

BIHAR STATE POWER TRANSMISSION COMPANY LTD., PATNA

A subsidiary company of Bihar State Power (Holding) Company Ltd., Patna CIN – U74110BR2012SGC018889

[SAVE ENERGY FOR BENEFIT OF SELF AND NATION]

Head Office, Vidyut Bhawan, Bailey Road, Patna – 800021
E-mail address – ceplanningengg@gmail.com, engg.dept@bsptcl.bihar.gov.in
Website - www.bsptcl.in

Letter No. C.E. (P&E) 05/2024 5 | / BSPTCL, Patna Dated 31 01 2024 From,

Kumar Prasant Chief Engineer (P&E)

To,

JV of M/s ABN Tower & Transmission Pvt. Ltd.(Lead partner) and M/s BinodConstruction(JV partner)
Godrej Genesis Building,Unit No.609,Plot No.XI,
6th Floor,Block EP & GP,Sector-V,Salt Lake
Kolkata-700091

Email: - info@abntower.com

Sub.:- Adoption of vendor alongwith GTP & Drawing of 33KV VCB of make M/s CG Power and Industrial Solution Ltd. for Construction of 2x50MVA, 132/33KV GSS Bhorey (Dist.Gopalganj) including residential quarter with construction of associated 02 nos. 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 under state plan against NIT-10/PR/BSPTCL/2023.

Ref.:- 1. NIT No.- 10/PR/BSPTCL/2023.

- 2. NOA No.- 13(service), Dated-01.09.23 & 12(supply), Dated-01.09.23
- 3. Your Letter no.- ABN/23-24/10/BSPTCL/RL-1397, Dated-04.01.2024
- 4. Your Letter no.- ABN/23-24/10/BSPTCL/RL-1434, Dated-10.01.2024
- 5. Your mail, dated 31.01.24

Sir.

With reference to subject noted above, your request for adoption of vendor along with GTP & Drawing of 33KV VCB of make M/s CG Power and Industrial Solution Ltd. from NIT-49/PR/BSPTCL/2022 for Construction of 2x50MVA, 132/33KV GSS Bhorey (Dist-Gopalganj) including residential quarter with construction of associated 02 nos. 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 under state plan against NIT-10/PR/BSPTCL/2023 is hereby considered on the risk and responsibility of M/s ABN Tower & Transmission Pvt. Ltd.(Lead partner) JV with M/s Binod Construction(JV partner). Details of approved drawings are as follows:

Sl. No	Description	Document No.
33KV 20	000A, 25KA for 3 sec, Vacuum Circuit Breaker	
1	GTP of 33KV 2000A, 25KA for 3 sec, Vacuum Circuit Breaker	
2	Coversheet for 36KV O/D PCVCB	COVERSHEET
3	General arrangement drawing for 36KV Outdoor PCVCP	PV7518BGB
4	Rating plate details for 36KV Outdoor PCVCB	PV7518BGB
5	General arrangement for Breaker support structure	GP2078Q1
0 7	Schematic Drg for 36KV O/D PCVCP Control C:	PV7518BSC1
8	1 Seliciliatic DIP for 36K V O/D DCVCD A C C:	PV7518BSC2
	Legellus Syllippie Davigo Niconstrati	PV6512O
JULY	600A, 25KA for 3 sec, Vacuum Circuit Breaker	1,00124
2	John V 1000A, 25KA for 3 sec. Vacuum Circuit Day 1	
3	coversheet for solvy ()/I) p(\v/\rangle B	COVERSHEET
	General arrangement drawing for 36KV Outdoor PCVCB	PV7518AGB
)	Rating plate details for 36KV Outdoor PCVCB	PV7518AGB
5	General arrangement for Breaker support structure	GP2078Q1
-	Schematic Drg for 36KV O/D PCVCB Control Circuit	PV7518ASC1



7 Schematic Drg for 36KV O/D PCVCB A.C. Circuit 8 Legends Symbols D.	
8 Legends Symbols Device Number	PV7518ASC2
a trice that WORL	PV6512O

Please note that this approval and issue of this letter does not absolve you from any contractual responsibility in terms of quality and correctness of the material and should be strictly in accordance with the tender specifications/ISS/IEC. If at any time, any abnormality is observed, BSPTCL reserves the right to withdraw this approval with immediate effect without any pre-

Encl: As above.

(Kumar Prasant) Chief Engineer(P&E)

CG Power and Industrial Solutions Limited Switchgear Division: Power Systems A-3 MIDC. Antitad, Mashik 422 010, Maharashtra, India T: +91 253 238 1130 F: +91 253 238 1247



SCHEDULED OF GUARANTEED TECHNICAL PARTICULARS OF 33 KV VCB

	lost - w	Parameters
No.	Description	CGPISL
1	Name of the Manufacturer	Leon
2	Manufacture's type and designation	IEC 62271-100
3	Governing standards	33kV
4	Rated voltage (kV)	36kV
5	Maximum continuous service rated voltage	50 HZ
6	Frequency (Mz)	Outdoor
7	Class (Outdoor)	
8	Normal current rating (amps)	2000 A
	(i) Under standard condition	2000 A
	# Under site condition	2000 A
	(iii) Derating factor, if any, for sites conditions	
9	Short time current rating (KA)	
	i) For 1 second	25
	Triby 1997 1997 1997 1997 1997 1997 1997 199	
10	(ii) For 3 second Maximum temperature rise over ambient 50 C due to rated current in main contacts, measured after breaking test.	Within Limit as per IEC
11	Rated short circuit breaking current	25kA
	a) Rated short circuit current (AC component) KA (rms) at	25KA
	KV	Less than 50%
	b) Percentage DC component /including DC	
	c) Asymmetrical breaking current (including	
	component) at KV	62.5kA
12	Making capacity (KA peak) part	
13	(milli seconds)	Less than 60mSec
	to interruption of 10% of the rated capacity	Less than 60mSec
	413 For interruption of 30% of the rated capacity	Less than 60mSec
	Far interruption of 60% of rated capacity	Less than 60mSec
	(d) For interruption of the full rated capacity.	Less than 20mSec
14	Arcing time	Less than 60mSec
15		
16	Make time Minimum reclosing time at rated interrupting capacity from the instant of the trip coil energization (milli second	300mSec

dopted for NIT No -10/PRIRSPTC2/0023

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1: +91 22 2423 7777 F; +91 22 2423 7733 W: www.cgglobal.com

Subject to the condition that you are not absolved on 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

CG Power and Industrial Solutions Limited

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17	Minimum Dead time	3 Min
	(a) 3 phase reclosing (milli second)	NA
	(b) 1 phase reclosing (do)	NA
	(c) Limit of adjustment of dead time for 1 phase reclosing	
	(d) Limit of adjustment of dead time for 1 phase reclosing.	NA
18	Date on restriking voltage for 100, 50% or 30% rated capacity.	As per IEC
	a) Amplitude factor	
	b) Phase Factor	
	Natural Fraguency	
	spine of Postriking Voltage (V) Illicio sec.	25% of Short Circuit Breaking
19	d) Rate of Rise of Restriking removed the Maximum interrupting capacity under phase opposition condition (MVA) – indicate value as per test report.	MVA
20 -	Maximum line charging current breaking capacity without over voltage exceeding 2.5 time the rated phase to neutral voltage (amps—indicate value as per test report)	Not Applicable
21	Maximum line charging current breaking capacity and corresponding over voltage recorded in test	Not Applicable
21	corresponding over voltage vossit	
	(a) On supply side }	
	(b) On line side) Maximum cable charging current breaking capacity and	50 A
22	corresponding over voltage recorded in test	
	(a) On supply side }	
	(b) On line side } Maximum shunt capacitor / Reactor Bank switching	400 A
23		Not Applicable
24	Maximum over voltage on switching transformer on no	Not Applicable
25	load and the charging current Dry 1 minute power frequency test withstand voltage for	
26	complete circuit breaker. (a) Between line terminal & ground parts (KV rms)	70kV
	(a) Between line terminal & glound person (b) Between terminal with breaker contacts open KV	70kV
	(peak Wet 1 minute power frequency test withstand voltage fo	

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28	1.2 / 50 microsecond wave impulse withstand test voltage for complete circuit breaker –	-aug al	
	the terminal & ground (KV peak)	170kV Peak	
	(b) Between terminal with circuit breaker contacts open	170kV Peak	
	(kv peak)	10	SPTCL
	SUPPORTING INSULATORS	Jaipur-Glass/CJI/RK/Reputed / A	Appro
29	Make and type	30kg(Appr) per insulator	White wa
30	Weight Non(UNAVO) Dimensions in mm	2530x1900x1000 (Approx)	
31	Transport dimension-VCB(HXWXD)Dimensions in mm	C	
32	Insulation class	AS PER IEC-85	
33	Visible corona discharge voltage	70kV	
34	Dry – 1 minute power frequency flashover voltage	70kV	200
35	Wet – 1 minute power frequency flashover voltage	170kV Peak	
36	1.2/5 microsecond impulse flashover voltage		
	Creepage distance to ground (mm) for heavily polluted		
37	atmosphere	900 mm	
	i) Total	400 mm	
	ii) Protected		
38	Minimum clearance in air –(Tolerance +/-5%)	420- 430 (as	per
	a) Between phase (mm)	400	1.
-	b) Live parts and earth (mm)	3700	
	c) Live parts to ground level (mm)	The graduate less sections	
	CONSTRUCTIONAL FEATURES	Three	
39	No. of poles per circuit breaker	One	
40	No. of breaks per phase	17 +/- 1 mm	4
41	Total length of breaks per hase (mm)	Butt	
42	Type of main contacts	Copper Chromium Alloys	
43	Materials of main contacts	No	
44	Last when main contacts silver plated (Yes/no)	Not Applicable	
45	Thickness of silver coating on - main contacts (IIIII)	Adequate	13
45	Contact pressure on main contacts (Kg/m2)	No separate arcing contact is	
40		applicable	
47	Type of arcing contacts	Not Applicable	
48	Contact pressure on arcing contacts (kg/m2)	Rotating	
49	Type of auxiliary switches	Copper Alloy	
50	Material of switch contacts	Yes	
51			
52	No. of auxiliary switch contacts operating with all time	6	4
	attich are closed when breaker is closed.	PPROVED	

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	han broaker is closed	6
-	b) Which are open when breaker is closed c) Those adjustable with respect to the position of	NIL
		Not Applicable
53	No. of auxiliary switch contacts operating with individual pole of a breaker	Nocripios
	-) Which are closed when breaker is closed.	
	when breaker is closed	
	c) Those adjustable with respect to the position of them.	
54	No. of spare auxiliary switch contacts operating with an	PERCHANISM THE
54	three poles or single pole of breaker	25
	a) Which are closed when breaker is closed.	7 5
	b) Which are open when breaker is closed c) Those adjustable with respect to the position of main	NIL -
		i Lia
55	No. of spare auxiliary switch contacts operative with	Not Applicable
	which are closed when breaker is closed.	
-	the state of the s	
	c) Those adjustable with respect to the position of many	
	No. of operating possible without maintenance	100
56	(-) At full rated interrupting capacity	100
	Tank 6 reted interrunting capacity	10000
	seed of ented current	10000
	Costed current	
57	(d) At 50% of rated current. Mounting flange details	As per GA No.PV7058B
58	Type of operating mechanism	Spring charge stored energy
	(a) Opening	Spring charge stored energy
	(b) Closing	220V DC
59	Tripping and closing circuit voltage (V)	200 W (+/-5%)
60	Power required for tripping coll	200 W(+/-5%)
61	Power required for closing coll	TNC & LR
62	Details of various selector switches	ON CRP (Not in our Scope)
63	Details of push button switches	ON CRP (Not in our Scope
64	Details of various selector switches	ON CRP (Not in our Scope
	Doctario	ON CIT (NOTE:
65	Details of push button switches Contingencies for which alarm provided	ON CRP (Not in our Scope

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Electrical Superintending Engineer 7 SEP 2023

(Planning and Engineering)

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	at a structure	Kindly refer GA Drawings
67	Design data for supporting structure.	80kg (Approx)
68	Weight of supporting structure (Steel) per breaker	10-15 Sec
69	Time required by motor to charge the closing spring	E2-C2-M2
70	Endurance Class	1.5
71	First Pole to Clear factor	Available
72	Auto reclosing feature	APPROVED

APPROVED

Subject to the condition that you are not absolved of

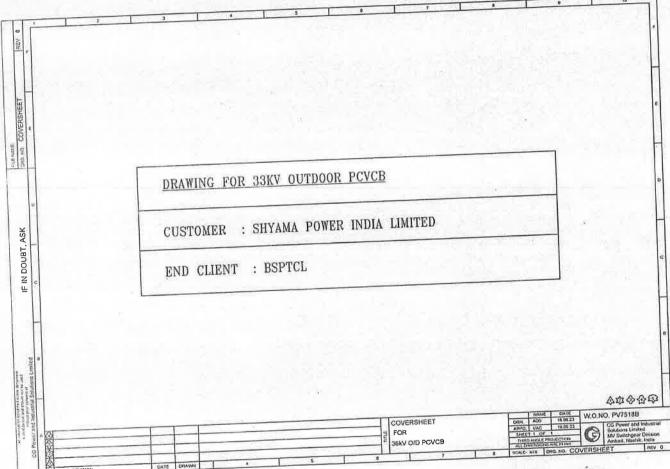
the responsibility for correctness of the materials supplied as per specification

Electrical Superintending Enginer (Planning and Engineering)

Bihar State Power Transmission Company Limits Vidyut Bhawan, Patna-800021

* NO. of terminals in common control of All control & contacts circuits to be wired up to common control cabinet plus 24 lerminals.





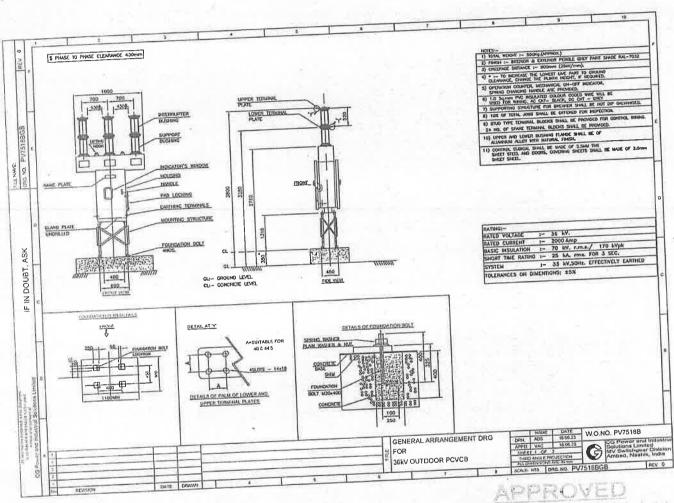
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Electrical Supermending Engineer (Planning and Engineering)
Siher State Power Transmission Company Limited Metival Bhawan, Patna-800021

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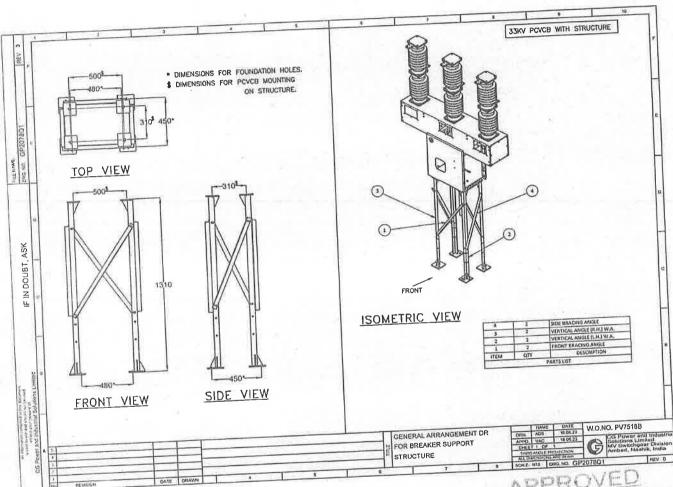
1 2	2 8 5 6 7 8 9 10
	RATING PLATE DETAILS
	PORCELAIN CLAD VACUUM CIRCUIT BREAKER RATING TO: IEC62271-100
E 20 20 20 20 20 20 20 20 20 20 20 20 20	CG Power and Industrial Solutions Limited. Medium Voltage Switchgear Divn. Ambad, Nashik-422010. MADE IN INDIA.
5	VOLTAGE 36 kV BREAKING CAPACITY 25 KAP ### YEAR
0	CURRENT 25 KA FOR 3 SEC
_	NO OF POLES 3 DC. COMPONENT <50% BIL 70/1/0 KMP
- Adh	OPERATING SEQUENCE/DUTY: O - 0,3Sec - CO - 3Min - CO
DOOBL	SHUNT TRIP 220 VDC CLOSING COIL 220 VDC
프	## Sr.Nos. ### MONTH& YEAR TO BE INCORPORATED IN WHICH JOB IS DESPATCHED
E Solvinius Solvinius Proposition of the Control of	RATING PLATE NAME
and the same of th	PATING PLATE BETAILS FOR SKY OUTDOOR PCVCB BETAILS FOR SKY

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

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Smar State Power Transmission Company Limited Vidviit Bhawan, Palna-800021

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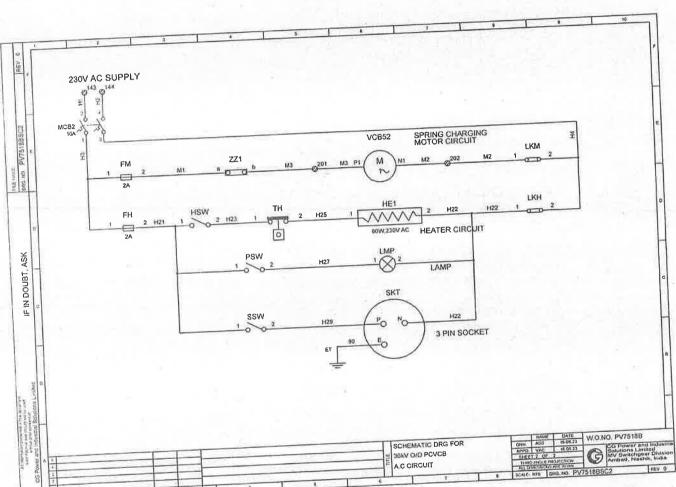
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Electrical Superintending Engineer Electrical Superintending Engineering)
(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidyut Bhawan, Patna-800021 his

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

	B-SHEET FOR W.O.NO.	PV7518B	REV'0'
	DEUEET NO .	PB/518D	
4000	BOARD NO.:	36kV O/D PCVCB	
AND THE REAL PROPERTY.	TOTAL QTY.:	4	No.
- William	PREPARED BY:	ADS	
		VAC	
1574544	r state that shows DATE:	16.06.23	
14000	DATE	2010	momat
		PCVCB	TOTAL
r I	DESCRIPTION	1	4
1	RASIC UNIT		
_	The second of the second secon		
	SP.CH.MOTOR:230V AC,AUX.SUPPLY: 220VDC		
	11.00.00.00	1	4
2	ANTI PUMPING DEVICE		
-	AUX.SUPPLY: 220VDC.		
		1	4
-	TNC SWITCH W/O BELL ALARM CONTACT	-	
3	TYPE - NON-LOCKABLE	VICTOR OF THE PERSON NAMED IN COLUMN 1	
	CALTED (SHIRKE/EUUIV.		
	CONTACTS: 1N/O IN EACH POSITION		
			4
	LOCAL/REMOTE SELECTOR SWITCH	1	
4	LUCAL/REMOTE SECTION OF SECTION O		
-11	TYPE - NON-LOCKABLE MAKE - SALZER/SHIRKE/EQUIV.		
	CONTACTS:ZN/O IN EACH POSITION		
	CONTACTS: ZN/O IN BACH TOSTTO		8
	and a court of	2	
5	ON-OFF TOGGLE SWITCH		
	FOR HEATER & SOCKET		
	RATING: 6A,230V AC		4
		1	
6	DOOR OPERATED SWITCH		
	RATING: 2A,230V AC		4
		1	
7	SPACE HEATER		
	RATING: 80W,230V AC		
		1	4
8	3PIN SOCKET		
-	RATING: 5A,230V AC		
_	A CONTRACT C	1	4
9	PANEL LAMP		
,	RATING: 5W,230V AC		
_	INTERIOR STATE	1	4
40	HOLDER FOR PANEL LAMP		
10		1	4
	THERMOSTAT-RIGID PROBE TYPE	1	
11	RATING: 230V AC		
	KATING - 250-115		
			4
12	A)MCB1-2POLE, 16A, 220V DC SUPPLY	1	4
	B)MCB2- 2POLE, 16A, 230V AC SUPPLY	1	4
	B)MCB2- ZPOLE, TON, ZSO, TO	1	
	ADD ON BLOCK FOR MCB2	The same of the sa	4
	and the state of t	1	
13	AUXILIARY SWITCH		
	CONTACTS:12NO+12NC		

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—10 | PRIBSPTC41023

(AC per GTP-Drawing & BOB) APPROVED

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

brie 07 SEP 2023

	BILL OF M	PV7518B SI	ARES	
- Constant	B'SHEET.NO.:	PB7518B_SI	PARES	
	OTY.:	1	NOS.	
SANATE NO.	PREPARED BY:			
	APPROVED BY:	VAC		
	DATE:	16.06.23	01-25K010 6K38	
	SPARES			
	TO CONTINUE ON THE CONTINUE ON		TOTAL	
ΙΤ	DESCRIPTION			
			1	
1	TRIPPING COIL ASSLY.			
	CONTROL VOLTAGE: 220V DC			
			1	
2	CLOSING COIL ASSLY.			
	CONTROL VOLTAGE: 220V DC	1		
		+	1	
3	TNC SWITCH W/O BELL ALARM CONTACT			
	TYPE - NON-LOCKABLE			
-	MAKE - SALZER/SHIRKE/EQUIV.	+		
	CONTACTS:1N/O IN EACH POSITION			
	CONTRACTOR		1	
4	LOCAL/REMOTE SELECTOR SWITCH			
-	TYPE - NON-LOCKABLE	-		
	MAKE - SALZER/SHIRKE/EQUIV.	-		
-	CONTACTS:2N/O IN EACH POSITION			
		-	1	
5	AUXILIARY SWITCH			
3	CONTACTS:12NO+12NC			

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—10/P/2/BSPTC4/2023

23/1/24

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SCHEDULED OF GUARANTEED TECHNICAL PARTICULARS OF 33 KV VCB

		Parameters
. No.	Description	CGPISL
1	Name of the Manufacturer	Leon
2	Manufacture's type and designation	IEC 62271-100
3	Governing standards	33kV
4	Rated voltage (kV)	36kV
5	Maximum continuous service rated voltage	50 HZ
6	Frequency (Mz)	Outdoor
7	Class (Outdoor)	
8	Normal current rating (amps)	1600 A
	(i) Under standard condition	1600 A
512	(ii) Under site condition	1600 A
	(iii) Derating factor, if any, for sites conditions	
9	Short time current rating (KA)	
	i) For 1 second	25
	(ii) For 3 second	
10	Maximum temperature rise over ambient 50 C due to rated current in main contacts, measured after breaking test.	Within Limit as per IEC
11	Rated short circuit breaking current	
7.7	a) Rated short circuit current (AC component) KA (rms) at	25kA
	KV	Less than 50%
	b) Percentage DC component	
	c) Asymmetrical breaking current (including DC	
	component) at KV	62.5kA
12	Making capacity (KA peak) part	
13	Total break time (milli seconds)	Less than 60mSec
13	(a) For interruption of 10% of the rated capacity	Less than 60mSec
	(b) For interruption of 30% of the rated capacity	Less than 60mSec
	(a) For interruption of 60% of rated capacity	Less than 60mSec
	(d) For interruption of the full rated capacity.	Less than 20mSec
1.0	Arcing time	Less than 60mSec
14	a si No Airm O	ress man compac
15 16	Minimum reclosing time at rated interrupting capacity from the instant of the trip coil energization (milli seconds)	300mSec

Adopted for NITNO--10 | PRIBS PTC4 2023

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Corporate Identity Number: L99999MH1937PLC002641

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(Planning and Engineering)
Bihar State Power Transmission Company Limited
Vidvot Bhawan, Patna-800021

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07 SEP 2023



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17	Minimum Dead time	300mSec
	(a) 3 phase reclosing (milli second)	NA
	(b) 1 phase reclosing (do) (c) Limit of adjustment of dead time for 1 phase	NA
	reclosing	NA
	desing	As per IEC
18	Date on restriking voltage for 100, 50% or 30% rated capacity.	As per ne
	a) Amplitude factor	
	b) Phase Factor	
-	Natural Frequency	
1000	Pote of Rise of Restriking Voltage (V) micro sec.	25% of Short Circuit Breaking
19	Maximum interrupting capacity under phase opposition condition (MVA) – indicate value as per test report.	MVA
20	Maximum line charging current breaking capacity without over voltage exceeding 2.5 time the rated phase to neutral voltage (amps – indicate value as per test report)	Not Applicable
21	Maximum line charging current breaking capacity and corresponding over voltage recorded in test	Not Applicable
	(a) On supply side }	
	On line side	
22	Maximum cable charging current breaking capacity and corresponding over voltage recorded in test	50 A
	(a) On supply side }	
	(It) On line side	
23	Maximum shunt capacitor / Reactor Bank switching	400 A
25	capacity (Single bank MVA) Maximum breaking capacity on kilometric faults (MVA)	Not Applicable
24	Maximum over voltage on switching transformer on the	Not Applicable
25	load and the charging current Dry 1 minute power frequency test withstand voltage for	
26	a mplota circuit breaker.	70kV -
	(a) Between line terminal & ground parts (KV rms)	70147
	(b) Between terminal with breaker contacts open KV	
27	Wet 1 minute power frequency test withstand voltage for complete circuit breaker	70kV

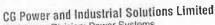
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Switchgear Division: Power Systems A-3 MIDC, Ambad, Nashik 422 010, Maharashira, India T: +91 253 238 1130 F: +91 253 238 1247



28	1.2 / 50 microsecond wave impulse withstand test voltage for complete circuit breaker –	
	(a) Between the terminal & ground (KV peak)	170kV Peak
	(b) Between terminal with circuit breaker contacts open (kv peak)	170kV Peak
	TOPS	A Company of the Comp
29	Make and type	Jaipur Glass/CJI/RK/Reputed
30	Weight	30kg(Appr) per insulator
31	Transport dimension-VCB(HXWXD)Dimensions in mm	2530x1900x1000 (Approx)
32	Insulation class	C
	Visible corona discharge voltage	AS PER IEC-85
33	Dry – 1 minute power frequency flashover voltage	70kV
34	Wet – 1 minute power frequency flashover voltage	70kV
35	1.2/5 microsecond impulse flashover voltage	170kV Peak
36	Creepage distance to ground (mm) for heavily polluted	THE RESIDENCE
37	atmosphere	900 mm
	i) Total	400 mm
	ii) Protected	400 11111
38	Minimum clearance in air –(Tolerance +/-5%)	430
	a) Between phase (mm)	400
-	b) Live parts and earth (mm)	3280
	c) Live parts to ground level (mm)	3280
	CONSTRUCTIONAL FEATURES	Thron
39	No. of poles per circuit breaker	Three
40	No. of breaks per phase	
41	Total length of breaks per hase (mm)	17 +/- 1 mm
42	Type of main contacts	Butt Sharming Alloys
43	Materials of main contacts	Copper Chromium Alloys
44	Whether main contacts silver plated (Yes/no)	No No
45	Thickness of silver coating on – main contacts (mm)	Not Applicable
46	Contact pressure on main contacts (Kg/m2)	Adequate
47	Type of arcing contacts	No separate arcing contact is applicable
40	Contact pressure on arcing contacts (kg/m2)	Not Applicable
48	Type of auxiliary switches	Rotating
49	Material of switch contacts	Copper Alloy
50	Whether contacts silver plated (Yes/No)	Yes
51	No. of auxiliary switch contacts operating with all three	
52	poles or single pole of breaker	6
	a) Which are closed when breaker is closed. b) Which are open when breaker is closed	6

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*****	c) Those adjustable with respect to the position of main contacts.	NIL
53	No. of auxiliary switch contacts operating with individual pole of a breaker	Not Applicable
	a) Which are closed when breaker is closed.	
	b) Which are open when breaker is closed	
	c) Those adjustable with respect to the position of main	
54	No. of spare auxiliary switch contacts operating with all three poles or single pole of breaker	
-	a) Which are closed when breaker is closed.	2
	b) Which are open when breaker is closed	2
	c) Those adjustable with respect to the position of main	NIL
55	No. of spare auxiliary switch contacts operative with individual pole of breaker	Not Applicable
11111111111	a) Which are closed when breaker is closed.	
	b) Which are open when breaker is closed	
	c) Those adjustable with respect to the position of main contacts.	
56	No. of operating possible without maintenance	100
	(a) At full rated interrupting capacity	100
-	(b) At 50% of rated interrupting capacity	100
	(c) At 100% of rated current	10000
	(d) At 50% of rated current.	10000
57	Mounting flange details	As per GA No.PV7058A
58	Type of operating mechanism	
30	(a) Opening	Spring charge stored energy
-	(b) Closing	Spring charge stored energy
59	Tripping and closing circuit voltage (V)	220V DC
60	Power required for tripping coil	200 W (+/-5%)
61	Power required for closing coil	200 W(+/-5%)
	Details of various selector switches	TNC & LR
62	Details of push button switches	ON CRP (Not in our Scope)
63	Details of various selector switches	ON CRP (Not in our Scope)
64	Details of push button switches	ON CRP (Not in our Scope)
65	Contingencies for which alarm provided	ON CRP (Not in our Scope)
66 67	Design data for supporting structure.	Kindly refer GA Drawings
	Weight of supporting structure (Steel) per breaker	80kg-(Approx)

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00 200	1130 F: #81 255 256 1257	10-15 Sec
59	Time required by motor to charge the closing spring	E2-C2-M2
70	Endurance Class	1.5
71	First Pole to Clear factor	Available
72	Auto reclosing feature	

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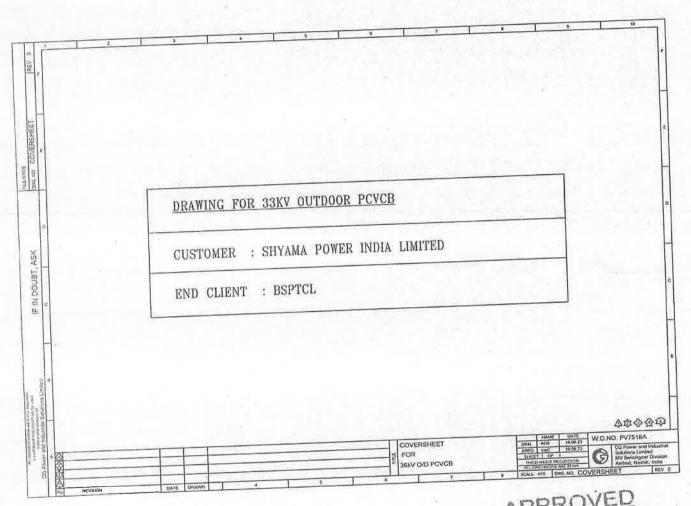
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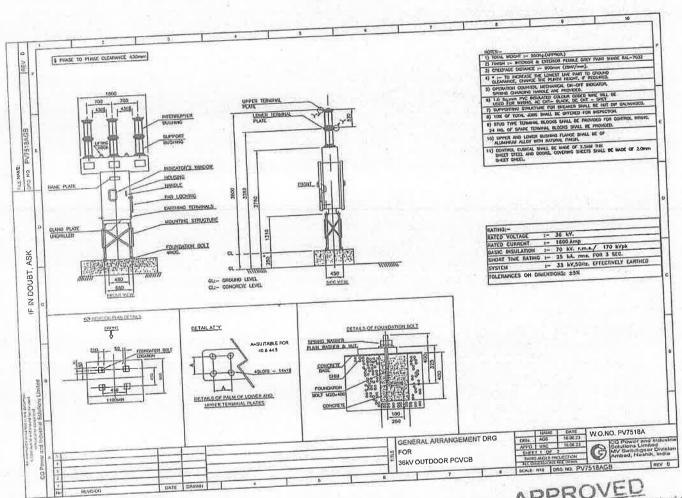


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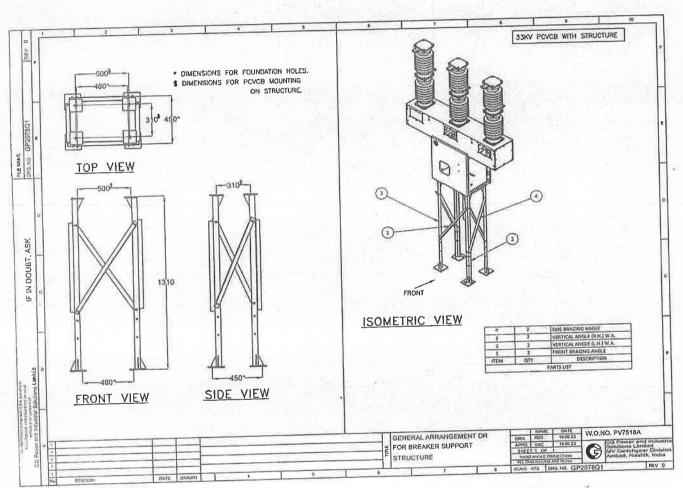
	3 4 5 6 7 8 9 10	
0 0		1
	RATING PLATE DETAILS	
ERS.NO PV7518AGB	PORCELAIN CLAD VACUUM CIRCUIT BREAKER CG Power and Industrial Solutions Limited. CIRCUIT BREAKER CIRCUIT BREAKER TYPE 369V25A	e
Constitution of the state of th	Medium Voltage Switchgear Divn. Ambad, Nashik 422010. MADE IN INDIA. VOLTAGE 36 KV BREAKING CAPACITY 25 KA VALTAGE 36 KV BREAKING CAPACITY 25 KA VALTAGE 36 KV BREAKING CAPACITY 25 KA VALTAGE 36 KV BREAKING CAPACITY 25 KA VEAR	
20	CURRENT 1600 AMP MAKING CAPACITY 62.5 KAP ### YEAR FREQUENCY 50 Hz SHORT TIME CURRENT 25 KA FOR 3 SEC NO OF POLES 3 DC. COMPONENT <50% BIL 70/170 KVP	
IF IN DOUBT, ASK	OPERATING SEQUENCE/DUTY : 0 - 0.3Sec - CO - 3Min - CO SHUNT TRIP 220 VDC CLOSING COIL 220 VDC	c
	## Sr.Nos. ### MONTH& YEAR TO BE INCORPORATED IN WHICH JOB IS DESPATCHED	
And the state of t		D
The state of the s	PATING PLATE DETAILS FOR SRKY OUTDOOR PCVCB T BOAL HIS DRICH NO. THE SECRET SHOULD BE SECRET SHOULD BE	nd industri nilod sar Chvislo hik, Imilia

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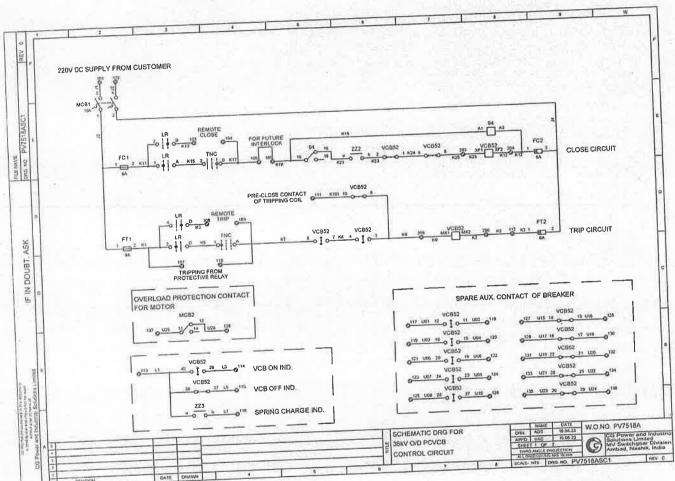
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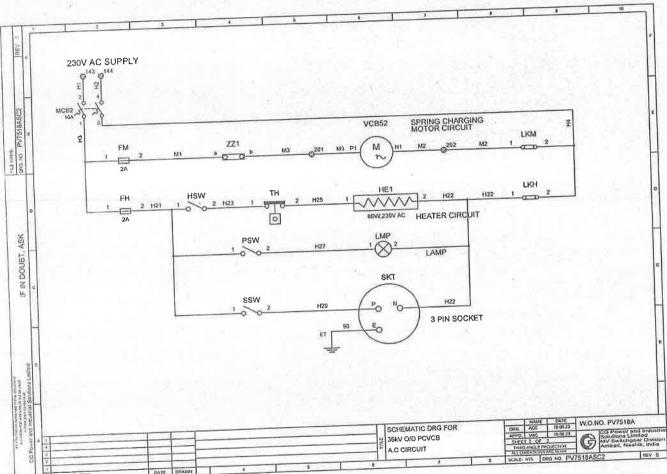
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				MNOTO	CODE, TAG, SYMBOL DESCRIE	TAG	TAG DESCRIPTION	4
*		ANSI	PROTECTIVE FUNCTIONS	SYMBOL	DESCRIPTION	77.0		3-10 - W
		CODE 94	ANTI PUMPING RELAY		HRC FUSE			
		VCB52	VACUUM CIRCUIT BREAKER	0_0	LINK			
Н		ZZ1	OPENS WHEN SPRINGS ARE CHARGED		NORMALLY OPEN CONTACT			
			CLOSES WHEN SPRINGS ARE CHARGED		NORMALLY CLOSED CONTACT			
			BREAKER CONTROL SWITCH	-0-	MOTOR			2, 0,000
4			LOCAL REMOTE SWITCH	<u></u>	THERMOSTAT	-		
		HE	SPACE HEATER	8	LAMP			21/20
		TH	THERMOSTAT	-01110-	SWITCH(TNC,LR,AUTO MANUAL)	-		
11		HSW	TOGGLE SWITCH FOR HEATER	000	TOGGLE SWITCH	+-		
11		ssw	TOGGLE SWITCH FOR SOCKET		COIL	-		
		PSW	DOOR SWITCH SWITCH FOR LAMP	-0 0-	(528)VGB OPERATED NO CONTACT	-		
		52X	AUX CONTACTOR FOR VCB CONTACT MUL	7 -0		1		
11		VC85200	VCB CLOSING COIL	(6)	3PIN SOCKET			
		VCB52TC	VCB TRIPPING COIL	-				
		-0	- VATO A MOD					-
		(X)	FUSES & MCB CLOSING CIRCUIT FUSES					
C		FC1,FC2	TRIPPING CIRCUIT FUSES					
		FT1,FT2	INDICATION CIRCUIT FUSES					
		FI1,FI2	FUSE/LINK FOR MOTOR CIRCUIT					
H		FM/LKM	FUSE/LINK FOR HEATER CIRCUIT					
		FHILKH	MINIATURE CIRCUIT BREAKER					
or and industrial Salarians United	<u>NO</u>	MCB TES THESE ARE TH	E FREQUENTLY USED ABBREVIATIONS AS PI	ER CGL STAND	DARD DRAWINGS		HANNE DATE	W.O.NO. PV7518A S.G. Prover and In S.G. Prov

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	B-SHEET FOR W.O.NO.	PV7518A	REV'0'
		PR7518A	
40	B'SHEET.NO.:	36kV O/D PCVCB	
	TOTAL QTY.:	9	No.
448	PREPARED BY:	ADS	
-	PREPARED BY: APPROVED BY:	VAC	
Stand	sis adiptions. APPROVED BY:	16.06.23	
	DATE:	10.00.23	
		PCVCB	TOTAL
T	DESCRIPTION	1	9
1	BASIC UNIT		
	33kV/1600A/25kA		
	SP.CH.MOTOR:230V AC,AUX.SUPPLY: 220VDC		
		1	9
2	ANTI PUMPING DEVICE		
	AUX.SUPPLY: 220VDC.		
		1	9
3	TNC SWITCH W/O BELL ALARM CONTACT	1	
	TYPE - NON-LOCKABLE		
	TMAKE - SALZER/SHIRKE/EQUIV.		
	CONTACTS:1N/O IN EACH POSITION		
-			9
1	LOCAL/REMOTE SELECTOR SWITCH	11	
1	TTYPE - NON-LOCKABLE		
	MAKE - SALZER/SHIRKE/EOUIV.		
-	CONTACTS:2N/O IN EACH POSITION		
_	CONTROL		18
5	ON-OFF TOGGLE SWITCH	2	10
5	FOR HEATER & SOCKET		
	RATING: 6A,230V AC		
_	RATING: 0A,250 V AG		
	DOOR OPERATED SWITCH	1	9
6	RATING: 2A,230V AC		
	RATING: ZA,ZSOV AC		
		1	9
7	SPACE HEATER		
	RATING: 80W,230V AC		
		1	9
8	3PIN SOCKET		
	RATING: 5A,230V AC		
		1	9
9	PANEL LAMP		
	RATING: 5W,230V AC		
2-1-		1	9
10	HOLDER FOR PANEL LAMP		
		1	9
11	THERMOSTAT-RIGID PROBE TYPE		
	RATING: 230V AC		
		4	
12	MCB	1	9
-	A)MCB1-2POLE, 16A, 220V DC SUPPLY		9
	IRIMCB2- 2POLE 16A, 230V AC SUPPLY	1	
	ADD ON BLOCK FOR MCB2		
	Miss		9
13	AUXILIARY SWITCH	1	
	LENGTH DISTRICT OF THE PARTY OF		
13	CONTACTS:12NO+12NC		

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Bihar State Power Transmission Company Limited Vigyat Bhawan, Patna-800021



	BILL OF M	INTERIOR				
	W.O.NO.:	PV7518A_SI	PARES			
STATE OF THE PARTY	W.O.NO.: B'SHEET.NO.:	PB7518A_5	NOS.			
Secret 2	QTY.: PREPARED BY:	ADS	1400.			
10.00	APPROVED BY:					
		16.06.23				
-	SPARES					
	DESCRIPTION		TOTAL			
IT	DESCRIPTION					
			1			
1	TRIPPING COIL ASSLY.					
	CONTROL VOLTAGE: 220V DC					
2	CLOSING COIL ASSLY.		1			
	CONTROL VOLTAGE: 220V DC	-				
	ALADM CONTACT		1			
3	TNC SWITCH W/O BELL ALARM CONTACT					
	TYPE - NON-LOCKABLE					
	MAKE - SALZER/SHIRKE/EQUIV.					
	CONTACTS:1N/O IN EACH POSITION					
4	LOCAL/REMOTE SELECTOR SWITCH		1			
-4	TYPE - NON-LOCKABLE	4	-			
1133	MAKE - SALZER/SHIRKE/EQUIV.	-				
	CONTACTS:2N/O IN EACH POSITION	-				
		-	1			
5	AUXILIARY SWITCH					
	CONTACTS:12NO+12NC	-				

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