

NOTE: 1. Drawings Approval subject to valid type test reports, to be checked during acceptance tests.
2. For EPC contractors only.

1. Minimum 300mm plinth shall be maintained for CT/PT/CVT/Isolators/IV/LA/Breaker the substation during foundation works to ensure safe live to ground clearance per IE rules.
2. Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings. The EPC contractor shall be instructed to supply the same line with CT/PT/CVT/Isolator/IVT/LA/Breaker's requirement and compatibility.

LIST OF DRAWINGS/DOCUMENTS FOR 245KV DBR DISCONNECTOR

S NO.	TITLE	DRAWING NO.	REV	SHEET
1	GA OF 245KV 800A 'DBR' DISCONNECTOR WITHOUT EARTH SWITCH	STD-2450001	0	1 OF 1
2	DETAILS OF MAIN CONTACT (245KV 800A DBR DISCONNECTOR)	STD-2450002	0	1 OF 1
3	GA OF MOTOR OPERATING MECHANISM FOR DISCONNECTOR	STD-2450003	0	1 OF 1
4	SCHE. DIAG OF DISCONNECTOR CONTROL PANEL AC & DC	STD-2450004	0	1 OF 2
5	TERMINAL BLOCK DETAILS FOR DISCONNECTOR CONTROL PANEL	STD-2450004	0	2 OF 2
6	NAME PLATE DETAILS (FOR 245KV DBR DISCONNECTOR)	STD-2450005	0	1 OF 1
7	GTP FOR 245KV DBR DISCONNECTOR	STD/GTP/245kv/DBR	0	----

NOTE:- THIS COMPLETE SET OF DRAWINGS ARE REPRESENTATIVE OF THE LATEST TYPE TEST REPORT AND PROPRIETARY DESIGN, RESEARCH & DEVELOPMENT OF SWITCHGEAR MANUFACTURING COMPANY PVT. LTD. GANDRAJAPALLE. THE DESIGNS SHALL NOT BE REPRODUCED WITHOUT WRITTEN CONSENT OF SWITCHGEAR MANUFACTURING COMPANY PVT. LTD. GANDRAJAPALLE.

CHIEF ENGINEER/PROJECTS
APTRANSCO/VS/VIJAYAWADA

Drawing approval subject to valid vendor registration

7653949/2023/EEMRT-ENE51

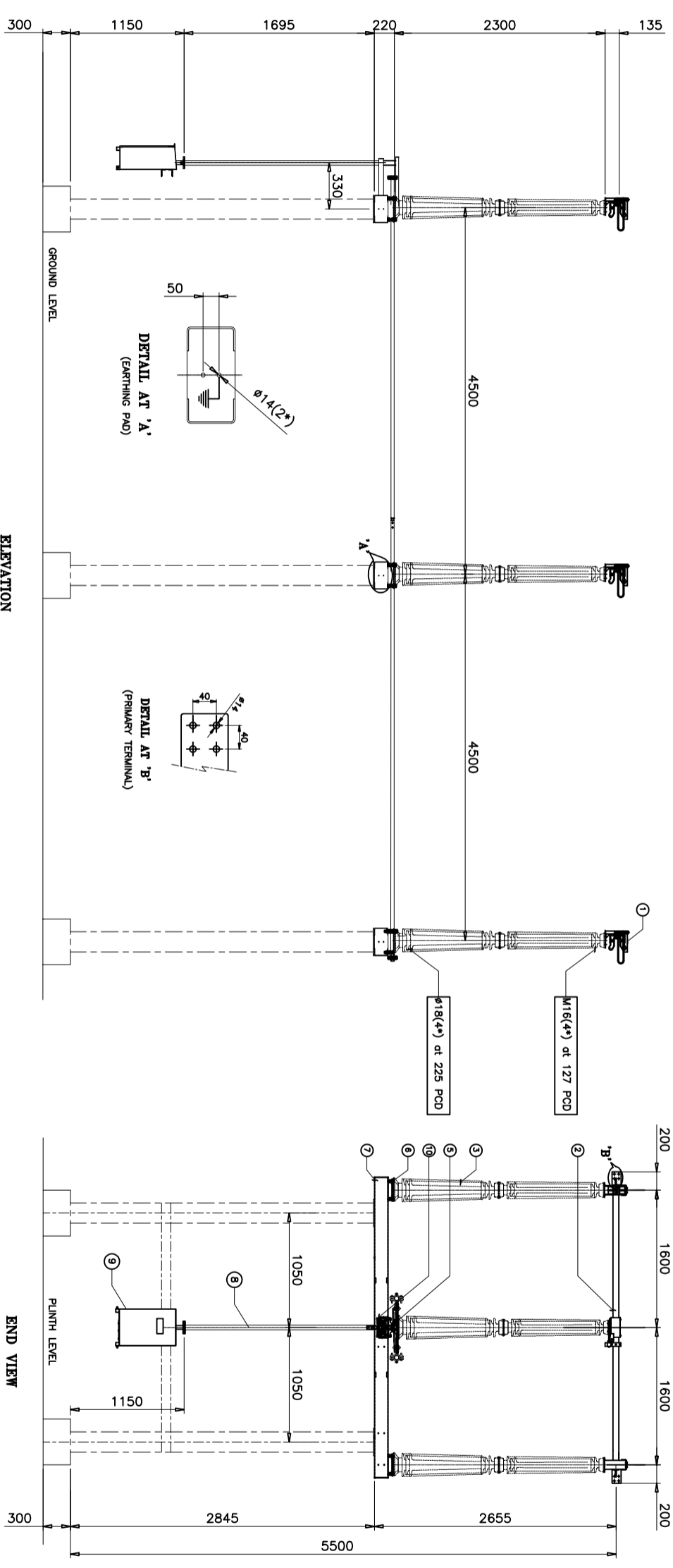
DRN	YVG	07.07.23		SWITCHGEAR MANUFACTURING COMPANY
CHKD	VK	07.07.23		
APPD	OJA	07.07.23	TITLE	MASTER LIST
DEPT	SIGN	DATE		
SC: NTS		Paper size A3	DRG.NO. S T D - 2 4 5 0 0 0 0	SHEET 1 OF 1
				REV. 0

SN	DATE	CHANGES MADE	SIG

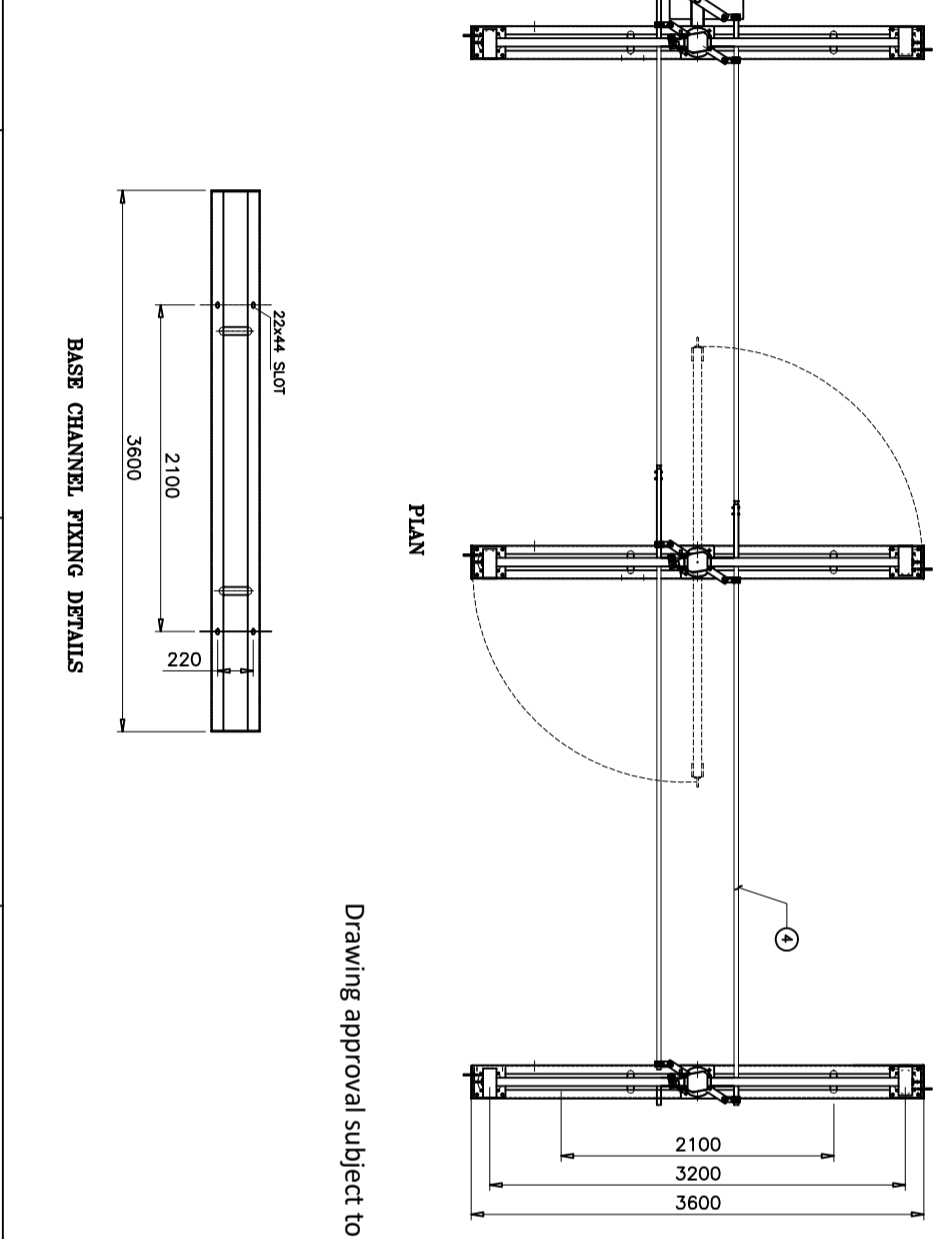
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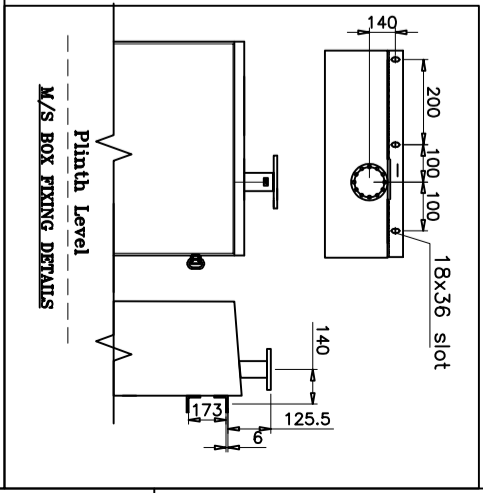
NO	DESCRIPTION	QTY
10	TOP OPERATING MECHANISM	01
9	OPERATING MECHANISM BOX(MOTOR)	01
8	OPERATING PIPE(50NB GI PIPE)	03
7	BASE CHANNEL(150X75X5MM THK)	03
6	ELEVATOR PLATE (12MM THK) MS HDG	06
5	ROTATING STOOL POST	03
4	TANDEM PIPE (32 NB GI PIPE)	02
3	INSULATOR STACK (CONTRACTOR SCOPE)	09
2	MOVING CONTACT ASSLY	03
1	FIXED CONTACT ASSLY	06



DRN	YVG	DATE
CHKD	VK	07.07.23
APPD	OJA	07.07.23
DEPT	SIGN	DATE
SC: NTS		3

CHIEF ENGINEER/PROJECTS
APTRANSCO/VISVIJAYAWADA

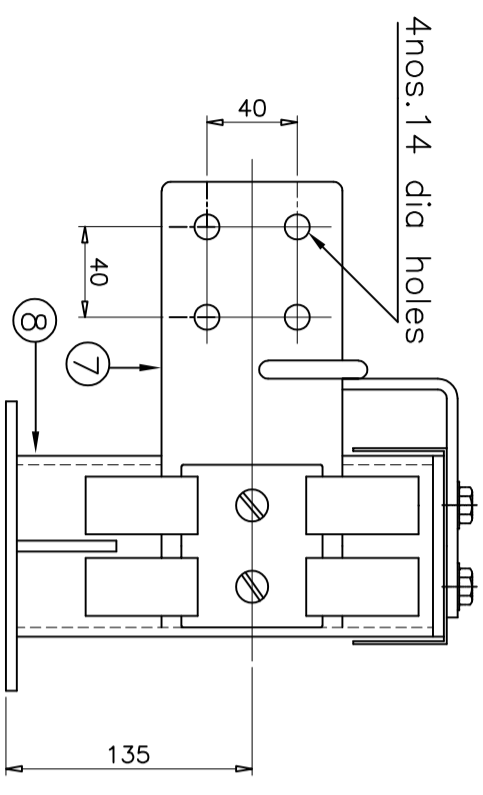
NOTES
1. ALL DIMENSIONS ARE IN 'mm'
2. ALL FERROUS PARTS ARE HOT DIP GALVANIZED WITH 85 MICRONS
3. ALL NON-FERROUS CONTACT POINTS ARE SILVER PLATED WITH 15 MICRONS
4. THE MAIN ROTATING POST HAS TWO NOS OF BEARING
5. ALL GI PIPES ARE OF 'B' CLASS AS PER IS:1239
6. MANUFACTURING TOLERANCES
i) UPTO 50mm--- ±3% ii) 51 to 100mm--- ±2%
iii) 101 to 300mm--- ±1% iv) ABOVE 300mm--- ±0.5%



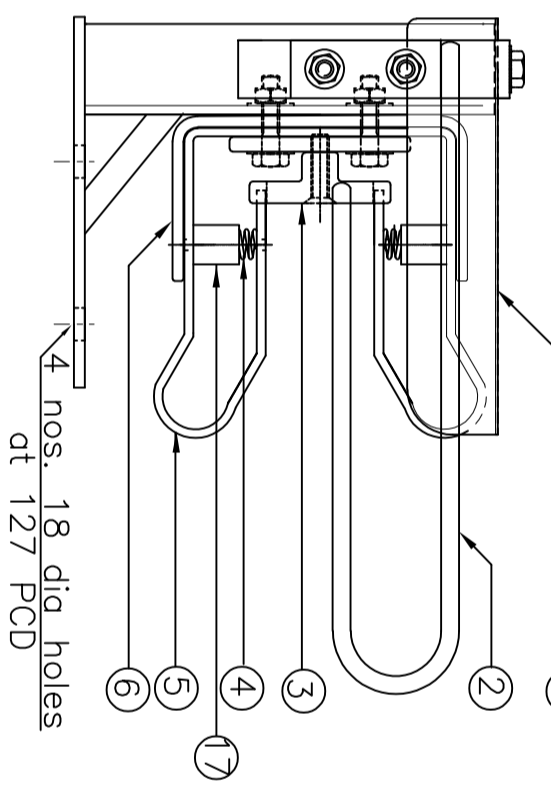
SWITCHGEAR MANUFACTURING COMPANY
GANDRAJAPALLE, CHITTOOR DIST, A.P, INDIA.
GENERAL ARRANGEMENT OF
245KV 800A DBR DISCONNECTOR WITHOUT EARTH SWITCH
SHEET 1 of 1

REV	DATE	CHANGES MADE	SIG
REF. STANDARD	IEC:62271-102		
MOTOR VOLTAGE AC	V	415	
CONTROL VOLTAGE DC	V	220	
GROSS	kg	34	
TL STRAIGHT	kg	102	
ACROSS	kVp	530	
PF TO EARTH	kVp	460	
ACROSS	kVp	1200	
L TO EARTH	kVp	1050	
STC PEAK FOR 3Sec	kAp	100	
CURRENT	A	800	
VOLTAGE	kV	245	
DESCRIPTION	UNIT	VALUE	

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DETAILS OF FIXED CONTACT



ELEVATION



END VIEW

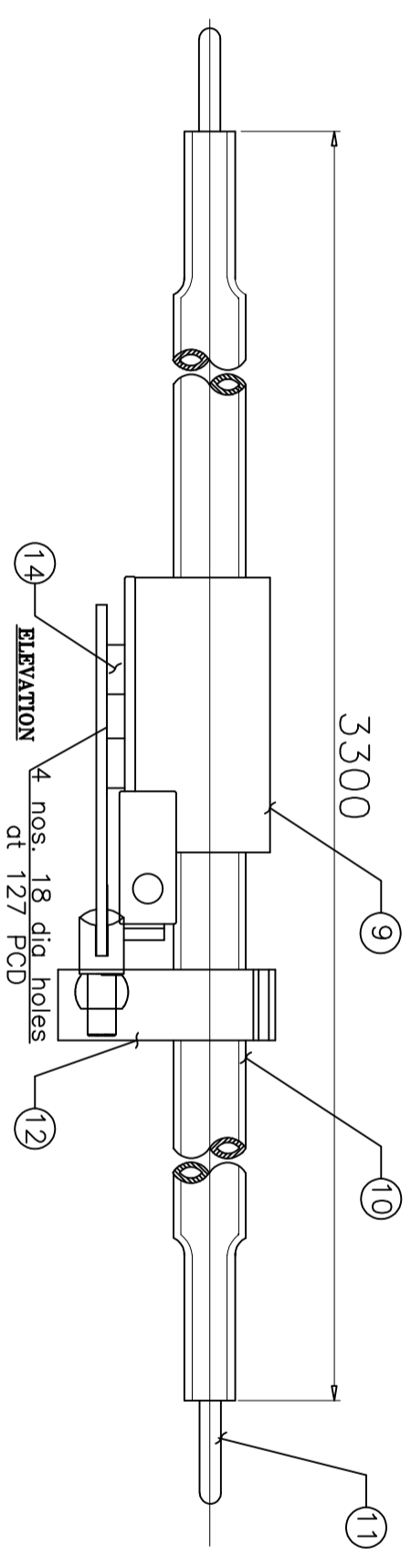
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2. Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings. The EPC contractor shall be instructed to supply the same line with CT/PT/CVT/Isolator/VT/LA/Breaker's requirement and compatibility.

NOTES

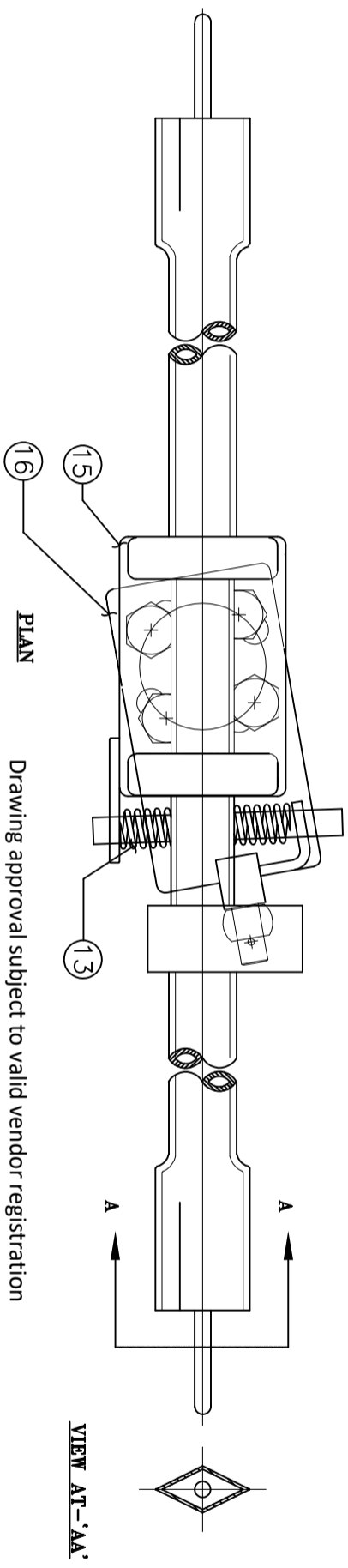
1. All dimensions are in 'mm'
2. All ferrous parts are hot-dip galvanized with 85 microns
3. All non-ferrous contact points are silver plated with 15 microns
4. Tolerances
 - (i) Upto 50mm ---- - +3%
 - (ii) 51 to 100 mm ---- - +2%
 - (iii) 101 to 300mm ---- - +1%
 - (iv) Above 300mm ---- - +0.5%
5. Bolted area are Tin plated up to 10 microns to avoid bi-metallic reaction between Cu & Al

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DETAILS OF MOVING CONTACT



ELEVATION



PLAN

VIEW AT-'AA'

CHIEF ENGINEER/PROJECTS
APTRANSCO/VS/VIJAYAWADA

PART LIST

1. FC rain hood (AL.)
2. FC Arcing horn (MS HDG)
3. Spacer (AL.)
4. FC spring (SS)
5. FC Jaw (2 Nos. 32x4 HDE Cu.flat)
6. Jaw back strip (MS HDG)
7. Jumper pad (75x12 Al. flat)
8. Supporting channel (MS HDG)
9. MC Rain Hood (AL.)
10. MC arm (38 OD 30 ID Cu. tube)
11. MC Arcing horn (MS HDG)
12. MC Clamp (MS HDG)
13. MC Spring (SS)
14. Spacer Bush (BRASS)
15. MC top plate (MS HDG)
16. MC bottom plate (MS HDG)
17. Bush (plastic)

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Sl.No.	Cross section	Area	Current Rating	Current Density (Amps/sq.mm)	DRN	YVG	DATE	TITLE
1	(FC JAWS) 32X4X4	512mm ²	800A	1.56	CHKD	VK	07.07.23	SWITCHGEAR MANUFACTURING COMPANY GANDRAJAPALLE, CHITTOOR DIST, A.P, INDIA. MAIN CONTACT DETAILS (FOR 245KV 800A DBR DISCONNECTOR)
2	(MC ARM) 38 OD X 30 ID	427.04mm ²	800A	1.87	APPD	OJA	07.07.23	
3	JUMPER PAD (75X12)	900mm ²	800A	0.88	DEPT	SIGN	DATE	

DRN	YVG	07.07.23
CHKD	VK	07.07.23
APPD	OJA	07.07.23
DEPT	SIGN	DATE
SC: NTS		
Paper size	A3	
DRG.NO.	S T D -	2 4 5 0 0 2
SHEET		1 of 1
REV.		0

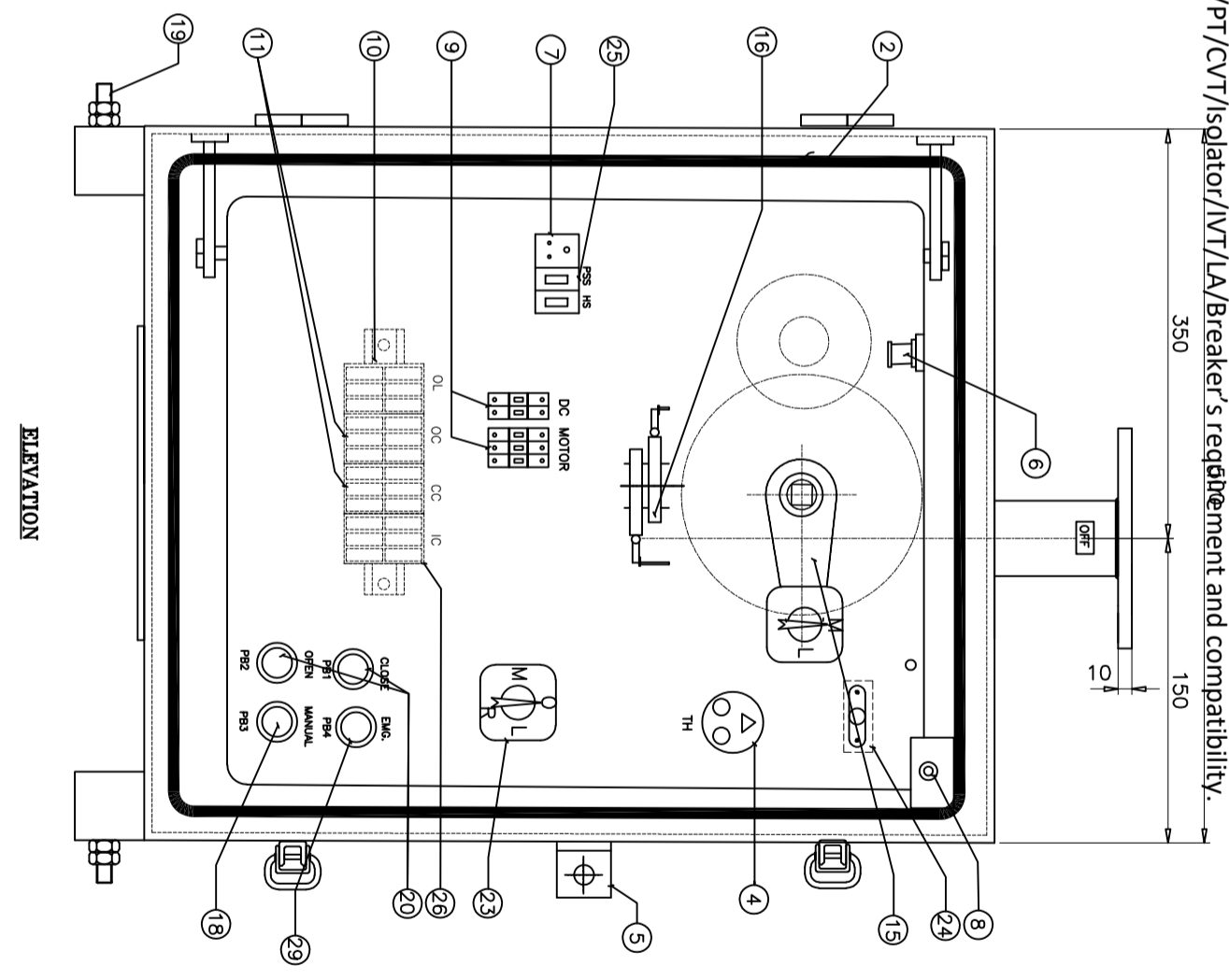
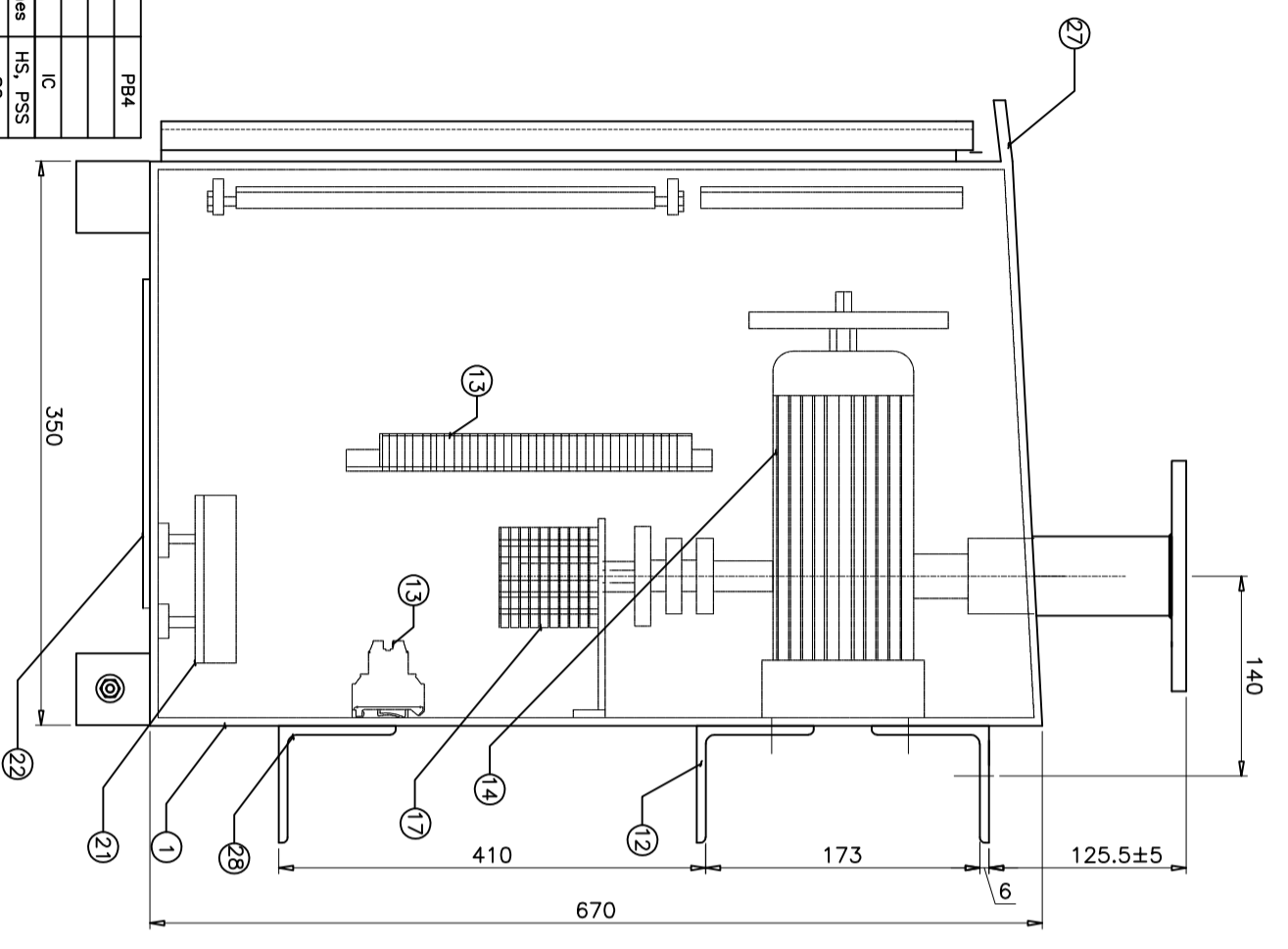
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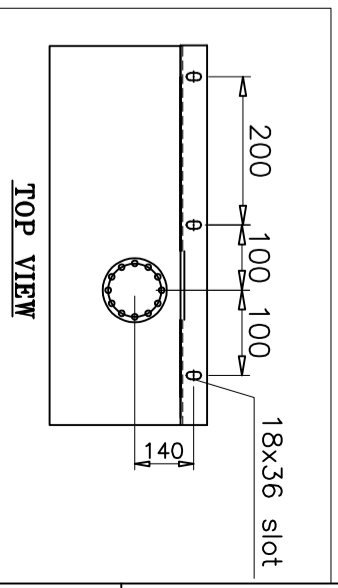
REV	DATE	CHANGES MADE	SIG

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END VIEW

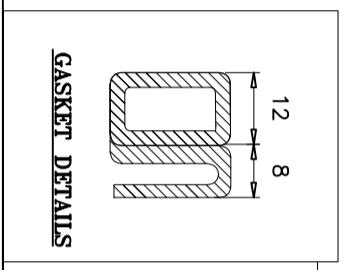
ELEVATION



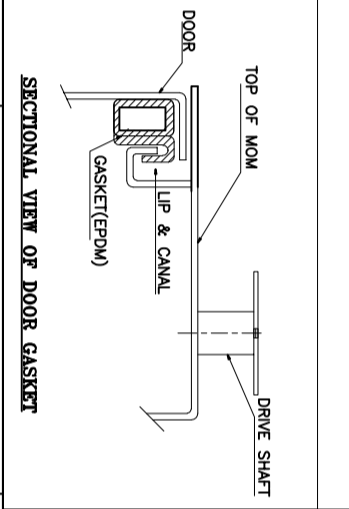
TOP VIEW

Drawing approval subject to valid vendor registration

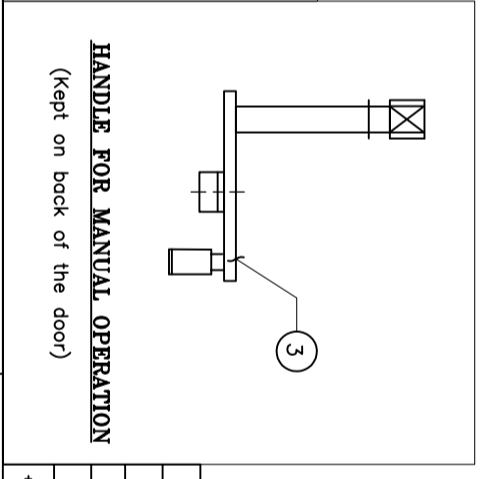
PT No.	DESCRIPTION	LEGEND
29	Emergency push button	PB4
28	Fixing cleat (Al.)	
27	Rain canopy	
26	Interlocking Contactor	IC
25	Heater & Power Socket Switches	HS, PSS
24	Solenoid Interlock	SC
23	Selector Switch (L/R/M)	S2
22	Gland plate (Without glands)	
21	Heater	CH
20	Close and open push buttons	PB1 & PB2
19	Earthing bolt (2nos of M12 size)	PB3
18	Push buttons for manual	
17	Aux.switch	
16	Limit switch	LS
15	Knob for manual operation	
14	Motor with reduction gear unit	
13	Terminal block(GTS4UN)	
12	Fixing Angle (MS HDG)	
11	Open & Close contactors	OC/CC
10	Overload relay (OL) cum SPP	OLR
9	MGBs	
8	Light switch (Door Operated)	PS
7	Power socket	CL
6	Lamp holder (WITHOUT LAMP)	
5	Provision for padlock	
4	Thermostat	TH
3	Handle for manual operation	
2	Rubber gasket (EPDM)	
1	Enclosure (3mm Th Aluminium)	



GASKET DETAILS



SECTIONAL VIEW OF DOOR GASKET



HANDLE FOR MANUAL OPERATION

(Kept on back of the door)

DRN	YVG	07.07.23	TITLE	DRG.NO.	S T D - 2 4 5 0 0 0 3	SHEET	REV.
CHKD	VK	07.07.23	SWITCHGEAR MANUFACTURING COMPANY			1	0
APPD	OJA	07.07.23	GANDRAJAPALLE, CHITTOOR DIST, A.P, INDIA.				
DEPT	SIGN		GENERAL ARRANGEMENT OF				
SC: NTS			MOTOR OPERATING MECHANISM FOR DISCONNECTOR				

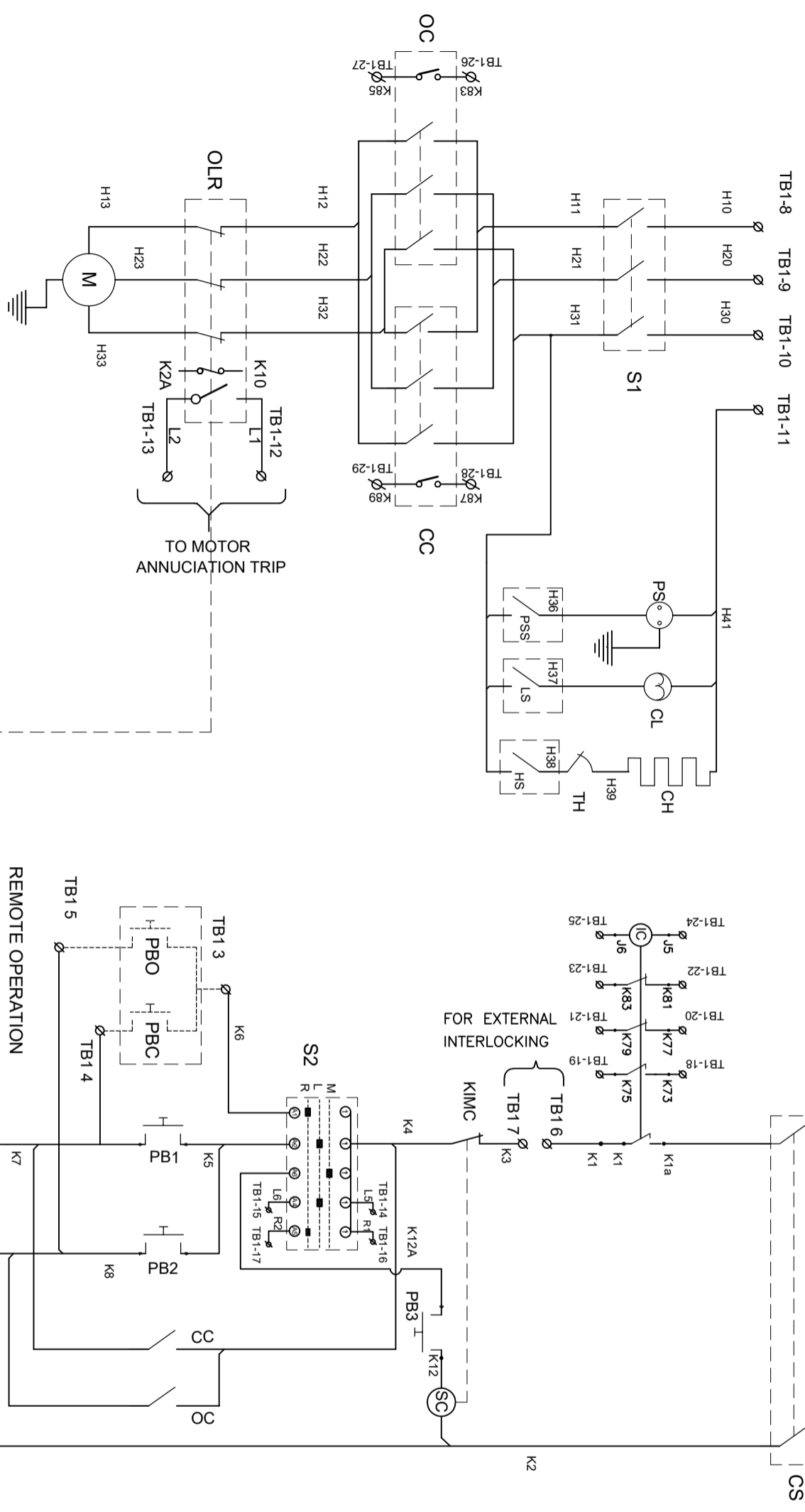
- NOTES**
- 01 All dimensions are in 'mm'
 - 02 For manual operation follow the instructions as given in schematic diagram
 - 03 Degree of protection for cabinet IP:55 as per IS:13947
 - 04 Cubicle shall be made out of 3 mm thick Aluminium Sheet and pointed to point shade 631 of IS:5
 - 05 Net weight of the box-70Kgs (Approx)
 - 06 Internal wiring will be done with 2.5 sq.mm cu stranded conductor & 20% Spare Terminals shall be provided.
 - 07 Tolerance as per GA drawing

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LEGEND	DESCRIPTION	MAKE	QTY
PB4	Emergency push button	Siemens/Schneider/C&S/ABB/Teknic	1
IC	Interlocking Contactor	Siemens/Schneider/C&S/ABB	1
KIMC	Key interlock switch	Recorn/Koycee/Switon	1
M	Motor 3Ø 415V AC (0.5HP)	Remi/Eicen/Lhp/Hindustan/CGL	1
S2	L/R/M selector switch	Recorn/Koycee/Switon	1
S1	MCB for 3Ø AC Supply (6A)	Siemens/Schneider/C&S/ABB	1
PS1	Power socket switch (5A)	Anchor/Maru/Reputed	1
PS2	Power socket (5A)	Anchor/Maru/Reputed	1
PB2	Interlock push button (for manual)	Siemens/Schneider/C&S/ABB/Teknic	1
PB1	Close and open push buttons	Siemens/Schneider/C&S/ABB/Teknic	2
OLR	Over load relay cum SPR(-1.6A)	Siemens/Schneider/C&S/ABB	1
TH	Thermostat (30°-85°)	Girish ego/Reputed	1
LS1	Limit switch close	Jabbalaji/BCH/Elmex/Mani/Teknic	1
LS2	Limit switch open	Jabbalaji/BCH/Elmex/Mani/Teknic	1
LS3	Lamp switch (2A)	Anchor/Maru/Suroj	1
LS4	Solenoid interlocking coil (220V)	OMN	1
HS	Heater switch (5A)	Anchor/Maru/Reputed	1
SS	MCB for Control supply (2A)	Siemens/Schneider/C&S/ABB	1
CH	Cubicle heater (80W, 240V AC)	Girish ego/Reputed	1
CL	Cubicle lamp (without bulb) 5A	Anchor/Maru/Reputed	1
OC	Close and open contactors	Siemens/Schneider/C&S/ABB	2

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DEPT	SIGN	DATE
SC: NTS		Paper size A3

OPERATING INSTRUCTIONS

- 1) Operation is possible only when the breaker is in 'OPEN' condition and after interlocking condition of system are satisfied
- 2) For manual operation of isolator please follow the instructions given below:
 - i) Press the manual push button(PB3) & Rotate the knob(15) provided on panel board, due to which the blocking flip will rotate to gain access for manual operation
 - ii) Insert the operating handle through hole to the gear box shaft
 - iii) Rotate the handle clockwise/anti-clockwise for open/close the Disconnector
 - iv) When manual operation is not needed, restore the knob to its original position

NOTES

- 1) Scheme shown when Disconnector in open position & De-Energised
- 2) In case of unavailability alternate reputed make shall be used

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 APTRANSCO/VS/VIJAYAWADA

REV	DATE	CHANGES MADE	SIG

SWITCHGEAR MANUFACTURING COMPANY
 GANDRAJAPALLE, CHITTOOR DIST, A.P, INDIA.

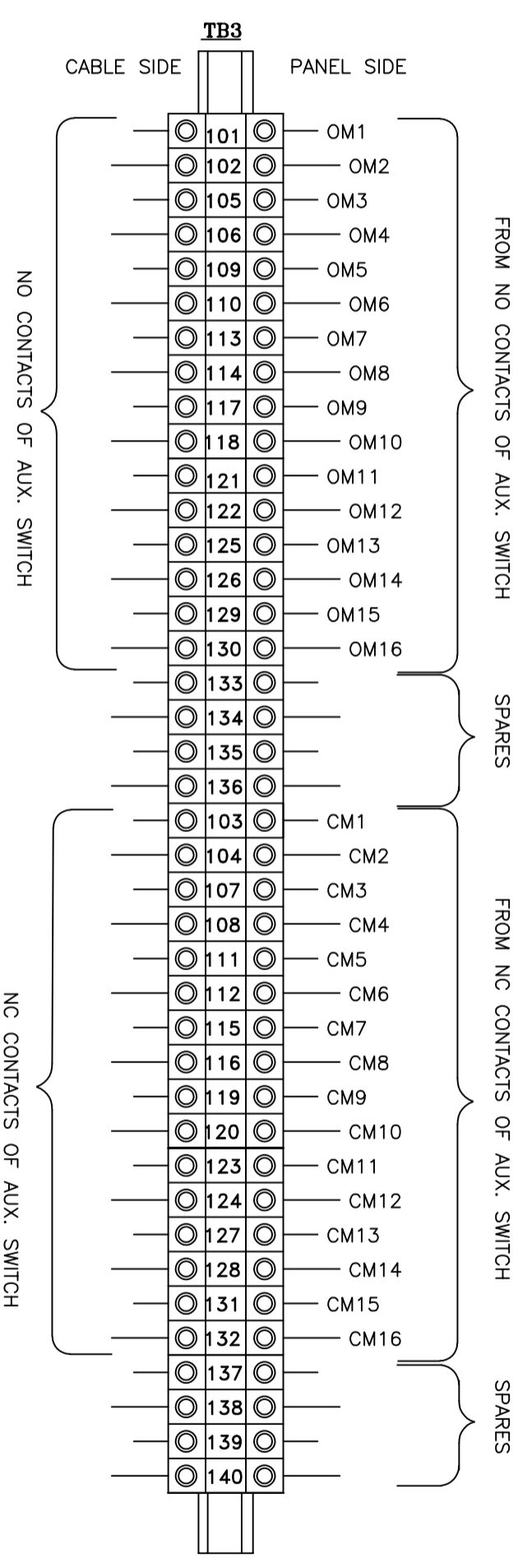
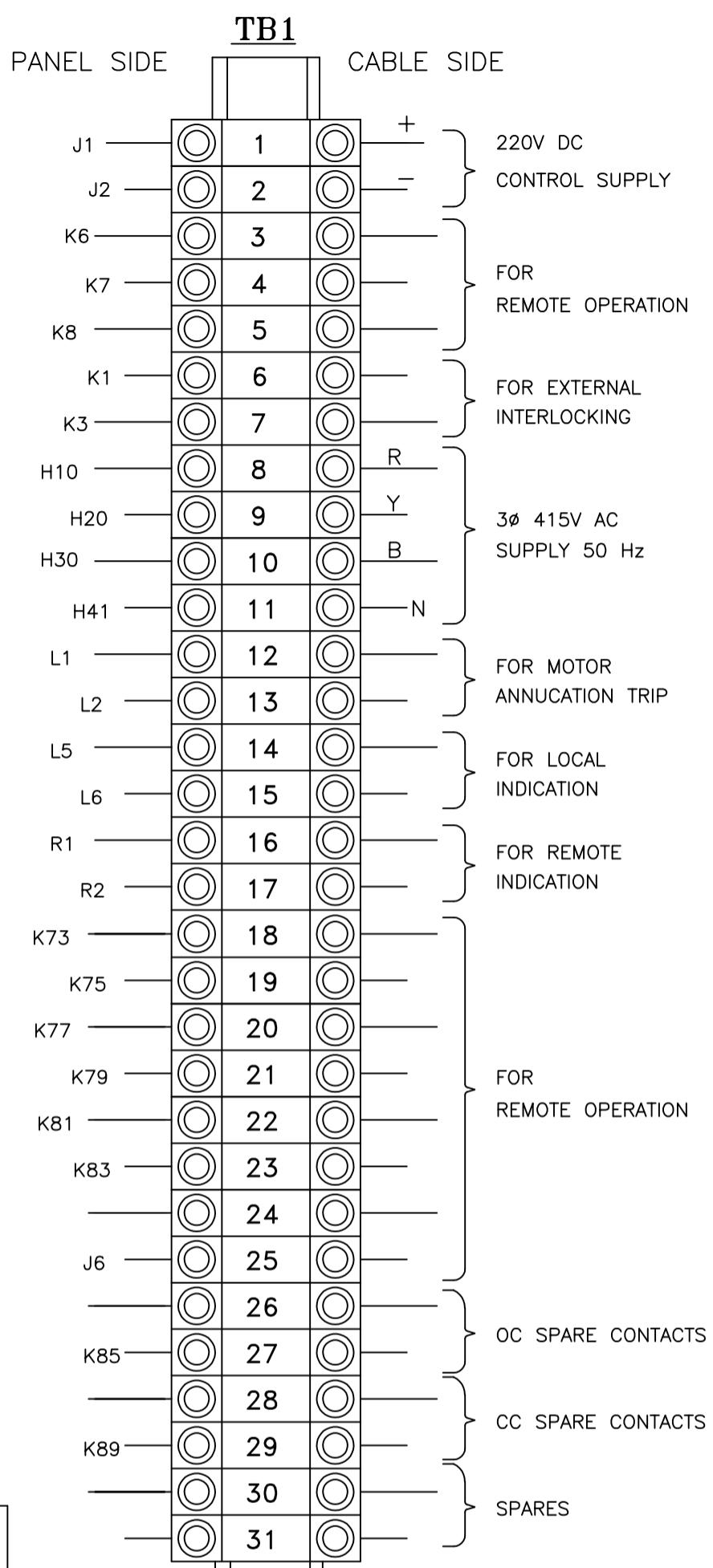
SCHEMATIC DIAGRAM OF
 FOR DISCONNECTOR CONTROL PANEL-AC & DC

DRG.NO. S T D - 2 4 5 0 0 0 4

SHEET 1 of 2 REV. 0

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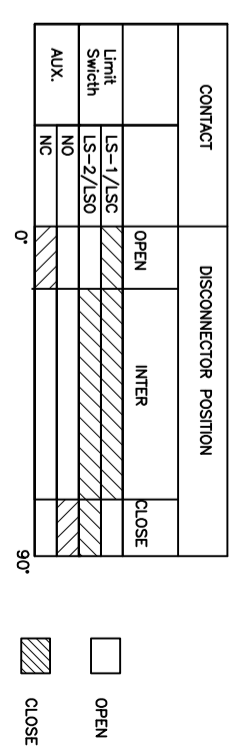


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**AUX. SWITCH TERMINAL DETAILS (8NO+8NC)
TERMINAL BLOCK DETAILS**

TERMINAL BLOCK FOR DC & AC

CONTACT DEVELOPMENT DIAGRAM



DRN	YVG	07.07.23	<p>SWITCHGEAR MANUFACTURING COMPANY GANDRAJAPALLE, CHITTOOR DIST, A.P, INDIA.</p>
CHKD	VK	07.07.23	
APPD	OJA	07.07.23	
DEPT	SIGN	DATE	
SC: NTS		Paper size A3	TITLE TERMINAL BLOCK DETAILS (FOR DISCONNECTOR CONTROL PANEL)
DRG.NO. S T D - 2 4 5 0 0 0 4			SHEET 2 of 2
			REV. 0

REV	DATE	CHANGES MADE	SIG

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APTRANSCO/VS/VIJAYAWADA

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SWITCHGEAR MANUFACTURING COMPANY

GANDRAJUPALLE, CHITTOOR DIST, AP, INDIA

CUSTOMER TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

SL.No.	(*)	TYPE	DBR
VOLTAGE (KV)	245	CURRENT (Amps)	800
STC (KA-sec-kAp)	40-3-100	IMPULSE (kVp)	1050
DC VOLTAGE (V)	220	PF VOLTAGE (KV)	460
OPERATING DEVICE	MOTOR	FREQUENCY (Hz)	50
YEAR	(**)		

CHIEF ENGINEER/PROJECTS
APTRANSCO/VS/VIJAYAWADA

FOR DISCONNECTOR

Drawing approval subject to valid vendor registration

NOTE: (**) TO BE MARKED AT THE TIME OF MANUFACTURING

- NOTE:**
1. ALL DIMENSIONS ARE IN MM
 2. MATERIAL : ALUMINIUM ALLOY
 3. TOLERANCE AS PER GA DRAWING
 4. LETTER ITCHED ON BLACK BACKGROUND

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DRN	YVG	07.07.23		SWITCHGEAR MANUFACTURING COMPANY GANDRAJUPALLE, CHITTOOR DIST, A.P, INDIA.
CHKD	VK	07.07.23		
APPD	OJA	07.07.23	TITLE	NAME PLATE DETAILS FOR 245KV DBR DISCONNECTOR
DEPT	SIGN	DATE		
SC: NTS			Paper size A3	DRG.NO. S T D - 2 4 5 0 0 0 5
			SHEET 1 of 1	REV. 0

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SWITCHGEAR MANUFACTURER NOT GOING TO BE REGISTERED PVT. LTD

CUSTOMER : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

GUARANTEED TECHNICAL PARTICULARS FOR 245KV DOUBLE BREAK DISCONNECTOR

Sl. No	Description	Unit	Particulars
1.	Manufacturer's Name & Address of manufacture		Switchgear Manufacturing Company Pvt. Ltd, Gandrajupalle, ChittoorDist
2.	Type Designation CHIEF ENGINEER/PROJECTS		Horizontal Double Break, DBR
3.	Applicable Standard APTRANSCO/VS/VIJAYAWADA		IS: 9921 (Part I to V) / IEC: 62271-102
4.	Rated voltage	(kV)	245
5.	Rated Frequency	(Hz)	50
6.	Outdoor / Indoor		Outdoor
7.	Whether all three poles are ganged together mechanically / electrically		Mechanically ganged
8.	Rated normal current	(Amps)	
	a) Under normal condition as per IS/ IEC	(Amps)	800Amps
	b) Under site conditions	(Amps)	800
9.	Rated short time withstand current for 3 sec. for Isolator & Earth switch	(kA rms)	40
10.	Rated peak withstand short circuit current for Isolator & Earth switch	kAp	100
11.	Rated short circuit making current	KA	For No-load operated Isolator making current is not applicable. But shall carry peak short circuit current of 100kAp
12.	Rated Magnetizing current / Capacitive current make/break capacity at 0.15% p.f.	(Amp)	0.7 Amps at 0.15 Pf (Assigned value)
13.	Temperature rise over ambient temperature 50°C at site corresponding to	(°C)	
	a) Maximum continuous current	(°C)	Within 55 °C
	b) Short time current	(°C)	
14.	Rated Insulation level		
	a) 1.2/50 microsecond lightning impulse withstand voltage (+ve or -ve polarity)	KV(peak)	± 1050
	i) To earth	KV(peak)	
	ii) Across the open Isolator	KV(peak)	± 1200
	- One terminal lightning Impulse		Not Applicable
	- Opposite terminal power frequency		Not Applicable
	b) 250 / 2500 microsecond switching impulse withstand voltage		
	i) To earth	KV(peak)	Not Applicable
	ii) Across the open Isolator	KV(peak)	Not Applicable
	- One terminal lightning Impulse	KV(peak)	Not Applicable
	- Opposite terminal power frequency	KV(peak)	Not Applicable
	c) One minute power frequency withstand voltage		
	i) To earth	KV (rms)	460
	ii) Across the terminals of open Isolator	KV (rms)	530
15.	Corona extinction voltage	KV (rms)	156
16.	Radio Interference voltage at 0.5 MHz and 2 MHz at 156 kV (rms)	(micro-volt)	1000 mV at 156 kV (rms)
17.	Rated mechanical terminal loads		
	a) Longitudinal (or straight)	N	800
	b) Transverse (or cross)	N	270

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18.	Total operating time		
	a) Opening time of Isolator	(Sec.)	12 sec. or less
	b) Closing time of Isolator	(Sec.)	12 sec. or less
19.	Main contacts (Fixed and Moving) of Isolator		
	a) Type		Main switch: High Pressure, Reverse Loop, Pressure relieving Type with Turn & Twist Design
	b) Material		Hard Drawn Electrolytic copper (HDEC)
	c) Whether contacts silver plated		Yes (Contact surface)
	d) Thickness of silver coating	microns	15 microns
	e) Contact area	mm ²	Line Contact
	f) Contact pressure	(Kg/ mm ²)	4kg/cm ² per Finger
	g) Current density(at minimum cross section of switch blade)		
	(i) Moving blade (Cu)	A/mm ²	1.87
	(ii) Terminal pad (Al)	A/mm ²	0.88
	(iii) Contacts (Cu)	A/mm ²	1.56
	(iv) Terminal connectors (Al) (Contractor Scope)	A/mm ²	1.0
	h) No. of operations which the Isolator can make without deterioration of contacts	Nos.	1000 (min)
20.	AUXILIARY CONTACTS		
	a) MAIN ISOLATOR		
	(i) Total number of 'NO'(for Purchaser's use)	Nos.	8
	(ii) Total number of 'NC'(for Purchaser's use)	Nos.	8
	(iii) Rated voltage	(Volts)	220V DC
	(iv) Rated continuous current	(Amps)	10A
	(v) Rated breaking current	(Amps)	2A DC
21.	Minimum clearance in air:		
	a) Phase to Phase clearance	mm	4500 (Center to Center)
	b) Phase to Ground clearance	mm	2300(Equal to the height of insulator selected)
	c) Between phases when isolator is open:	mm	3200(Center to Center)
22.	Bearings		
	a) Types of bearings		Deep Groove ball bearing
	b) Locations of bearings		Below the rotating post insulator
	c) Type of Lubricant for bearings		Heavy Duty Grease

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23.	Terminal Clamp & Connectors				<p style="text-align: center;">CHIEF ENGINEER/PROJECTS APTRANSOCO/VS/VIJAYAWADA</p> <p style="text-align: center;">Not in scope of Switchgear Manufacturing Company</p>
	a) Manufacturer's Name				
	b) Applicable standard				
	c) Material				
	i. Clamp body				
	ii. Bolts & nuts				
	iii. Spring washers				
	d) Rated current		Amp		
	e) Rated terminal load		Kg.		
	f) Weight of clamp complete with hard ware		Kg.		
	g) Radio interference voltage		(micro-volts)		
	h) Corona extinction voltage		kV		
	i) Maximum allowable span for Aluminium Tube with outer diameter of 114.2 mm and inside diameter of 97.18 mm on equipment terminal and with rated fault current and 7 m & 4.5 m phase to phase spacing				
24.	Operating Mechanism				<p style="text-align: center;">Main switch: Motor with Manual Handle for Emergency operation</p> <p style="text-align: center;">Yes</p> <p style="text-align: center;">3 Phase, 415 V, 50 Hz, Squirrel Cage AC Induction motor IS : 325 & IS : 996 415 Volt, 1.12 Amps, 0.5 H.P Totally enclosed, self-ventilating</p>
	a) Name & address of manufacturer				
	b) Type of operating mechanism				
	c) Whether separate operating mechanism provided for operation of Isolator pole				
	d) Electrical operation.				
	i) Motor type (AC / DC)				
	ii) Applicable standard				
	iii) Rated - voltage and current, HP				
	iv) Type of enclosure and method of cooling				
	v) Power required for closing and opening operation		Watts	373	
	vi) Running time for motor for closing and opening operation		(sec.)	Less than 12 secs	
	vii) Control supply for motor (Volt), power, consumption		Volt, Amp	220 Volt DC 35 Watts	
	e) Type of manual operating mechanism for Isolator pole				
	f) Force required to operate				
	g) Whether padlocking are in included as per the specification				
	h) Type of manual device				
	i) Weight of operating mechanism (Approx.)		kg	Torsional Motor Operating Mechanism Box - - 70Kg (Approx)	
25.	Type of interlocking between isolator and earthing switch				<p style="text-align: center;">-</p>
	a) Resistance of operating and Interlock coils		K Ω		
	b) Details of following interlocks provided as per specification				

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	i) Mechanical interlock between Isolator and earth switch		NA
	ii) Electrical interlock for Isolator and earth switch		NA
	iii) Electrical interlocking in association with circuit breaker		NA
	iv) Electrical interlock to bring back all three poles to open position in case any pole fails to close within specified time.	Drawing approval subject to valid vendor registration	
	v) Provisions to cut-off supply to the motor during manual operation and provision for de-coupling the motor.		NA
	vi) Electrical scheme to provide remote alarm for pole discrepancy		NA
	vii) Arrangement provided to prevent electrical or manual operation unless interlock is satisfied.		NA
26.	Control Cabinet / Marshalling box/MOM Panel		
	a) Name & address of Manufacturer		Switchgear Manufacturing Company Pvt. Ltd, Gandrajupalle, Chittoor-Dist
	b) Applicable Standard		IS: 5039 / IS: 8623, IEC: 60439
	c) Sheet thickness (mm) Top/Bottom/Side//Back/Door Leaf	mm	Aluminium, 3mm thick
	d) Degree of protection provided		IP - 55
	e) Colour of finish paint		
	i) Outside		
	ii) Inside		Light Admiral Grey in accordance with shade No. 631 of IS: 5
	f) Control wiring		
	(i) Current & Voltage rating	A, V	10 A & 1100 V
	(ii) Size and Material of conductor		2.5 sq. mm Stranded copper wires
	g) Terminal blocks		
	(i) Name & address of Manufacturer		Elmex or connectwell
	(ii) Current & Voltage rating	A, V	10 A & 1100 V
	h) Space heater rating at 240 volts	(Watts)	80 watts
	i) Provision of lock with keys	Yes/No	Yes
	j) Dimensioned drawing (External & Internal)	Yes/No	Yes
	k) Control cabinet / marshaling Box internal lighting lamp and door switch for controlling.		Provision for Bulb Holder and control by Door Switch shall be provided. Suitable Bulb shall be provided by Contractor
	l) Weight	kg	70 Kgs (Approx.)
	m) Plinth Mounted / Structure mounted.		Structure Mounted

1. Minimum 300mm plinth shall be maintained for CT/PT/CVT/Isolators/IV/LA/Breakers in the substation during foundation works to ensure safe live to ground clearance per IE rules.
2. Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings. The EPC contractor shall be instructed to supply the same line with CT/PT/CVT/Isolator/IV/LA/Breaker's requirement and compatibility.

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27.	A. Tandem Pipe		
	a) Size		32NB
	b) Class		Class 'B'
	c) Material		G.I. Pipe
	d) Applicable Standard		IS: 1239 (Part D), 1990 & IS: 4736, 1986
	e) Weight of Zinc		(gm/sq.m) 360
	B. Down Pipe		
	a) Size (Internal / External dia)		(mm) 50NB
	b) Class		Class 'B'
	c) Material		G.I. Pipe
	d) Applicable Standard		IS: 1239 (Part D), 1990 & IS: 4736, 1986
	e) Weight of Zinc		(gm/sq.m) 360
28.	Size and Weight		
	a) Weight of each pole (without Insulators)		K gs. (Approx.)
	b) Space requirement i.e. length		Please refer GA drawing
	c) Dimensions		
	(i) 3 Phase Isolator		
	(ii) Isolator -cum- Earthing Switch (mm x mm x mm)		
	d) Size of largest part		
29.	INSULATORS		Not in scope of Switchgear Manufacturing Company

For Switchgear Manufacturing Company Pvt. Ltd



Authorized Signatory

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