

 Drawing approval subject to valid vendor registration
 

GUARANTEED TECHNICAL PARTICULARS FOR OIL IMMERSED
33KV INDUCTIVE VOLTAGE TRANSFORMER OF RATIO:
33KV/RT3/110V/RT3/110V/RT3

	Client Name	M/s. Transmission Corporation of Andhra Pradesh Limited	
	Drawing No:	33OV04	
1.	Type	Single Phase, Oil immersed, Dead tank	
2.	Name and Address of Manufacturer.	Straton Electricals Private Limited. Sy No. 42/A1/1, Alinagar, Gadda Potaram (GP), Jinnaram(M), Sangareddy (Dist.), Hyderabad-502319, Telangana, India.	
3.	Reference standard	IS-16227:2015	
4.	Rated Voltage/Highest System Voltage	33KV/36KV	
5.	Rated primary voltage	33kV/rt3	
6.	Rated secondary voltage	110V/rt3, 110V/rt3	
7.	Insulation Class	A	
	Secondary core details:		
	a) Number of windings	Sec-Winding-I	Sec-Winding-II
	b) Rated Burden	50VA	50VA
	c) Class of accuracy	3P	0.2
8.	Basic Insulation Level	36/70/170kVp	
9.	Primary stud / Secondary stud	Nickle Plated Copper stud of 30mm diameter 80mm length / M6 Nylon stud type terminal blocks	
10.	Rated voltage factor	1.2 continuous & 1.5 for 30sec	
11.	Temperature rise over ambient	< 55°C as per IS 16227:2015	
12.	Impulse withstand test voltage kV (Peak)	170 KV (Peak)	
13.	One minute power frequency dry and wet withstand voltage on primary	70 KV (rms)	
14.	One minute power frequency withstand voltage on secondary	3 KV (rms)	
15.	Partial discharge level		
	a) @ 1.2Um/Rt3	<5pC	
	b) @ Um	<10pC	
16.	Total creepage distance of the bushing	25mm/KV (min)	
17.	Live part to ground clearance	400 mm (min)	
18.	Gauge of the MS tank with Paint shade 631 as per IS 5	- Min 5mm for top cover and bottom - Min 3.15mm for tank sides at studs interface	
19.	Hardware exposed to air	Hot dip galvanized	
20.	Quantity/Weight of oil	35±5 Liters Approx.	
21.	Whether all O-rings are fixed in properly machined grooves?	Yes	

7543666/2023/EEMRT-ENE51
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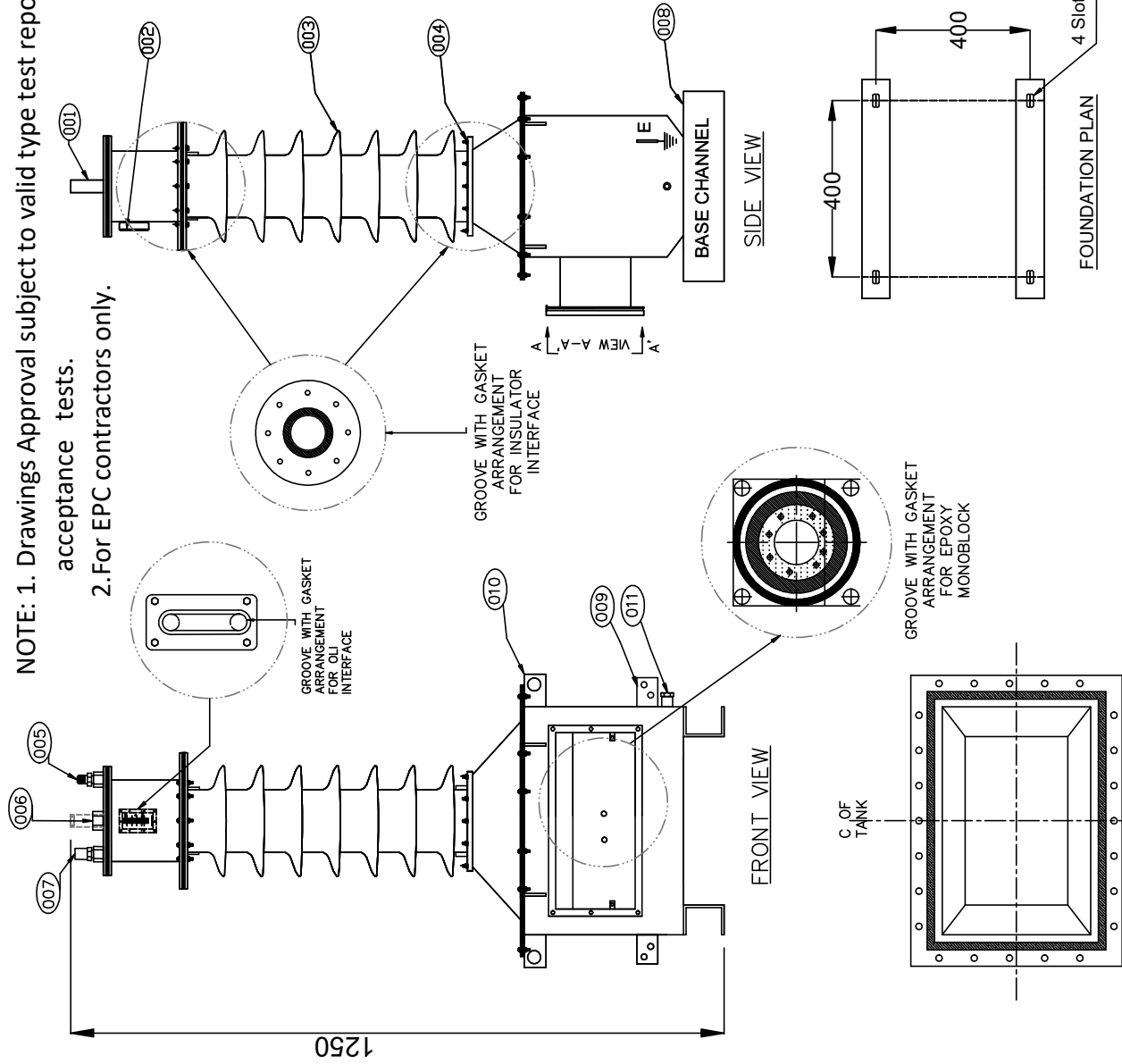
22.	Sealing arrangement (Gasket with groove)	1. Insulator flange interfaces at top tank & base. 2. The secondary terminal interface of molded epoxy cast resin monoblock with O-ring. 3. Oil level indicator & primary stud interface with tank
23.	O-rings & gaskets' material	Nitrile Butyl Rubber
24.	Oil filling arrangement	Oil filling valve on top of the tank & drain valve at the bottom
25.	Insulation Class	A
26.	Make of Porcelain Insulator	CJI / Ravi Kiran / Modern / Any std. make
27.	Type of Insulator construction	Both flanges cemented at the top & bottom of the bushing
28.	Weight of Steel	40 Kgs approx.
29.	Weight of Copper	6 Kgs approx..
30.	Total weight	140 ± 10 Kgs approx.
31.	Mounting details	400mm X 400mm
32.	Overall dimensions	As per GA drawing.

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/IVT/LA/Breaker's requirement and compatibility.

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SPECIFICATIONS	
SYSTEM VOLTAGE/HSV	33/36kV
BASIC INSULATION LEVEL	36/70/170kVp
TYPE	OIL IMMERSED DEAD TANK
VOLTAGE FACTOR	1.2 CONT. & 1.5 FOR 30secs
NO. OF Sec-Windings	2
RATIO	33KV/RT3/110V/RT3/110V/RT3
CLASS (WDG-1, WDG-2)	3P, 0.2
BURDEN (WDG-1, WDG-2)	50VA, 50VA
TOTAL CREEPAGE DISTANCE	25mm/kV
REF. STANDARD	IS 16227:2015
TOTAL WEIGHT	140±10 Kgs.

S.NO	ITEM DESCRIPTION	MATERIAL	QTY
001	HT TERMINAL	ø30mm NICKEL PLATED COPPER	01
002	OIL LEVEL INDICATOR (OIL)	AL. DIE CASTED	01
003	INSULATOR	PORCELAIN	01
004	BUSHING TYPE	CEMENTED FLANGE TYPE	02
005	N2 FILLING VALVE	BRASS	01
006	OIL FILLING VALVE	MILD STEEL	01
007	PRESSURE RELIEF VALVE	BRASS	01
008	MOUNTING BASE	MILD STEEL	01
009	EARTH BUSBAR	SS (50x8x70(L)mm)	02
010	LIFTING HOLES	MILD STEEL	04
011	OIL DRAIN PLUG	MILD STEEL	01

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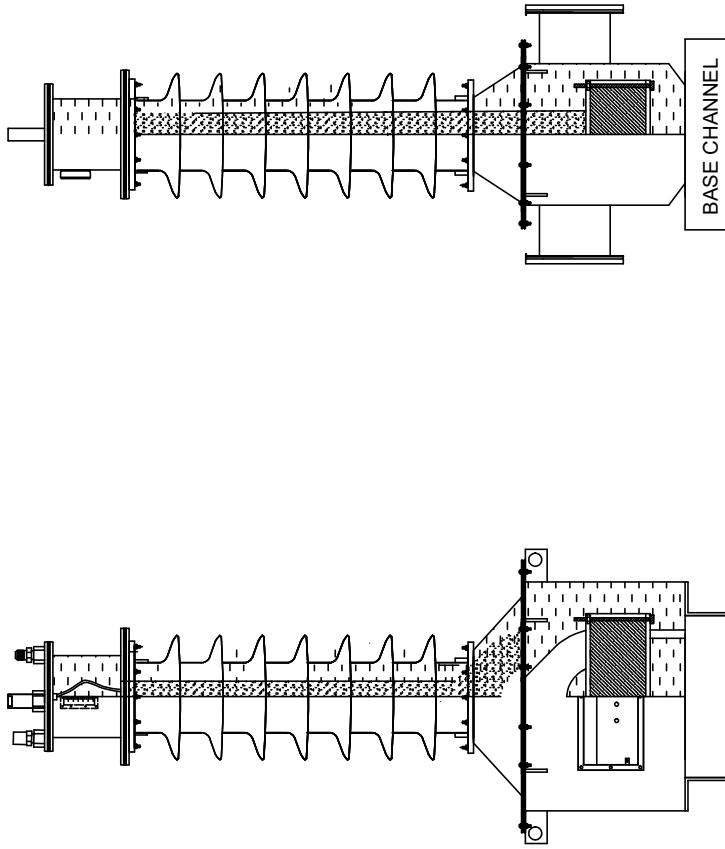
TITLE:
 GENERAL ARRANGEMENT DRAWING FOR
 33KV OIL IMMERSED IVT (3P/50VA,
 0.2/50VA)

SIGN	DATE
SG	
SR	
PD	

Drawn: SG
 Checked: SR
 Approved: PD

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FRONT VIEW

SIDE VIEW

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CLASS (WDG-1, WDG-2)	3P, 0.2
BURDEN (WDG-1, WDG-2)	50VA, 50VA
TOTAL CREEPAGE DISTANCE	25mm/kV
REF. STANDARD	IS 16227:2015
TOTAL WEIGHT	140±10 Kgs.

DESIGN DATA:

PRIMARY WINDING:

- a. Area of Crossection: 0.29Sq.mm
- b. Conductor material: Electrolytic Copper
- c. Weight of conductor: 4.5Kgs approx.

SECONDARY WINDING:

- a. Area of Crossection:
Winding-I: 18SWG (1.167Sq.mm)
Winding-II: 14&16SWG (5.25Sq.mm)
- b. Conductor material: Super enameled Copper wire
- c. Weight of conductor: 1.5Kgs approx.

- 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.
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4 Slots of 8MM Radius

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SIGN	DATE
DRAWN	SG
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APPROVED	PD

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TITLE:

CROSSSECTIONAL VIEW OF
33kV OIL IMMERSED IVT (3P/50VA,
0.2/50VA)

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NAME PLATE DETAILS

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STRATON®

INDUCTIVE VOLTAGE TRANSFORMER

Made in India

Make	Straton Electricals Pvt Ltd.	IVT Ratio	33000V/rt3/110V/rt3/110V/rt3	Mfg Year	2023
Type	33kV Outdoor Oil Immersed IVT	Winding #	II		
Ref Std	IS 16227(Part 1&3).	Ratio (V/V)	33000V/rt3/110V/rt3	Primary Terminals	A-N
HSV	36 kV	Secondary Terminals	a1-n1	Output VA	50
Ins Class	A	Acc. Class	3P		0.2
Freq.	50Hz				
Temp. cat.	-5/50°C	Weight	140±10 Kgs		
Oil Qty	35±5Ltrs	Oil Confirms to	IS 335		
Minimum Creepage distance	900 mm				

CAUTION:

1. ENSURE LV TERMINALS ARE NOT SHORT CIRCUITED WHEN IVT IS IN OPERATION.

A CONNECTION DIAGRAM

Serial # _____

Owner M/s. TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED.

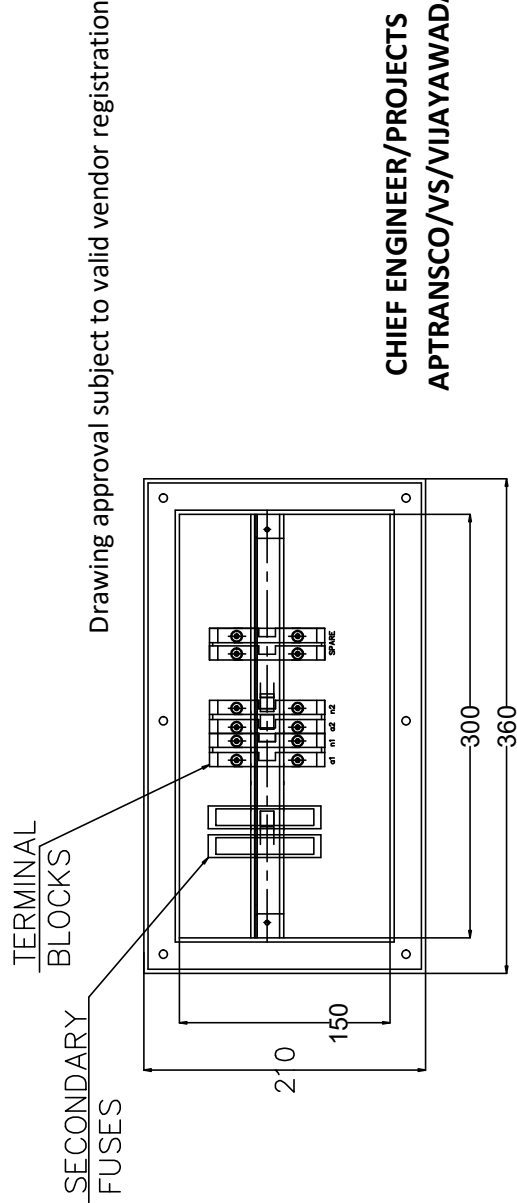
Made in India by: Straton Electricals Pvt Ltd., Sy.No: 42/A1/1, Gaddapotharam, Jinnaram, Sangareddy, Hyd, T.S. - 502319. Email: info@stratonelectricals.com.

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Page No. 5 of 6 DIMENSIONAL TOLERANCES ± 5mm	All information contained in this document is confidential and is the property of STRATON ELECTRICALS PVT. LTD. reproduction of this in any form should not be done without the written permission of the company				SIGN	DATE	1
	DRAWN	SG	CHECKED	SR	APPROVED	PD	2
	TITLE: NAME PLATE DETAILS OF 33KV OIL IMMERSED IVT (3P/50VA, 0.2/50VA)						3
ALL DIMENSIONS ARE IN mm							4
STRATON							5
TITLE: NAME PLATE DETAILS OF 33KV OIL IMMERSED IVT (3P/50VA, 0.2/50VA)							6
TITLE: NAME PLATE DETAILS OF 33KV OIL IMMERSED IVT (3P/50VA, 0.2/50VA)							7
TITLE: NAME PLATE DETAILS OF 33KV OIL IMMERSED IVT (3P/50VA, 0.2/50VA)							8
TITLE: NAME PLATE DETAILS OF 33KV OIL IMMERSED IVT (3P/50VA, 0.2/50VA)							9

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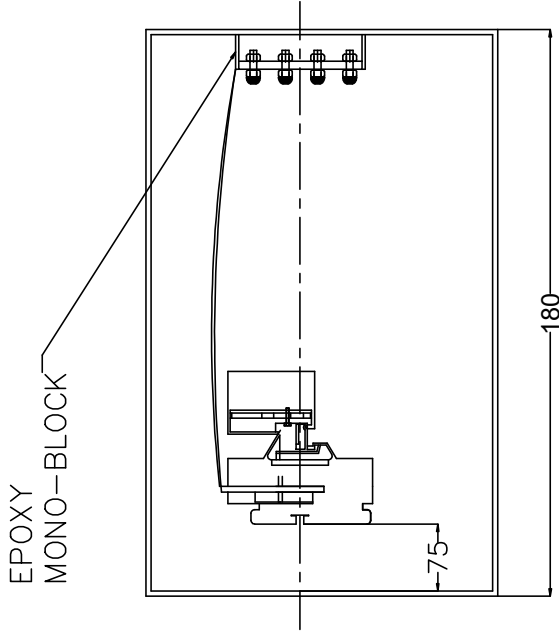


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SIDE VIEW



NOTES:

1. SECONDARY TERMINAL BOX SHALL BE PROVIDE REMOVABLE GLAND PLATE WITHOUT HOLE.
2. SECONDARY TERMINAL BOX SHALL BE PROVIDED WITH COVER WITH EPDM GASKET.
4. DEGREE OF PROTECTION FOR SECONDARY TERMINAL SHALL BE IP55
6. 20% SPARE TERMINALS SHALL BE PROVIDED

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		CHECKED	SR							
		APPROVED	PD							
TITLE: SECONDARY TERMINAL BOX DETAILS OF 33KV OIL IMMERSED IVT (3P/50VA, 0.2/50VA)		STRATON		SIGN	DATE					
Page No. 6 of 6	DIMENSIONAL TOLERANCES ± 5mm		ALL DIMENSIONS ARE IN mm							

PROJECTION

SCALE : NTS

DATE: 01-06-2023

DWG #: 330V04