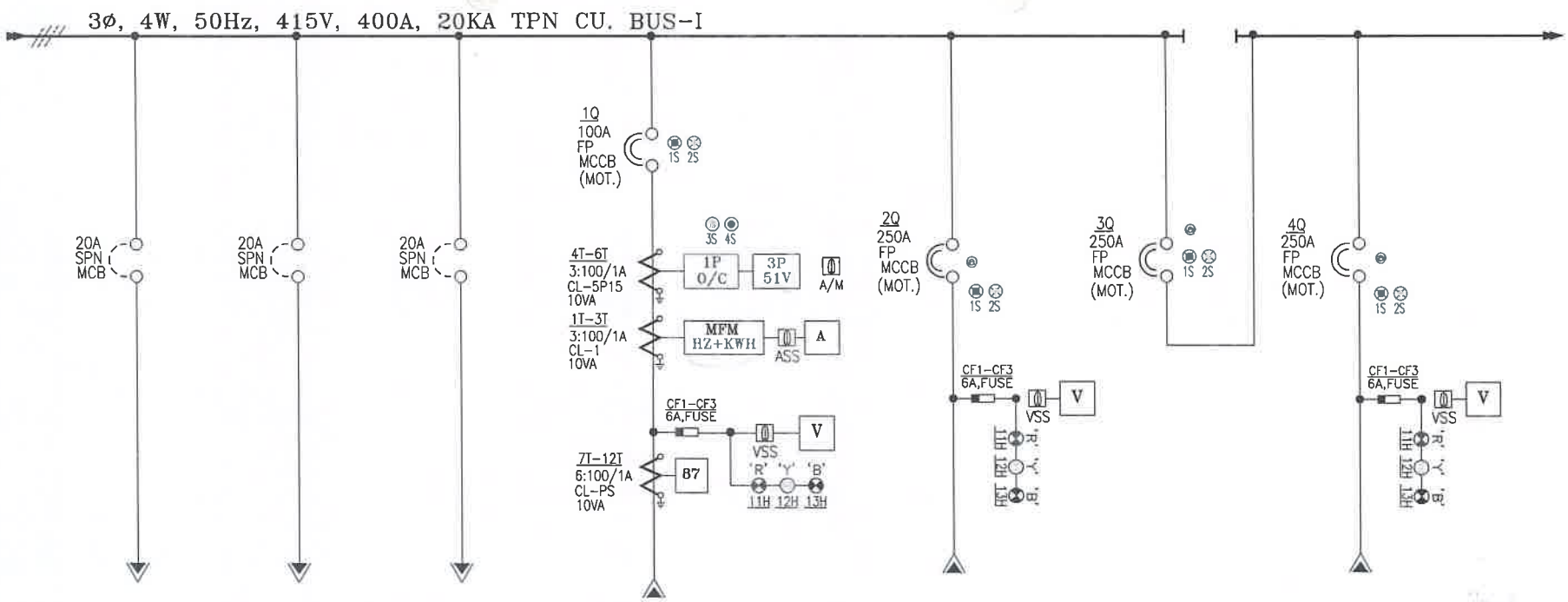

FEEDER No.	1F5	1F5	1F5	1F1 & 1F2	3F1	3F4	4F1
FEEDER RATING	20A	20A	20A	100A	250A	250A	250A
FEEDER DESCRIP TION	SPARE	SPARE	SPARE	FROM DG AMF PANEL	INCOMER-1 FROM MAIN SWITCH BOARD	BUS COUPLER	INCOMER-2 FROM MAIN SWITCH BOARD
CABLE SIZE IN mm2	--	--	--	2Rx3.5Cx300 AL.	2Rx3.5Cx300 AL.	--	2Rx3.5Cx300 AL.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Kosma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianksp@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.	NIT NO.:10/PR/BSPTCL/2023		
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 7 OF 20

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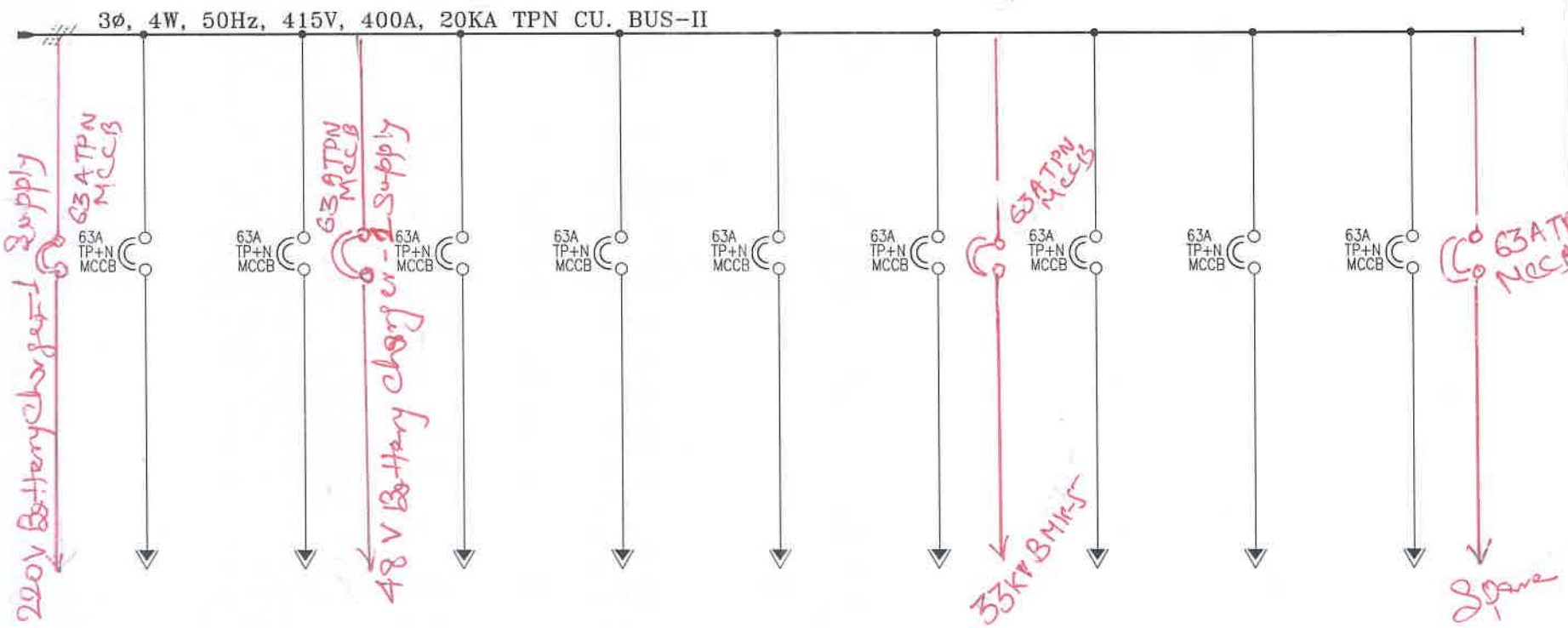

FEEDER No.	4F2	4F3	4F4	4F5	4F5	4F6	5F1	5F2	5F3
FEEDER RATING	63A	63A	63A	63A	63A	63A	63A	63A	63A
FEEDER DESCRIPTION	220V BATTERY CHARGER-2 SUPPLY	48V BATTERY CHARGER-2 SUPPLY	132KV BMK-2	132KV BMK-4	33KV BMK-~~2~~ 1	33KV BMK-3	SPARE	SPARE	SPARE
CABLE SIZE IN mm²	1x3.5Cx70 AL.	1x3.5Cx70 AL.	1x3.5Cx70 AL.	1x3.5Cx70 AL.	1x3.5Cx70 AL.	1x3.5Cx70 AL.	--	--	--

(as corrected)

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. : 10/PR/BSPTCL/2023		SHEET NO. 8 OF 20
	DIMENSION TOLERANCE ± 10MM.				

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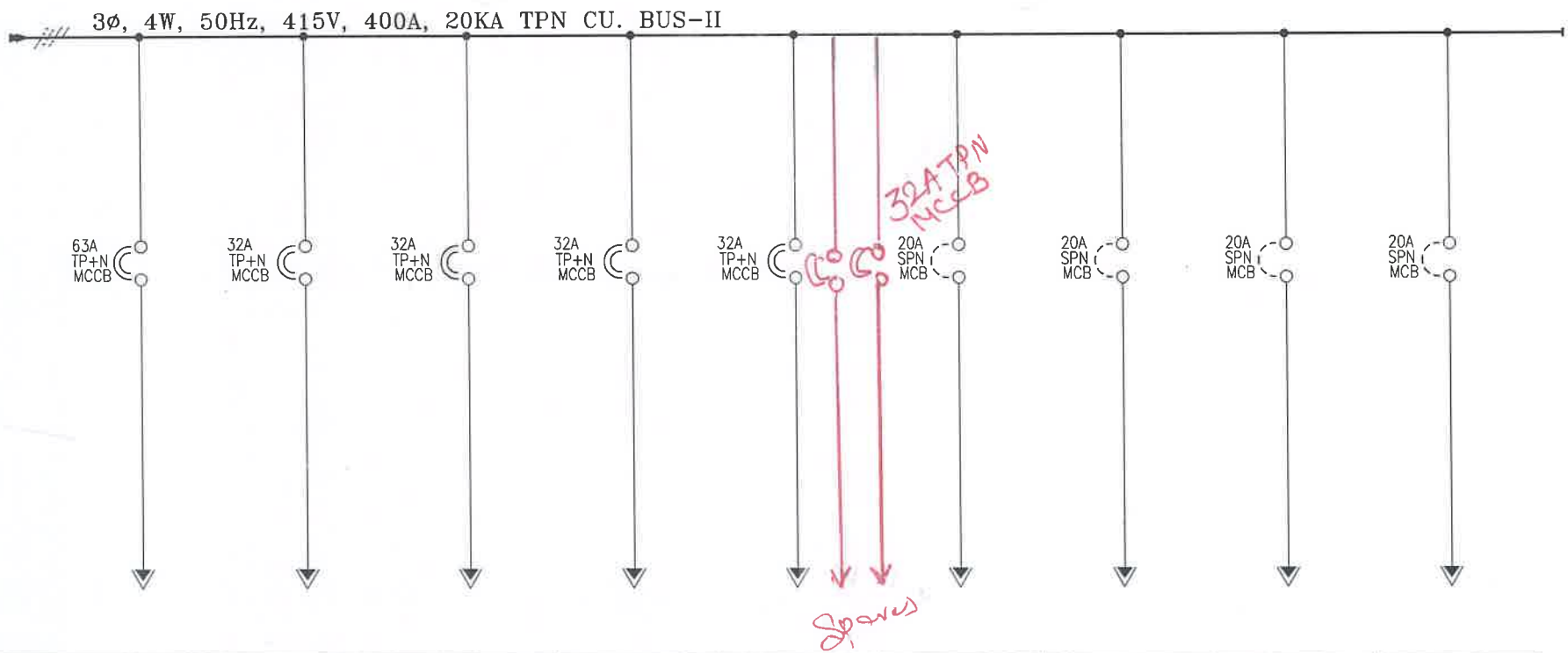

FEEDER No.	5F4	5F5	5F6	5F7	5F8	3F3	3F3	3F3	3F3
FEEDER RATING	63A	32A	32A	32A	32A	20A	20A	20A	20A
FEEDER DESCRIPTION	SPARE	50MVA TRAFO-1 MB AUX. SUPPLY	50MVA TRAFO-2 MB AUX. SUPPLY	2HP DEWATERING PUMP SUPPLY	SUPPLY	315KVA SST-1 MB AUX. SUPPLY	315KVA SST-2 MB AUX. SUPPLY	SUMP PUMP	CONTROL BUILDING WATER PUMP SUPPLY
CABLE SIZE IN mm2	--	1Rx3.5Cx70 AL.	1Rx3.5Cx70 AL.	1Rx3.5Cx70 AL.	1Rx3.5Cx70 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.	1x4Cx6 AL.

(as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt.Ltd. B-17 Roema Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asinkanpur@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 9 OF 20

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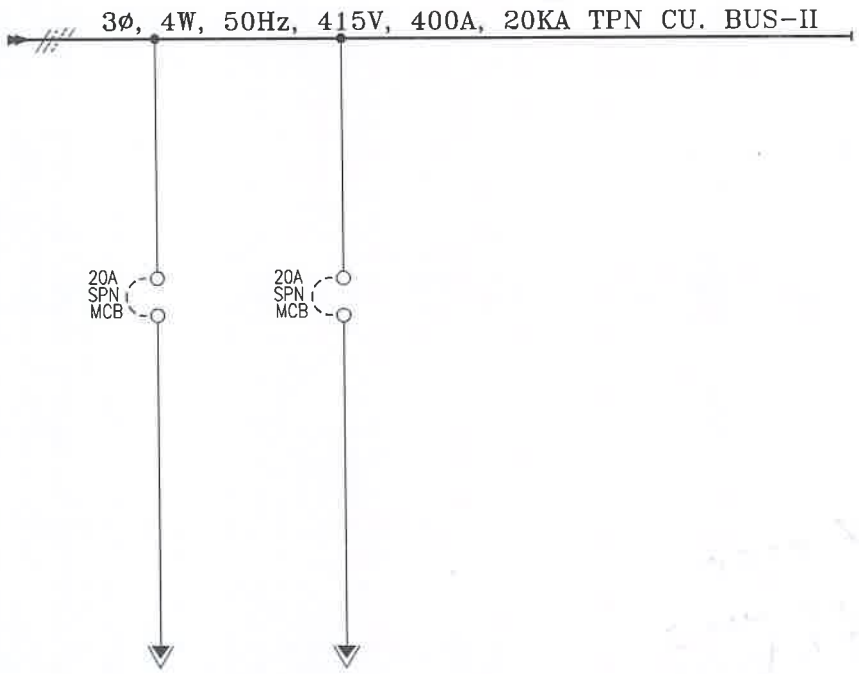

FEEDER No.	3F3	3F3
FEEDER RATING	20A	20A
FEEDER DESCRIPTION	SPARE	SPARE
CABLE SIZE IN mm2	--	--

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt. Ltd. B-17 Kursna Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E- Mail: asianksp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 10 OF 20
	DIMENSION TOLERANCE ± 10MM.				

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BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
1	MCCB 100A, 20KA 4P, WITH O/L, S/C THERMAL MAGNETIC BASED RELEASE AND WITH FOLLOWING ACCESSORIES (i) MOTOR MECHANISM-220V DC (ii) SPREADER TERMINAL (iii)AUX + TRIP CONTACT	C&S	1
2	MCCB 250A, 20KA 4P, WITH O/L, S/C THERMAL MAGNETIC BASED RELEASE AND WITH FOLLOWING ACCESSORIES (i) MOTOR MECHANISM-220V DC (ii) SPREADER TERMINAL (iii)AUX + TRIP CONTACT (iv) SHUNT TRIP COIL-220V DC	C&S	3
3	MCCB-63A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM	C&S	19
4	MCCB-32A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM	C&S	4
5	MCB-20A,2P,10KA , C-CURVE	C&S	27
6	DEFINITE TIME OVER-CURRENT RELAY(SINGLE POLE) , FLUSH MOUNTED, AUX SUPPLY 220V DC ,CTR-/1A	C&S/JVS	1
7	DEFINITE TIME VOLTAGE CONTROLLED OVER-CURRENT RELAY(THREE-POLE) , FLUSH MOUNTED, AUX SUPPLY 220V DC ,CTR-/1A	C&S/JVS	1
8	TRIPLE POLE DIFFERENTIAL PROTECTION RELAY , AUX SUPPLY 220V DC ,CTR-/1A	C&S/JVS	1
9	MFM(HZ+KWH) METER 96Sq.mm, 415V AC, CTR-/1A	RISHABH/AE	1
10	ANALOG AMP METER 96Sq.mm, 90DEG. CTR-/1A , 0-100A	RISHABH/AE	1
11	ANALOG VOLT METER 96Sq.mm, 0-500V ,90DEG.	RISHABH/AE	3
12	AMMETER SELECTOR SWITCH 3POSITION WITH OFF ,6A	VAISHNO/SURDHI	1
13	VOLTMETER SELECTOR SWITCH 3POSITION WITH OFF ,6A	VAISHNO/SURDHI	3
14	CURRENT TRANSFORMER , 100/1A, CL-1,10VA RESIN CAST	AE/ASIAN	3
15	CURRENT TRANSFORMER , 100/1A, CL-5P15,10VA RESIN CAST	AE/ASIAN	3
16	CURRENT TRANSFORMER , 100/1A, CL-PS,10VA RESIN CAST	AE/ASIAN	6
17	LED INDICATION LAMP, 230V AC ,DIA. 22.5mm- RED	C&S/VAISHNO/SURDHI	3
18	LED INDICATION LAMP, 230VAC ,DIA. 22.5mm- YELLOW	C&S/VAISHNO/SURDHI	3
19	LED INDICATION LAMP,230V AC ,DIA. 22.5mm- BLUE	C&S/VAISHNO/SURDHI	3
20	ILL LED INDICATION LAMP, 220V DC ,DIA. 22.5mm- RED	C&S/VAISHNO/SURDHI	4
21	ILL. LED INDICATION LAMP, 220V DC ,DIA. 22.5mm- GREEN	C&S/VAISHNO/SURDHI	4
22	DG. STRAT/STOP PUSH BUTTON , DIA. 22.5mm- RED/GREEN	C&S/VAISHNO/SURDHI	2
23	ON DELAY TIMER 220V DC	SELEC	4
24	AUTO MANUAL SELECTOR SWITCH 6A, 2P,2W WITH OFF	VAISHNO/SURDHI	1
25	VOLTAGE MONITOR(U/V) RELAY(27),415V AC	L&T/SELEC	3
26	CONTROL FUSE BASE WITH HRC 6A	C&S	1SET
27	CONTROL CONTACTOR 220V DC	C&S	1SET
28	SPACE HEATER WITH THEMOSTATE	REPUTED	1SET
29	BULB HOLDER WITH DOOR SWITCH	REPUTED	1SET
30	SWITCH & SOCKET 5/15A 3PIN Legrand/Schneider/Siemens/Crabtree	REPUTED	1SET

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Reema Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianksp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 11 OF 20

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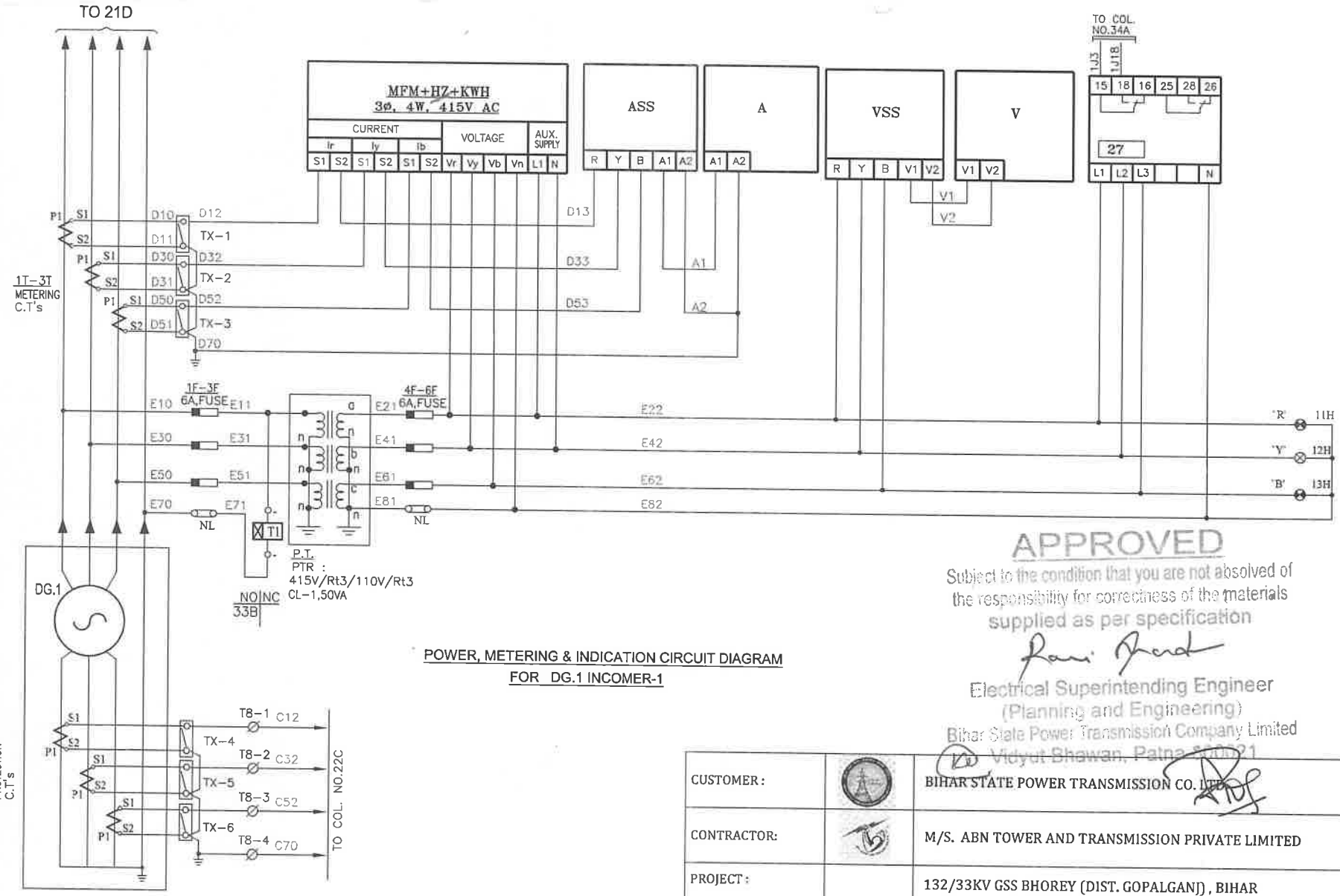
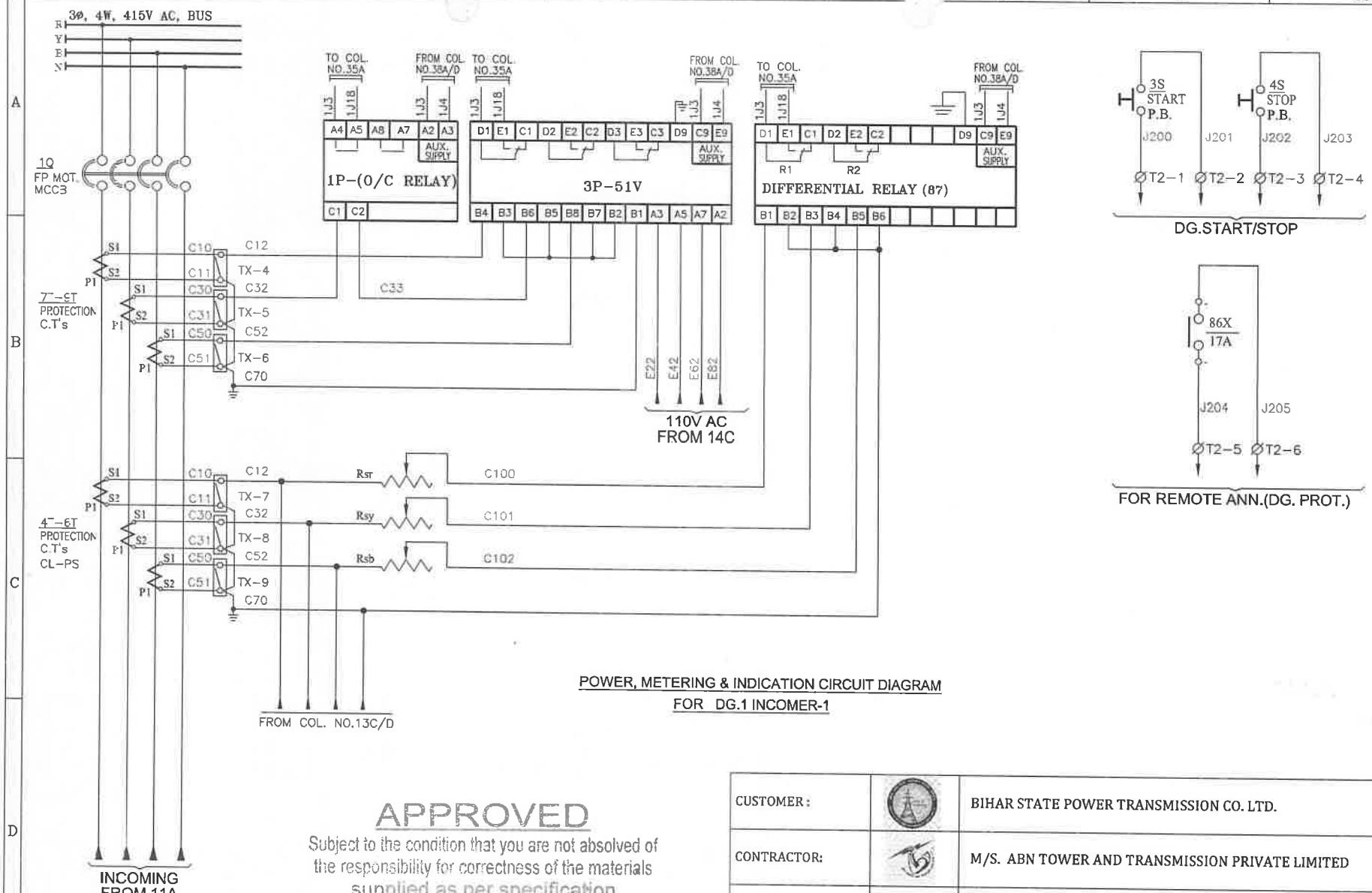


POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR DG.1 INCOMER-1

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.			
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR			
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankanpur@gmail.Com		NAME	DATE	TITLE : 415V ACDB SCHEMATIC DIAGRAM	
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024		
	CHECKED	GANESH	08.08.2024		
	APPROVED				
DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm. DIMENSION TOLERANCE ± 10MM.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 12 OF 20



POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR DG.1 INCOMER-1

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APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

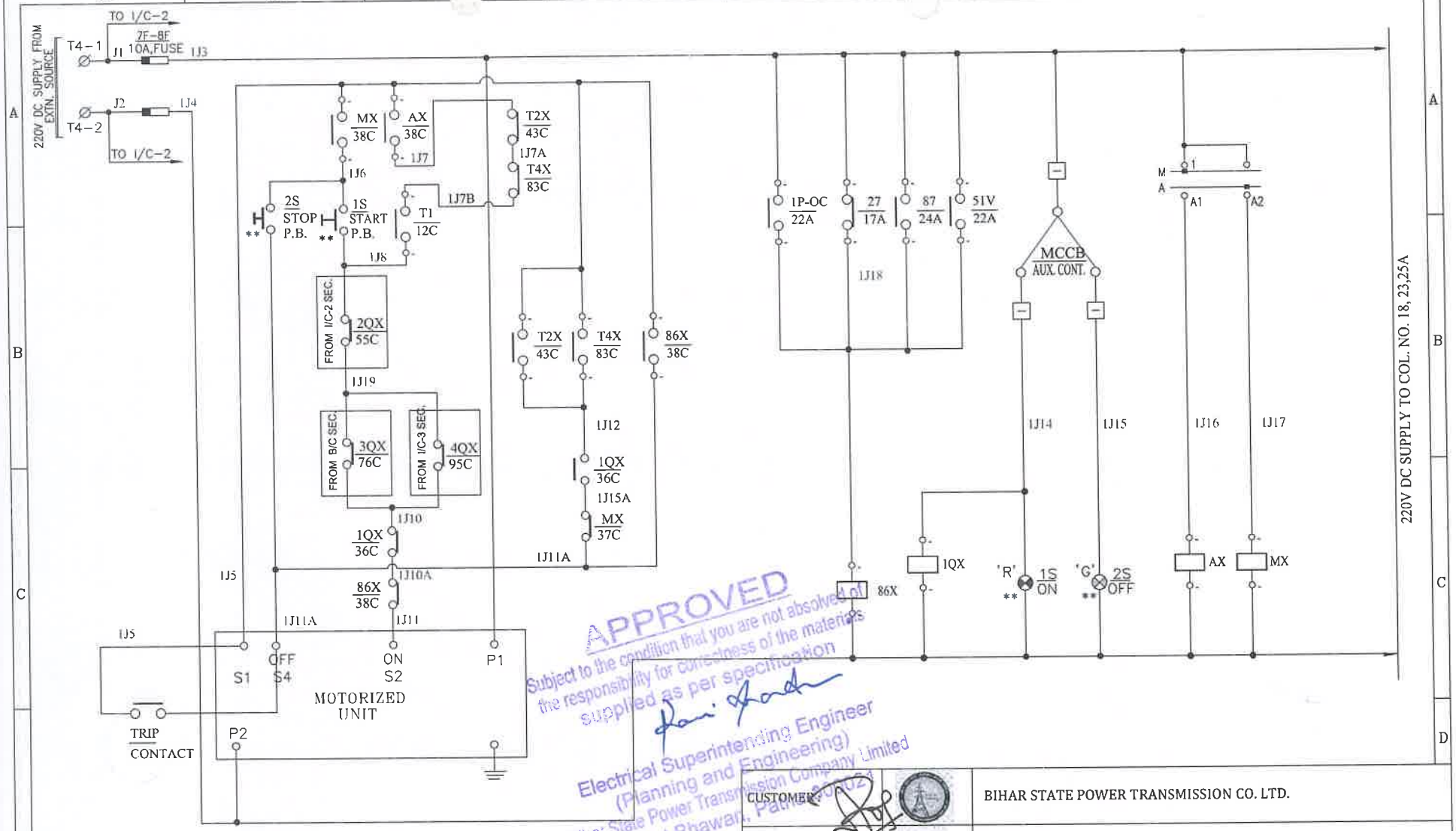
CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianksp@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	--	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 13 OF 20
	DIMENSION TOLERANCE ± 10MM.				



CONTROL CIRCUIT DIAGRAM
FOR DG.1 INCOMER-1

** :-ILLUMINATED TYPE PUSH BUTTON

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APPROVED
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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

APPROVED
Subject to the condition that you are not absolved the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rawna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E- Mail: asiankanpur@gmail.com Asian Switchgear Pvt. Ltd.		NAME	DATE	TITLE : 415V ACDB SCHEMATIC DIAGRAM		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160B		REV.01	--	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 14 OF 20
		DIMENSION TOLERANCE ± 10MM.				

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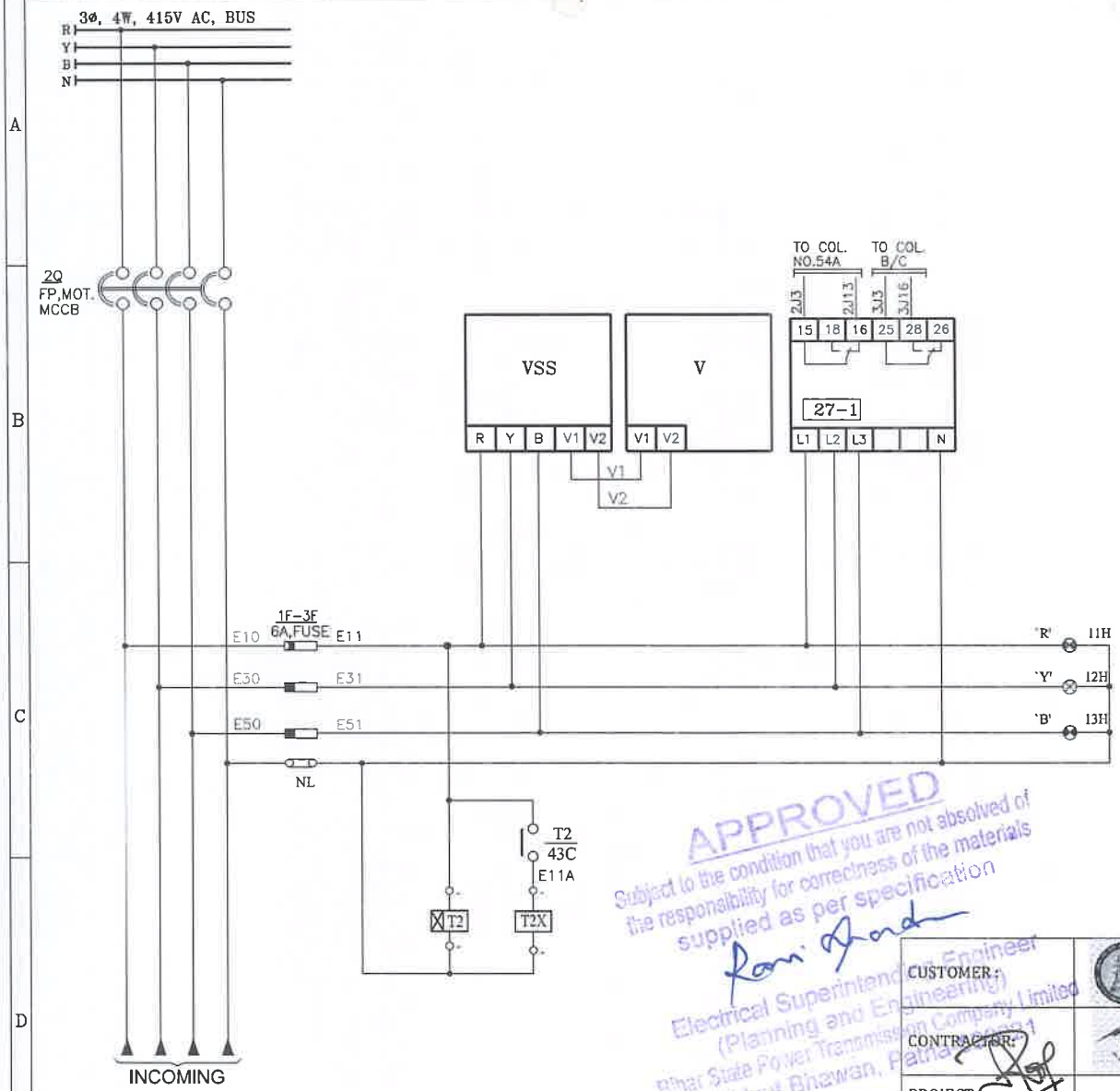
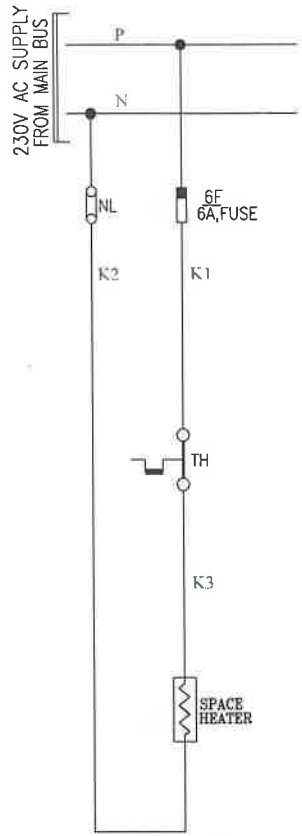


POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR TRF.1 INCOMER-2



FOR TRF.1 INCOMER SEC. ONLY

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR :	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Kosma Industrial Estate Kanpur (U.P.) Ph:0512-2416004, Fax: 0512-2416002 www.asianSwitchgear.com E-Mail: asianKanpur@gmail.Com		NAME	DATE	TITLE : 415V ACDB SCHEMATIC DIAGRAM		
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	--	REV.03	--	SCALE N.T.S.	
	REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 15 OF 20	
	DIMENSION TOLERANCE ± 10MM.					

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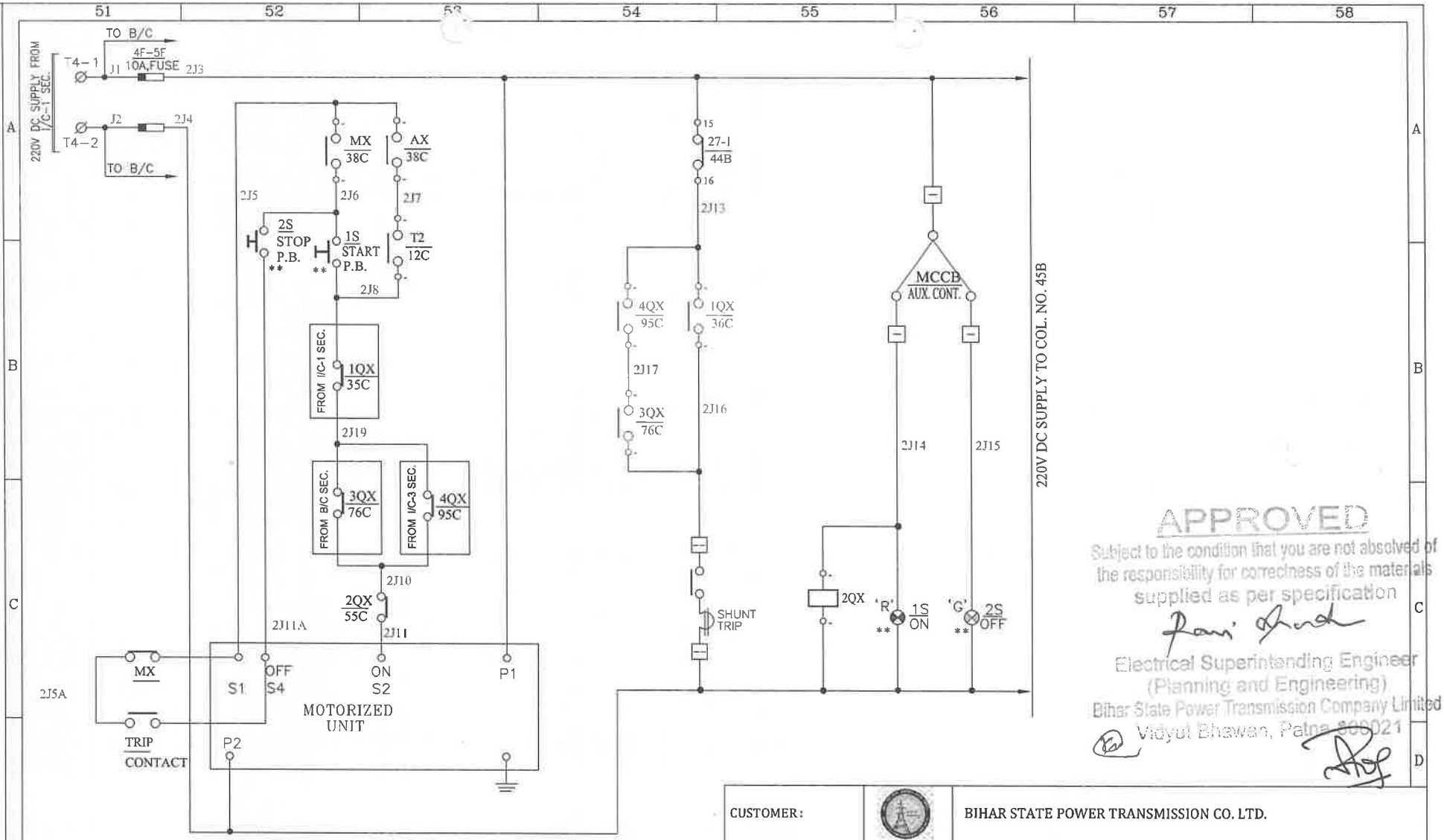

CONTROL CIRCUIT DIAGRAM
FOR TRF.1 INCOMER-2

** :-ILLUMINATED TYPE PUSH BUTTON

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt. Ltd. B-17 Kooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianskapi@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	--	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.	NIT NO. :10/PE/BSPTCL/2023		
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 16 OF 20

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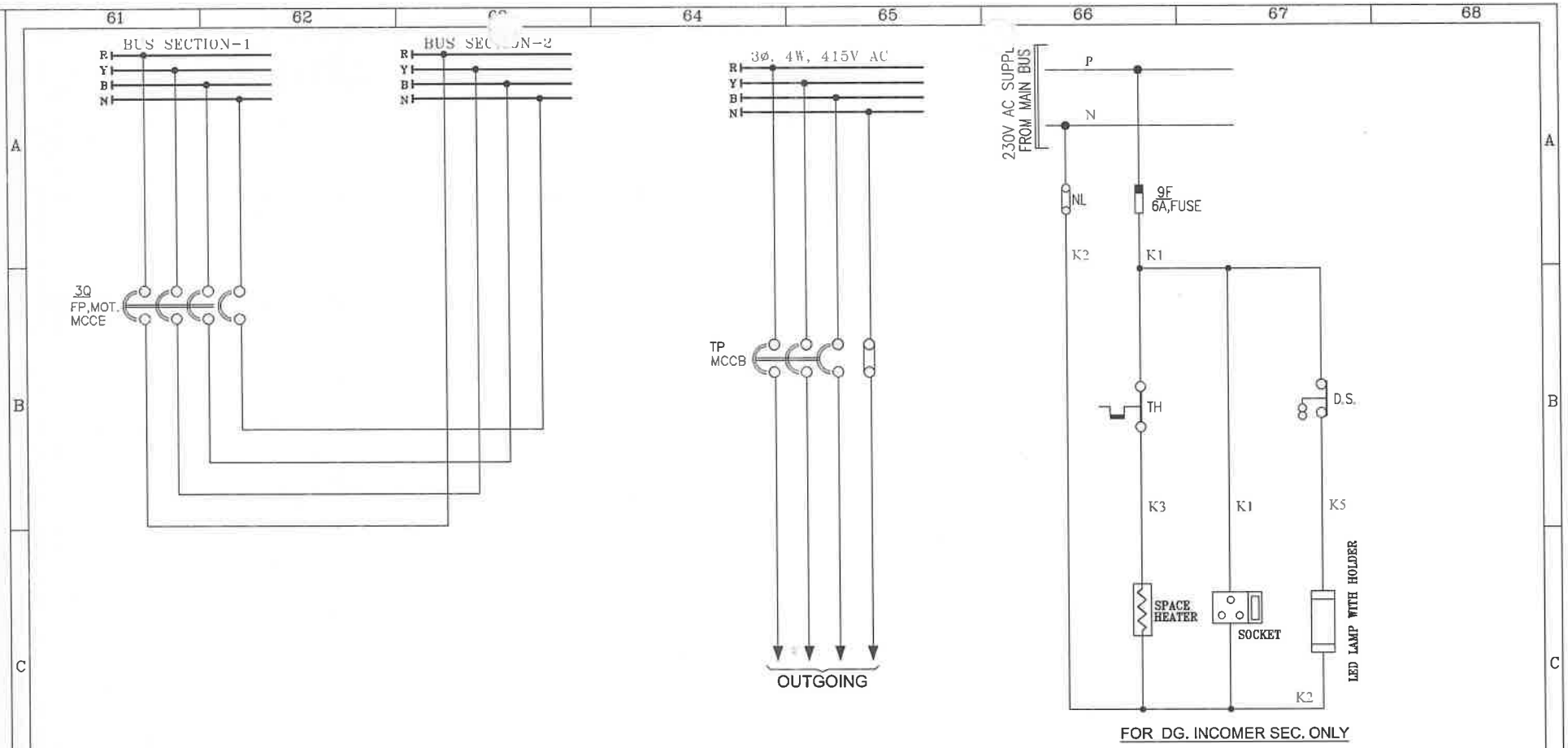
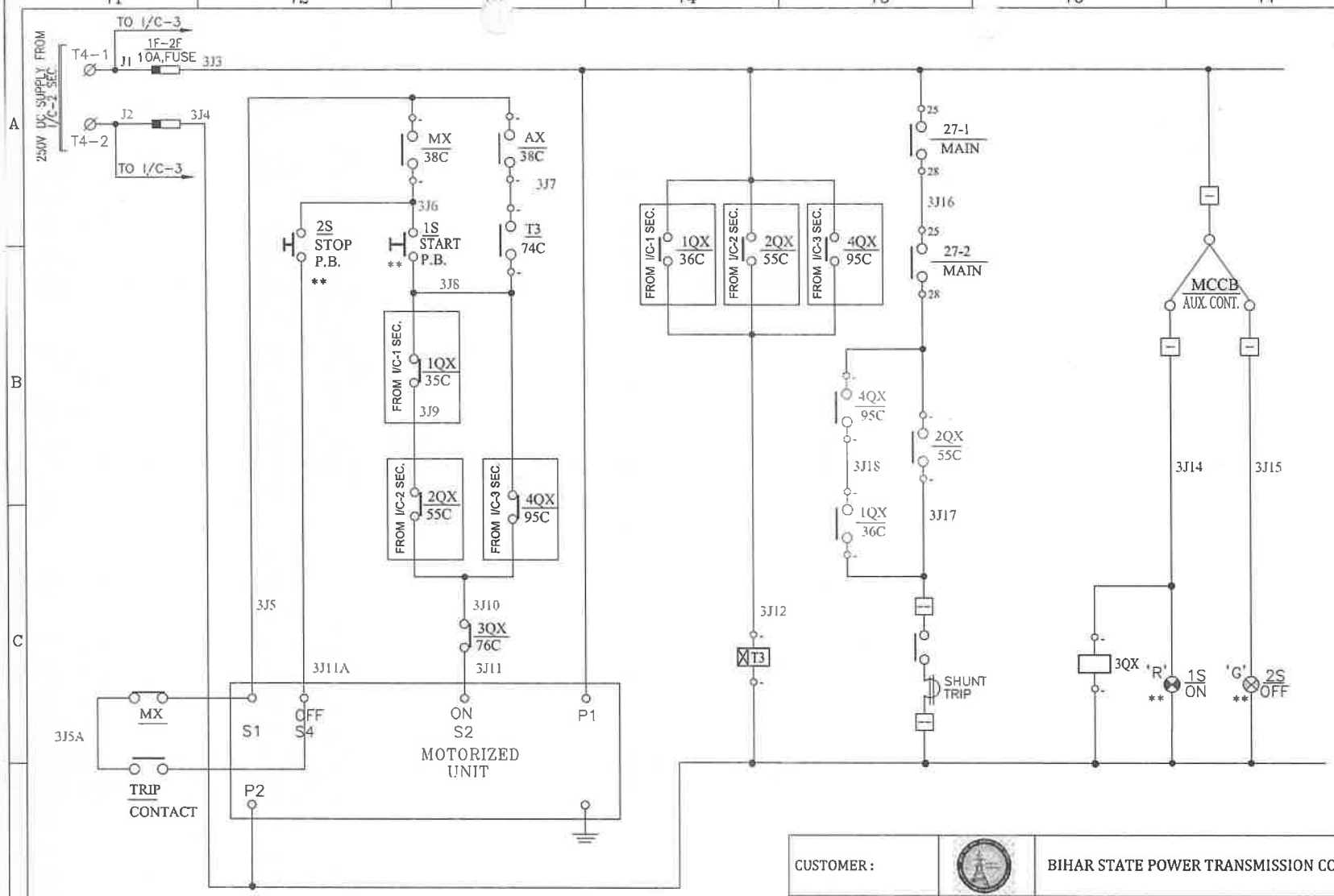


POWER CIRCUIT DIAGRAM
FOR BUSCOUPLER

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E- Mail: asianskp@gmail.com			NAME	DATE	TITLE : 415V ACDB SCHEMATIC DIAGRAM		
Asian Switchgear Pvt. Ltd.		DRAWN	GANESH	08.08.2024			
		CHECKED	GANESH	08.08.2024			
		APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160B		REV.01	--	REV.03	--	SCALE N.T.S.	
		REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 17 OF 20	
		DIMENSION TOLERANCE ± 10MM.					



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CONTROL CIRCUIT DIAGRAM
FOR BUSCOUPLER

** :-ILLUMINATED TYPE PUSH BUTTON

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410604, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankrp@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ACDB SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	--	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 18 OF 20
	DIMENSION TOLERANCE ± 10MM.				

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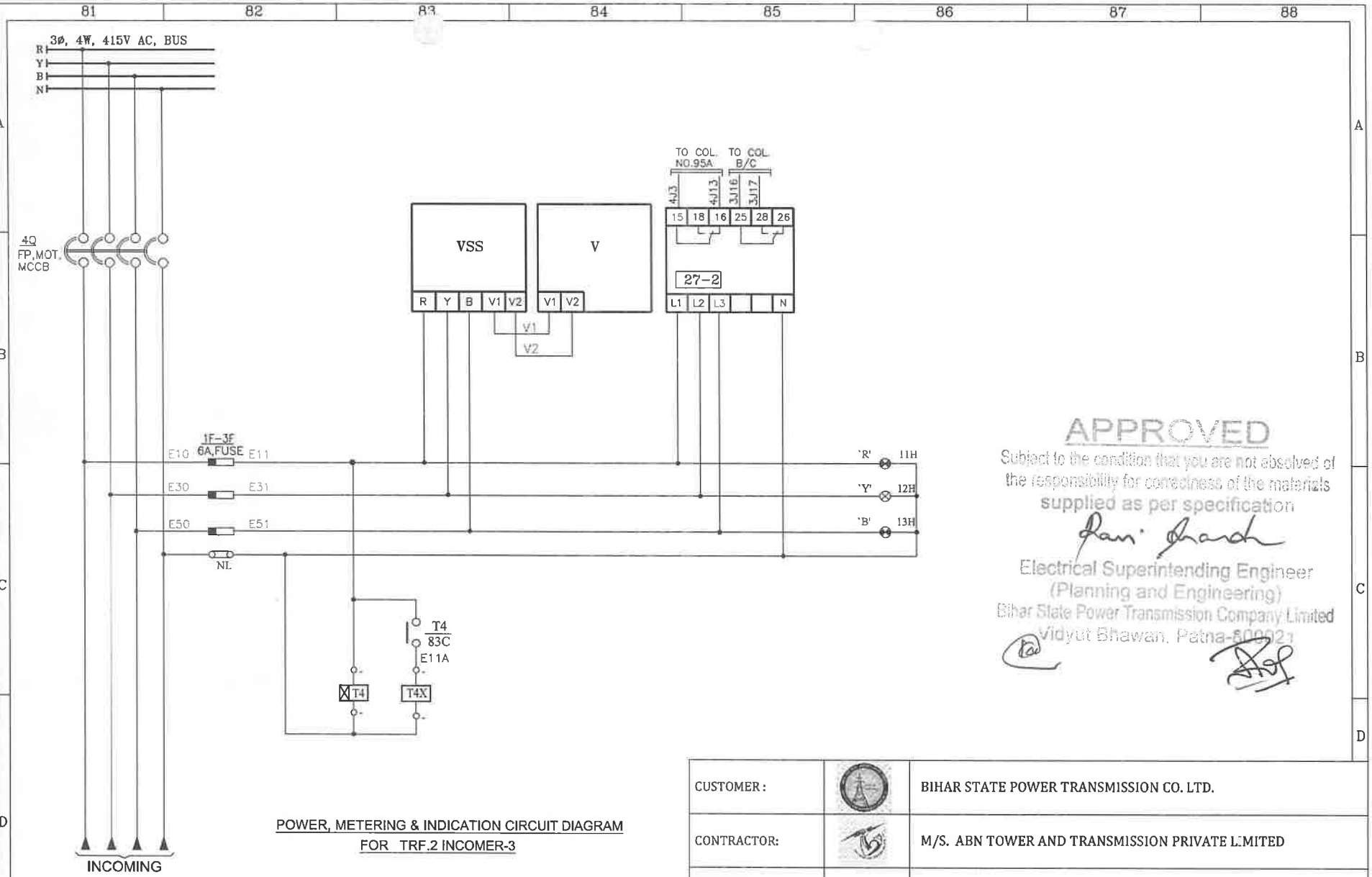

POWER, METERING & INDICATION CIRCUIT DIAGRAM
FOR TRF.2 INCOMER-3

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankanp@gmail.com		NAME	DATE	TITLE : 415V ACDB SCHEMATIC DIAGRAM			
	DRAWN	GANESH	08.08.2024				
	CHECKED	GANESH	08.08.2024				
Asian Switchgear Pvt. Ltd.	APPROVED						
DRAWING NUMBER : ASPL/BSPTCL/24160B		REV.01	--	REV.03	--	SCALE N.T.S.	
		REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 19 OF 20	
		DIMENSION TOLERANCE ± 10MM.					

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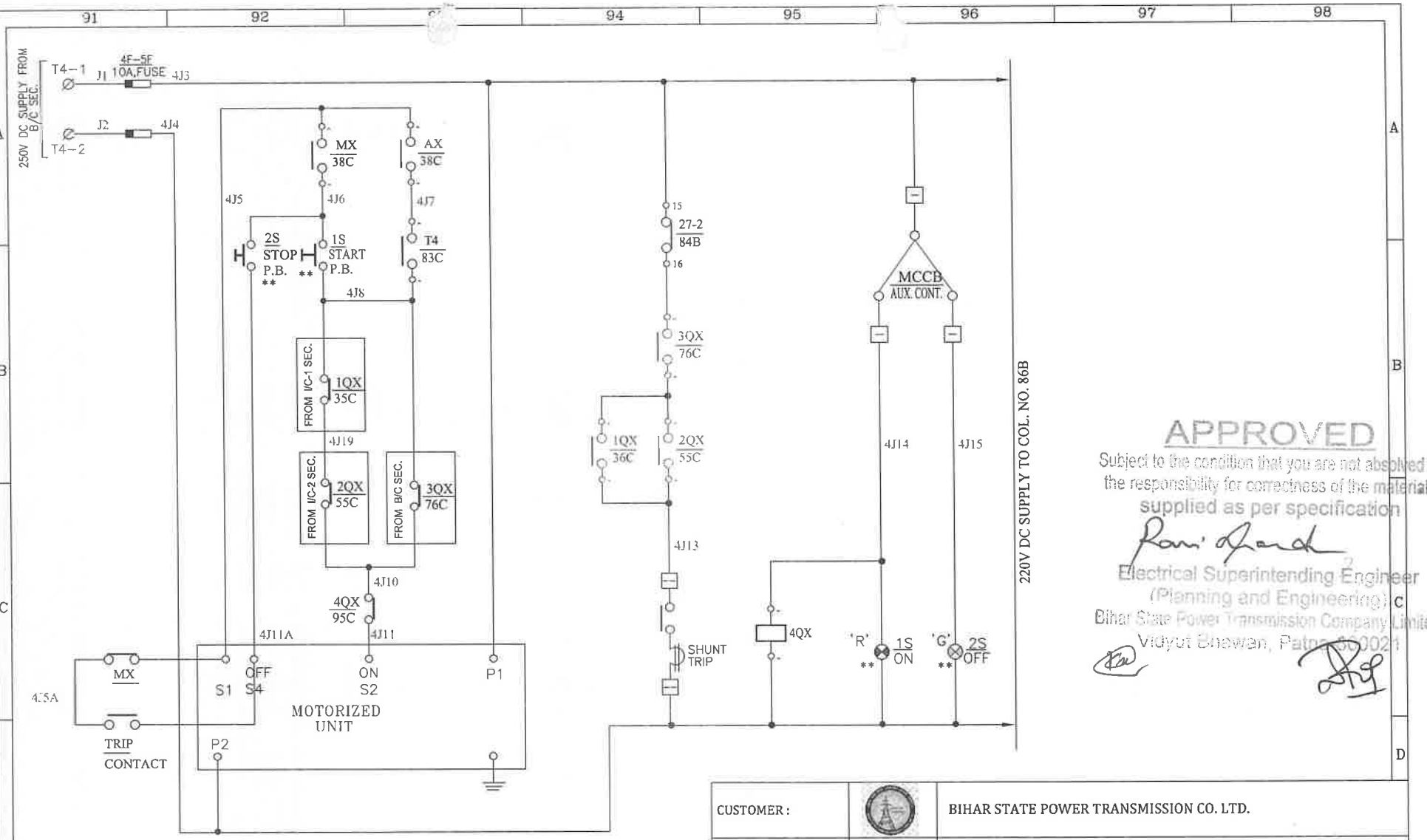

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CONTROL CIRCUIT DIAGRAM
FOR TRF. 2 INCOMER-3

** :-ILLUMINATED TYPE PUSH BUTTON

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Kosma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianksp@gmail.Com		NAME	DATE	TITLE : 415V ACDB SCHEMATIC DIAGRAM
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024	
	CHECKED	GANESH	08.08.2024	
	APPROVED			

DRAWING NUMBER : ASPL/BSPTCL/24160B	REV.01	--	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 20 OF 20
	DIMENSION TOLERANCE ± 10MM.				

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ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	415V MLDB
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-80002

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2430002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com		NAME	DATE	TITLE : 415V MLDB TITLE SHEET		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160C	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
	REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 1 OF 8	
	DIMENSION TOLERANCE ± 10MM.					

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GENERAL NOTES FOR LT SWITCH BOARD :-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
3. THE PANEL SHALL BE SUITABLE FOR 3Ø, 4W, 415V±10% AC, 50±5% HZ SUPPLY.
4. THE PANEL SHALL BE FABRICATED WITH
   - (i) BASE CHANNEL - ISMC-75
   - (II) STRUCTURE & MOUNTING PLATE - 2.0 mm. CRCA
   - (III) DOOR,COVER & PARTITION - 1.6 mm. CRCA
   - (IV) GLAND PLATE - 3.0 mm. CRCA
5. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
6. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
7. BUS BAR SHALL BE OF ELECTROLYTIC GRADE COPPER SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSON RESISTANCE, SMC/DMC INSULATORS.
8. BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
9. EARTH BUS SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
10. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
    - A. AC VOLTAGE CIRCUIT - 1.5 SQ MM RED, YELLOW, BLUE, BLACK
    - B. CURRENT CIRCUIT - 2.5 SQ MM RED, YELLOW, BLUE, BLACK
    - C. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
    - D. DC CONTROL CKT. - 1.5 SQ MM GREY
    - E. GROUNDING - 2.5 SQ MM GREEN
11. THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:
    - A. BETWEEN PHASE TO PHASE - 25 MM
    - B. BETWEEN PHASE TO NEUTRAL - 25 MM
    - C. BETWEEN PHASE TO EARTH - 25 MM
    - D. BETWEEN NEUTRAL TO EARTH - 25 MM

    NOTE:–CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.
12. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
13. PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
14. CABLE ENTRY AS PER G.A. DRAWING.
15. PAINT SHADE - SMOKE GREY (692 OF IS:5)

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt. Ltd. B-17 Reema Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asinkanp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V MLDB GENERAL NOTES

DRAWING NUMBER : ASPL/BSPTCL/24160C	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 2 OF 8
	DIMENSION TOLERANCE ± 10MM.				

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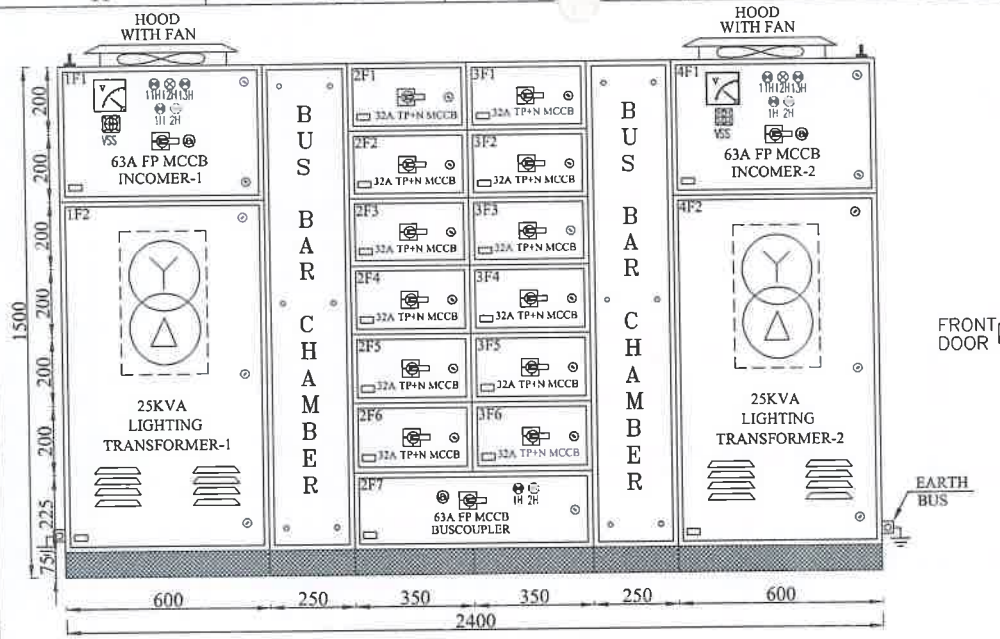
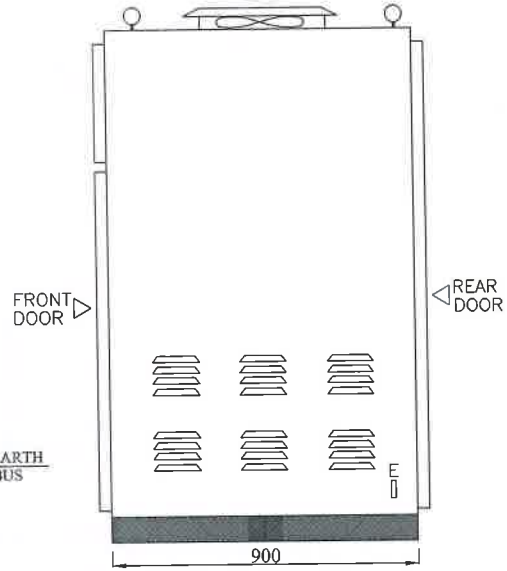
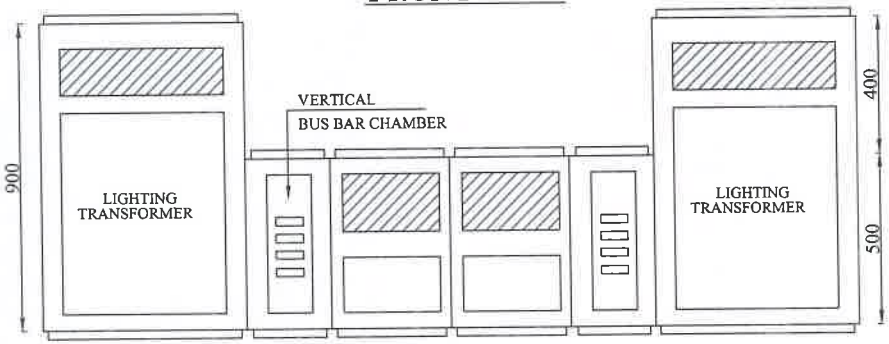


FRONT VIEW



SIDE VIEW



BOTTOM VIEW

(as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Chand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

Drawing Shall be modified as per comment in different sheets

MAIN BUS BAR SIZE:-

PHASE : 1x25x10 Sq. mm./Eq. CU.
NEUTRAL : 1x25x05 Sq. mm./Eq. CU.
EARTH : 1x20x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

@ :-MECHANICAL INTERLOCKED

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankanpur@gmail.com Asian Switchgear Pvt. Ltd.		NAME	DATE	TITLE : 415V MLDB GENERAL ARRANGEMENT DRAWING		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160C		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 3 OF 8
		DIMENSION TOLERANCE ± 10MM.				

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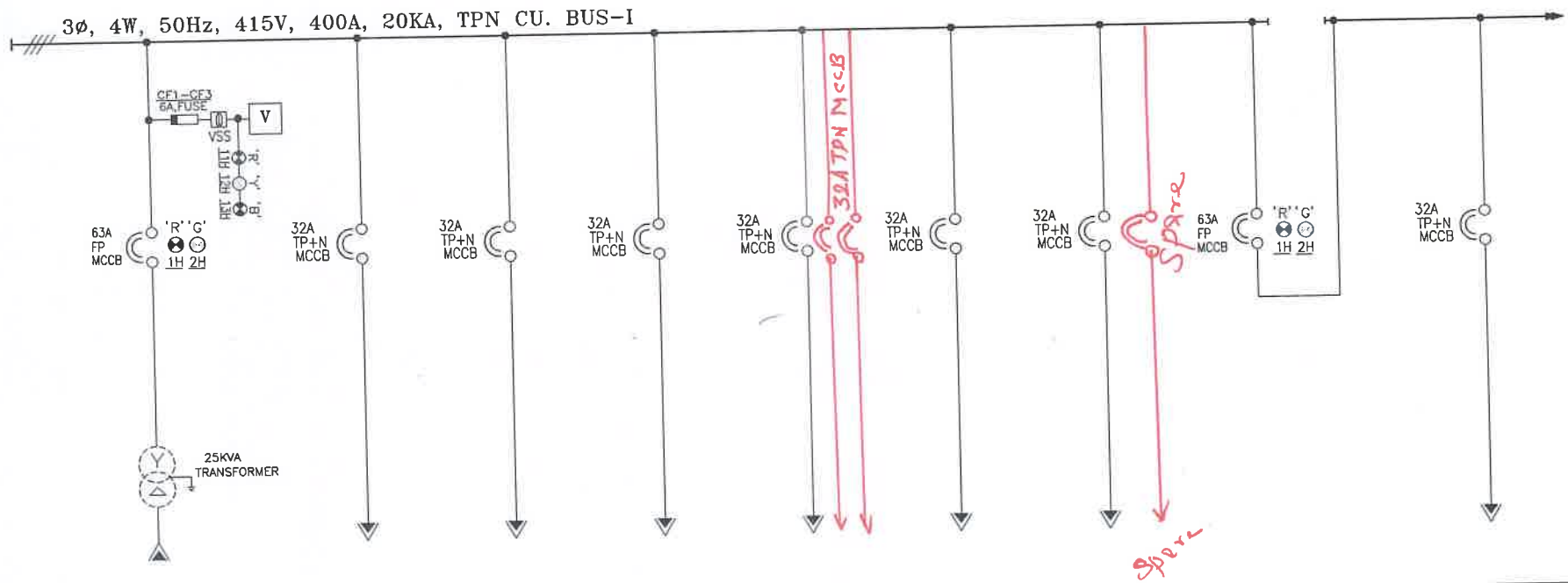

FEEDER No.	1F1,1F2	2F1	2F2	2F3	2F4	2F5	2F6	2F7	3F1
FEEDER RATING	63A	32A	32A	32A	32A	32A	32A	63A	32A
FEEDER DESCRIPTION	25KVA 415/415V DYN1 LIGHTING TRF.-1	NILP-1 , CRB LIGHTING SUPPLY-1	NILP-2 , CRB STORE SHED LIGHTING	DG. SHED LIGHTING	NOLP-1 SWYD LIGHTING-1	SPARE	SPARE	BUS COUPLER	NILP-1 , CRB LIGHTING SUPPLY-2
CABLE SIZE IN mm2	1RX3.5CX300 AL.	1Rx3.5Cx35 AL.	1Rx3.5Cx35 AL.	1Rx3.5Cx35 AL.	1Rx3.5Cx35 AL.	--	--	--	1Rx3.5Cx35 AL.

(as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Anand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

03 Sets (total) of NOLP ports to be provided in each side of bus sectionalizer of NOLP for *

* ① 132KV Switchyard ② 33KV Switchyard ③ Street lighting respectively.

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianskp@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V MLDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160C	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 4 OF 8
	DIMENSION TOLERANCE ± 10MM.				

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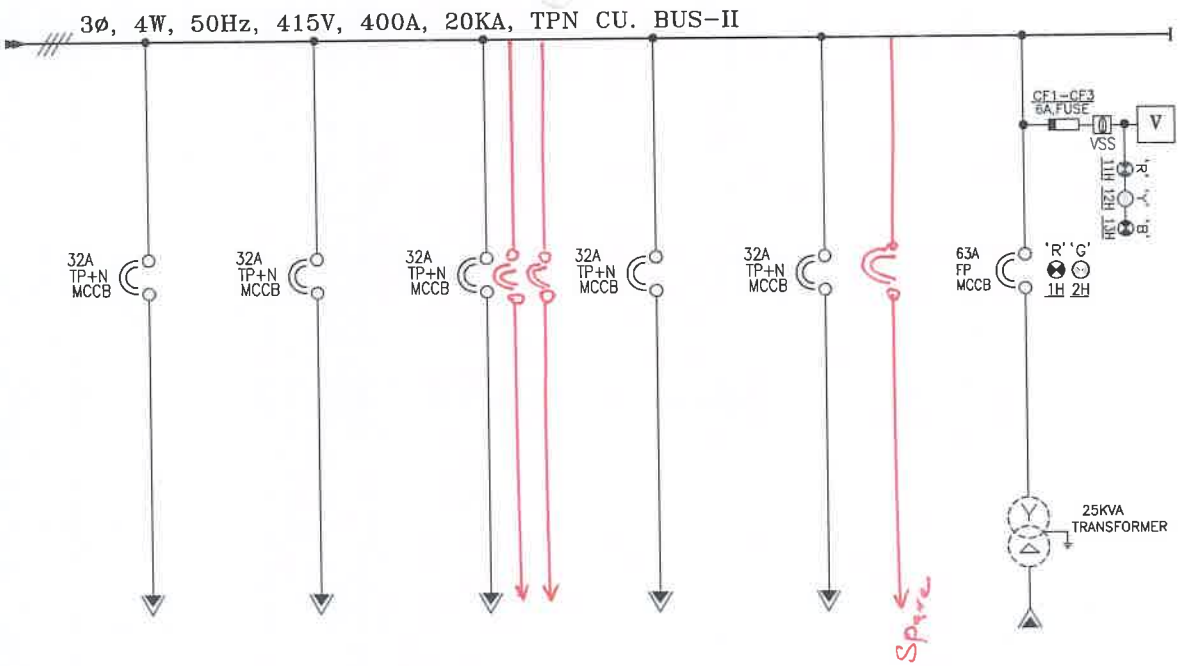

FEEDER No.	3F2	3F3	3F4	3F5	3F6	4F1,4F2
FEEDER RATING	32A	32A	32A	32A	32A	63A
FEEDER DESCRIPTION	NILP-4 DORMITORY LIGHTING	NILP-5 SECURITY HUT & PUMP HOUSE LIGHTING	NOLP-1 SWYD LIGHTING-2	SPARE	SPARE	25KVA 415/415V DYN1 LIGHTING TRF.-2
CABLE SIZE IN mm2	1Rx3.5Cx35 AL.	1Rx3.5Cx35 AL.	1Rx3.5Cx35 AL.	--	--	1RX3.5CX300 AL.

03 Sets of NOLP port to be provided in each side of bus sectionalizer of MLDB for
① 132KV Switchyard
② 33KV Switchyard
③ Street lighting
respectively.

(as corrected)

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianskp@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V MLDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160C	REV.01	04.11.2024	REV.03	--	SCALE N.T.S
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 5 OF 8
	DIMENSION TOLERANCE ± 10MM.				

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BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
A			
1	MCCB-63A,4P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM & AUX. CONTACT BLOCK	C&S	3
2	CASTLE LOCK FOR MECHANICAL INTERLOCKING	REPUTED	3
3	25KVA , 415/415V DYN1 LIGHTING TRANSFORMER	AE/GPD	2
4	MCCB-32A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM	C&S	12
5	ANALOG VOLT METER 96Sq.mm, 0-500V ,90DEG.	RISHABH/AE	2
6	VOLTMETER SELECTOR SWITCH 3POSITION WITH OFF ,6A	VAISHNO/SURDHI	2
7	LED INDICATION LAMP, 230V AC ,DIA. 22.5mm- RED	C&S/VAISHNO/SURDHI	5
8	LED INDICATION LAMP, 230VAC ,DIA. 22.5mm- YELLOW	C&S/VAISHNO/SURDHI	2
9	LED INDICATION LAMP,230V AC ,DIA. 22.5mm- BLUE	C&S/VAISHNO/SURDHI	2
10	LED INDICATION LAMP,230V AC ,DIA. 22.5mm- GREEN	C&S/VAISHNO/SURDHI	3
11	CONTROL CONTACTOR 230V AC	C&S	1
12	CONTROL FUSE BASE WITH HRC 6A	C&S	10
13	THEMOSTATE	REPUTED	2
14	COOLING FAN	REPUTED	2

BoM shall be modified as per comments in different sheets. of MLDB drawings

2

(as checked)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Anand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. 0-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankanpur@gmail.com Asian Switchgear Pvt. Ltd.		NAME	DATE	TITLE : 415V MLDB BILL OF MATERIAL		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160C		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023				SHEET NO. 6 OF 8
		DIMENSION TOLERANCE ± 10MM.				

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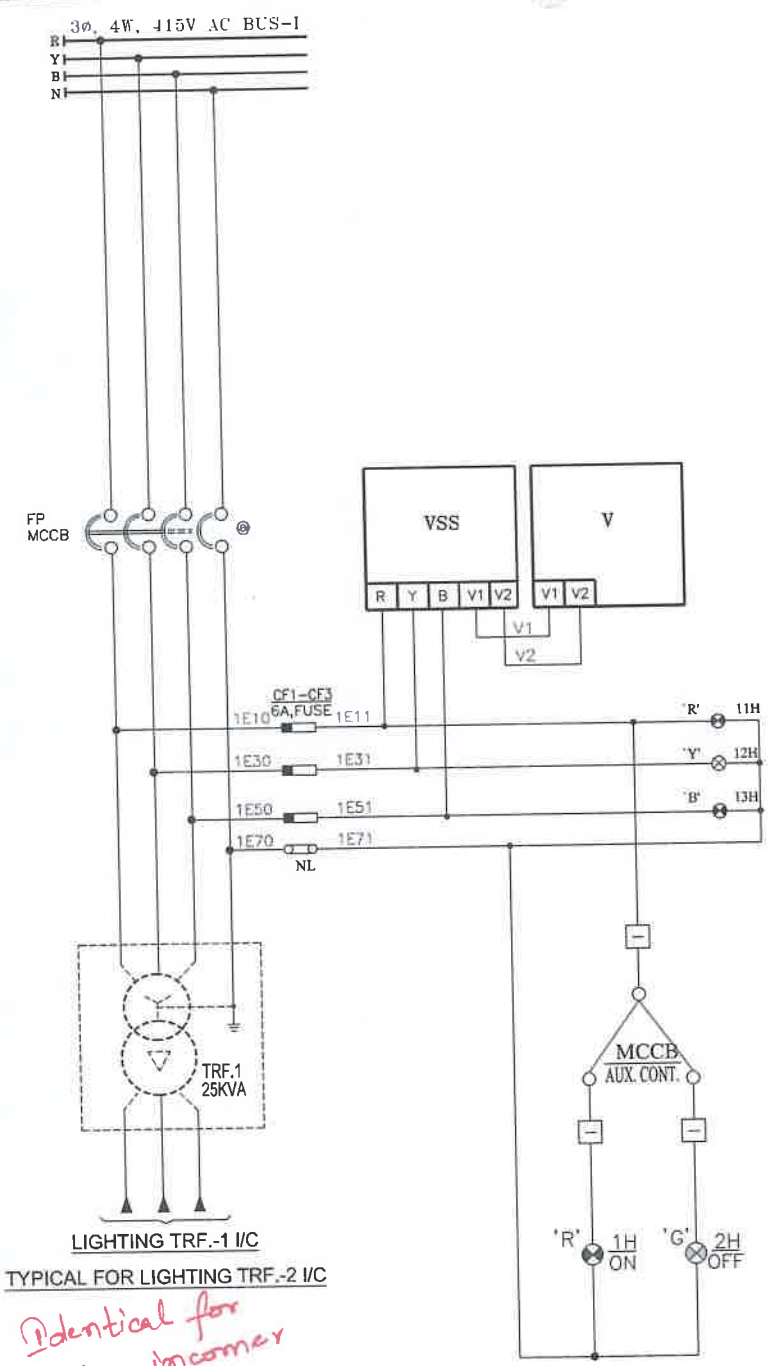
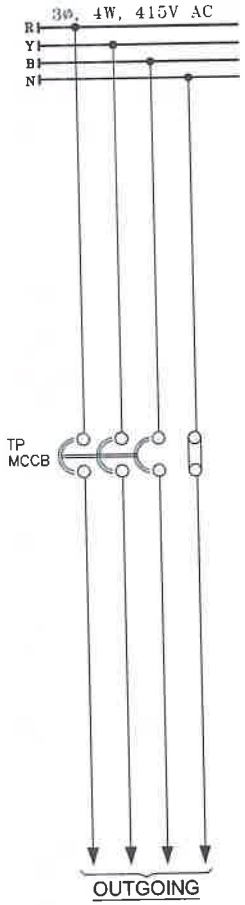


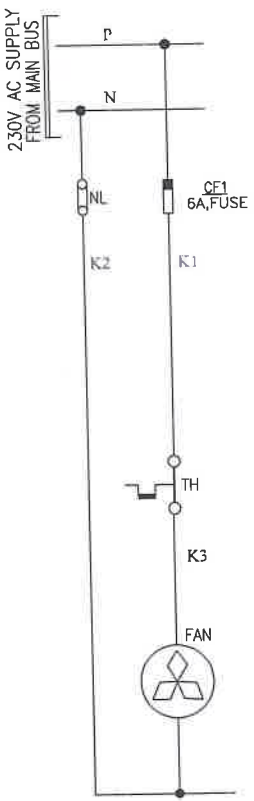
LIGHTING TRF.-1 I/C

TYPICAL FOR LIGHTING TRF.-2 I/C

Identical for both incomer



OUTGOING



COOLING FAN CIRCUIT
FOR TRF.1&2 INCOMER

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianksp@gmail.Com			NAME	DATE	TITLE : 415V MLDB SCHEMATIC DIAGRAM		
Asian Switchgear Pvt. Ltd.		DRAWN	GANESH	08.08.2024			
		CHECKED	GANESH	08.08.2024			
		APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160C		REV.01	04.11.2024	REV.03	--	SCALE N.T.S	
		REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 7 OF 8	
		DIMENSION TOLERANCE ± 10MM.					

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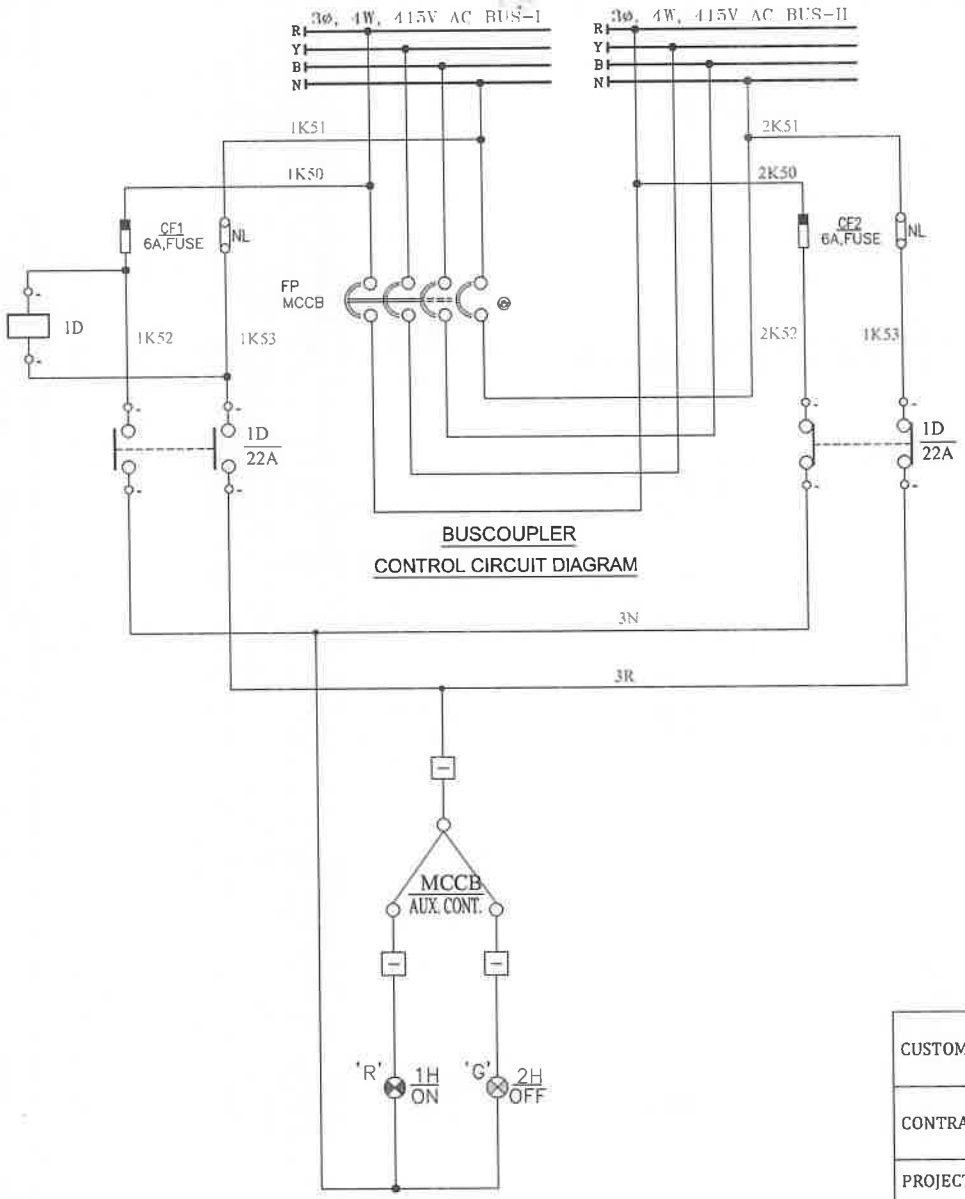

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :		NAME	DATE	TITLE :
Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E- Mail: asiankanpur@gmail.Com	DRAWN	GANESH	08.08.2024	415V MLDB SCHEMATIC DIAGRAM
Asian Switchgear Pvt. Ltd.	CHECKED	GANESH	08.08.2024	
	APPROVED			

DRAWING NUMBER : ASPL/BSPTCL/24160C	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 8 OF 8
	DIMENSION TOLERANCE ± 10MM.				

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ASIAN SWITCHGEAR PVT. LTD.

Asian Switchgear Pvt. Ltd.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	415V ELDB
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE: 415V ELDB TITLE SHEET

DRAWING NUMBER: ASPL/BSPTCL/24160D	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 1 OF 6

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GENERAL NOTES FOR LT SWITCH BOARD :-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
3. THE PANEL SHALL BE SUITABLE FOR 3Ø, 4W, 415V±10% AC, 50±5% HZ SUPPLY.
4. THE PANEL SHALL BE FABRICATED WITH
   - (i) BASE CHANNEL - ISMC-75
   - (II) STRUCTURE & MOUNTING PLATE - 2.0 mm. CRCA
   - (III) DOOR,COVER & PARTITION - 1.6 mm. CRCA
   - (IV) GLAND PLATE - 3.0 mm. CRCA
5. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
6. THE PANEL SHALL BE PAINTED WITH **ELECTROSTATIC POWDER COATING PAINT** AFTER NINE TANK PROCESS.
7. BUS BAR SHALL BE OF **ELECTROLYTIC GRADE COPPER** SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSON RESISTANCE, SMC/DMC INSULATORS.
8. BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
9. **EARTH BUS** SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
10. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED **COPPER FLEXIBLE WIRE** AND FOLLOWING COLOUR STANDARD.
    - A. AC VOLTAGE CIRCUIT - 1.5 SQ MM RED, YELLOW, BLUE, BLACK
    - B. CURRENT CIRCUIT - 2.5 SQ MM RED, YELLOW, BLUE, BLACK
    - C. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
    - D. DC CONTROL CKT. - 1.5 SQ MM GREY
    - E. GROUNDING - 2.5 SQ MM GREEN
11. THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:
    - A. BETWEEN PHASE TO PHASE - 25 MM
    - B. BETWEEN PHASE TO NEUTRAL - 25 MM
    - C. BETWEEN PHASE TO EARTH - 25 MM
    - D. BETWEEN NEUTRAL TO EARTH - 25 MM

    NOTE:–CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.
12. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
13. PANEL **DOOR LOCK** SHALL BE PROVIDED ON EACH DOOR.
14. **CABLE ENTRY** AS PER G.A. DRAWING.
15. PAINT SHADE - **SMOKE GREY (692 OF IS:5)**

APPROVED
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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Kosma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410007 www.asianswitchgear.com E-Mail: asianhq@gmail.Com			NAME	DATE	TITLE: 415V ELDB GENERAL NOTES		
Asian Switchgear Pvt. Ltd.		DRAWN	GANESH	08.08.2024			
		CHECKED	GANESH	08.08.2024			
		APPROVED					
DRAWING NUMBER: ASPL/BSPTCL/24160D		REV.01	04.11.2024	REV.03	--	SCALE N.T.S	
		REV.02	--	REV.04	--		
JOB NUMBER: ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 2 OF 6	
		DIMENSION TOLERANCE ± 10MM.					

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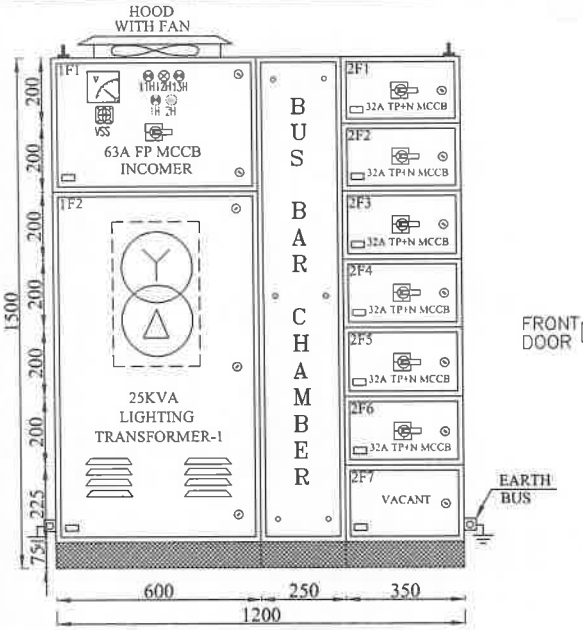
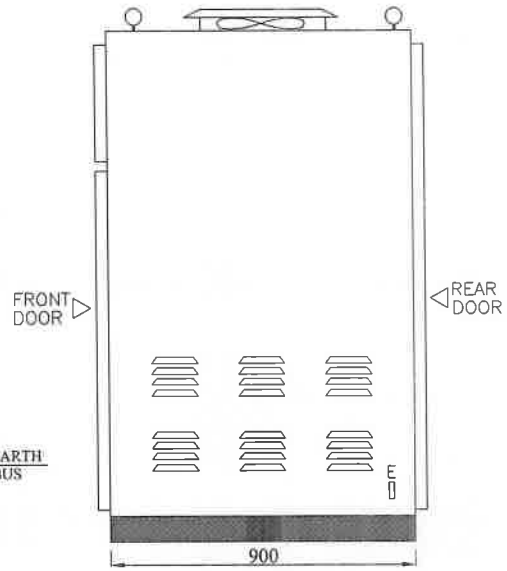
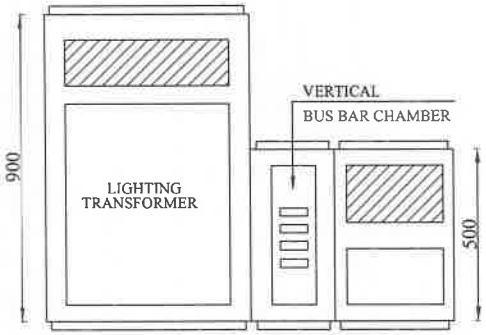


FRONT VIEW



SIDE VIEW



BOTTOM VIEW

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

MAIN BUS BAR SIZE:-

PHASE : 1x25x05 Sq. mm./Eq. CU.
NEUTRAL : 1x25x05 Sq. mm./Eq. CU.
EARTH : 1x20x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiaskanp@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ELDB GENERAL ARRANGEMENT DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160D	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 3 OF 6
	DIMENSION TOLERANCE ± 10MM.				

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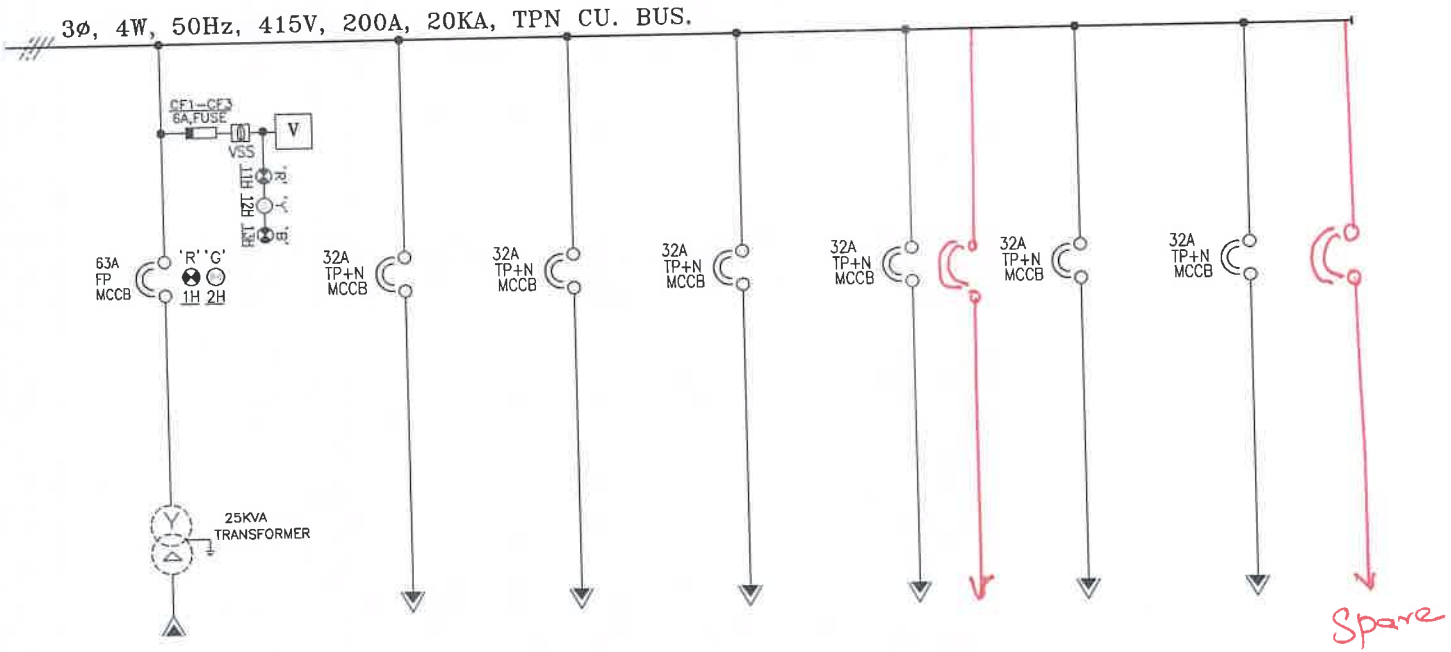

FEEDER No.	1F1,1F2	2F1	2F2	2F3	2F4	2F5	2F6
FEEDER RATING	63A	32A	32A	32A	32A	32A	32A
FEEDER DESCRIPTION	25KVA 415/415V DYN1 LIGHTING TRF.	EILP-1 , CRB LIGHTING SUPPLY	EILP-2 STORE SHED LIGHTING	EILP-3 DG. SHED LIGHTING	EOLP-1 SWYD LIGHTING-1	SPARE	SPARE
CABLE SIZE IN mm2	1RX3.5CX70 AL.	1Rx4Cx16 CU.	1Rx4Cx16 CU.	1Rx4Cx16 CU.	1Rx4Cx16 CU.	--	--

02 nos. of EOLP ports to be provided
① for 132KV Switchyard
② for 33KV Switchyard respectively.

(as a noted)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
B-17 Kosmik Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianlkp@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ELDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160D	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.	NIT NO.:10/PR/BSPTCL/2023		
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 4 OF 6

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BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
A			
1	MCCB-63A,4P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM & AUX. CONTACT BLOCK	C&S	1
2	25KVA , 415/415V DYN1 LIGHTING TRANSFORMER	AE/GPD	1
3	MCCB-32A,3P,20KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM	C&S	6
4	ANALOG VOLT METER 96Sq.mm, 0-500V ,90DEG.	RISHABH/AE	1
5	VOLTMETER SELECTOR SWITCH 3POSITION WITH OFF ,6A	VAISHNO/SURDHI	1
6	LED INDICATION LAMP, 230V AC ,DIA. 22.5mm- RED	C&S/VAISHNO/SURDHI	2
7	LED INDICATION LAMP, 230VAC ,DIA. 22.5mm- YELLOW	C&S/VAISHNO/SURDHI	1
8	LED INDICATION LAMP,230V AC ,DIA. 22.5mm- BLUE	C&S/VAISHNO/SURDHI	1
9	LED INDICATION LAMP,230V AC ,DIA. 22.5mm- GREEN	C&S/VAISHNO/SURDHI	1
10	CONTROL FUSE BASE WITH HRC 6A	C&S	4
11	THEMOSTATE	REPUTED	1
12	COOLING FAN	REPUTED	1

BoM Shall be modified as per comments in different sheets of ELDB

(as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
B-17 Roorna Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianSwitchgear.com
E- Mail: asiankgp@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 415V ELDB BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/24160D	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 5 OF 6
	DIMENSION TOLERANCE ± 10MM.				

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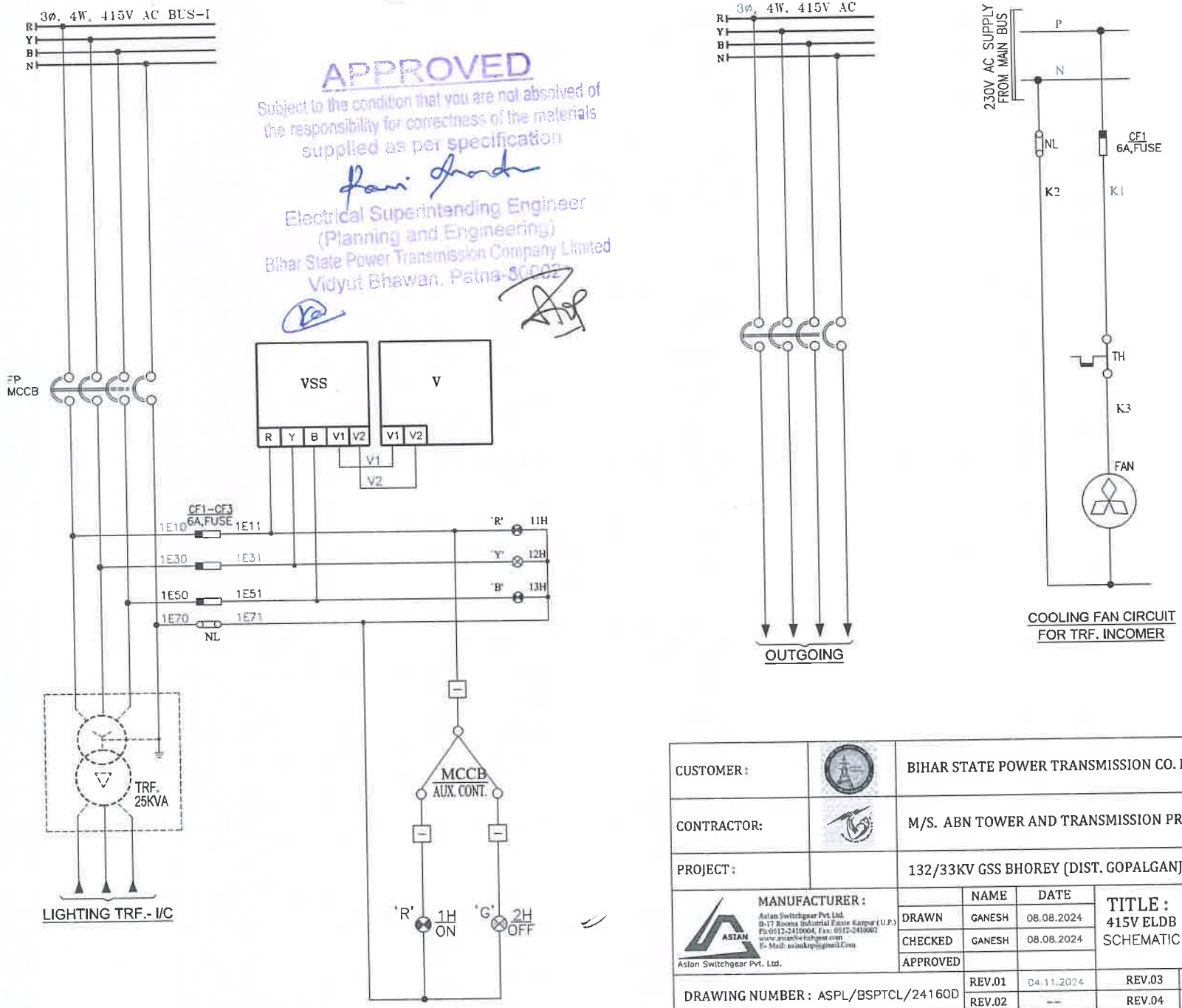

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
D-17 Roorna Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianSwitchgear.com
E-Mail: asianknp@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
415V ELDB
SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160D	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.
SHEET NO. 6 OF 6

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ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	220V DCDB
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com		NAME	DATE	TITLE: 220V DCDB TITLE SHEET			
	DRAWN	GANESH	08.08.2024				
	CHECKED	GANESH	08.08.2024				
	APPROVED						
DRAWING NUMBER: ASPL/BSPTCL/24160E		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
		REV.02	--	REV.04	--		
JOB NUMBER: ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 1 OF 10	
		DIMENSION TOLERANCE ± 10MM.					

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GENERAL NOTES FOR LT SWITCH BOARD :-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
3. THE PANEL SHALL BE SUITABLE FOR 220V±10% DC SUPPLY.
4. THE PANEL SHALL BE FABRICATED WITH
   - (i) BASE CHANNEL - ISMC-75
   - (II) STRUCTURE & MOUNTING PLATE - 2.0 mm. CRCA
   - (III) DOOR,COVER & PARTITION - 1.6 mm. CRCA
   - (IV) GLAND PLATE - 3.0 mm. CRCA
5. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
6. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
7. BUS BAR SHALL BE OF ELECTROLYTIC GRADE COPPER SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSON RESISTANCE, SMC/DMC INSULATORS.
8. BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
9. EARTH BUS SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
10. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
    - A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
    - B. DC CONTROL CKT. - 1.5 SQ MM GREY
    - C. GROUNDING - 2.5 SQ MM GREEN
11. THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:
    - A. BETWEEN +VE TO –VE - 25 MM
    - B. BETWEEN –VE TO EARTH - 25 MM
    - C. BETWEEN +VE TO EARTH - 25 MM

    NOTE:–CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.
12. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
13. PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
14. CABLE ENTRY AS PER G.A. DRAWING.
15. PAINT SHADE - SMOKE GREY (692 OF IS:5)
16. AUX. SUPPLY 230V AC NOT IN ASPL SCOPE

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Kosma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianksp@gmail.Com			NAME	DATE	TITLE : 220V DCDB GENERAL NOTES		
Asian Switchgear Pvt. Ltd.		DRAWN	GANESH	08.08.2024			
		CHECKED	GANESH	08.08.2024			
		APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160E		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
		REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 2 OF 10	
		DIMENSION TOLERANCE ± 10MM.					

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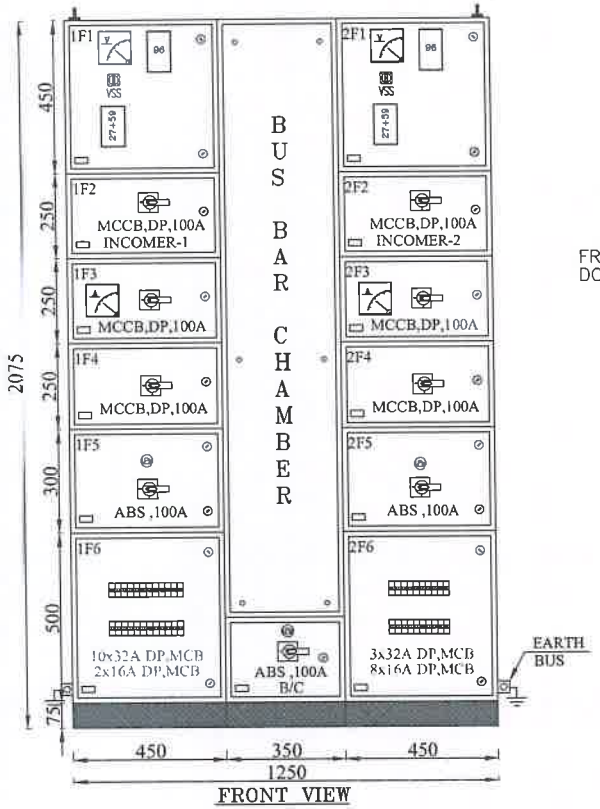
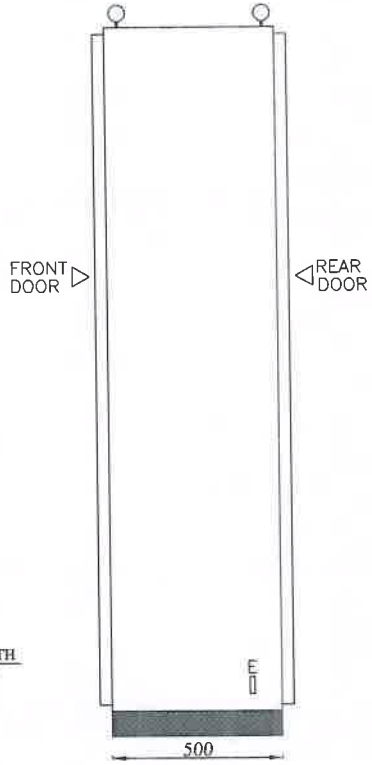
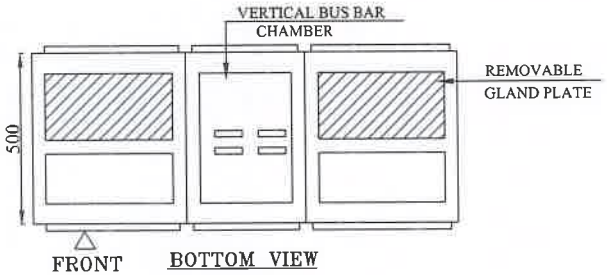


FRONT VIEW



SIDE VIEW



BOTTOM VIEW

@ :-MECHANICAL INTERLOCKED

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Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

MAIN BUS BAR SIZE:-

+VE	:	1x25x10 Sq. mm./Eq. CU.
-VE	:	1x25x10 Sq. mm./Eq. CU.
EARTH	:	1x20x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E- Mail: asiankgp@gmail.Com		NAME	DATE	TITLE : 220V DCDB GENERAL ARRANGEMENT DRAWING		
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160E		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 3 OF 10
		DIMENSION TOLERANCE ± 10MM.				

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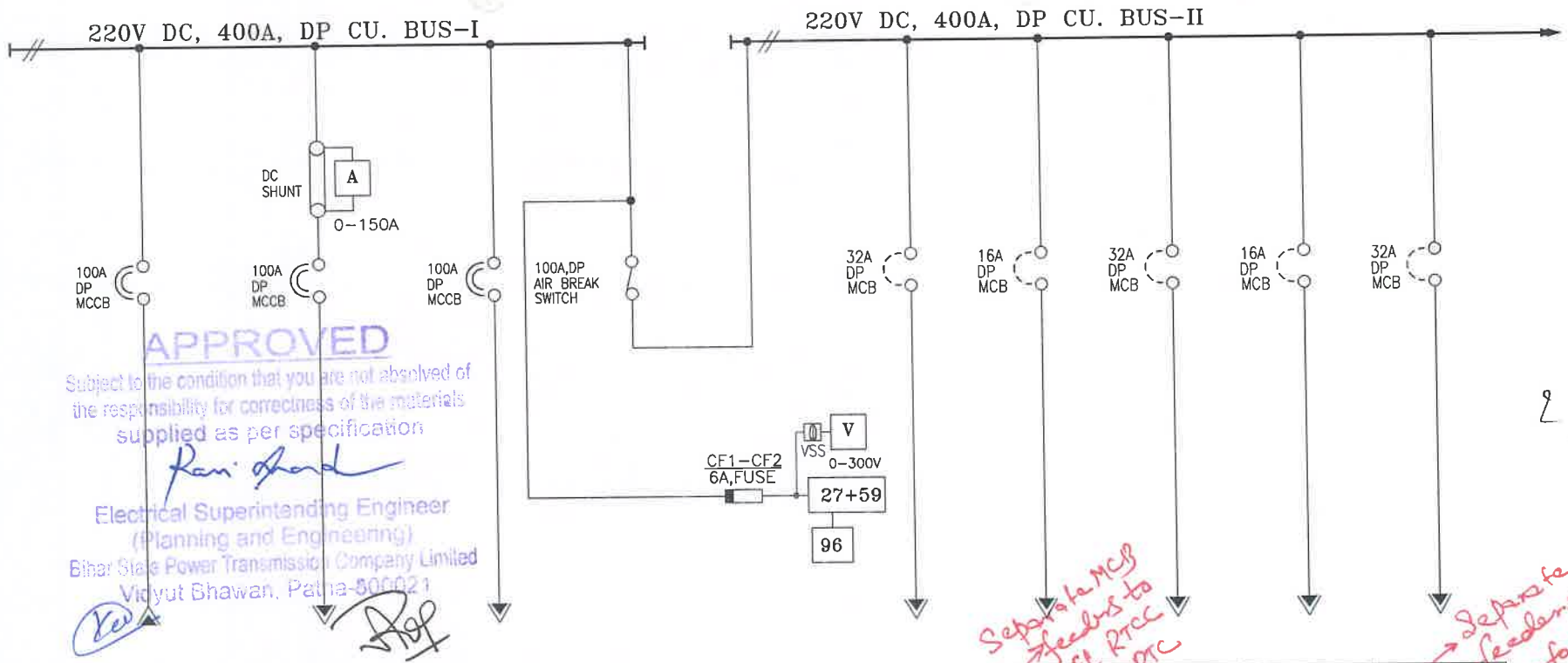

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Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Anand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

FEEDER No.	1F2	1F3	1F4	1F1, 1F5	1F6	1F6	1F6	1F6	1F6
FEEDER RATING	100A	100A	100A	100A	32A	16A	32A	16A	32A
FEEDER DESCRIPTION	INCOMER FROM CHARGER-1	220V BATTERY-1	220V BATTERY DICHARGE FEEDER	AIR BREAK SWITCH	132KV C&R PANEL SUPPLY-1	50MVA TRAFO-1 RTCC CONTROL SUPPLY	33KV C&R PANEL SUPPLY-1	315KVA SST-1 MB SUPPLY	50MVA TRAFO-1 MB SUPPLY
CABLE SIZE IN mm2	2x1Cx150 AL.	2x1Cx150 AL.	2x1Cx150 AL.	--	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.

Separate MCB feeders to Trafo-1 RTCC & Trafo-2 RTC

Separate MCB feeders to Trafo-1 & Trafo-2 MBs supply.

Separately MCB feeders for 08 nos. 132 KV bays

Separately MCB feeders for 14 nos. 33 KV bays

Separate MCB feeders for SST-1 & SST-2

Note: for all Sheets of DCDB BUS-I & BUS-II
(1) Separate DC Supply i.e DC-1 & DC-2 from each Section of DCDB to be provided by separate MCBs of suitable rating to each C&R panels, Communication panels, transformer MBs, RTCCs, (wiring from DCDB to CRP or Comm. panel to be provided individually for each panel)
(2) Looping of DC buses in CRP or communication panel is not acceptable as shown in 1F6.

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.			
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED			
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ), BIHAR			
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankanpur@gmail.com		NAME	DATE	TITLE: 220V DCDB SINGLE LINE DRAWING	
	DRAWN	GANESH	08.08.2024		
	CHECKED	GANESH	08.08.2024		
Asian Switchgear Pvt. Ltd.	APPROVED				
DRAWING NUMBER: ASPL/BSPTCL/24160E	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 4 OF 10
	DIMENSION TOLERANCE ± 10MM.				

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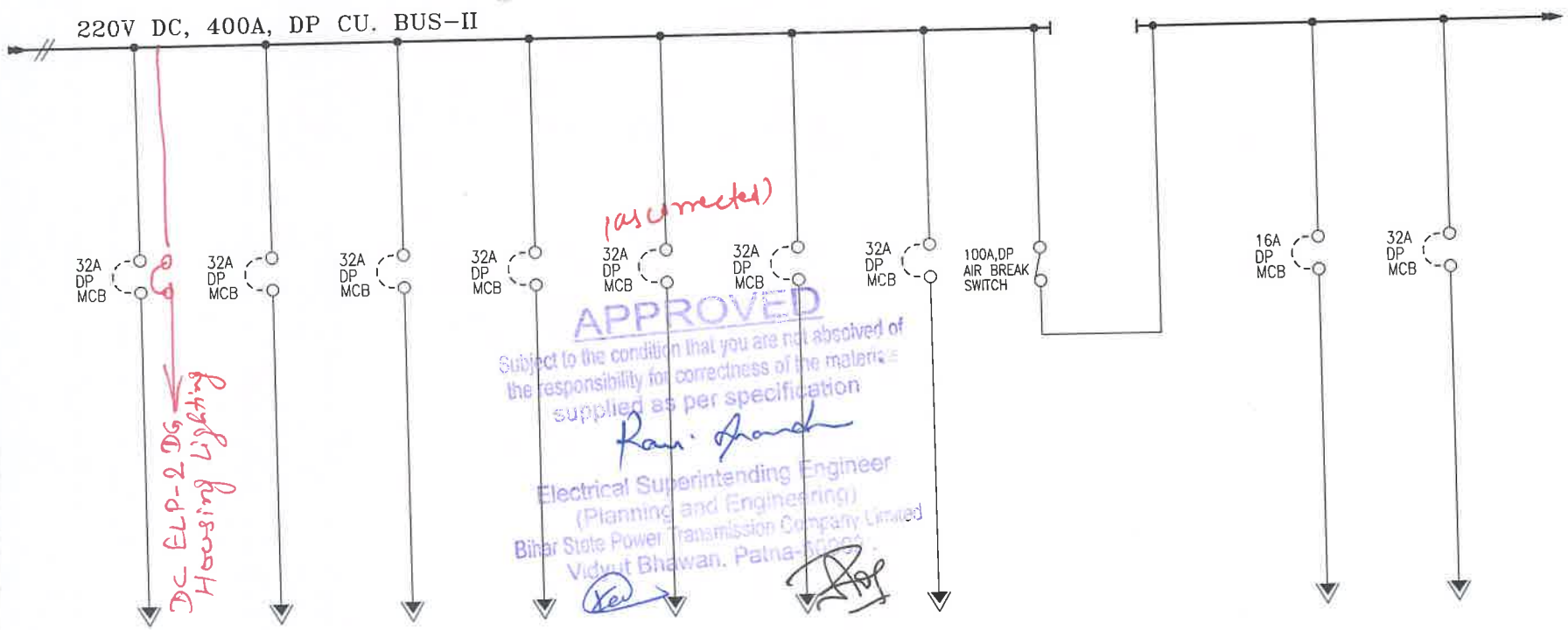

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Subject to the condition that you are not absolved of the responsibility for correctness of the material supplied as per specification
Ravi Anand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

FEEDER No.	1F6	1F6	1F6	1F6	1F6	1F6	1F6	--	2F6	2F6
FEEDER RATING	32A	32A	32A	32A	32A	32A	32A	100A	16A	32A
FEEDER DESCRIPTION	DC ELP-1 CRB LIGHTING	COMM. PANEL SUPPLY	FDA PANEL SUPPLY	SPARE	SPARE	SPARE	SPARE	BUS COUPLER	415V MSB CONTROL SUPPLY	132KV C&R PANEL SUPPLY-2
CABLE SIZE IN mm2	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	--	--	--	--	--	1x4Cx16 CU.	1x4Cx16 CU.

Each comm. panel shall be separately supplied via separate MCBs through DC-1 & DC-2 both

Separate MCBs feeders for 08 nos. 132KV bays

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
B-17 Rooma Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asianksp@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 220V DCDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160E	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S

SHEET NO. 5 OF 10

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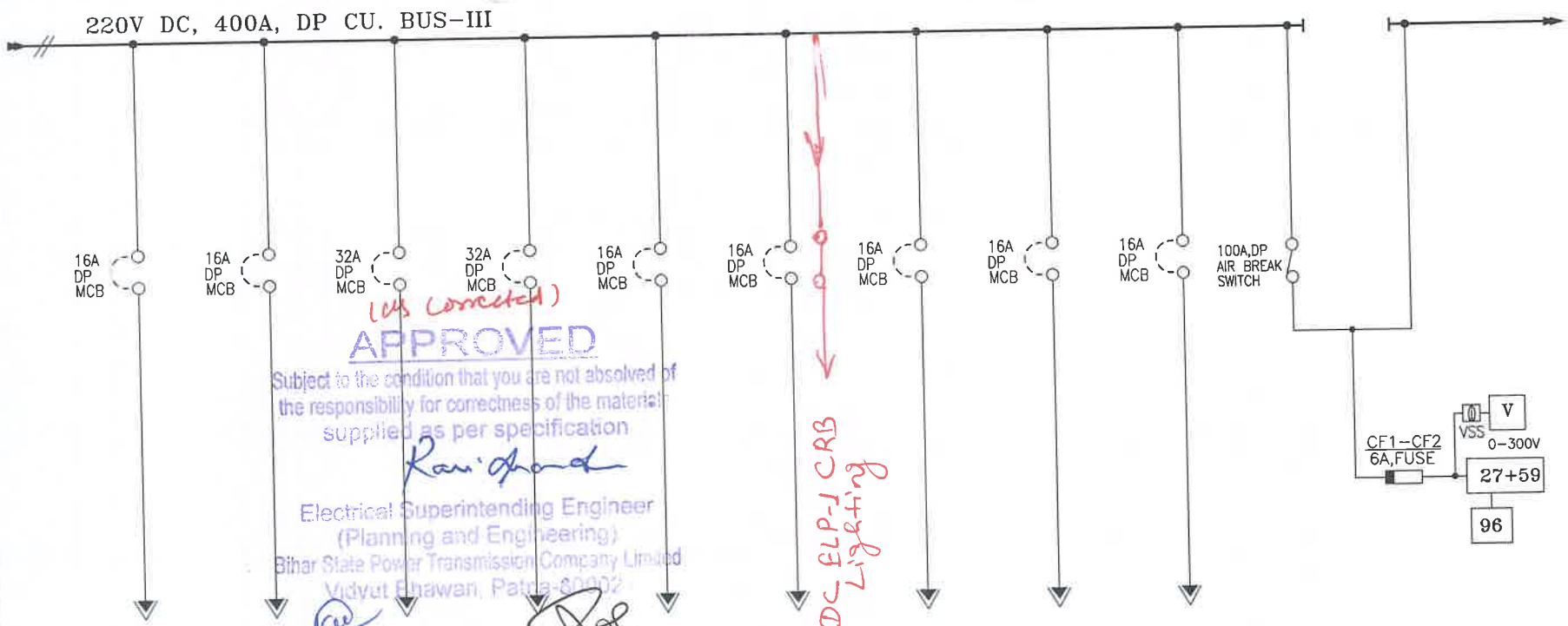

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the material supplied as per specification
Ravi Chandra
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

FEEDER No.	2F6	2F6	2F6	2F6	2F6	2F6	2F6	2R6	2F6	2F1, 2F5
FEEDER RATING	16A	16A	32A	32A	16A	16A	16A	16A	16A	100A
FEEDER DESCRIPTION	415V ACDB CONTROL SUPPLY	50MVA TRAFO-2 RTCC CONTROL SUPPLY	33KV C&R PANEL SUPPLY-2	50MVA TRAFO-2 MB SUPPLY	315KVA SST-2 MB SUPPLY	DC ELP-2 DG. HOUSUNG LIGHTING	SPARE	SPARE	SPARE	AIR BREAK SWITCH
CABLE SIZE IN mm2	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	--	--	--	--

Separate MCB feeders to Trafo-1 & Trafo-2 RTCC Control supply

Separate MCB feeders for 14 nos. 33 KV bays

Separate MCB feeders for SST-1 & SST-2

Separate MCB feeders to Trafo-1 & Trafo-2 MB Supply

2

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
D-17 Reema Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asiankanpur@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 220V DCDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160E	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 5 OF 10

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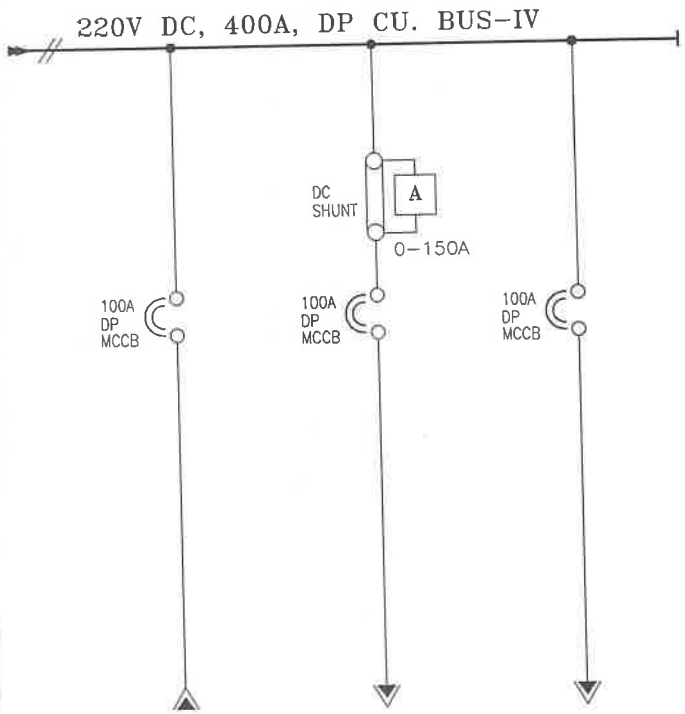

FEEDER No.	2F2	2F3	2F4
FEEDER RATING	100A	100A	100A
FEEDER DESCRIPTION	INCOMER FROM CHARGER-2	220V BATTERY-2	220V BATTERY DICHARGE FEEDER
CABLE SIZE IN mm2	2x1Cx150 AL.	2x1Cx150 AL.	2x1Cx150 AL.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Roorna Industrial Estate Kanpur (U.P.)
Ph.0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asiankgs@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
220V DCDB
SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160E	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 7 OF 10
	DIMENSION TOLERANCE ± 10MM.				

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BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
1	MCCB-100A,2P,4KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM, SPREADER , SHUNT TRIP COIL-230V AC	C&S	2
2	MCCB-100A,2P,4KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM, SPREADER	C&S	4
3	AIR BREAK SWITCH , 100A DP (i) DOOR OPERATING HANDLE	C&S	3
4	MCB ,32A,DP, C-CURVE -4KA	C&S	13
5	MCB ,16A,DP, C-CURVE -4KA	C&S	10
6	INSTANTANEOUS UNDER + OVERVOLTAGE RELAY , OPERATING VOLTAGE-220V DC, AUX. SUPPLY-230V AC	C&S/JVS	2
7	BATTERY EARTH FAULT RELAY , OPERATING VOLTAGE-220V DC, AUX. SUPPLY-230V AC	C&S/JVS	2
8	ANALOG AMP METER 96Sq.mm, 0-150A WITH SHUNT	AE/RISHABH	2
9	ANALOG VOLT METER 96Sq.mm, 0-300V	AE/RISHABH	2
10	VOLT SELECTOR SWITCH	VAISHNO/SURDHI	2
11	CONTROL FUSE BASE WITH HRC 6A	C&S	8

BoM shall be modified as per comments in SLDs of DCDB-1 & 2.

* 50% Spare feeders to be provided after consideration of comments in SLDs

(as corrected)
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asinkp@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 220V DCDB BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/24160E	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 8 OF 10
	DIMENSION TOLERANCE ± 10MM.				

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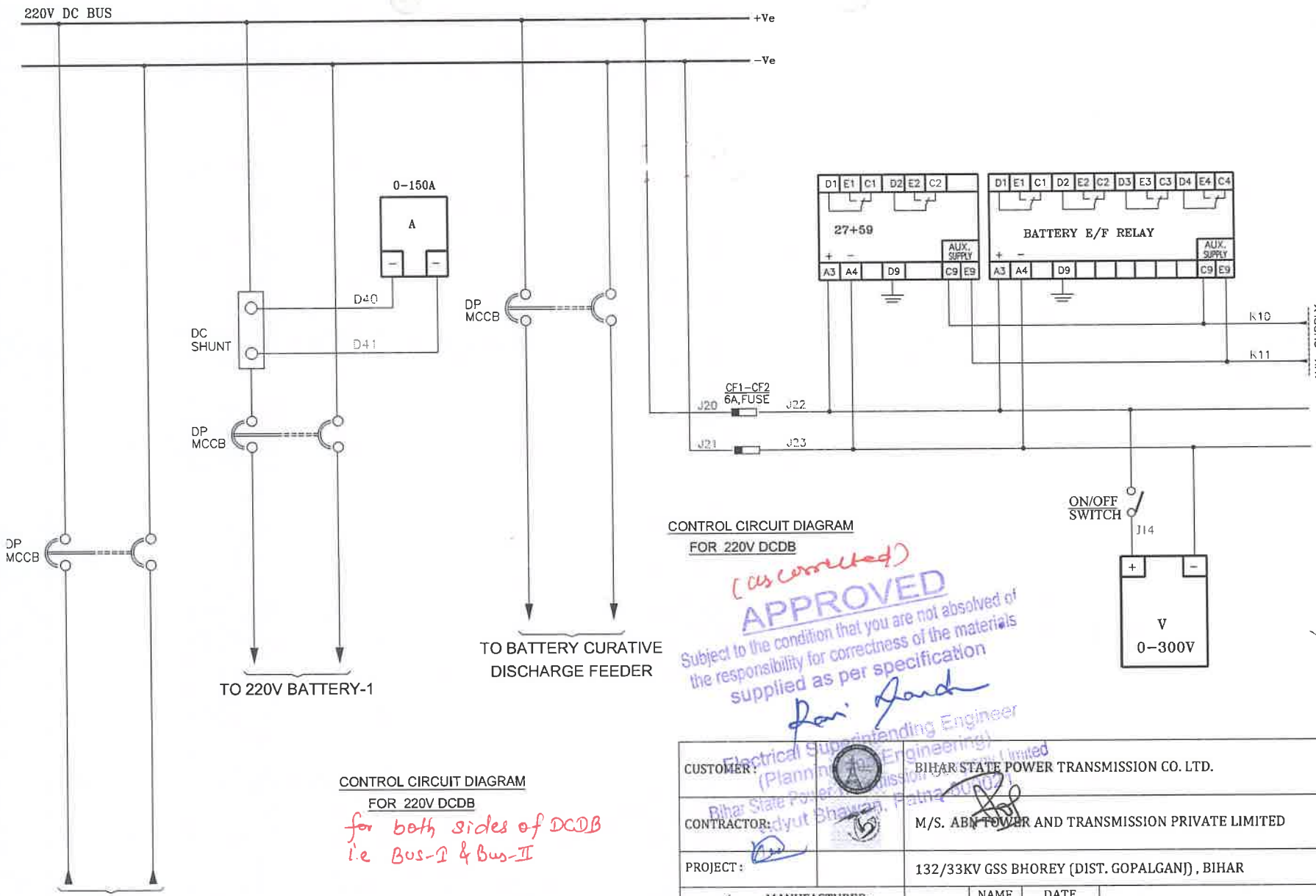


CONTROL CIRCUIT DIAGRAM
FOR 220V DCDB

(as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer (Planning & Engineering) Bihar State Power (Transmission) Company Limited Vidyut Bhawan, Patna-800021

CONTROL CIRCUIT DIAGRAM
FOR 220V DCDB

for both sides of DCDB
i.e Bus-I & Bus-II

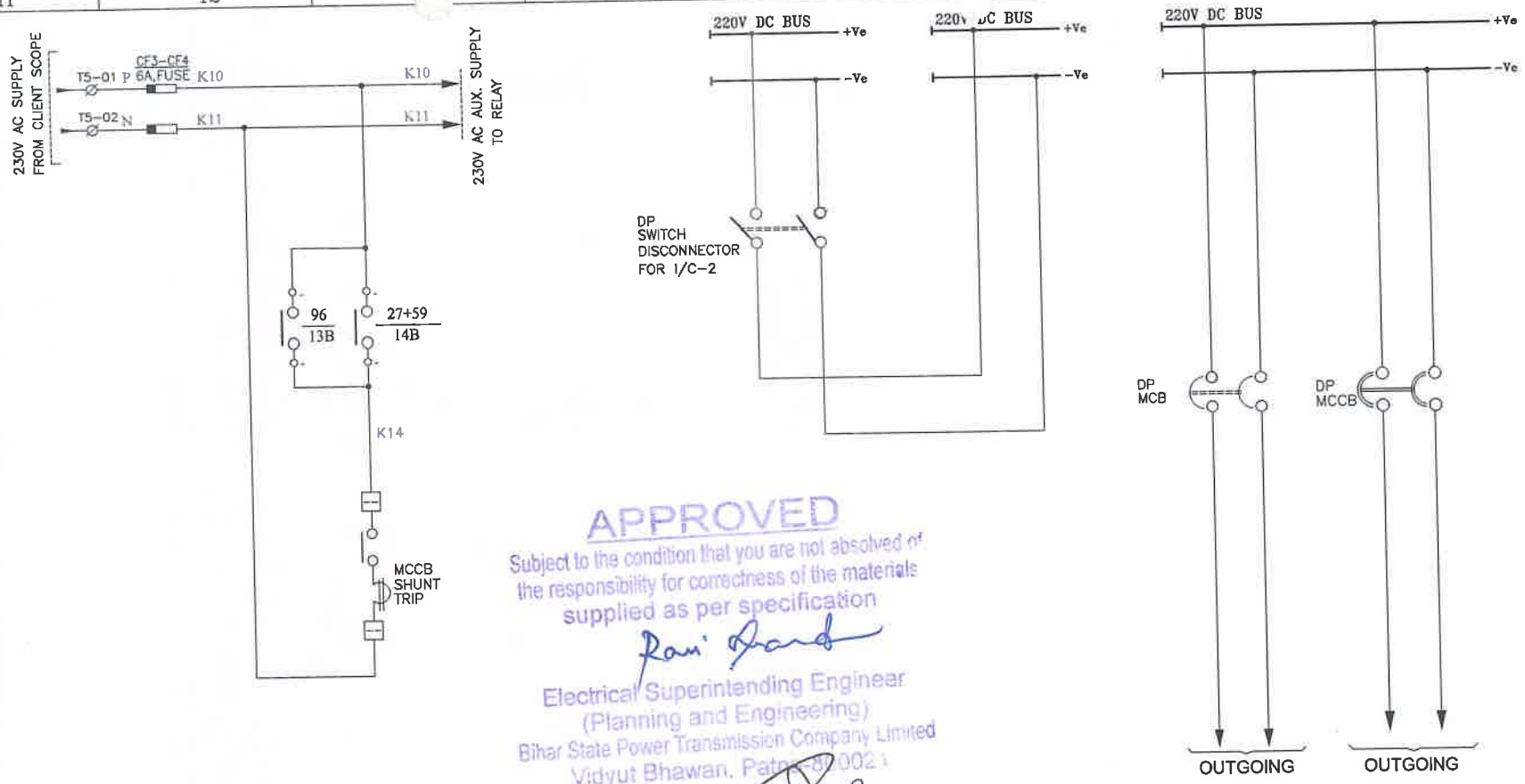
CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN POWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Kwoma Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asianskp@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
220V DCDB
SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160E	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 9 OF 10
	DIMENSION TOLERANCE ± 10MM.				



APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Anand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

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CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooms Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asiankpsg@gmail.Com Asian Switchgear Pvt. Ltd.			NAME	DATE	TITLE : 220V DCDB SCHEMATIC DIAGRAM	
		DRAWN	GANESH	08.08.2024		
		CHECKED	GANESH	08.08.2024		
		APPROVED				
DRAWING NUMBER : ASPL/BSPTCL/24160E		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 10 OF 10
		DIMENSION TOLERANCE ± 10MM.				

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ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	48V DCDB
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 48V DCDB TITLE SHEET

DRAWING NUMBER : ASPL/BSPTCL/24160F	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 1 OF 8

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GENERAL NOTES FOR LT SWITCH BOARD :-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, FLOOR MOUNTED AND COMPARTMENTALISED , CONFIRM TO IS:8623
3. THE PANEL SHALL BE SUITABLE FOR 48V±10% DC SUPPLY.
4. THE PANEL SHALL BE FABRICATED WITH
   - (i) BASE CHANNEL - ISMC-75
   - (II) STRUCTURE & MOUNTING PLATE - 2.0 mm. CRCA
   - (III) DOOR,COVER & PARTITION - 1.6 mm. CRCA
   - (IV) GLAND PLATE - 3.0 mm. CRCA
5. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
6. THE PANEL SHALL BE PAINTED WITH **ELECTROSTATIC POWDER COATING PAINT** AFTER NINE TANK PROCESS.
7. BUS BAR SHALL BE OF **ELECTROLYTIC GRADE COPPER** SUPPORTED ON NON HYGROSCOPIC, NON CARBONISING, CORROSON RESISTANCE, SMC/DMC INSULATORS.
8. BUS BAR SHALL BE INSULATED HEAT SHRINKABLE COLOURED PVC SLEEVES RED, YELLOW, BLUE AND BLACK FOR IDENTIFICATION.
9. **EARTH BUS** SHALL BE PROVIDED THROUGHOUT THE PANEL LENGTH
10. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED **COPPER FLEXIBLE WIRE** AND FOLLOWING COLOUR STANDARD.
    - A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
    - B. DC CONTROL CKT. - 1.5 SQ MM GREY
    - C. GROUNDING - 2.5 SQ MM GREEN
11. THE MINIMUM CLEARANCE IN MAIN BUSBARS SHALL BE AS FOLLOWS:
    - A. BETWEEN +VE TO –VE - 25 MM
    - B. BETWEEN –VE TO EARTH - 25 MM
    - C. BETWEEN +VE TO EARTH - 25 MM

    NOTE:–CLEARANCE BETWEEN TERMINALS AT COMPONENTS SHALL BE AS PER APPLICABLE INDIVIDUAL STANDARDS FOR COMPONENTS MANUFACTURER.
12. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
13. PANEL **DOOR LOCK** SHALL BE PROVIDED ON EACH DOOR.
14. **CABLE ENTRY** AS PER G.A. DRAWING.
15. PAINT SHADE - **SMOKE GREY (692 OF IS:5)**
16. AUX. SUPPLY 230V AC NOT IN ASPL SCOPE

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd.		NAME	DATE	TITLE : 48V DCDB GENERAL NOTES		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160F		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 2 OF 8
		DIMENSION TOLERANCE ± 10MM.				

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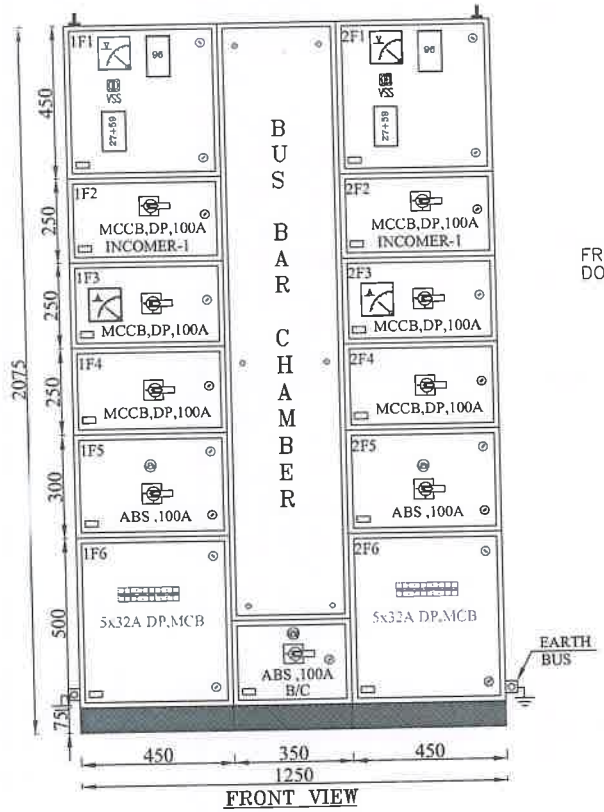
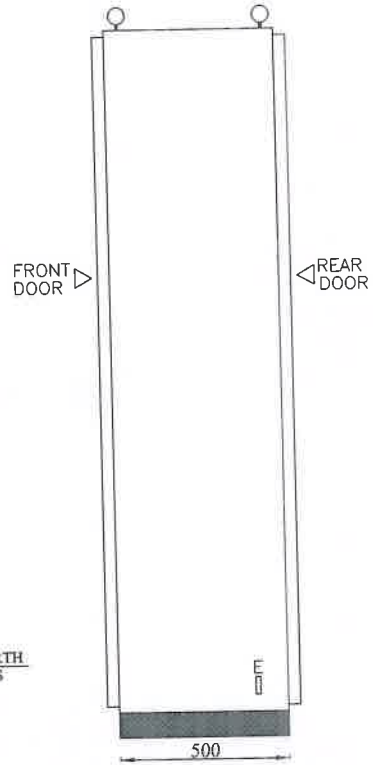
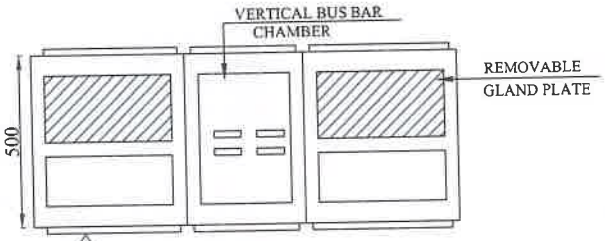


FRONT VIEW



SIDE VIEW



BOTTOM VIEW

@ :-MECHANICAL INTERLOCKED

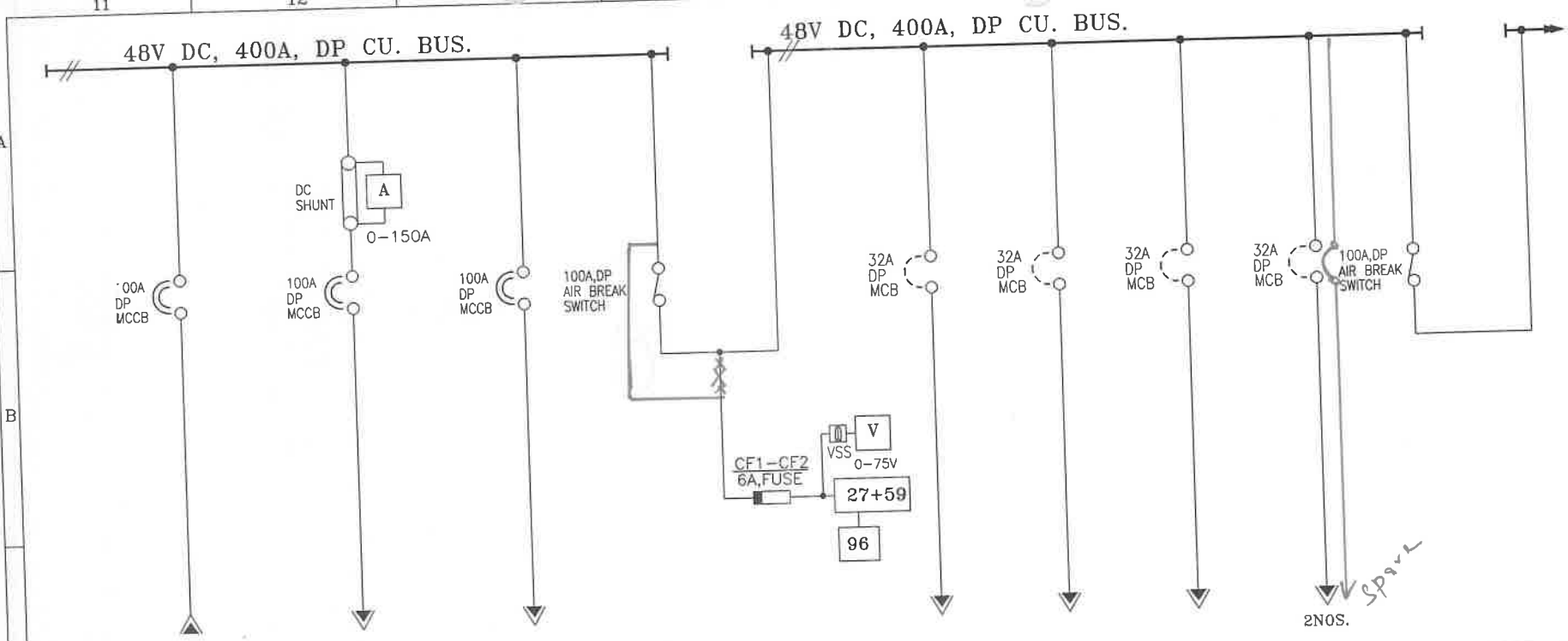
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

MAIN BUS BAR SIZE:-

+VE : 1x25x10 Sq. mm./Eq. CU.
-VE : 1x25x10 Sq. mm./Eq. CU.
EARTH : 1x20x05 Sq. mm./Eq. CU.

CABLE ENTRY-BOTTOM

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roorna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankrp@gmail.Com		NAME	DATE	TITLE : 48V DCDB GENERAL ARRANGEMENT DRAWING			
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024				
	CHECKED	GANESH	08.08.2024				
	APPROVED						
DRAWING NUMBER : ASPL/BSPTCL/2416OF		REV.01	04.11.2024	REV.03	--	SCALE N.T.S	
		REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 3 OF 8	
		DIMENSION TOLERANCE ± 10MM.					



FEEDER No.	1F2	1F3	1F4	1F1, 1F5	1F6	1F6	1F6	1F6	--
FEEDER RATING	100A	100A	100A	100A	32A	32A	32A	32A	100A
FEEDER DESCRIPTION	INCOMER FROM CHARGER-1	48V BATTERY-1	48V BATTERY DICHARGE FEEDER	AIR BREAK SWITCH	TO EPAX PANEL SUPPLY	TO COMM. EQUIPMENT SUPPLY	TO RTU	SPARE	BUS COUPLER
CABLE SIZE IN mm2	2x1Cx150 AL.	2x1Cx150 AL.	2x1Cx150 AL.	--	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	--	--

(as corrected)

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Chandra

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna (800021)

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankanpur@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 48V DCDB SINGLE LINE DRAWING

DRAWING NUMBER : ASPL/BSPTCL/24160F	REV.01	04.11.2024	REV.03 --
	REV.02	--	REV.04 --
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023
	DIMENSION TOLERANCE ± 10MM.		

SCALE N.T.S.

SHEET NO. 4 OF 8

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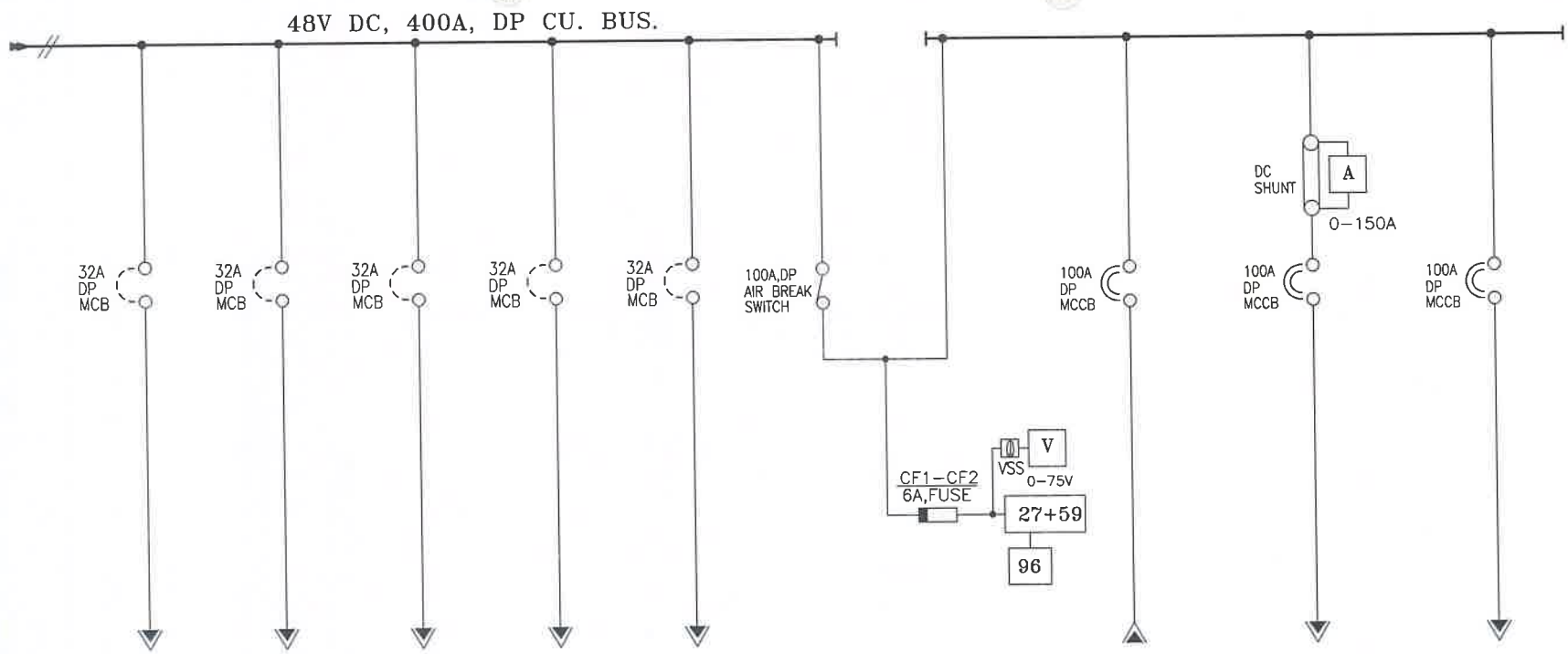

FEEDER No.	2F6	2F6	2F6	2F6	2F6	2F1, 2F5	2F2	2F3	2F4
FEEDER RATING	32A	32A	32A	32A	32A	100A	100A	100A	100A
FEEDER DESCRIPTION	TO RTU	TO EPAX PANEL SUPPLY	TO COMM. EQUIPMENT SUPPLY	SPARE	SPARE	AIR BREAK SWITCH	INCOMER FROM CHARGER–2	48V BATTERY–2	48V BATTERY DICHARGE FEEDER
CABLE SIZE IN mm2	1x4Cx16 CU.	1x4Cx16 CU.	1x4Cx16 CU.	--	--	--	2x1Cx150 AL.	2x1Cx150 AL.	2x1Cx150 AL.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-80002

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER: Asian Switchgear Pvt. Ltd., B-17 Kosma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankgp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE: 48V DCDB SINGLE LINE DRAWING

DRAWING NUMBER: ASPL/BSPTCL/24160F	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.
SHEET NO. 5 OF 8

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BILL OF MATERIAL

Sr. No.	ITEM DESCRIPTION	MAKE	Qty
1	MCCB-100A,2P,4KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM, SPREADER , SHUNT TRIP COIL-230V AC	C&S	2
2	MCCB-100A,2P,4KA WITH O/L & S/C THERMAL MAGNETIC BASED RELEASE , EXTENDED- ROM, SPREADER	C&S	4
3	AIR BREAK SWITCH , 100A DP (i) DOOR OPERATING HANDLE	C&S	3
4	MCB ,32A,DP, C-CURVE -4KA	C&S	10
6	INSTANTANEOUS UNDER + OVERVOLTAGE RELAY , OPERATING VOLTAGE-48V DC, AUX. SUPPLY-230V AC	C&S/JVS	2
7	BATTERY EARTH FAULT RELAY , OPERATING VOLTAGE-48V DC, AUX. SUPPLY-230V AC	C&S/JVS	2
8	ANALOG AMP METER 96Sq.mm, 0-150A WITH SHUNT	AE/RISHABH	2
9	ANALOG VOLT METER 96Sq.mm, 0-75V	AE/RISHABH	2
10	VOLT SELECTOR SWITCH	VAISHNO/SURDHI	2
11	CONTROL FUSE BASE WITH HRC 6A	C&S	8

BoM shall be modified as per comments in 48V DCDB - SLD

(as corrected)

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Ravi Kant

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
B-17 Roorna Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianSwitchgear.com
E-Mail: asianksp@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 48V DCDB BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/24160F	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.	NIT NO.:10/PR/BSPTCL/2023		
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 6 OF 8

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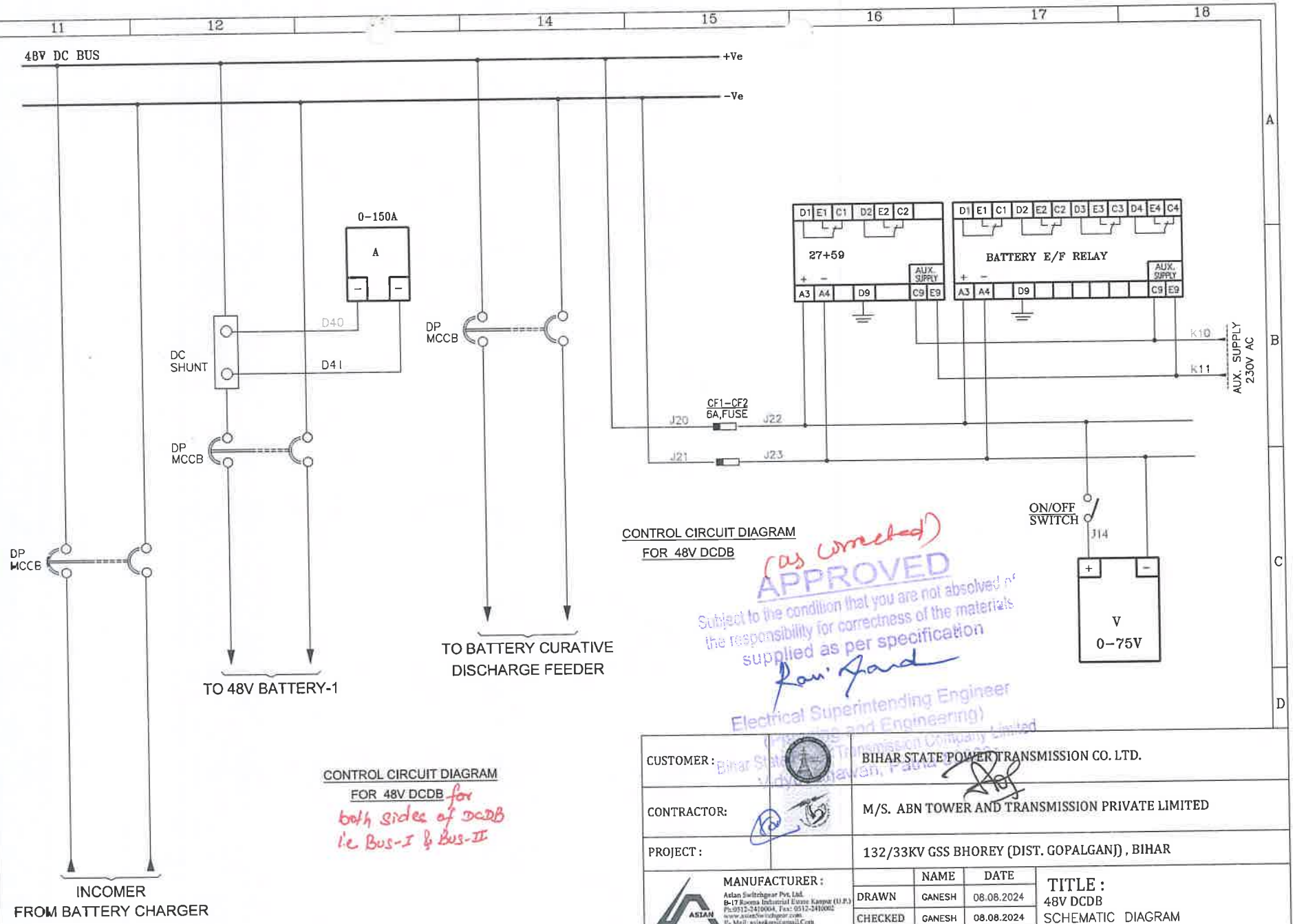

CONTROL CIRCUIT DIAGRAM
FOR 48V DCDB

CONTROL CIRCUIT DIAGRAM
FOR 48V DCDB for both sides of DCDB i.e Bus-I & Bus-II

(as corrected)
APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Kant
Electrical Superintending Engineer
(Procurement and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E- Mail: asianskapr@gmail.Com		NAME	DATE	TITLE : 48V DCDB SCHEMATIC DIAGRAM		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160F	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
	REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 7 OF 8	
	DIMENSION TOLERANCE ± 10MM.					

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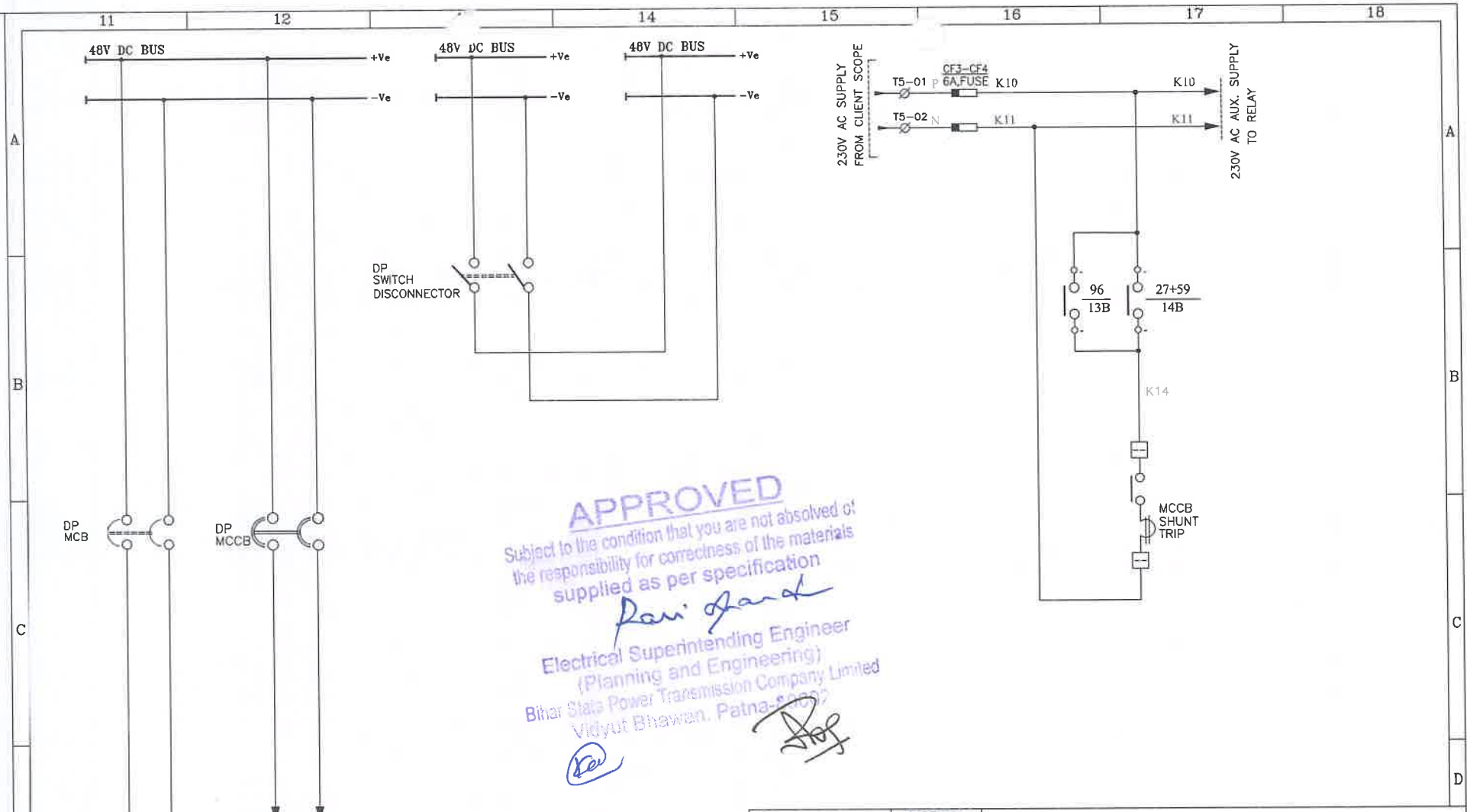

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianksp@gmail.com Asian Switchgear Pvt. Ltd.			NAME	DATE	TITLE : 48V DCDB SCHEMATIC DIAGRAM		
		DRAWN	GANESH	08.08.2024			
		CHECKED	GANESH	08.08.2024			
		APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160F		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
		REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 8 OF 8	
		DIMENSION TOLERANCE ± 10MM.					

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Asian Switchgear Pvt. Ltd.

ASIAN SWITCHGEAR PVT. LTD.

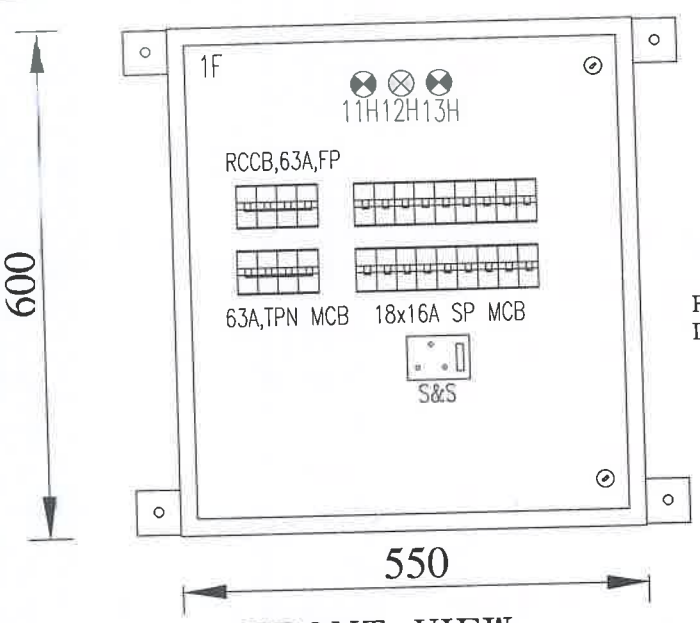
B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

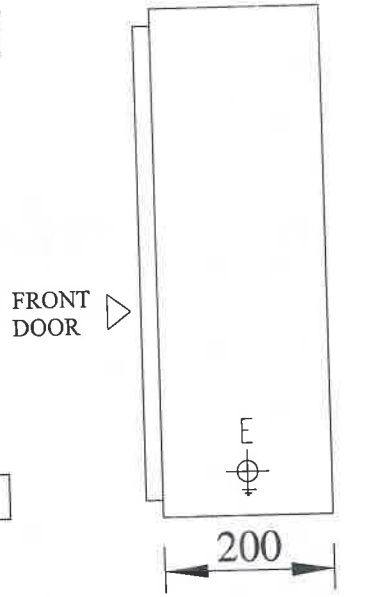
PANEL NAME	LIGHTING PANEL(INDOOR) TYPE ACP-1
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	4Nos.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna

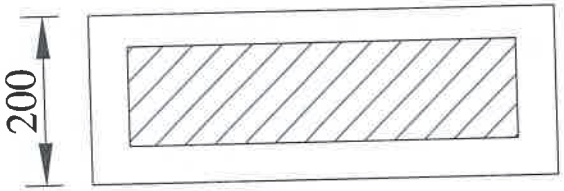
CUSTOMER:	BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT:	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com		NAME	DATE	TITLE: LIGHTING PANEL(INDOOR) TYPE ACP-1 TITLE SHEET	
	DRAWN	GANESH	08.08.2024		
	CHECKED	GANESH	08.08.2024		
	APPROVED				
DRAWING NUMBER: ASPL/BSPTCL/24160G	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 1 OF 5
	DIMENSION TOLERANCE ± 10MM.				



FRONT VIEW



SIDE VIEW



BOTTOM VIEW

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
4. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
6. EARTH STUD SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
   A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
   B. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
10. CABLE ENTRY AS PER G.A. DRAWING.
11. PAINT SHADE - SMOKE GREY (692 OF IS:5)
12. GLAND PLATE - 3.0 MM. CRCA.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E- Mail: asianKanpur@gmail.Com		NAME	DATE	TITLE : LIGHTING PANEL(INDOOR) TYPE ACP-1 GENERAL ARRANGEMENT DRAWING		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
Asian Switchgear Pvt. Ltd.	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160G	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
	REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 2 OF 5	
	DIMENSION TOLERANCE ± 10MM.					

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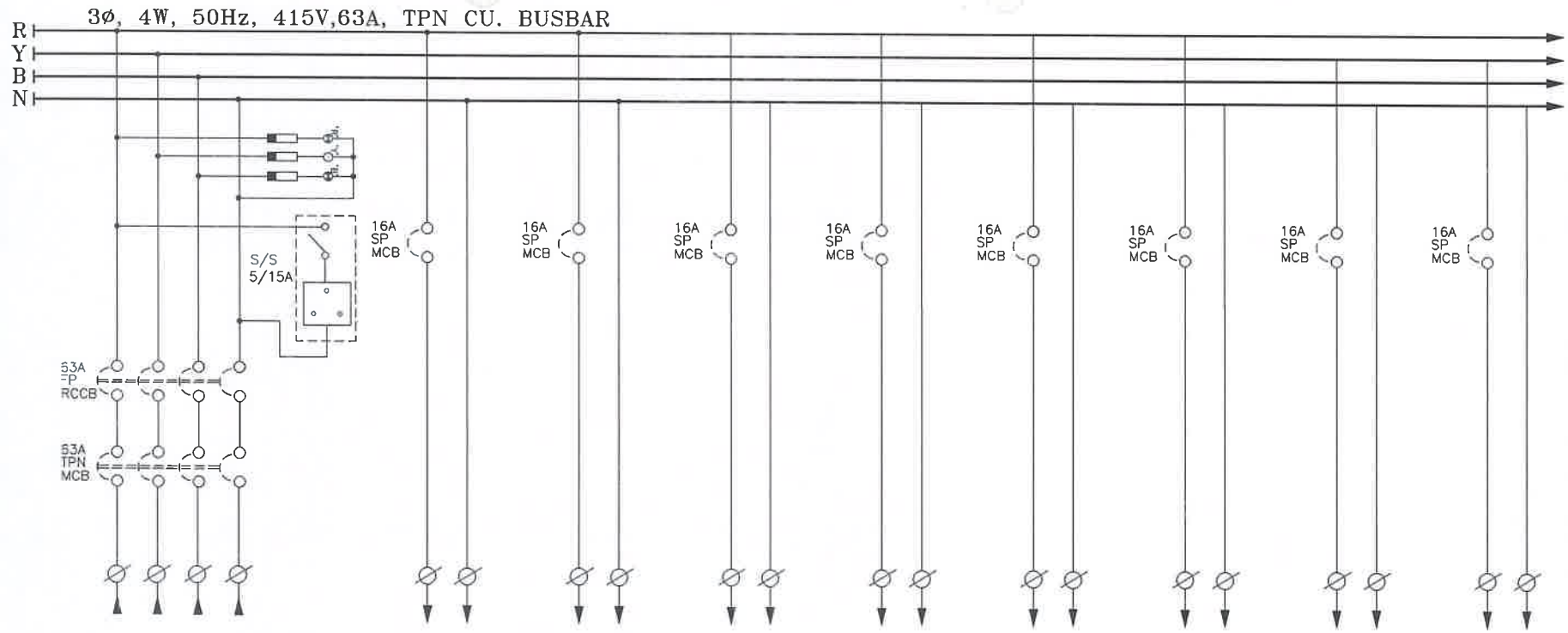

FEEDER No.	1F	1F	1F	1F	1F	1F	1F	1F	1F
FEEDER RATING	63A	16A	16A	16A	16A	16A	16A	16A	16A
FEEDER DESCRIPTION	INCOMER	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING
CABLE SIZE IN mm2	**	**	**	**	**	**	**	**	**

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800002

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
D-13 Rooma Industrial Estate Kanpur (U.P.)
Ph.0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asinkanpur@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
LIGHTING PANEL(INDOOR) TYPE ACP-1
FOUR LINE DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160G	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 3 OF 5
	DIMENSION TOLERANCE ± 10MM.				

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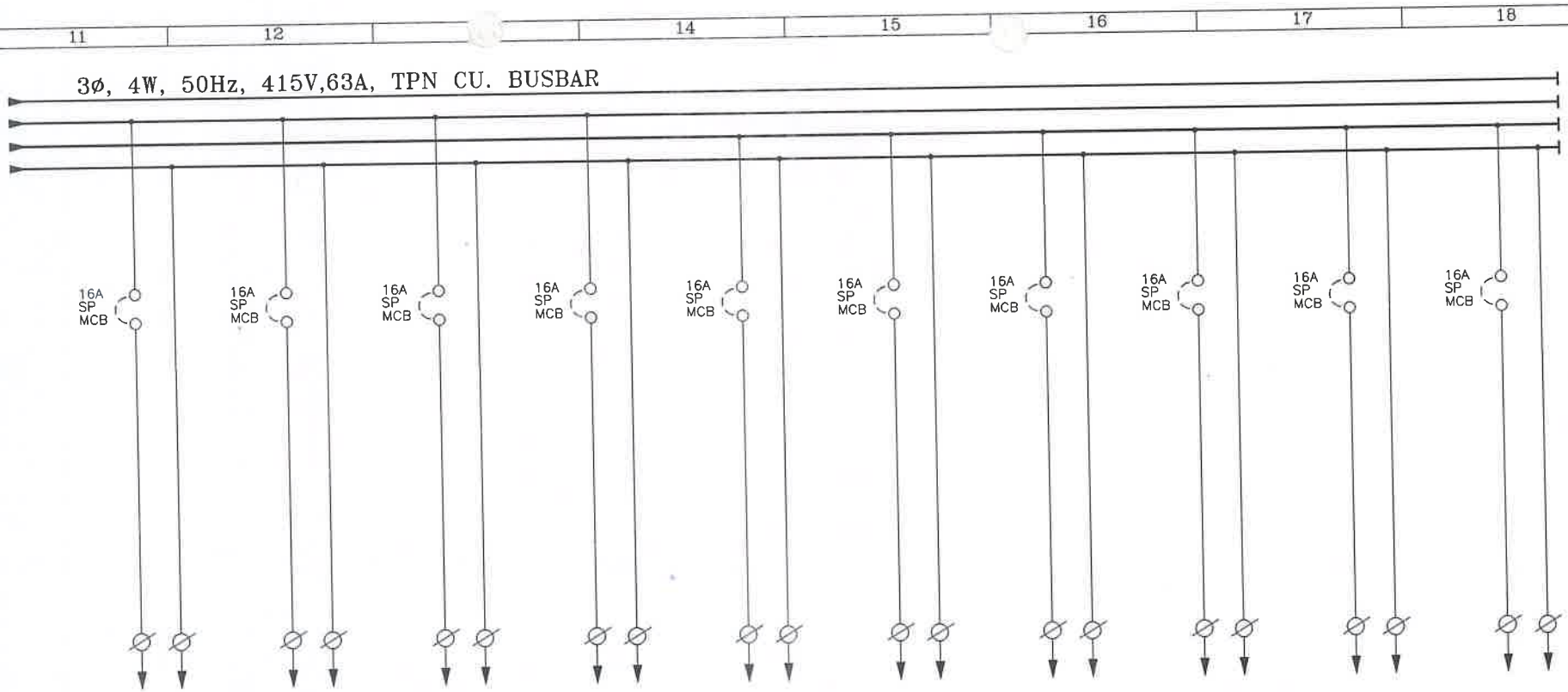

FEEDER No.	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
FEEDER RATING	16A	16A	16A	16A	16A	16A	16A	16A	16A	16A
FEEDER DESCRIP TION	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING
CABLE SIZE IN mm2	**	**	**	**	**	**	**	**	**	**

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Roorna Industrial Estate Kanpur (U.P.)
Ph.0512-2410064, Fax.: 0512-2410002
www.asianSwitchgear.com
E-Mail: asiankgp@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
LIGHTING PANEL(INDOOR) TYPE ACP-1
FOUR LINE DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160G	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 4 OF 5
	DIMENSION TOLERANCE ± 10MM.				

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BILL OF MATERIAL

Sr. NO.	DESCRIPTION	MAKE	QTY.
01	MCB, 63A,TPN ,10KA C-CURVE	C&S	1
02	RCCB, 63A,FP ,300mA	C&S	1
03	MCB, 16A,SP ,10KA C-CURVE	C&S	18
04	PHASE INDICATION LAMP-RED,YELLOW,BLUE -230V AC,22.5Sq.MM	C&S/VAISHNO/SURDHI	3
05	FUSE FITTING WITH HRC (20/6A)	C&S	3
06	SWITCH & SOCKET 5/15A ,230V AC	~~REPUTED~~ Legrand/Schneider/Siemens/Crabtree	
07	POWER TERMINAL ,16SQ.MM.	CONNECTWELL	4
08	POWER TERMINAL ,10SQ.MM.	CONNECTWELL	36

(as corrected)

APPROVED

Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Rooma Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianSwitchgear.com
E- Mail: asionkanpur@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
LIGHTING PANEL(INDOOR) TYPE ACP-1
BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/24160G	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 5 OF 5
	DIMENSION TOLERANCE ± 10MM.				

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ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	LIGHTING PANEL (OUTDOOR) TYPE ACP-2
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	11Nos.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Chandra
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com		NAME	DATE	TITLE : LIGHTING PANEL (OUTDOOR) TYPE ACP-2 TITLE SHEET		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160H		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 1 OF 5
		DIMENSION TOLERANCE ± 10MM.				

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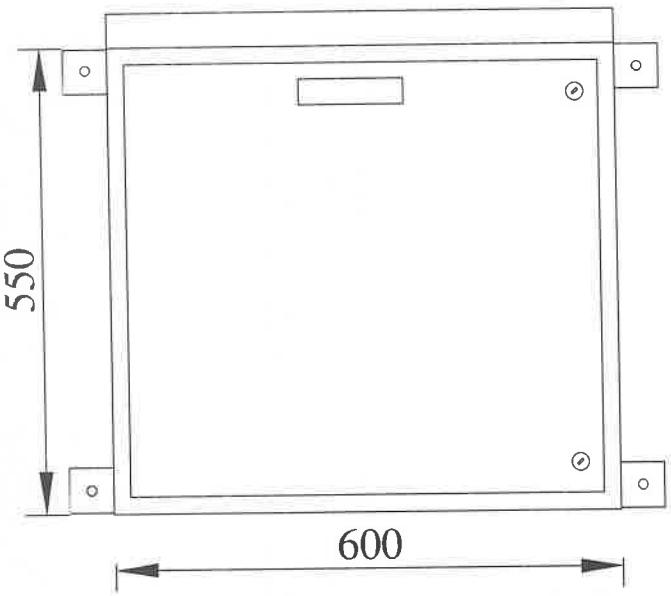
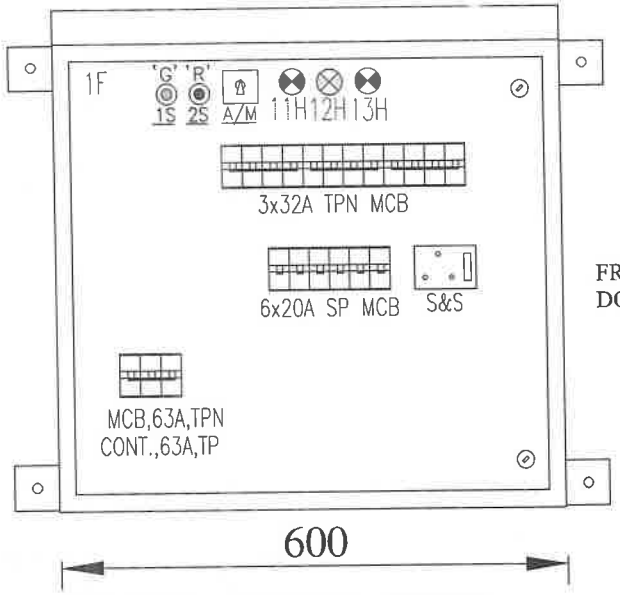
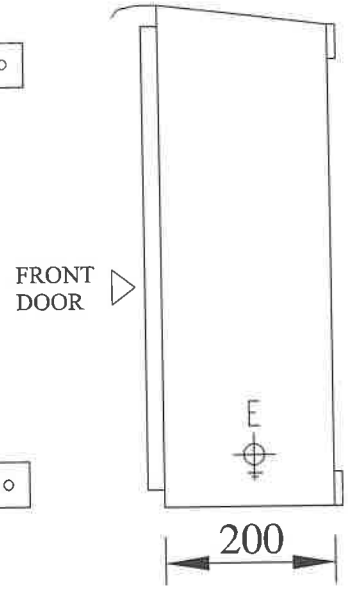


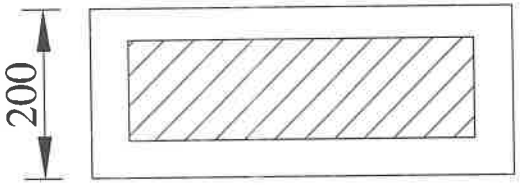
FRONT OUTER VIEW



FRONT INNER VIEW



SIDE VIEW



BOTTOM VIEW

APPROVED
Subject to the condition that you are not absolved the responsibility for correctness of the material supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
4. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH **ELECTROSTATIC POWDER COATING PAINT** AFTER NINE TANK PROCESS.
6. **EARTH STUD** SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED **COPPER FLEXIBLE WIRE** AND FOLLOWING COLOUR STANDARD.
   A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
   B. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL **DOOR LOCK** SHALL BE PROVIDED ON EACH DOOR.
10. **CABLE ENTRY** AS PER G.A. DRAWING.
11. PAINT SHADE - **SMOKE GREY (692 OF IS:5)**
12. GLAND PLATE - 3.0 MM. CRCA.

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Kanpur Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianskp@gmail.com		NAME	DATE	TITLE: LIGHTING PANEL (OUTDOOR) TYPE ACP-2 GENERAL ARRANGEMENT DRAWING		
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER: ASPL/BSPTCL/24160H	REV.01	04.11.2024	REV.03	--	SCALE N.T.S	
	REV.02	--	REV.04	--		
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 2 OF 5	
	DIMENSION TOLERANCE ± 10MM.					

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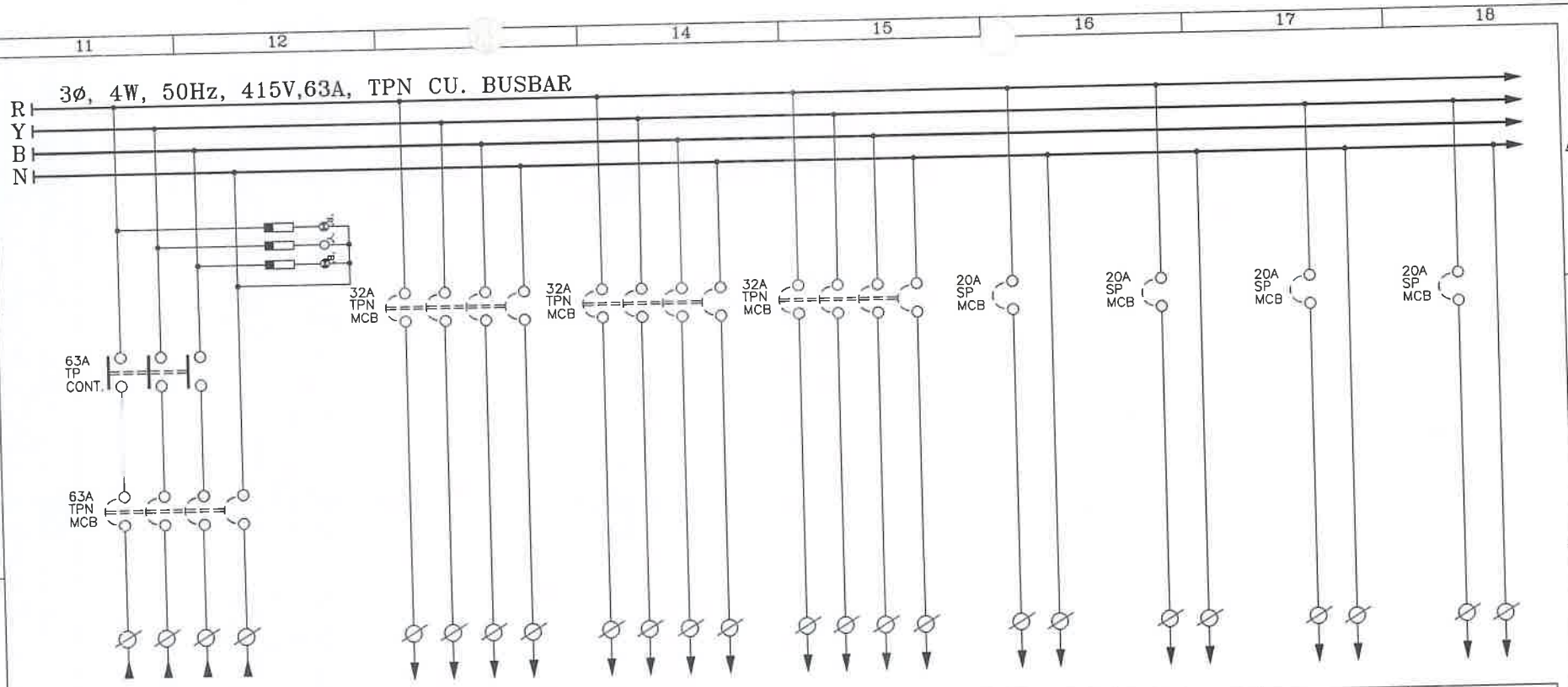

FEEDER No.	1F	1F	1F	1F	1F	1F	1F	1F
FEEDER RATING	63A	32A	32A	32A	20A	20A	20A	20A
FEEDER DESCRIPTION	INCOMER	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING
CABLE SIZE IN mm2	**	**	**	**	**	**	**	**

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Rooma Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asianksp@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
LIGHTING PANEL (OUTDOOR) TYPE ACP-2
FOUR LINE DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160H	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 3 OF 5
	DIMENSION TOLERANCE ± 10MM.				

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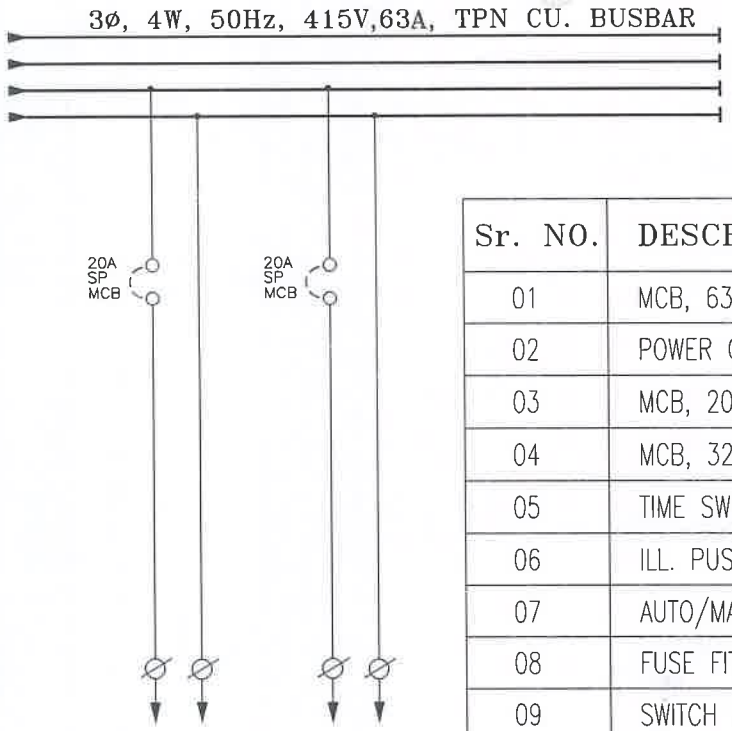

FEEDER No.	1F	1F
FEEDER RATING	20A	20A
FEEDER DESCRIPTION	OUTGOING	OUTGOING
CABLE SIZE IN mm2	**	**

BILL OF MATERIAL

Sr. NO.	DESCRIPTION	MAKE	QTY.
01	MCB, 63A,TPN ,10KA C-CURVE	C&S	1
02	POWER CONTACTOR ,63A, TP ,COIL VOLTAGE-230V AC ,AC-1	C&S	1
03	MCB, 20A,SP ,10KA C-CURVE	C&S	6
04	MCB, 32A,TPN ,10KA C-CURVE	C&S	3
05	TIME SWITCH ,230V AC ,0-24 HOUR	L&T/SELEC	1
06	ILL. PUSH BUTTON-RED,GREEN,22.5Sq.MM	C&S/VAISHNO/SURDHI	2
07	AUTO/MANUAL SELECTOR SWITCH, 1P,2W ,6A	VAISHNO/SURDHI	1
08	FUSE FITTING WITH HRC (20/6A)	C&S	4
09	SWITCH & SOCKET 5/15A ,230V AC Legrand/Schneider/Siemens/	REPUTED Crabtree	1
10	POWER TERMINAL ,16SQ.MM.	CONNECTWELL	4
11	POWER TERMINAL ,10SQ.MM.	CONNECTWELL	24
12	PHASE INDICATION LAMP-RED,YELLOW,BLUE -230V AC,22.5Sq.MM	C&S/VAISHNO/SURDHI	3

(as corrected)

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Sahu
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asianknp@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : LIGHTING PANEL (OUTDOOR) TYPE ACP-2 FOUR LINE DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160H	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 4 OF 5
	DIMENSION TOLERANCE ± 10MM.				

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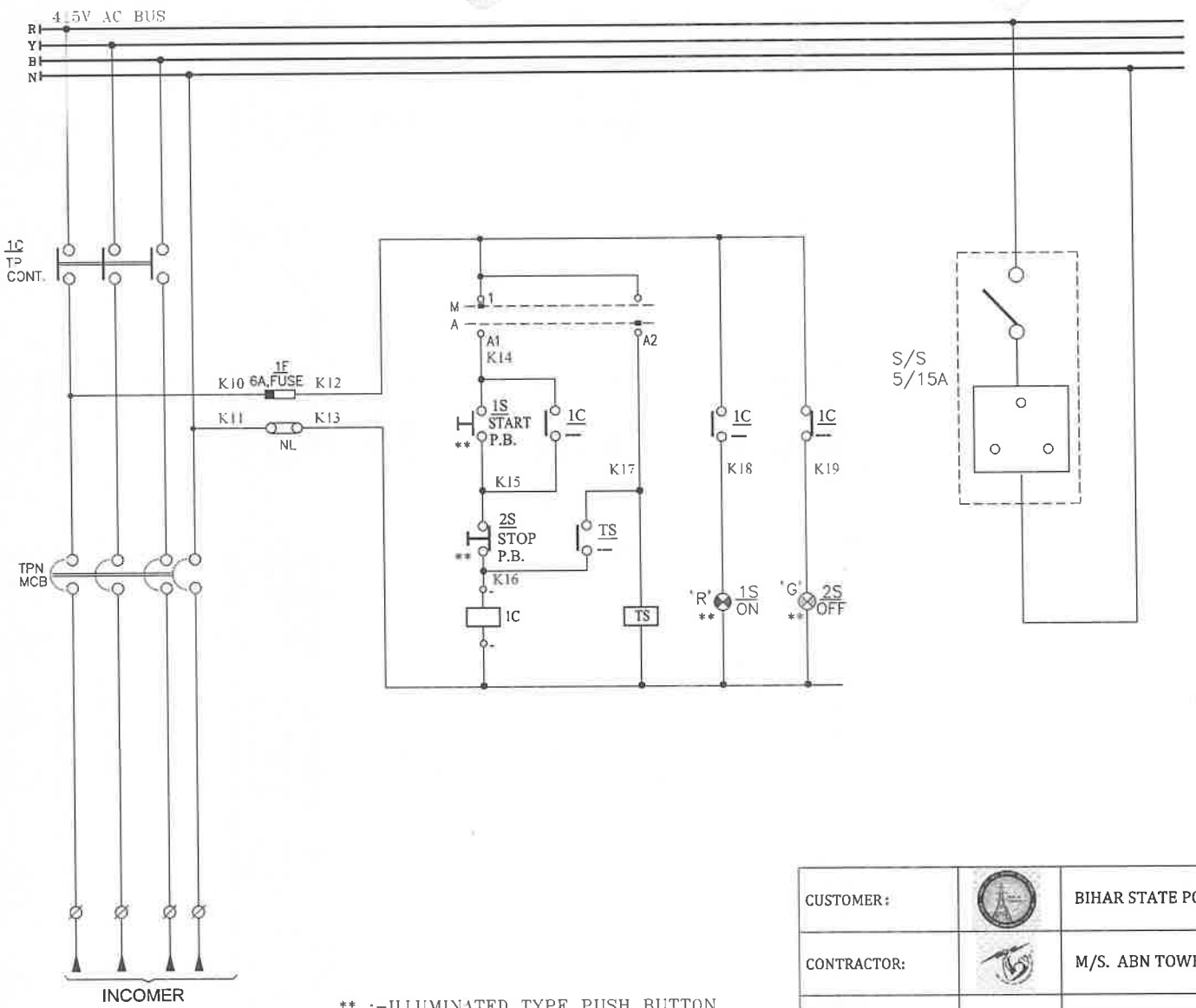

** :-ILLUMINATED TYPE PUSH BUTTON

APPROVED
Subject to the condition that you are not absolved the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan Patna-800001

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER:
Asian Switchgear Pvt. Ltd.
D-17 Rawan Industrial Estate Kanpur (U.P.)
Ph.:0512-2410004, Fax: 0512-2410002
www.asianSwitchgear.com
E-Mail: asianskp@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE:
LIGHTING PANEL (OUTDOOR) TYPE ACP-2
BILL OF MATERIAL

DRAWING NUMBER: ASPL/BSPTCL/24160H	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 5 OF 5
	DIMENSION TOLERANCE ± 10MM.				

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ASIAN SWITCHGEAR PVT. LTD.

Asian Switchgear Pvt. Ltd.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	LIGHTING PANEL (OUTDOOR) TYPE ACP-3
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	5Nos.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E- Mail: asianknp@gmail.Com		NAME	DATE	TITLE : LIGHTING PANEL (OUTDOOR) TYPE ACP-3 TITLE SHEET	
	DRAWN	GANESH	08.08.2024		
	CHECKED	GANESH	08.08.2024		
	APPROVED				
DRAWING NUMBER : ASPL/BSPTCL/24160I	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 1 OF 5
	DIMENSION TOLERANCE ± 10MM.				

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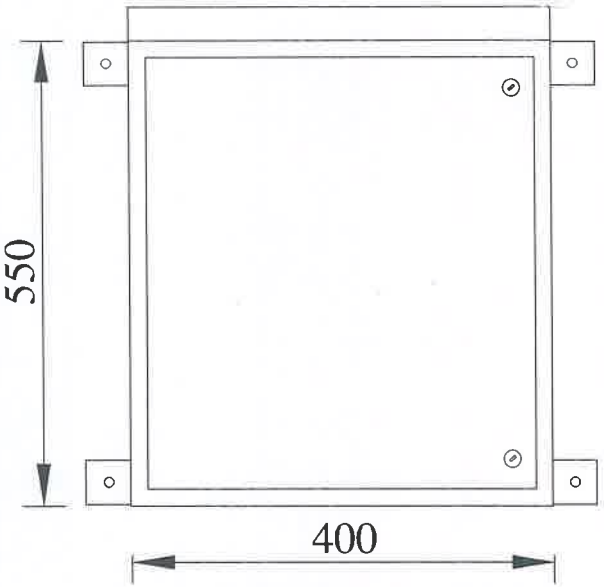
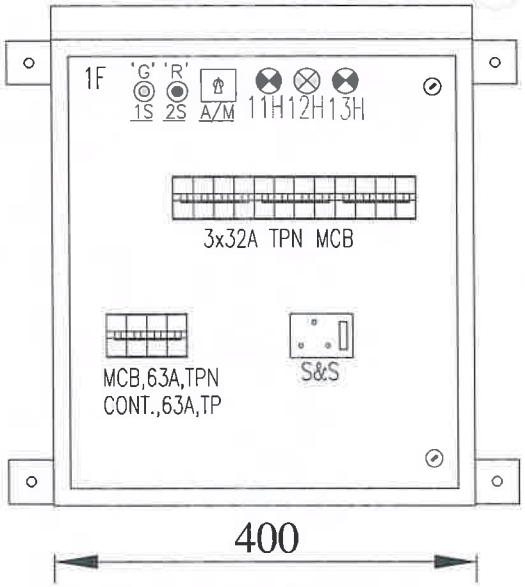
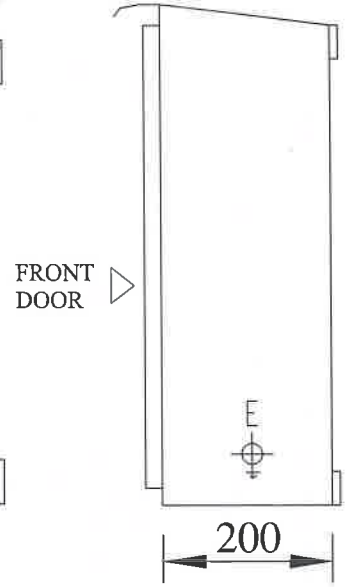
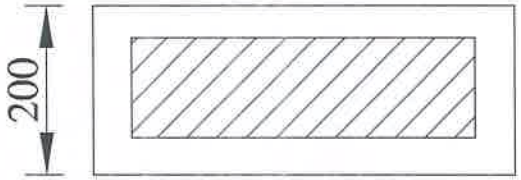


FRONT OUTER VIEW



FRONT INNER VIEW





BOTTOM VIEW

APPROVED
Subject to the condition that you are not absolved the responsibility for correctness of the material supplied as per specification
Ravi Anand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
4. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH **ELECTROSTATIC POWDER COATING PAINT** AFTER NINE TANK PROCESS.
6. **EARTH STUD** SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED **COPPER FLEXIBLE WIRE** AND FOLLOWING COLOUR STANDARD.
   A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
   B. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL **DOOR LOCK** SHALL BE PROVIDED ON EACH DOOR.
10. **CABLE ENTRY** AS PER G.A. DRAWING.
11. PAINT SHADE - **SMOKE GREY (692 OF IS:5)**
12. GLAND PLATE - 3.0 MM. CRCA.

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph.0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianskgp@gmail.Com		NAME	DATE	TITLE : LIGHTING PANEL (OUTDOOR) TYPE ACP-3 GENERAL ARRANGEMENT DRAWING		
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/241601		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 2 OF 5
		DIMENSION TOLERANCE ± 10MM.				

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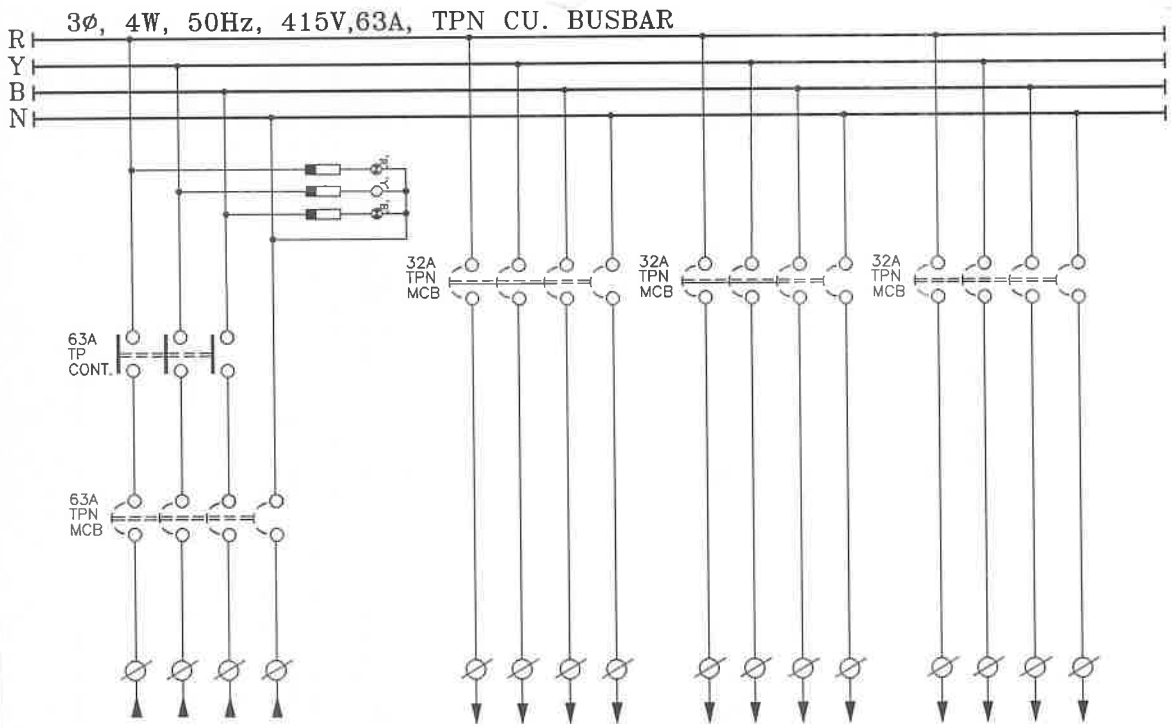

FEEDER No.	1F	1F	1F	1F
FEEDER RATING	63A	32A	32A	32A
FEEDER DESCRIPTION	INCOMER	OUTGOING	OUTGOING	OUTGOING
CABLE SIZE IN mm2	**	**	**	**

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the material supplied as per specification
Ravi Anand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Roorna Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asiankanpur@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
LIGHTING PANEL (OUTDOOR) TYPE ACP-3
FOUR LINE DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/241601	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 3 OF 5
	DIMENSION TOLERANCE ± 10MM.				

BILL OF MATERIAL

Sr. NO.	DESCRIPTION	MAKE	QTY.
01	MCB, 63A,TPN ,10KA C-CURVE	C&S	1
02	POWER CONTACTOR ,63A, TP ,COIL VOLTAGE-230V AC ,AC-1	C&S	1
03	MCB, 32A,TPN ,10KA C-CURVE	C&S	3
04	TIME SWITCH ,230V AC ,0-24 HOUR	L&T/SELEC	1
05	ILL. PUSH BUTTON-RED,GREEN,22.5Sq.MM	C&S/VAISHNO/SURDHI	2
06	AUTO/MANUAL SELECTOR SWITCH, 1P,2W ,6A	VAISHNO/SURDHI	1
07	FUSE FITTING WITH HRC (20/6A)	C&S	1
08	SWITCH & SOCKET 5/15A ,230V AC Legrand/Schneider/Siemens	REPUTED/Crabtree	1
09	POWER TERMINAL ,16SQ.MM.	CONNECTWELL	4
10	POWER TERMINAL ,10SQ.MM.	CONNECTWELL	12
11	PHASE INDICATION LAMP-RED,YELLOW,BLUE -230V AC,22.5Sq.MM	C&S/VAISHNO/SURDHI	3

(as corrected)

APPROVED

Subject to the condition that you are not absolve the responsibility for correctness of the materi supplied as per specification

Ravi Shankar

Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER: Asian Switchgear Pvt. Ltd.
Asian Switchgear Pvt. Ltd.
B-17 Roorna Industrial Estate Kanpur (U.P.)
Ph.:0512-2410604, Fax: 0512-2410602
www.asianswitchgear.com
E-Mail: asiankanpur@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE: LIGHTING PANEL (OUTDOOR) TYPE ACP-3
FOUR LINE DIAGRAM

DRAWING NUMBER: ASPL/BSPTCL/241601	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 4 OF 5
	DIMENSION TOLERANCE ± 10MM.				

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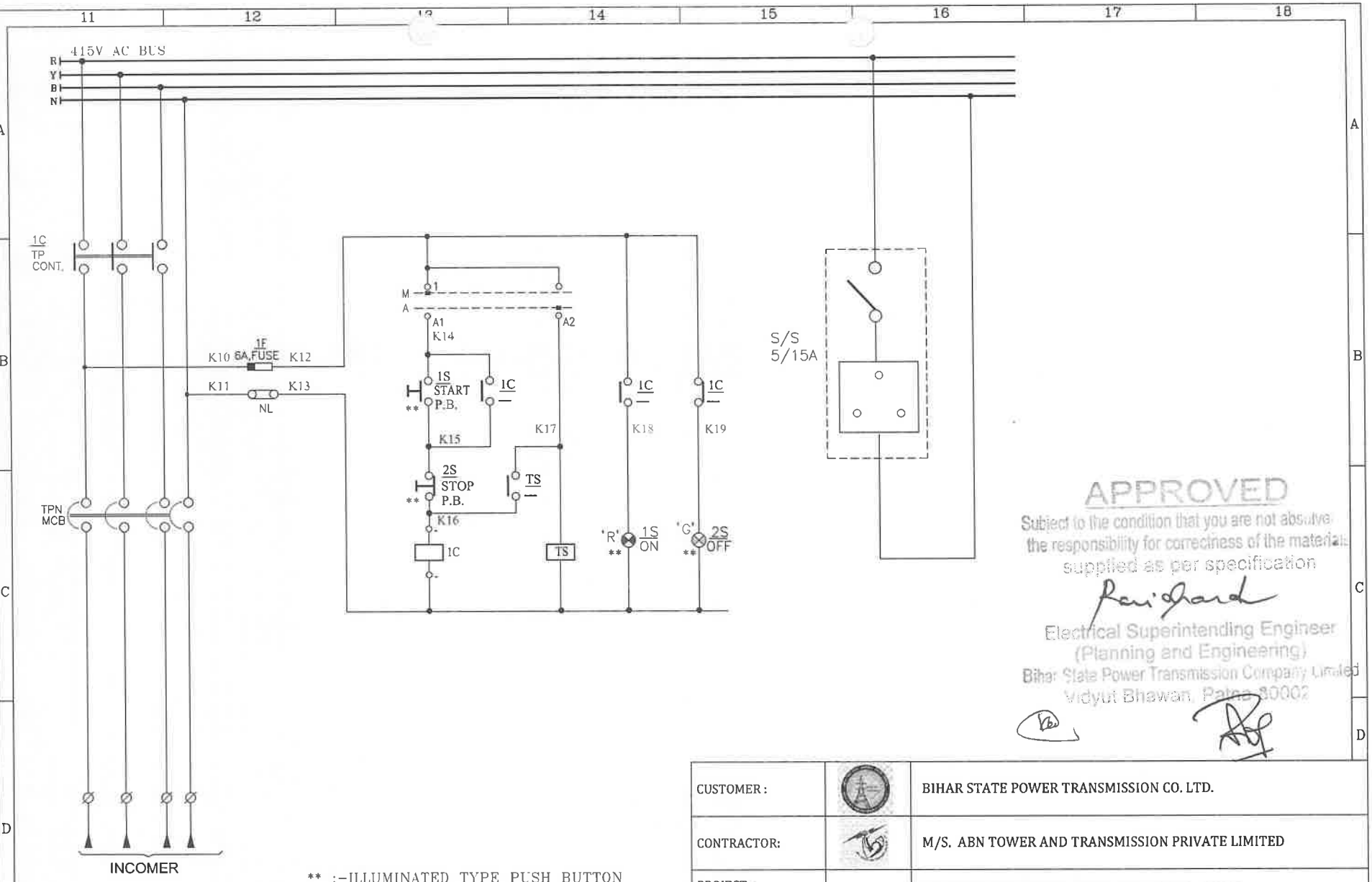

** :-ILLUMINATED TYPE PUSH BUTTON

APPROVED
Subject to the condition that you are not absolve the responsibility for correctness of the materials supplied as per specification
Ravi Chand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.					
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED					
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR					
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asinkanpur@gmail.Com Asian Switchgear Pvt. Ltd.			NAME	DATE	TITLE : LIGHTING PANEL (OUTDOOR) TYPE ACP-3 BILL OF MATERIAL		
		DRAWN	GANESH	08.08.2024			
		CHECKED	GANESH	08.08.2024			
		APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/241601		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
		REV.02	--	REV.04	--		
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 5 OF 5	
		DIMENSION TOLERANCE ± 10MM.					

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ASIAN SWITCHGEAR PVT. LTD.

Asian Switchgear Pvt. Ltd.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	LIGHTING PANEL(INDOOR) TYPE DCP
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.
PO NO:	ABN/24-25/BSPTCL/10/PO-160
NIT No.	10/PR/BSPTCL/2023
QTY.	1No.

APPROVED
Subject to the condition that you are not absolver the responsibility for correctness of the materia supplied as per specification
Ravi Ranjan
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan Patna-800001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianknp@gmail.Com		NAME	DATE	TITLE : LIGHTING PANEL(INDOOR) TYPE DCP TITLE SHEET		
	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160J		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 1 OF 5
		DIMENSION TOLERANCE ± 10MM.				

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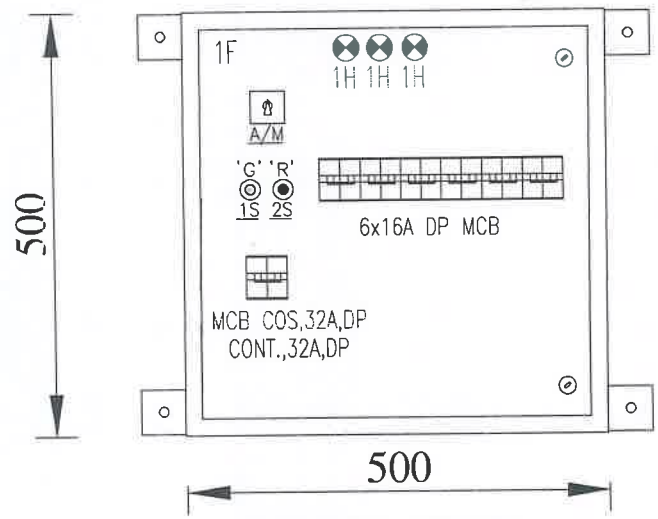
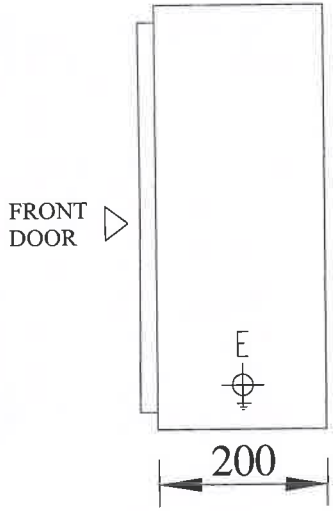
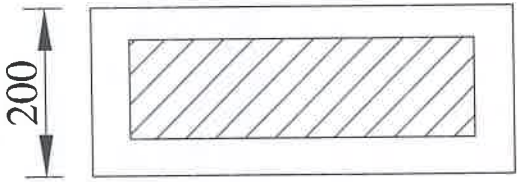


FRONT VIEW



SIDE VIEW



BOTTOM VIEW

APPROVED
Subject to the condition that you are not absolved the responsibility for correctness of the material supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
4. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH **ELECTROSTATIC POWDER COATING PAINT** AFTER NINE TANK PROCESS.
6. **EARTH STUD** SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED **COPPER FLEXIBLE WIRE** AND FOLLOWING COLOUR STANDARD.
   - A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
   - B. DC CONTROL CKT. - 1.5 SQ MM GRAY
   - C. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL **DOOR LOCK** SHALL BE PROVIDED ON EACH DOOR.
10. **CABLE ENTRY** AS PER G.A. DRAWING.
11. PAINT SHADE - **SMOKE GREY** (692 OF IS:5)
12. GLAND PLATE - 3.0 MM. CRCA.

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER: Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianswitchgear.com E-Mail: asiankgp@gmail.Com		NAME	DATE	TITLE: LIGHTING PANEL(INDOOR) TYPE DCP GENERAL ARRANGEMENT DRAWING		
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER: ASPL/BSPTCL/24160J	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.	
	REV.02	--	REV.04	--		
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023		SHEET NO. 2 OF 5	
	DIMENSION TOLERANCE ± 10MM.					

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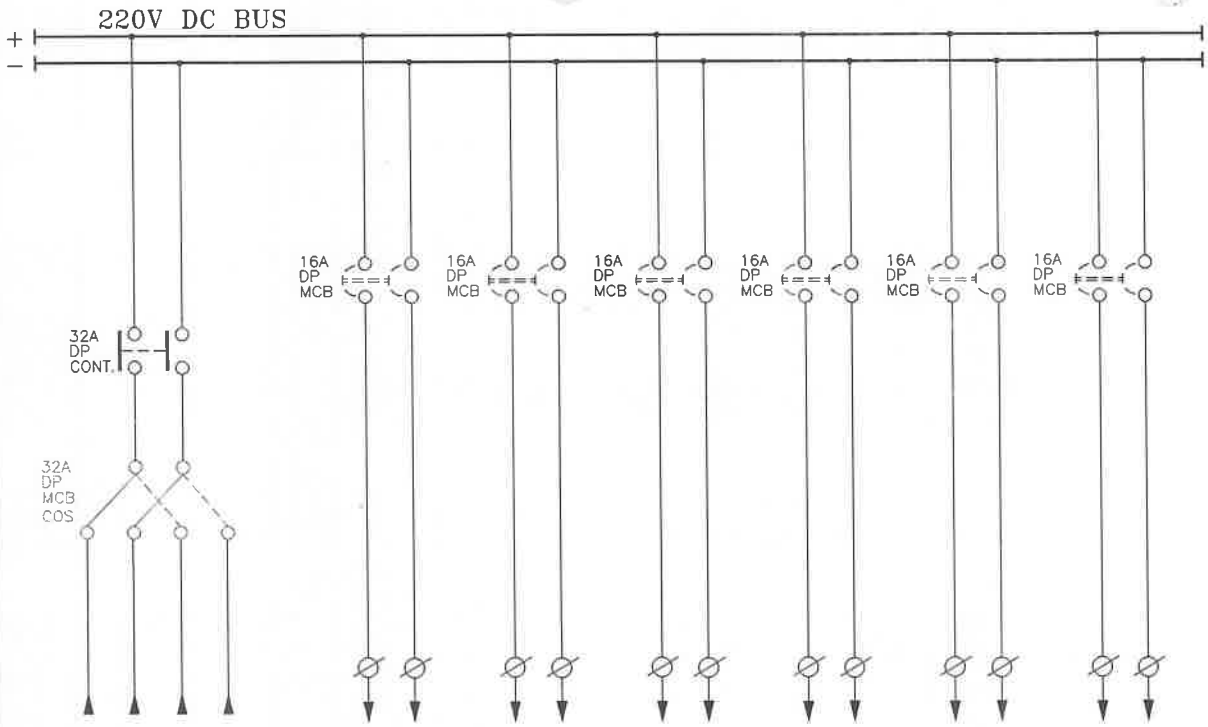

FEEDER No.	1F	1F	1F	1F	1F	1F	1F
FEEDER RATING	32A	16A	16A	16A	16A	16A	16A
FEEDER DESCRIPTION	INCOMER−1 & 2	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING	OUTGOING
CABLE SIZE IN mm2	**	**	**	**	**	**	**

APPROVED
Subject to the condition that you are not absolve the responsibility for correctness of the material supplied as per specification
Ravi Ranjan
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

CUSTOMER :	BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :	132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Rooma Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianSwitchgear.com
E- Mail: asiankanpur@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
LIGHTING PANEL(INDOOR) TYPE DCP
TWO LINE DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160J	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 3 OF 5
	DIMENSION TOLERANCE ± 10MM.				

BILL OF MATERIAL

Sr. NO.	DESCRIPTION	MAKE	QTY.
01	MCB COS, 32A, DP	C&S	1
02	POWER CONTACTOR ,32A, DP ,COIL VOLTAGE-220V DC	C&S	1
03	MCB, 16A, DP ,DC	C&S	6
04	AUX. RELAY , 230V AC , 8PIN	SALZER	1
05	ILL. PUSH BUTTON-RED,GREEN,22.5Sq.MM-220V DC	C&S/VAISHNO/SURDHI	2
06	AUTO/MANUAL SELECTOR SWITCH, 1P,2W ,6A	VAISHNO/SURDHI	1
07	FUSE FITTING WITH HRC (20/6A)	C&S	3
08	POWER TERMINAL ,16SQ.MM.	CONNECTWELL	2
09	POWER TERMINAL ,10SQ.MM.	CONNECTWELL	12
10	INDICATING LAMP -RED , 22.5Sq.MM-220V DC	C&S/VAISHNO/SURDHI	2
11	INDICATING LAMP -RED , 22.5Sq.MM-230V AC	C&S/VAISHNO/SURDHI	1

APPROVED
Subject to the condition that you are not absolve the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan Patna-800001

CUSTOMER:		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT:		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER: Aslan Switchgear Pvt. Ltd.
Aslan Switchgear Pvt. Ltd.
B-17 Rooma Industrial Estate Kanpur (U.P.)
Ph.0512-2410004, Fax: 0512-2410002
www.aslanSwitchgear.com
E-Mail: aswkanp@gmail.Com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE: LIGHTING PANEL(INDOOR) TYPE DCP FOUR LINE DIAGRAM

DRAWING NUMBER: ASPL/BSPTCL/24160J	REV.01	04.11.2024	REV.03	--
	REV.02	--	REV.04	--
JOB NUMBER: ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO.:10/PR/BSPTCL/2023	
	DIMENSION TOLERANCE ± 10MM.			

SCALE N.T.S.

SHEET NO. 4 OF 5

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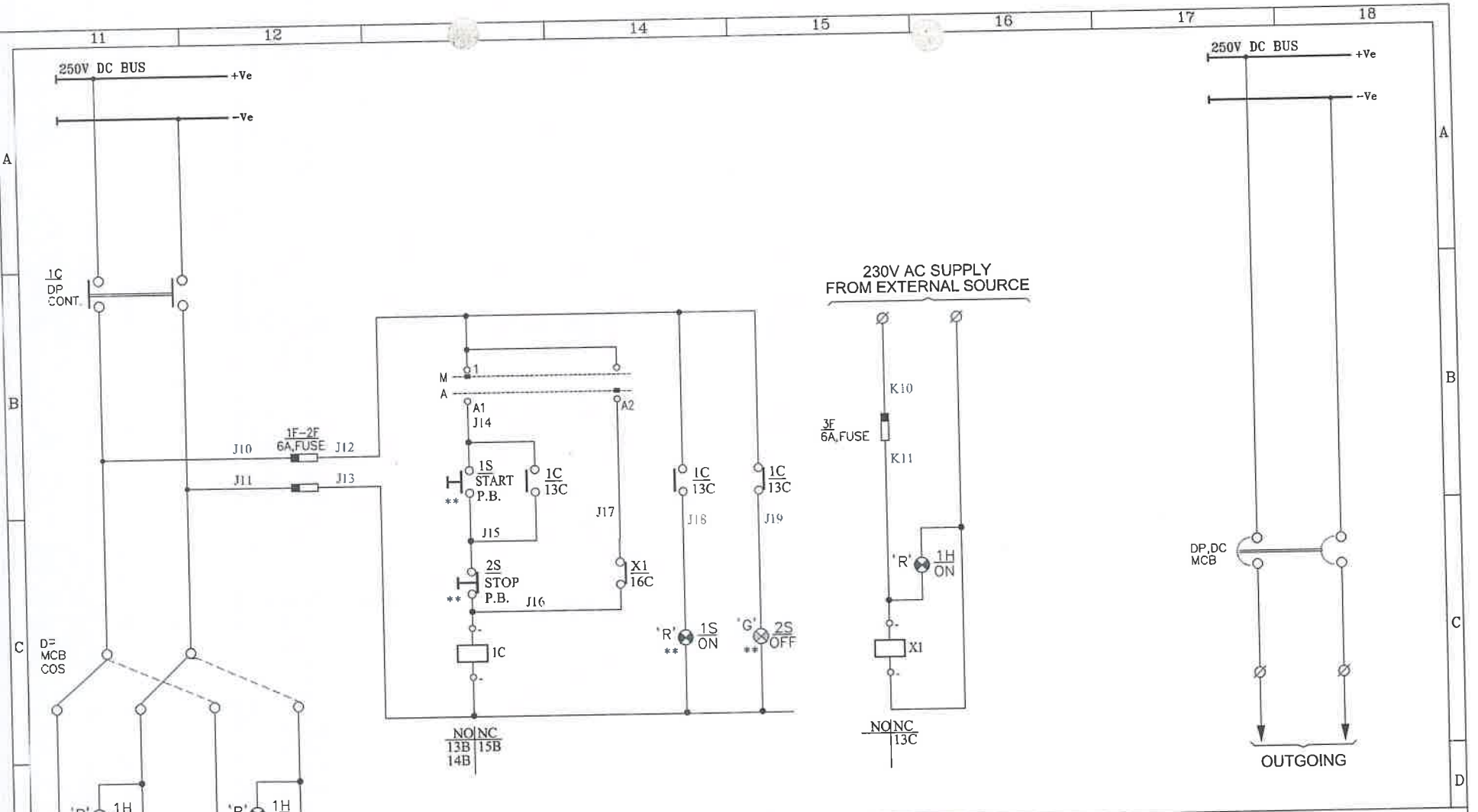

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the material supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800001

** :-ILLUMINATED TYPE PUSH BUTTON

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Kosma Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asianksp@gmail.com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
LIGHTING PANEL(INDOOR) TYPE DCP
BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/24160J	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 5 OF 5
	DIMENSION TOLERANCE ± 10MM.				

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Asian Switchgear Pvt. Ltd.

ASIAN SWITCHGEAR PVT. LTD.

B-17 ROOMA INDUSTRIAL ESTATE KANPUR (U.P.)
www.asianSwitchgear.com
EMail: asianknp@gmail.Com

DRAWING FOR APPROVAL

PANEL NAME	132 kV BMK & 33kV BMK	
CLIENT	BIHAR STATE POWER TRANSMISSION COMPANY LIMITED(BSPTCL)	
CONTRACTOR	M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED	
PROJECT.	DESIGN, MANUFACTURE, TESTING AT MANUFACTURE?S WORKS AND DELIVERY OF EQUIPMENTS REQUIRED FOR CONSTRUCTION OF 2X50MVA, 132/33KV GSS BHOREY (DIST. GOPALGANJ) INCLUDING RESIDENTIAL QUARTER WITH CONSTRUCTION OF ITS ASSOCIATED 02NOS. 132KV LINE BAYS AT GSS HATHUA & CONSTRUCTION OF ITS ASSOCIATED 132KV D/C BHOREY-HATHUA TR. LINE WITH ACSR PANTHER CONDUCTOR (LINE LENGTH-60RKM) ON TURNKEY BASIS.	
PO NO:	ABN/24-25/BSPTCL/10/PO-160	
NIT No.	10/PR/BSPTCL/2023	
QTY.	132kV BMK-5Nos.	33kV BMK-6Nos.

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Ravi Nandan
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan Patna-8000

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER: Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 132 kV BMK & 33kV BMK TITLE SHEET

DRAWING NUMBER : ASPL/BSPTCL/24160K	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 1 OF 5
	DIMENSION TOLERANCE ± 10MM.				

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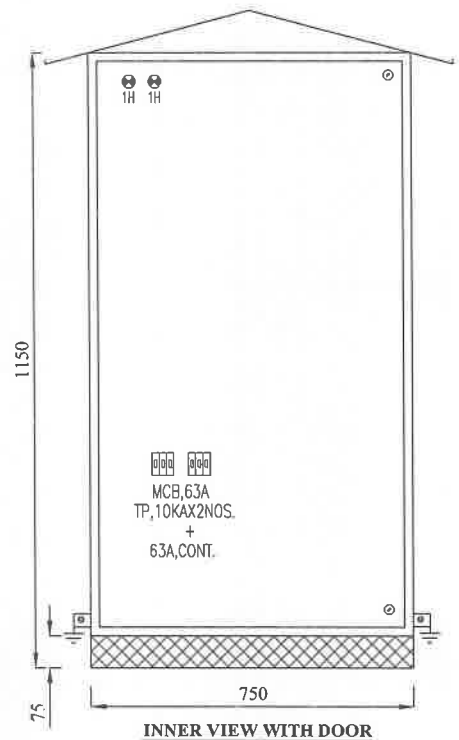
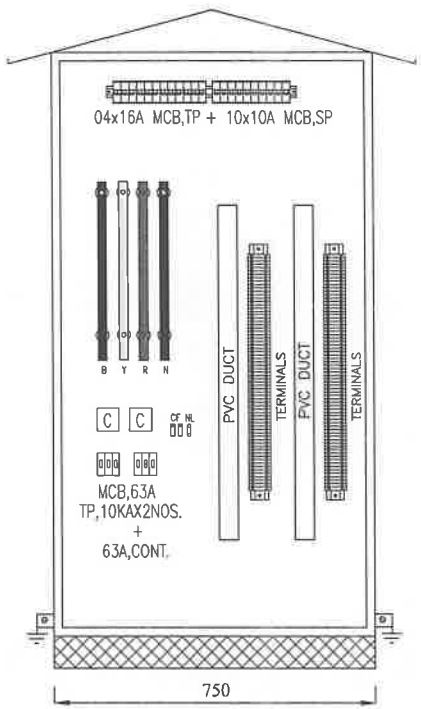
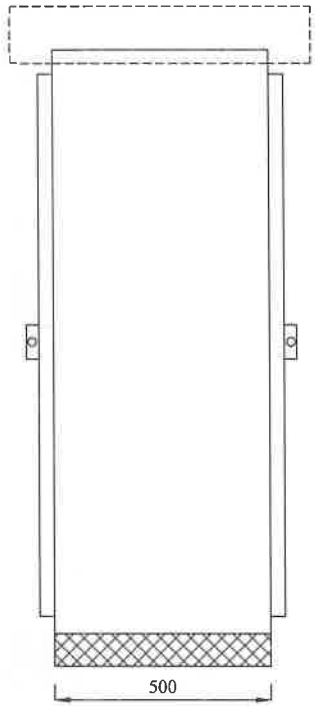


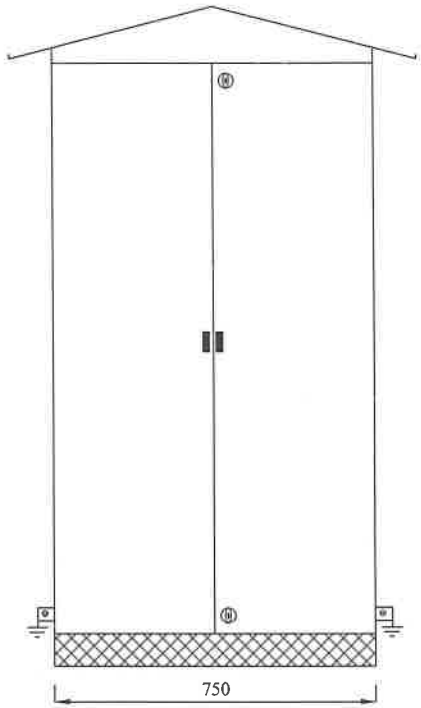
INNER VIEW WITH DOOR



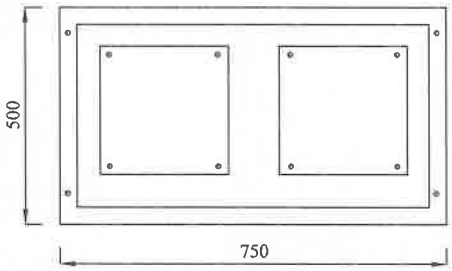
INNER VIEW WITHOUT DOOR



SIDE VIEW



FRONT OUTER VIEW



BOTTOM VIEW

CABLE ENTRY-BOTTOM

APPROVED
Subject to the condition that you are not absolved the responsibility for correctness of the materials supplied as per specification
Ravi Kant
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.				
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED				
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR				
MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Rooma Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asiankanpur@gmail.Com		NAME	DATE	TITLE : 132 kV BMK & 33kV BMK GENERAL ARRANGEMENT DRAWING		
Asian Switchgear Pvt. Ltd.	DRAWN	GANESH	08.08.2024			
	CHECKED	GANESH	08.08.2024			
	APPROVED					
DRAWING NUMBER : ASPL/BSPTCL/24160K		REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
		REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****		ALL DIMENSION ARE IN mm. NIT NO.:10/PR/BSPTCL/2023				SHEET NO. 2 OF 6
		DIMENSION TOLERANCE ± 10MM.				

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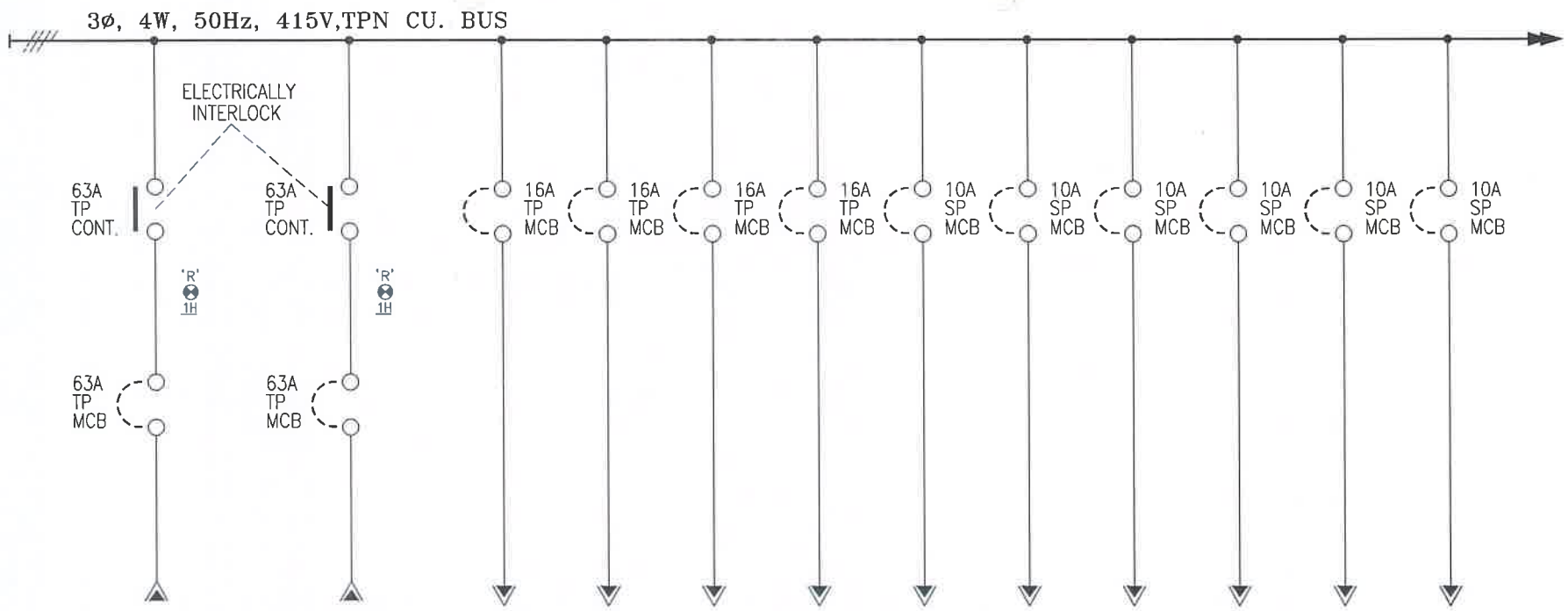

FEEDER No.	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
FEEDER RATING	63A	63A	16A	16A	16A	16A	10A	10A	10A	10A	10A	10A
FEEDER DESCRIP TION	INCOMER-1	INCOMER-2	--	--	--	--	--	--	--	--	--	--
CABLE SIZE IN mm2	1Rx3.5Cx70 AL.	1Rx3.5Cx70 AL.	1Rx4Cx16 AL.	1Rx4Cx16 AL.	1Rx4Cx16 AL.	1Rx4Cx16 AL.	1Rx2Cx6 AL.	1Rx2Cx6 AL.	1Rx2Cx6 AL.	1Rx2Cx6 AL.	1Rx2Cx6 AL.	1Rx2Cx6 AL.
SCHEME DRG MODULE	IC1	IC2	OG1	OG1	OG1	OG1	OG1	OG1	OG1	OG1	OG1	OG1

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the materials supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan Patna-800001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd.
B-17 Panki Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianswitchgear.com
E-Mail: asiankanpur@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 132 kV BMK & 33kV BMK SINGLE LINE DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160K	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 3 OF 6
	DIMENSION TOLERANCE ± 10MM.				

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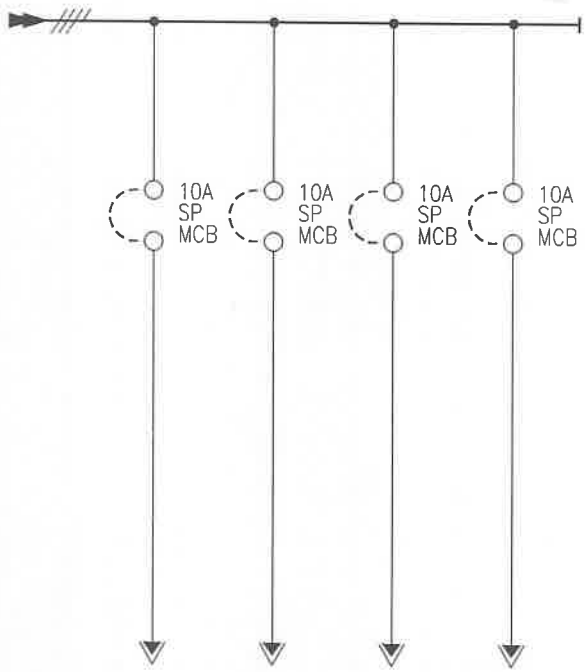

FEEDER No.	1F	1F	1F	1F
FEEDER RATING	10A	10A	10A	10A
FEEDER DESCRIP TION	--	--	--	--
CABLE SIZE IN mm2	1Rx2Cx6 AL.	1Rx2Cx6 AL.	1Rx2Cx6 AL.	1Rx2Cx6 AL.
SCHEME DRG MODULE	OG1	OG1	OG1	OG1

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM.
2. THE PANELS SHALL BE DUST & VERMIN PROOF, FREE STANDING, WALL MOUNTED AND NON COMPARTMENTALISED.
3. THE PANEL SHALL BE FABRICATED WITH - 2.0/1.6 MM. CRCA.
4. RUBBER GASKET SHALL BE PROVIDED INSIDE THE DOORS TO MAKE THE PANEL DUST AND VERMIN PROOF.
5. THE PANEL SHALL BE PAINTED WITH ELECTROSTATIC POWDER COATING PAINT AFTER NINE TANK PROCESS.
6. EARTH STUD SHALL BE PROVIDED
7. CONTROL WIRING SHALL BE CARRIED OUT WITH 1100V GRADE PVC INSULATED COPPER FLEXIBLE WIRE AND FOLLOWING COLOUR STANDARD.
   A. AC CONTROL CKT. - 1.5 SQ MM RED, BLACK
   B. GROUNDING - 2.5 SQ MM GREEN
8. NAME PLATE SHALL BE PROVIDED ON EACH FEEDER AND PANEL.
9. PANEL DOOR LOCK SHALL BE PROVIDED ON EACH DOOR.
10. CABLE ENTRY AS PER G.A. DRAWING.
11. PAINT SHADE:– - SMOKE GREY (692 OF IS:5)
12. GLAND PLATE- 3.0 MM. CRCA.

APPROVED
Subject to the condition that you are not absolved the responsibility for correctness of the material supplied as per specification
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Asian Switchgear Pvt. Ltd. B-17 Roona Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.asianSwitchgear.com E-Mail: asianskp@gmail.com

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 132 kV BMK & 33kV BMK SINGLE LINE DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160K	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.	NIT NO. :10/PR/BSPTCL/2023			SHEET NO. 4 OF 6
	DIMENSION TOLERANCE ± 10MM.				

BILL OF MATERIAL

Sr. No.	Item Description	Qty	Make
A	**Incoming :-**		
1	MCB 63A TP , 10KA C-CURVE	2	C&S
2	Contactor 63A TP 220V AC Coil AC-3 Duty	2	C&S
B	**Outgoing :-**		
1	MCB 16A TP , 10KA C-CURVE	4	C&S
2	MCB 10A SP , 10KA C-CURVE	10	C&S
C	**Control Circuit :-**		
1	On-delay Timer 230V AC	1	SELEC
2	Indicating Lamp LED Type RED 230 V AC	2	C&S/VAISHNO/SURDHI
3	HRC Fuse with Base 6A	2	C&S
7	Terminal I/C 70 sq. mm Non Discconnecting Type (Incomer-1&2)	8	CONNECTWELL
8	Terminal O/G 6 sq. mm Non Discconnecting Type (3Ph. & 1Ph. Ckt.)	40	CONNECTWELL
9	Terminal O/G 6 sq. mm Non Discconnecting Type (Interlocking)	100	CONNECTWELL
10	Door Switch with Bulb Holder	1	Reputed
11	Space Heater with Thermostate	1	Reputed

APPROVED
Subject to the condition that you are not absolve the responsibility for correctness of the mater supplied as per specificatio
Electrical Superintending Engine (Planning and Engineering) Bihar State Power Transmission Compa ed Vidyut Bhawan Patna

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER : Aslan Switchgear Pvt. Ltd. B-17 Rawna Industrial Estate Kanpur (U.P.) Ph:0512-2410004, Fax: 0512-2410002 www.aslanswitchgear.com E- Mail: aslanksp@gmail.Com
Aslan Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE : 132 kV BMK & 33kV BMK BILL OF MATERIAL

DRAWING NUMBER : ASPL/BSPTCL/24160K	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 5 OF 6
	DIMENSION TOLERANCE ± 10MM.				

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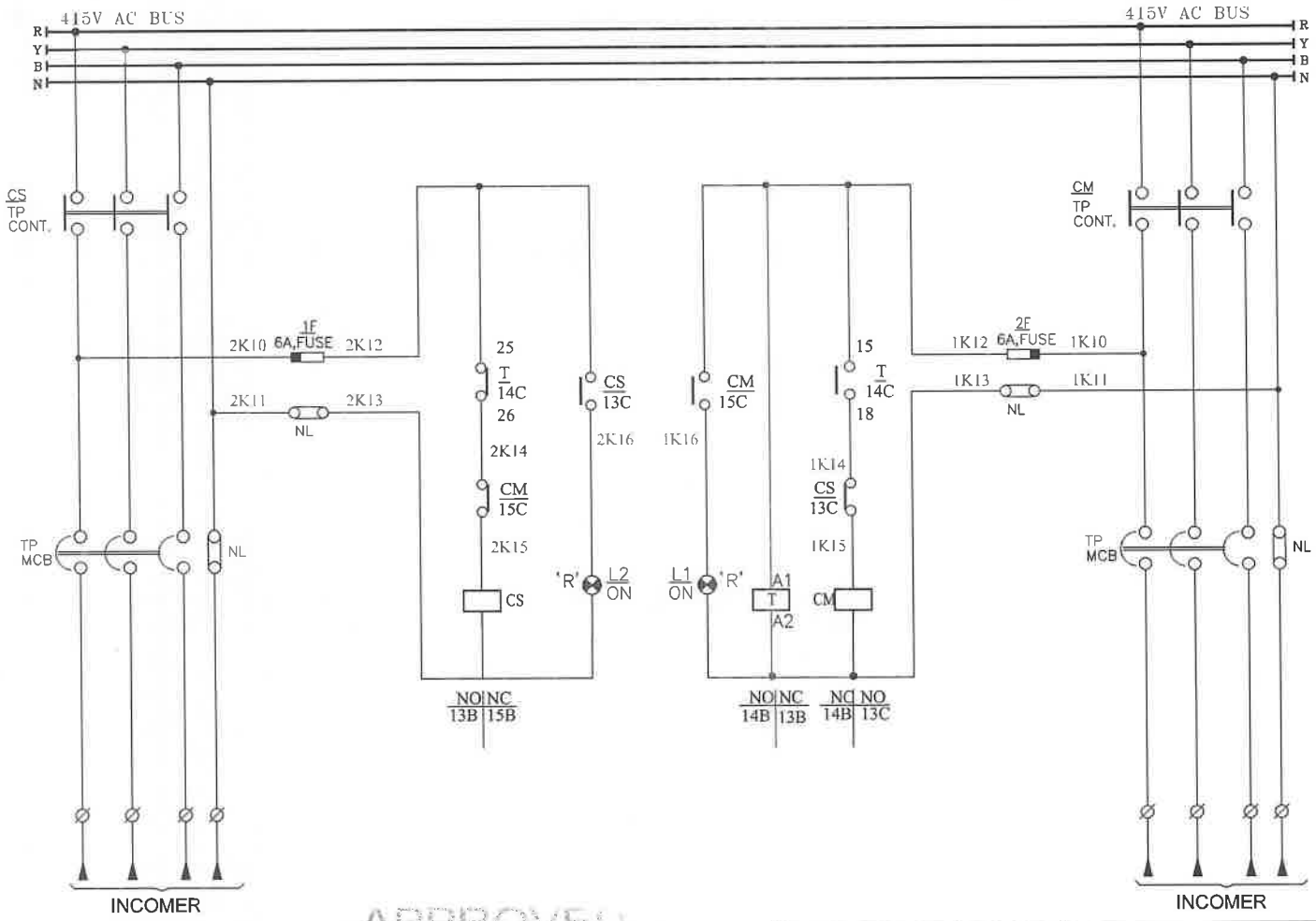

APPROVED
Subject to the condition that you are not absolved of the responsibility for correctness of the material supplied as per specification
Ravi Anand
Electrical Superintending Engineer
(Planning and Engineering)
Bihar State Power Transmission Company Ltd.
Vidyut Bhawan Patna-800001

CUSTOMER :		BIHAR STATE POWER TRANSMISSION CO. LTD.
CONTRACTOR:		M/S. ABN TOWER AND TRANSMISSION PRIVATE LIMITED
PROJECT :		132/33KV GSS BHOREY (DIST. GOPALGANJ) , BIHAR

MANUFACTURER :
Asian Switchgear Pvt. Ltd.
B-17 Roorna Industrial Estate Kanpur (U.P.)
Ph:0512-2410004, Fax: 0512-2410002
www.asianSwitchgear.com
E-Mail: asienkpr@gmail.Com
Asian Switchgear Pvt. Ltd.

	NAME	DATE
DRAWN	GANESH	08.08.2024
CHECKED	GANESH	08.08.2024
APPROVED		

TITLE :
132 kV BMK & 33kV BMK
SCHEMATIC DIAGRAM

DRAWING NUMBER : ASPL/BSPTCL/24160K	REV.01	04.11.2024	REV.03	--	SCALE N.T.S.
	REV.02	--	REV.04	--	
JOB NUMBER : ASPL/2024/****	ALL DIMENSION ARE IN mm.		NIT NO. :10/PR/BSPTCL/2023		SHEET NO. 6 OF 6
	DIMENSION TOLERANCE ± 10MM.				

CALCULATION FOR COPPER BUS BAR CAPACITY – 1000A

PARAMETERS

Thermal rating of Bus Bar (reqd.)	=	1000A
Size of Copper Bus Bar Proposed	=	(1x63x10 sq.mm)**
Current rating as per copper table no.-12 on CDA (AC rating)	=	1555.31A**
Site Ambient Temperature	=	50°C
Rise in Temperature allowed	=	35°C
Final Temperature Permitted	=	85°C
Size of Bus Bar enclosure	=	300 X 900 sq.mm

(0) **THERMAL RATING**

(0) Derating due to Temperature rise of 35°C over ambient of 50°C

Deareting factor due to temperature rise = 0.815 (As per annexure-1, Table 28.3)

(b) **DERATING DUE TO ENCLOSURE**

The derating factor for enclosure is based on the ratio of Bus Bar size and enclosure size, which is:

$$= \frac{3 \times (1 \times 63 \times 10)}{300 \times 900} = \frac{1890}{270000}$$

= 0.70%

As per table 5(enclosed) of INDAL. Bus Bar the derating factor is:

0.85 if ratio is less than 1%
0.75 if ratio is less than 5%

(c) **PROXIMITY FACTOR**

The Bus Bar is air cooled. The effect of proximity is considered to be negligible. The proximity factor is 1.

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Total Derating Factor

Summing up the total derating factor shall be

= Derating factor due to temperature rise X derating due to enclosure X derating factor due to proximity

Total derating factor	=	0.815X 0.85 X 1		
	=	0.69275		
Thermal Rating of Bus Bar	=	1555.31X0.69275	=	1077.44A

The bus bar size taken is suitable for 1077.44A (required 1000A)

Hence given cross-section is suitable to carry a continuous current of 1000A.

** As per CDA Copper Table No.-12

1X80X8 is suitable for current rating 1580A.

Than 1X63X10 will be suitable for current rating (1580X63X10)/(1X80X8)

= 1555.31A

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