

**MEGAWIN**

1 of 5

M/s. A.P.Transco Ltd, Hyderabad.**GUARANTEED TECHNICAL PARTICULARS FOR 33 KV VACUUM CIRCUIT BREAKERS**

S.No	Description	Particulars
1.	a) Maker's name country of manufacture. b) Manufacturer's type designation.	MEGAWIN SWITCHGEAR - P - LTD. INDIA MSP 36
2.	Applicable Technical Standards	IS 13118 / IEC 62271-100
3.	a) Rated voltage (kV) b) Rated Frequency (Hz)	36 kV 50 Hz
4.	Number of Poles	Three
5.	Class (Outdoor/Indoor)	Outdoor
6.	Rated normal current: a) Under silk conditions (Amps) b) Rated (Amps)	1600A 1600A
7.	Rated short circuit breaking current: a) R.M.S. value of A.C. component of rated short circuit current (kA) b) Percentage DC component c) Asymmetrical breaking current (including DC component) d) Certificate or report no. e) Csstogram no.	25 kA 32% 28kA HPL09105 & HPL09053 HPL09105, S010, S011, S015, S019, S021 & S024 HPL09053, S002, S003, S005, S006, S008, S009
8.	Rated short circuit making current (kA)	62.5 kA
9.	First Pole to clear factor	1.3
10.	Rated transient recovery voltage for terminal faults (<V peak)	As per IS
11.	Rated characteristics for short line faults.	As per IS
12.	Rated operating sequence	O-0.3sec - CO-3 min-CO
13.	Rated duration of short circuit (sec.)	3
14.	Rated out of phase breaking current (kA)	6.5 kA
15.	Opening time (ms)	< 80 ms
16.	Arcing time (ms): a) At 10% rated breaking current b) At 25% rated breaking current c) At 50% rated breaking current d) At 100% rated breaking current e) Maximum Arcing time at lowest fault currents	< 15 ms < 15 ms < 15 ms < 15 ms < 15 ms
17.	Break time (ms): a) At 10% rated breaking current b) At 25% rated breaking current c) At 50% rated breaking current d) At 100% rated breaking current e) Maximum break time at lowest fault current	< 80 ms < 80 ms < 80 ms < 80 ms (max.) < 80 ms (max.)
18.	Closing time (ms)	< 80 ms
19.	Maximum Pole discrepancy time: a) Opening (ms) b) Closing (ms)	2 2
20.	Rated in a charging breaking current (kA)	
21.	Maximum cable charging current: a) On supply side b) On line side	50 50

APPROVED FOR TURNKEY PROJECTS

[Signature]
CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH Soudha/HYD.



MEGAWIN

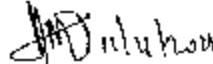
245

S.No	Description	Particulars
22	Rated small inductive breaking current (kA)	25
23	Max. rise of temperature over ambient temperature for current rating under clause 6.	35° max. above ambient
24	Interrupting capacity based on duty cycle as per clause 11. a) AC Component (kA) b) Percentage D.C. Component	25 32%
25	Latching current (kA)	-
26	No. of breaks in series per pole	One
27	Length of contact travel (mm)	21.2mm
28	Total length of break per pole (mm)	21.2mm
29	Rate of contact travel: a) At tripping (meters/sec.) b) At closing (meters/sec.)	1.1 m/s 1.1 m/s
30	Type of devices, if any, used to obtain uniform voltage distribution between breaks	-
31	Recovery voltage distribution between breaks in percent of rated voltage: a) Single line to ground fault b) Interruption of short lines c) Switching off an unloaded Transformer	As per IEC 82271-100
32	Type of main contact	Silt
33	Type of arcing contacts and/or arcing device	NA
34	Material of contacts a) Main b) Arcing c) Auxiliary	Copper Alloy NA NA
35	Whether contacts are silver plated	- NA -
36	Thickness of silver coating (mm)	-
37	Contact pressure (kg/sq. mm.)	250 - 300 Kgs
38	Insulation level of the breaker: a) 1 minute power frequency withstand voltage (kV rms) b) Switching surge withstand test voltage (kV peak) c) Impulse withstand test voltage (kV peak) d) Max. dynamic a.f. over voltage withstand (kV peak)	70 kV As per IS / IEC 170 kV (p) as per IS / IEC
39	Minimum clearance in Air (mm) a) Between Phases (live parts) b) Between live parts and earth c) Centre to centre distance between phases d) The safety boundaries during a breaking operation for circuit breakers with an external exhaust for ionized gases or flames	> 400 mm > 360 mm 750 mm Interupters enclosed in porcelain
40	Whether the circuit breaker is suitable for fixed trip operation or trip free operation and whether it is provided with a lock-out device preventing closing of the breaker	Trip Free

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APTRANSCO/VIDYUTH Soudha/HYD.

S.No	Description	Particulars
41.	Method of closing a) Normal b) Emergency	Motor / manual Manual
42.	Type of closing mechanism	Spring charged
43.	a) Normal voltage of closing b) Pick up range, (volts)	220V DC 85 – 110%
44.	a) Power at normal voltage of closing mechanism, (watts) b) Power at 85% of normal voltage, (watts)	< 300W at rated voltage < 300W at 70% of normal voltage
45.	Type of tripping mechanism	Spring operated
46.	Normal voltage of tripping coils, (volts)	220V DC
47.	a) Power at normal voltage for tripping coils, (watts) b) Power at 70% normal voltage for tripping coils, (watts)	300W at rated voltage < 300W at 70% of normal voltage
48.	Arc duration at 100% (ms) interruption capacity: a) Opening Arcing time No. of loops and time including resistor current duration (cycle) i) Resistor current duration, (cycle) ii) Total length of the arc, (mm) iii) Max. length of the arc, (mm) iv) Total interrupting time measured from instant of trip coil energisation to arc extinction of resistor current (cycles). b) Closing time measured from instant of application of power to closing device upto arcing contacts touching, (cycles).	- NA -
49.	Critical current (current giving the longest arc when a break takes place) (kA)	Please refer test certificate enclosed.
50.	a) Recovery voltage when circuit breaker tested at 100% rated breaking capacity, (kV inst.) b) Rate of rise of re-striking voltage at breaking i) for 30% breaking capacity (kV/Micro. sec.) ii) for 100% breaking capacity, (kV/Micro. sec.) c) Maximum over voltage factor of the circuit breaker when switching off. i) Unloaded transformers. ii) Loaded transformer iii) Open circuited lines	2.88 kV/ μ .Sec 0.57 kV/ μ .Sec < 2.5 PU < 2.5 PU < 2.5 PU
51.	When switching of synchronous systems: a) Max. current (kA) b) Max. contacts of 1 pole (kV)	As per IS / IEC
52.	No. of openings the circuit breaker is capable of performing without inspection, replacement of contacts or other main parts. a) at 50% rated current b) at 100% rated current c) at current corresponding to 50% rated breaking capacity d) at current corresponding to 100% rated breaking capacity	> 10000 operations > 10000 operations > 100 operations > 100 operations

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APTRANSCO/VIDYUTH SODHA/HYD.



MEGAWIN

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S.No	Description	Particulars
53.	a) Weight of complete circuit breaker (kg.) b) Impact loading for foundation design, to include dead load plus impact value on opening at maximum interrupting ratings, in terms of equivalent static load, (kg.) c) Overall dimensions: Height (mm) Width (mm) Length (mm)	620 Kgs approx 2.5 times 3500 mm (max) 1760 mm 400 mm
54.	Porcelain: a) Make b) Type c) Descriptive pamphlet No. d) Weight (kg) e) Transport dimensions (mm) f) Height above foot, required to remove porcelain (mm) g) Insulator class h) One minute dry power frequency withstand, kV (r.m.s.) i) 10 seconds wet power frequency withstand, kV (peak) j) Flash over voltage, (kV) k) Full wave impulse withstand voltage kV (peak) l) Switching surge withstand voltage kV (peak) m) Corona discharge voltage, (kV r.m.s.) n) Nature of the dielectric o) Creepage distance, total protected (mm) p) Volume of insulating medium per porcelain, (liters) q) Permissible safe cantilever loading on installed porcelain (kg.m.)	Adityabirla/Ravikiran/Jaipur glass/Equity Holow 40 Kgs approx 600x400x400 mm 500 mm $\pm$ 10 mm Class E 70 kV 85 kV Above 35kV 170 KV Above 85kV As per S As per S 900mm As per manufacturer standard -
55.	Operating mechanism: a) Mechanically operated or pneumatically or hydraulically operated. b) For stored energy mechanism: 1. Spring charging motor i) Rating kW ii) Voltage V iii) Power frequency withstand voltage iv) Time required for the motor to charge the spring fully (secs.) v) Power required at the normal control voltage to charge the spring - Watts vi) Specification reference. 2. Spring closing/opening i) Number of springs ii) Type iii) Number of turns iv) Gauge v) External diameter mm vi) Stiffness vii) Material viii) Force developed in full charged position. ix) Specification reference.	Mechanical 880 W 230V 2 KV 10 - 15 secs < 380W Closing - 1, Opening - 1 Helical - - - - Spring steel - -

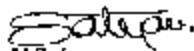
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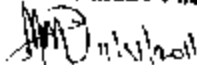
CHIEF ENGINEER, CONSTRUCTION-T
 APTRANSCO/VIDYUTHI SODHAKHYO.

S.No	Description	Particulars 35 kV VCBs
56	Details of Vacuum for 33kV VCBs a) Make of the Vacuum bottle/Interrupter b) Pressure maintained in the Vacuum interrupter c) Gap between the contacts in Vacuum d) Area of contacts e) Allowable increase in the Vacuum interrupter f) Measure, if any, to be taken for maintaining normal allowable pressure in the Vacuum interrupter g) Periodically maintenance of the following i) For maintaining vacuum interrupting chamber ii) for cranging contacts iii) other maintainable schedules if any h) method of checking pressure in Vacuum interrupter and procedure to check up.	Megawin (Approved & Supplied 10 Nos Breakers vide LETTER CE/LIP&MM/DE-2/CIA-0013/D.YC282/2010 DT29/12) 10⁻³ Bar 21+1 mm As per Manufacturer Standard NA Maintenance Free Closing of vacuum Interrupter due to atmospheric pressure.
57.	No. of auxiliary contacts provided a) Those close when breaker is closed. b) Those open when breaker is closed. c) Those adjustable with respect to the position of main contacts. d) Continuous rating of contacts. e) Breaking capacity of contacts.	2 2 - 10 A at 250 AC 2 A at 250 DC
58.	Whether the equipment covered by this Bid have been fully type tested and if so, whether the copies of the type test cert. Enclosed to the bid offer.	Yes, Copies of Type tes; reports are enclosed.

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For MEGAWIN SWITCHGEAR-P-LIMITED,


M. Satyanarayana
Branch Manager


CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SODHA/IND.

	Standardised Drawing for 33 kV Vacuum Circuit Breaker (M/s Megawin Switchgear - P- Ltd.,)	
	STD/GTP-DWG/Approval No. 250-1- 5 sheets	Revision No. 0
	Prepared & Approved during November - 2011	
Customer ref : APTRANSCO		
Title: GTP for 33 kV VCB		

SHEET No	TITLE	DWG_NO	REV_NO
01	LIST OF DRAWINGS FOR 33KV POVCB WITH BASIC STRUCTURE	MS-107-6690-01-R0	R0
02	GENERAL ARRANGEMENT FOR 33KV POVCB WITH BASIC STRUCTURE	MS-GA-6690-01-R0	R0
03	FOUNDATION DETAILS FOR 33KV POVCB WITH BASIC STRUCTURE	MS-FD-6690-01-R0	R0
04	MECHANISM FRONT VIEW FOR 33KV POVCB WITH BASIC STRUCTURE	MS-MFV-6690-01-R0	R0
05	POLE ASSEMBLY FOR 33KV POVCB WITH BASIC STRUCTURE	MS-PA-6690-01-R0	R0
06	SUPPORT / ARC INSULATOR FOR 33KV POVCB WITH BASIC STRUCTURE	MS-SAI-5590-01-R0	R0
07	LEGEND FOR 33KV POVCB WITH BASIC STRUCTURE	MS-LR-6690-01-R0	R0
08	TECHNICAL DETAILS FOR 33KV POVCB WITH BASIC STRUCTURE	MS-ID-6690-01-R0	R0
09	POWER CIRCUIT FOR 33KV POVCB WITH BASIC STRUCTURE	MS-PC-6690-01-R0	R0
10	DC CONTROL CIRCUIT FOR 33KV POVCB WITH BASIC STRUCTURE	MS-DCC-6690-01-R0	R0
11	INDICATION LAMP CIRCUIT FOR 33KV POVCB WITH BASIC STRUCTURE	MS-LC-6690-01-R0	R0
12	AC CONTROL CIRCUIT FOR 33KV POVCB WITH BASIC STRUCTURE	MS-ACC-6690-01-R0	R0
13	NAME PLATE DETAILS FOR 33KV POVCB WITH BASIC STRUCTURE	MS-NPC-6690-01-R0	R0
14	BILL OF MATERIALS FOR 33KV POVCB WITH BASIC STRUCTURE	MS-BOM-6690-01-R0	R0
15	OTHER MAKE DETAILS FOR 33KV POVCB WITH BASIC STRUCTURE	MS-OMD-6690-01-R0	R0
16	TERMINAL CONNECTOR DETAILS FOR 33KV POVCB	MS-TCO-5590-01-R0	R0
17	TERMINAL BLOCK DETAILS FOR 33KV POVCB WITH BASIC STRUCTURE	MS-TB-6690-01-R0	R0
18	SPARE TERMINALS DETAILS FOR 33KV POVCB WITH BASIC STRUCTURE	MS-STD-6690-01-R0	R0

INSTALLATION: _____ CITY: _____ TITLE: LIST OF DRAWING FOR 33KV POVCB WITH BASIC STRUCTURE

DATE	05.11.2017	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
CHECKED	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
APPROVED	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	

PROJECT: _____

DATE: 05.11.2017

CHECKED: 21

APPROVED: 21

CUSTOMER ID: 6690-01-R0

DWG NO.: MS-107-6690-01-R0

MS-GA-6690-01-R0

MS-FD-6690-01-R0

MS-MFV-6690-01-R0

MS-PA-6690-01-R0

MS-SAI-5590-01-R0

MS-LR-6690-01-R0

MS-ID-6690-01-R0

MS-PC-6690-01-R0

MS-DCC-6690-01-R0

MS-LC-6690-01-R0

MS-ACC-6690-01-R0

MS-NPC-6690-01-R0

MS-BOM-6690-01-R0

MS-OMD-6690-01-R0

MS-TCO-5590-01-R0

MS-TB-6690-01-R0

MS-STD-6690-01-R0

SHEET 01 OF 18

CLIENT: M/S. TRANSMISSION CORPORATION OF A.P. LIMITED, HYDERABAD.

APPROVED FOR TURKEY PROJECTS

CHEF ENGINEER / CONSTRUCTION-1

A/TRANSCO/INDU/UTH 6040-44-110

CHECKED

Standardised Drawing for 33 KV Vacuum Circuit Breaker

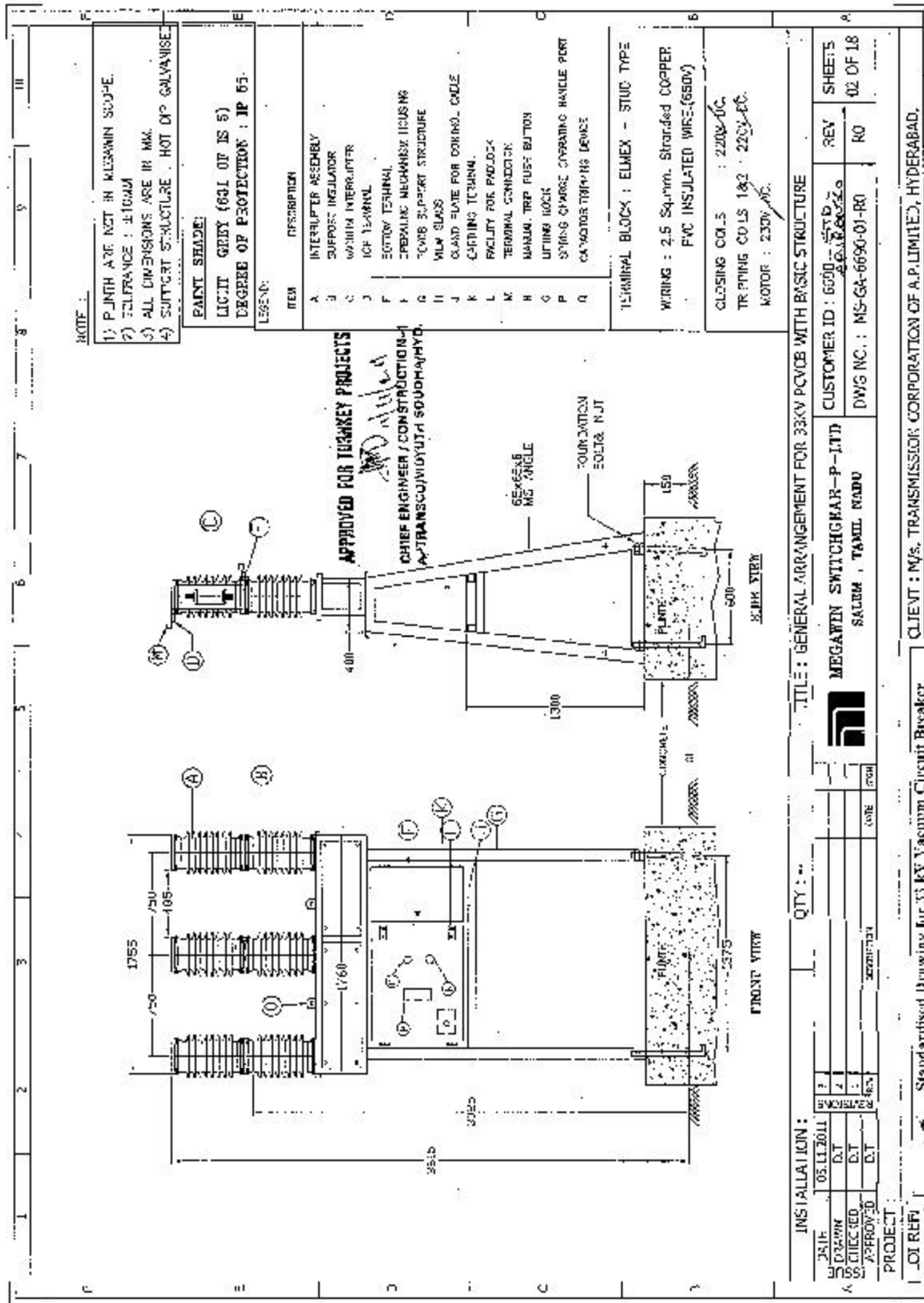
(MS-Megawin Switchgear - P-110-9)

STDG CP-DWG/Approval No. 250-2-1 sheet Revision No. 0

Prepared & Approved during November - 2011

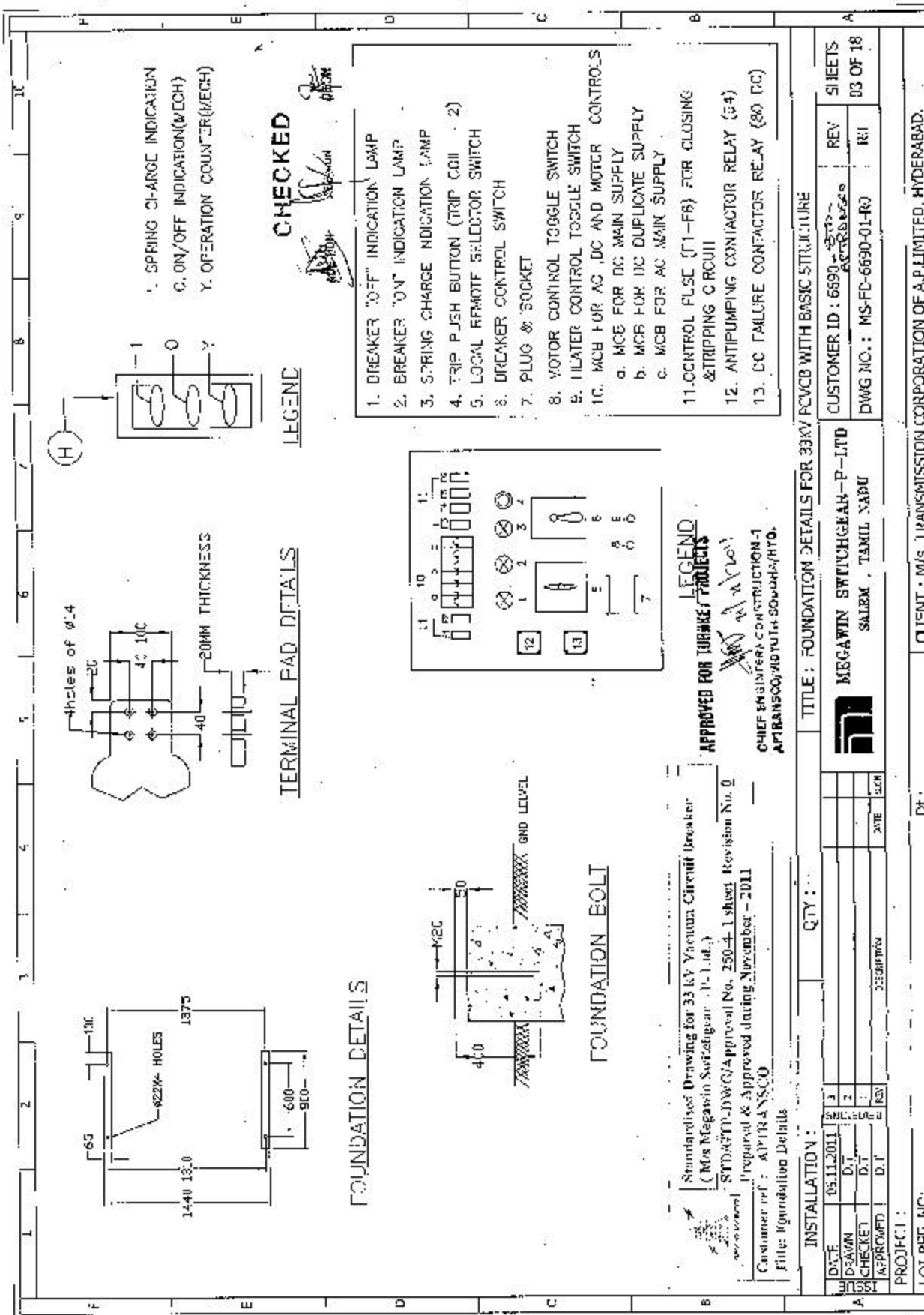
Customer ref: A/TRANSCO

Title: List of Drawings



CHECKED

APPROVED



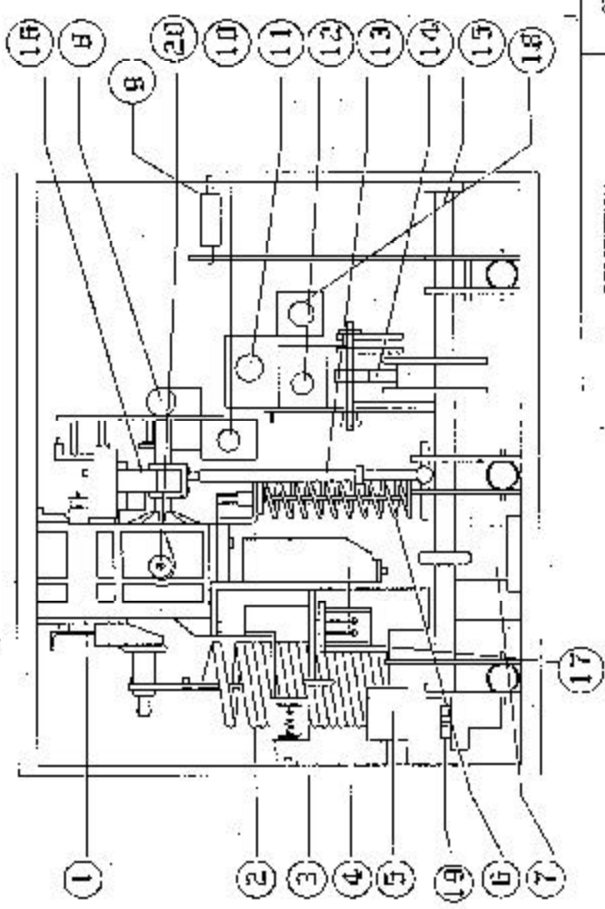
Standardised Drawing for 33 kV Vacuum Circuit Breaker
(M/s Megawin Switchgear - P.Ltd.)
SYNOPSIS-DWG/Approval No. 250-4-1 sheet Revision No. 0
Prepared & Approved during November - 2011
Customer ref : APT/134/NSCO
File: Foundation Details

APPROVED FOR TUNABLE PROJECTS
CHIEF ENGINEER CONSTRUCTION-1
APRANSOQ/10 YUTH SODH/1/HYO.

CHECKED

LEGEND

1. BREAKER "OFF" INDICATION LAMP
2. BREAKER "ON" INDICATION LAMP
3. SPRING CHARGE INDICATION LAMP
4. TRIP PUSH BUTTON (TRIP COIL - 2)
5. LOCAL REMOTE SELECTOR SWITCH
6. BREAKER CONTROL SWITCH
7. PLUG & SOCKET
8. MOTOR CONTROL TOGGLE SWITCH
9. ISOLATOR CONTROL TOGGLE SWITCH
10. MCB FOR AC ,DC AND MOTOR CONTROLS
- a. MCB FOR DC MAIN SUPPLY
- b. MCB FOR DC DUPLICATE SUPPLY
- c. MCB FOR AC MAIN SUPPLY
11. CONTROL FUSE (F1-F6) FOR CLOSING & TRIPPING CIRCUIT
12. ANTI-PUMPING CONTACTOR RELAY (24)
13. DC FAILURE CONTACTOR RELAY (80 DC)



NOTE:

- 1). SPRING CHARGE HANDLE WILL BE SUPPLIED LOOSE.
- 2). INSERT THIS HANDLE IN SPRING CHARGE PORT HOLES (MEV-20) TO OBTAIN ONLY MANUAL SPRING CHARGE WHEN REQUIRED.

CHECKED

Standardised Drawing for 33 KV Vacuum Circuit Breaker
1 M/s Megawin Switchgear - P. Ltd.,

STD/GTP-DWG/Approval No. 250-S-1 sheet Revision No. 0
Prepared & Approved during November-2011

Customer ref : APTRANSCO
Title: Mechanism front view

APPROVED FOR TURNKEY PROJECTS

CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/MIDUTH SOUDHA/INTD.

INSTALLATION :

DATE	05.11.2011
DRAWN	D.T
CHECKED	D.T
APPROVED	D.T

PROJECT :

LOT REF. NO:

DT :

CLIENT : M/s. TRANSMISSION CORPORATION OF A.P.LIMITED, HYDERABAD.

DESCRIPTION	QTY/ASST.	DESCRIPTION	QTY/ASST.
1 : GEAR RACK	1 No.	17 : TRIPPING COIL (TC-1)	1 No.
2 : ON SPRING	1 No.	18 : TRIPPING-PUSH BUTTON	1 No.
3 : SPRING CHARGE INDICATOR	1 No.	19 : CONNECTING ROD	1 No.
4 : SPRING CHARGING MOTOR	1 No.	20 : TRIPPING LEVER	1 No.
5 : ON-OFF INDICATOR	1 No.	15 : MAIN SHUTT	1 No.
6 : OFF SPRING	1 No.	16 : CLOSING LEVER	1 No.
7 : DAMPER	1 No.	17 : SPRING CHARGE LIMIT SWITCH	3 Nos.
8 : CLOSING PUSH BUTTON	1 No.	18 : ADDITIONAL TRIP COIL (TC-2)	1 No.
9 : AUXILIARY SWITCH	1 No.	19 : OPERATOR COUNTER	1 No.
10 : CLOSING COIL	1 No.	20 : MANUAL SPRING CHARGE OPERATING PORT	1 No.

TITLE : MECHANISM FRONT VIEW FOR 33KV VCB'S WITH BASIC STRUCTURE



MEGAWIN SWITCHGEAR-P-LTD
SALEM, TAMIL NADU

CUSTOMER ID : 6690-2000-2000-2000
DWG NO. : MS-MEV-6690-01-RC

REVISION
REV R0

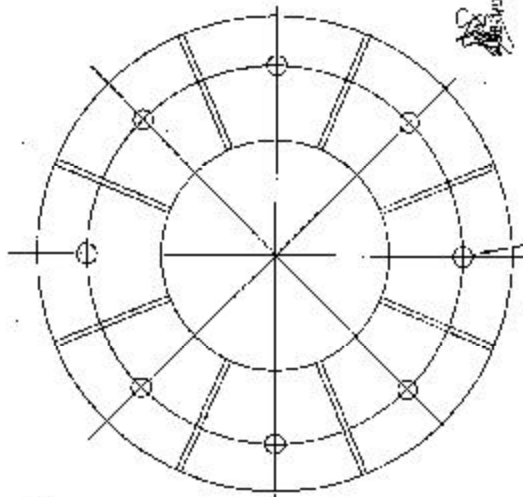
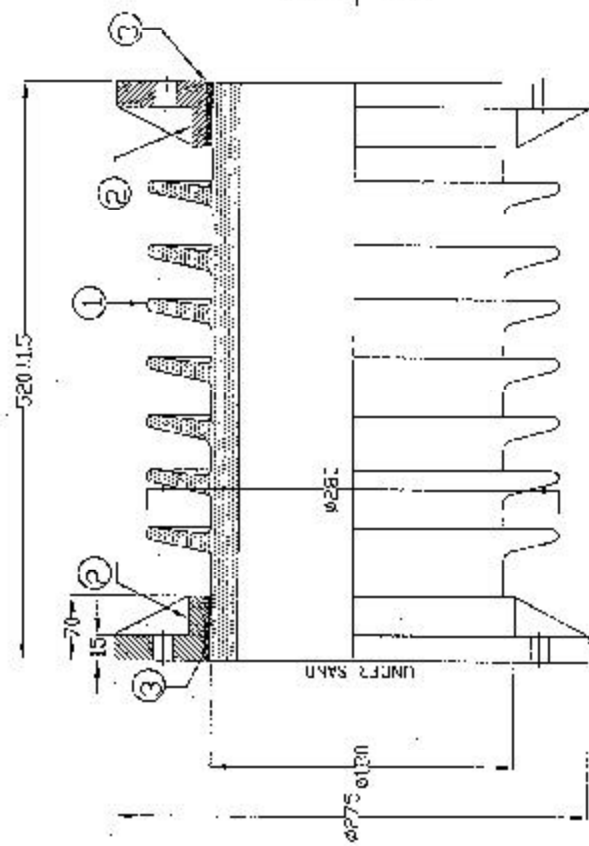
SHEETS
34 OF 18

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LIGAND

ITEM	DESCRIPTION	MATERIAL	QTY.
1	INSULATOR	PROCELAIN	1
2	FLANGES	ALUMINIUM ALLOW	2
3	CEMENT	PORTLAND	--

CREEPAGE OF DISTANCE : 900 mm (minimum)



CHECKED

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CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/UDYUTH SODHAK/HYD.

Standardised Drawing for 33kV Vacuum Circuit Breaker
(M/s Megawin Switchgear - P-Ltd.,)

STD/CTP-DWG-CA/Approval No. 254-2-1 sheet Revision No. 0
Prepared & Approved during November - 2011

Customer ref : APTRANSCO

Title: Support/Arc Insulator

TITLE : SUPPORT/ARC INSULATOR FOR 33KV POCB WITH BASIC STRUCTURE



MARGAWIN SWITCHGEAR - P-LTD

SALEM, TAMIL NADU

CUSTOMER ID : 6601-5700-26

REV SHEETS

DWG NO. : MS-582-559C-01-KD

REV SHEETS

CLIENT : M/s. TRANSMISSION CORPORATION OF A.P. LIMITED, HYDERABAD.

DL :

LOI REF. NO.:

MAK : JAI-HR GLASS/RAMKIRAN - 5NGS/POCB

INSTALLATION :

DATE : 15.11.2011

BY : [Signature]

DT : [Signature]

DT : [Signature]

DT : [Signature]

DT : [Signature]

DT : [Signature]

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PROJECT :

TECHNICAL DATA	
RATED VOLTAGE	33KV
RATED CURRENT	1000A
BREAKING CAPACITY	25KA
SIL	700KV m/s/170KV(Peak)
VCB WEIGHT	620 KG (APPROX)
FOUNDATION LOAD	1500 KG
CREEPAGE OF INSULATOR	500 mm
CONTROL VOLTAGE	220V DC
Ph. to Ph. CLEARANCE (Minimum)	485 mm
Ph. to G.L. CLEARANCE (Minimum)	5470 mm

LEGEND			
ITEM	QTY	DESCRIPTION	MATERIAL
A	3	INTERRUPTER CHAMBER	PORCELAIN
C	3	VACUUM INTERRUPTER	CS MEGAWIN
E	3	SUPPORT INSULATOR	POTOLAIN
G	1	INTERFACIE HOUSING	STRUCTURAL STEEL FRAME/H.C.R STL SH. ENCLOSURE
D	3	TOP LUMINAL	ALUMINIUM
F	3	BOTTLE TERMINAL	ALUMINIUM
L	2	FOUNDATION BOLT	M20 x 400 4 Nos.
K	1	EARTHING STUD	BRASS
F	1	CONTROL VEHICLE	SHEET STEEL THICKNESS 3.0 mm
M	6	TERMINAL CONNECTOR	ALUMINIUM DIE CASTING

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CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SUDHAKAR/NO.

Standardised Drawing for 33KV VCB with Basic Structure
(M/s Megawin Switchgear P. Ltd.)
STD/GTP-DWG/Approval No. 250-S-1 sheet Revision No. 0
Prepared & Approved during November - 2011

Customer ref : APTRANSCO
Title: Legend

INSTALLATION :

DATE	05.11.2011
DRAWN	1
CHECKED	2
APPROVED	1
DATE	05.11.2011
DATE	05.11.2011
DATE	05.11.2011

QTY : -

TITLE : LEGEND FOR 33KV VCB WITH BASIC STRUCTURE



MEGAWIN SWITCHGEAR-P-LTD
SALEM, TAMIL NADU

CUSTOMER ID : 6690-0000	REV	SHEET IS
DWG NO. : MS-LD-6690-01-R0	R0	07 OF 18

PROJECT :

LOI REF. NO.:

Dt :

CLIENT : M/S. TRANSMISSION CORPORATION OF A.P. LIMITED, HYDRABAD.

CHECKED

APPROVED
DATE: 05.11.2011
BY: [Signature]

TECHNICAL SPECIFICATION

- CONTROL CURBICLE
- DOOR CLOSING ARRANGEMENT
- DEGREE OF PROTECTION
- PAINT SHADE TO EXTERIOR
- CABLE ENTRY
- EARTH BUS
- WIRING BY STANDARD Cu. CABLE
 - AC CXT
 - CONTROL CXT
- PUNTI NOT IN MEGAWIN SCOPE.
- TERMINAL BLOCKS WILL BE ELMEX (STD INPL)
- TWO TRIPPING COIL AND ONE CLOSING COIL WILL BE PROVIDED.
- CONTROL SUPPLY
- MOTOR SUPPLY
- ILLUMINATION LAMP WILL BE 240V AC 70 WATT'S COMPACT FLUORESCENT LAMP.
- SUPPORT STRUCTURE
- VCB AUX. CONTACTS
- 20% SPARE TERMINAL WILL BE PROVIDED

- SHEET STEEL THICKNESS 3 mm
- PAD LOCK ARRANGEMENT
- IP 55
- LIGHT GRAY (631 OF IS 5)
- BOTTOM
- TINNED COPPER BUS OF 25x6mmx 300mm PROVIDED
- BLACK (2.5 Sq.mm)
- GRAY (1.5 Sq.mm)

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CHIEF ENGINEER / CONSTRUCTION
APTRANSCO, W/O. JYOTI SOUDHAPALLY

Standardised Drawing for 33 kV Vacuum Circuit Breaker
(M/s Megawin Switchgear - P. Ltd.)

STD/GTP-DWG/Approval No. 250-9-1 steel / Revision No. 0
Prepared & Approved during November 2011

Customer ref : APTRANSCO
Title: Technical Details

TITLE : TECHNICAL DETAILS FOR 33KV VCB WITH BASIC STRUCTURE

DATE	BY	DATE	BY	DATE	BY
05.11.2011	1	05.11.2011	2	05.11.2011	3
DRAWN	1	CHECKED	2	APPROVED	3
D.T	1	D.T	2	D.T	3
DESIGNED	1	DATE	2	DATE	3



MEGAWIN SWITCHGEAR-P-LTD
SALEM, TAMIL NADU

CUSTOMER ID : 6690 - 65-00-
DWG NO. : MS-TD-6590-C1-R0
REV R0
SHEETS 08 OF 18

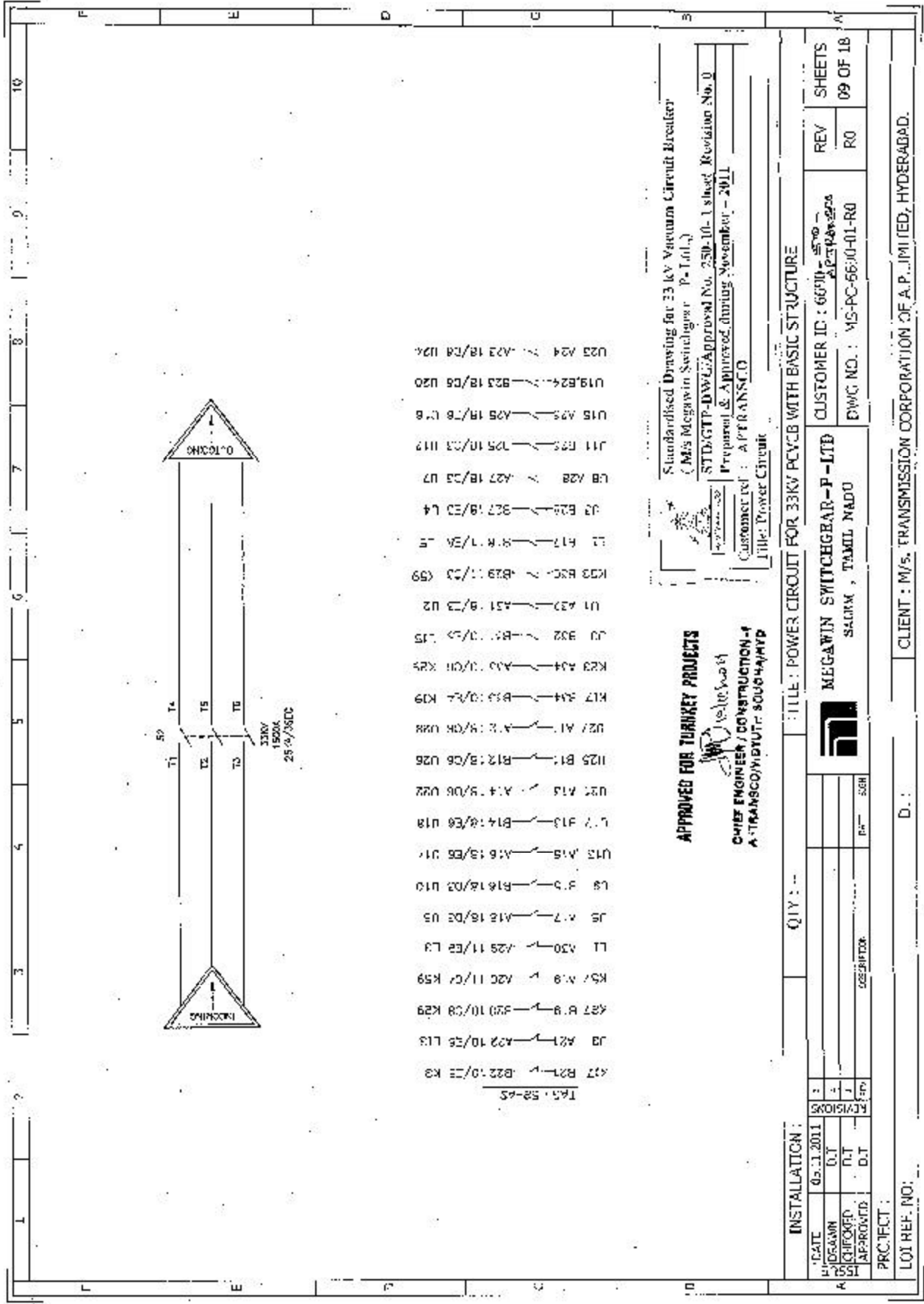
LOI REF. NO:

DU:

CLIENT : M/s. TRANSMISSION CORPORATION OF A.P.LIMITED, HYDERABAD.

CHECKED

DATE



CHECKED

[Signature]

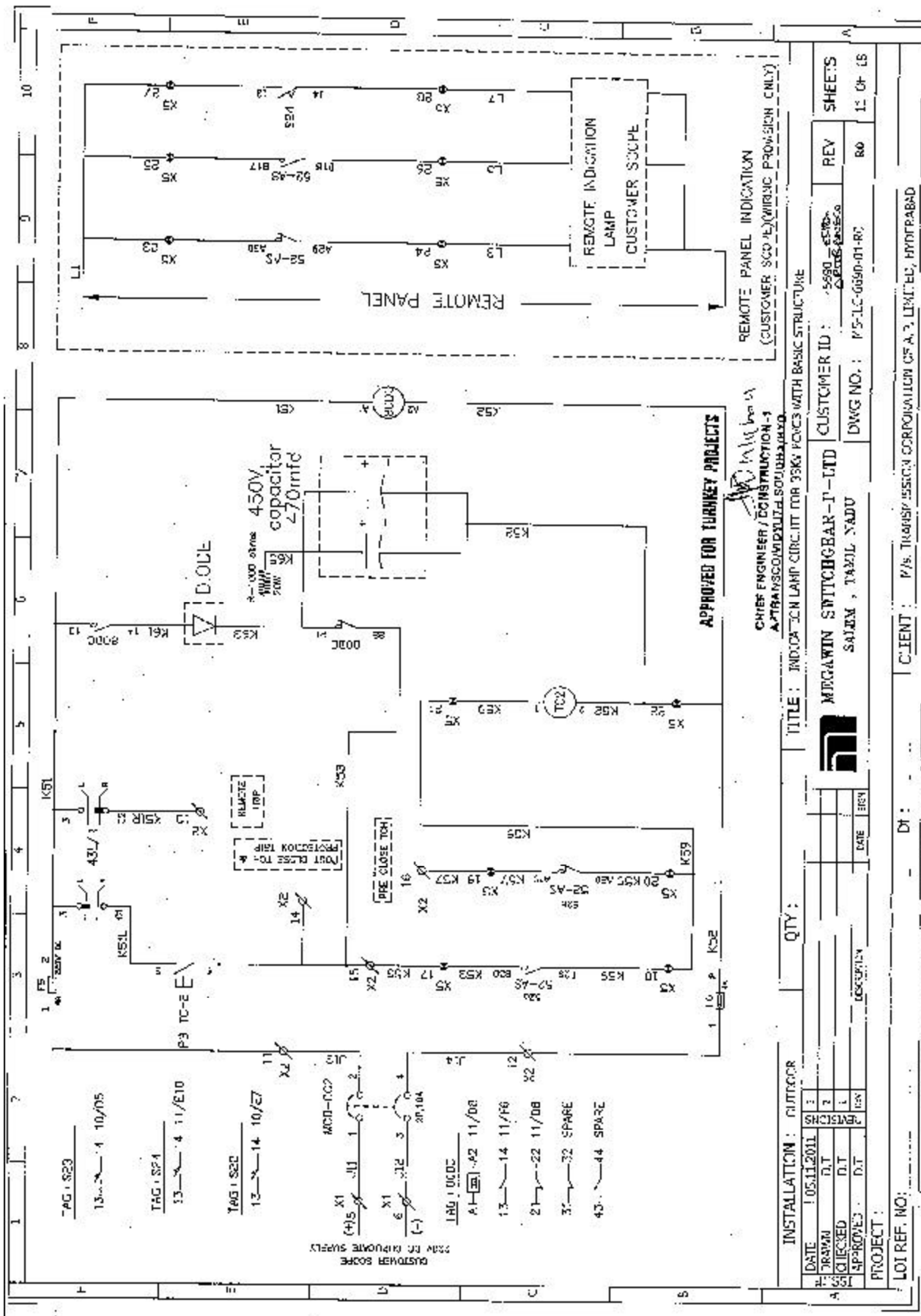
Standardised Drawing for 33 kV Vacuum Circuit Breaker
(M/s Megawin Switchgear - P. Ltd.)
STD/GTP-DWG/Approval No. 230-10-1 sheet Revision No. 0
Prepared & Approved during November - 2011
Customer ref : A/P RANSCO
Title: Power Circuit

APPROVED FOR TURNKEY PROJECTS

[Signature]

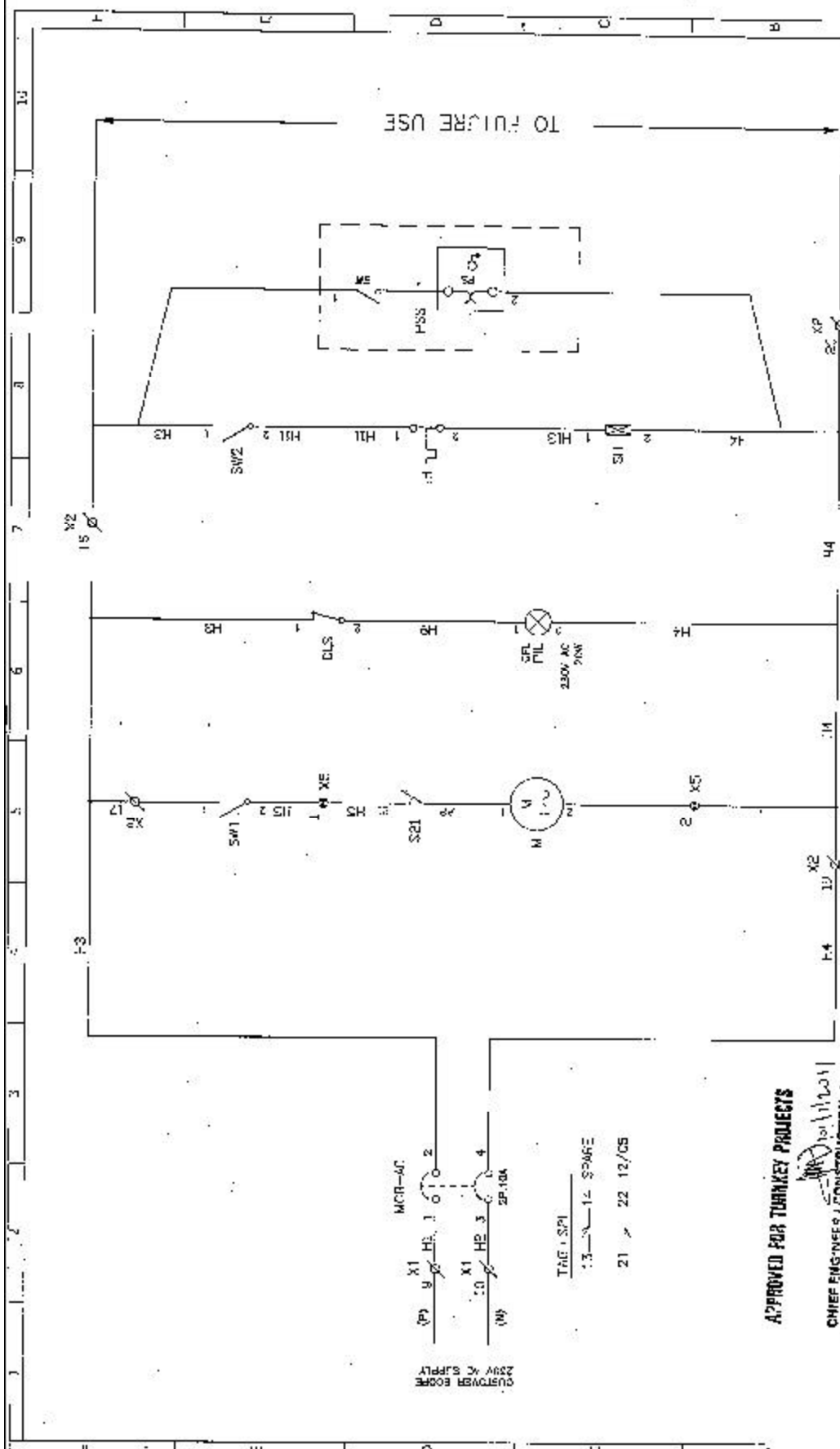
CHIEF ENGINEER / CONSTRUCTION-4
A TRANSCO/WIDUT/TSOU/4/MVD

INSTALLATION :		QTY : --		TITLE : POWER CIRCUIT FOR 33KV PCVCB WITH BASIC STRUCTURE	
DATE	05.11.2011			CUSTOMER ID : 6030-5700-5700-5700	SHEETS
DESIGNED	D.T			APPROVED	09 OF 18
CHECKED	D.T			DWG NO. : M5-PC-66/0-01-R0	REV
APPROVED	D.T			SARIM, TAMIL NADU	R0
PROJECT :		CLIENT : M/s. TRANSMISSION CORPORATION OF A.P. LIMITED, HYDERABAD.			
LOI REF. NO.:					



CHECKED

APTRANSCO
SOUTHERN ZONE
CHIEF ENGINEER / CONSTRUCTION - 3



СЛУЖБА ЗАКОНА И ОД ПРАВОСЛАВ

CHIEF ENGINEER / CONSTRUCTION-1
AFTRANSCO/WIDUUTH SOJDMA/HYQ.

INSTALLATION : AUTO-33		QTY :		TITLE : AC CONTROL CIRCUIT FOR 33KV FEEDER WITH BASIC STRUCTURE	
DATE	05-12-11	1		 MERGIN SWITCHGEAR-P-LTD SALEM, TAMIL NADU	CUSTOMER ID : 6600-SSC-01-RU DWG NO. : MS-ACC-6600-01-RU
DRAWN	D.T	2			
CHECKED	D.T	1			
APPROVED	D.T	149	DATE : 20/04		
PROJECT : AUTO-33-e-AIT - 20					
LOI REF. NO:		Dt:		CLIENT : M/S. TRANSMISSION CORPORATION OF A.P. LIMITED, HYDERABAD	

CLIENT: MIS. TRANSMISSION CORPORATION OF A.P. LIMITED, HYDERABAD

Standardised Drawing for 3.3 kV Vacuum Circuit Breaker
(M/s. Megawin Switchgear - P. Ltd.)

STD/GTP-DWG/Approval No. 250-13-1 sheet Revision No. 0
Prepared & Approved during November-2011

Customer ref : ALTRA MSCO
Title: AC Control Circuit

Case: AC Control Group

CHICK

[Handwritten signatures]

MEGAWIN #3x4Holes		175		125	
SL. No./ID No. Type Manufacturer's Ref. Sld. Month & Year of Manufacture Rated Voltage Rated Insulation Level Rated Frequency Rated Normal Current Rated Breaking Capacity (Symmetrical) Rated Breaking Capacity (Asymmetrical) First Pole to clear factor Rated Short Time Current/Duration Rated auxiliary DC Supply voltage of closing and opening devices Rated Out of phase breaking current Rated Supply voltage of auxiliary circuits : 230V Rated Supply frequency of auxiliary circuit : 230V/50 Hz Rated Operating Duty : O-0.3Sec.-CO-3min-CO Purchase Order Number and Date		MEGAWIN SWITCHGEAR-P-LTD, SALEM.		MANUFACTURED IN INDIA BY	
MEGAWIN SWITCHGEAR-P-LTD, SALEM.					
Standardised Drawing for 33 kV Vacuum Circuit Breaker (M/s MEGAWIN Switchgear - P-Ltd.) S/D: C/P-D/WG/Approval No. 250-14-1 sheet Revision No. 11 Prepared & Approved during November-2011 Customer ref : APTRAMSCO Title: Name Plate Details					

APPROVED FOR TUNKEY PROJECTS M/S ENGINEER / CONSTRUCTION-1 M/S RAMSICO/MIDVTH SODA/HYD.		TITLE : NAME PLATE DETAILS FOR 33KV PVCB WITH BASIC STRUCTURE	
SHEETS 13 OF 18		REV R0	
CUSTOMER ID : 6600-01-00 AP-18RAMSCO		DWG NO. : MS-NP-0-6600-01-R0	
MEGAWIN SWITCHGEAR-P-LTD SALEM, TAMIL NADU		PROJECT :	
DATE : 05.11.2011 DESIGNED : CHECKED : APPROVED :		PROJECT :	
LOT REF. NO:		CLIENT : M/S. TRANSMISSION CORPORATION OF A.P. LIMITED, HYDRABAD.	

CHECKED

[Signature]

OTHER EQUIVALENT MAKE NOT SPECIFIED IN BOM

ITEM	MAKE
MCB	SCHNEIDER ELECTRIC/HP/HAVELLS
HEATERS	KONTAKT PYROS/R.K. HEATERS
THERMOSAT	KONTAKT PYROS/GRESHGO
ILLUMINATION LAMP	PHILIPS/CGL/CEMA/BAUJ
INDICATION LAMPS	TEKNIC/ESSEN/PAS/BCH/VIRAL
COMBINED SWITCH & SOCKET	KUNDAN/ANCHOR
PUSH BUTTON	TEKNIC/ESSEN/PAS/DOH
LOCAL / REMOTE SELECTION SWITCH	KAYCEE / SW LON
BREAKER CONTROL SWITCH	KAYCEE / SW LON

APPROVED FOR TURNKEY PROJECTS

CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO MIDYTH SOUNDHAYIB

Standardised Drawing for 33 kV Vacuum Circuit Breaker
(M/s Megawin Switchgear - P. Ltd.)
STDG-11-DWG/Approval No. 250-16-1 dated Revision No. 0
Prepared & Approved during November 2011
Customer ref : APTRANSCO
Title: Other Make Details

INSTALLATION :

DATE	05.11.2011
DRAWN	D.T.
CHECKED	D.T.
APPROVED	D.T.

QTY :-



MEGAWIN SWITCHGEAR-P-LTD
Salem, Tamil Nadu

CUSTOMER ID : 6690-STD-APTRANSCO
DWG NO. : MS-OMD-6690-01-RD

REV

SHEETS

RD

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PROJECT :

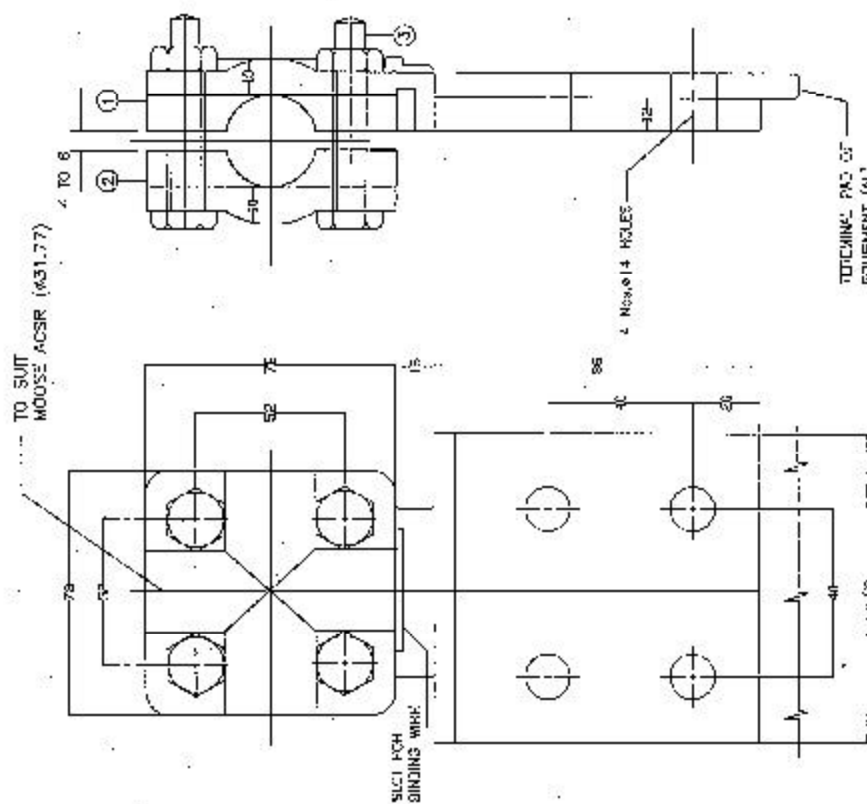
DT :

CLIENT : M/S. TRANSMISSION CORPORATION OF A.P. LIMITED, HYDERABAD.

CHECKED

APPROVED

ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED



- NOTES:**
1. REFERENCE STANDARD : IS-3061-1970
 2. CURRENT RATING : TO SUIT CONDUCTOR RATING
 3. SHORT TIME CURRENT RATING : 25KA/5s
 4. BOLT TIGHTENING TORQUE : M10 BOLT: 23NM M2 BOLT: 35NM
 5. THE EFFECTIVE MINIMUM THICKNESS OF ANY CURRENT CARRYING PART OF THE CLAMP SHALL BE 12 MM.
 6. DIMENSIONS SHOWN ARE SUBJECT TO MANUFACTURING TOLERANCES AS FOLLOW UP TO 50 MM $\pm 0.5\%$ FROM 51 TO 100 MM $\pm 0.4\%$ FROM 101 TO 300 MM $\pm 0.3\%$ ABOVE 300 MM $\pm 0.2\%$
 7. GENERAL ARRANGEMENT SUBJECT TO MINOR CHANGES WITHOUT AFFECTING THE PERFORMANCE AND APPLICATION NEEDS ACTUAL PROFILE WILL BE TO REQUIRED DIMENSIONS.

MATERIAL LIST

ITEM	DESCRIPTION	QTY	MTL.
1	U-BY PILLS	1 NO	AL ALLOY 4060 (A0) TO IS-617-1972
2	CLAMP	1 NO	40--
4	M10 BOLT WITH NUT, 1 PLAN & SPRING WASHER	4 PCS	M/S HOT DIP GALVANIZED

APPROVED FOR TURNKEY PROJECTS

QTY : 6 Nos. / PCVCB

CHIEF ENGINEER / CONSTRUCTION - I
APTRANSCO, VIJAY NAGAR, HYD.

Standardised Drawing for 33 kV Vacuum Circuit Breaker
(M/s Megawatt Switchgear - P. Ltd.)
STD/GIT-DWG/Approval No. 230-17-1 sheet Revision No. 0
Prepared & Approved during November 2011
Customer Ref : APTRANSCO
1-Hole Terminal Connector Details

INSTALLATION :

DATE	05.12.11	BY	
DRAWN	D.T	CHECKED	D.T
APPROVED	D.T		

PROJECT :

LOT NO. :

CLIENT : M/s. TRANSMISSION CORPORATION OF A.P. LIMITED, HYDERABAD.

LOT :

QTY :

TITLE : TERMINAL CONNECTOR DETAILS FOR 33KV PCVCB WITH BASIC STRUCTURE

MEGAWATT SWITCHGEAR - P. LTD

CUSTOMER ID : 6690-310-01

DWG NO. : MS-TCB-6690-01-R0

REV

SHEETS

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APTRANSCO

X3-SPARE BREAKER TERMINALS

X3	1	U1	520 52-AS	A31	U2	2	X3
X3	3	U3	520 52-AS	B27	U1	4	X3
X3	5	U5	520 52-AS	A18	U6	6	X3
X3	7	U7	520 52-AS	A27	U8	8	X3
X3	9	U9	520 52-AS	B16	U10	10	X3
X3	11	U11	520 52-AS	A25	U12	12	X3

X3-SPARE BRFAKCR TERMINALS

X3	13	U13	520 52-AS	A16	U14	14	X3
X3	15	U15	520 52-AS	A25	U16	16	X3
X3	17	U17	520 52-AS	A14	U18	18	X3
X3	19	U19	520 52-AS	A23	U20	20	X3
X3	21	U21	520 52-AS	A16	U22	22	X3
X3	23	U23	520 52-AS	A21	U24	24	X3
X3	25	U25	520 52-AS	A12	U26	26	X3
X3	27	U27	520 52-AS	A12	U28	28	X3

APPROVED FOR TURNKEY PROJECTS

CHIEF ENGINEER / CONSTRUCTION
APTRANSCO/WDYUTHI SODHAPATYD

Standard Drawing for 33 KV Vacuum Circuit Breaker
LMs Megawin Switchgear - (P-Ltd.)

STDC/TP-DWG/Approval No. 250-19-1 sheet Revision No. 0
Customer ref : APTRANSCO
Title: Spare Terminal Details

INSTALLATION: OUTDOOR

QTY:

TITLE: SPARE TERMINALS DETAILS FOR 33KV VSCB WITH BASIC STRUCTURE

DATE	05.11.2015	NO	1
BY	U.T	NO	2
CHECKED	U.T	NO	3
APPROVED	U.T	NO	4

MEGAWIN SWITCHGEAR-P-LTD

CUSTOMER ID: 6600-5133-2

REV

SALEM, TAMIL NADU

DWG NO.: KS-S-3-8200-01-NC

REV

PROJECT:

LOI REF. NO:

Dt:

CLIENT: M/s. TRANSMISSION CORPORATION OF AP, LIMITED, HYDRABAD

CHECKED

APPROVED

DATE