



Drawing approval subject to valid vendor registration

**GUARANTEED TECHNICAL PARTICULARS FOR OIL IMMERSED
33KV CURRENT TRANSFORMER OF RATIO: 25/1A**

	Client Name :	M/s. Transmission Corporation of Andhra Pradesh Limited
	Drawing No:	33OC01/WP1
1.	Type	Single Phase, Oil immersed, Live 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-16227:2016
4.	Rated Voltage/Highest System Voltage	33KV/36KV
5.	Rated primary Current	25A
	Secondary core details:	
	a) Number of cores	Core-I Metering
	b) Rated secondary current	1A
	c) Rated Burden	5VA
	d) Class of accuracy	0.2S
	e) Accuracy Limit Factor (ALF)	-
	f) Instrument Security Factor (ISF)	<5
	g) Knee Point Voltage (Vk)	-
	h) Excitation Current (mA)@ Vk/2	-
6.	i) Method of ratio change and secondary connection details & connection diagram	Secondary tapping
7.	Primary stud / Secondary stud	Nickel Plated Copper stud of 30mm diameter 80mm length / M6 Nylon stud type terminal blocks
8.	Current density	1A/Sq.mm
9.	Short time Thermal Current & its duration	140 x Rated Primary Current
10.	Rated dynamic current (Peak value)	2.5 times of STC / 8.75kAp
11.	i) Rated continuous thermal current ii) Temperature rise over ambient	1.2 times continuous <55°C as per IS 16227:2016
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)

Straton Electricals Pvt. Ltd

Sy. No. 42/A1/A, Alinagar, Gaddapotharam (GP), Jinnaram (M),
Sangareddy (Dist.), Hyderabad - 502319, Telangana, India.

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**CHIEF ENGINEER/PROJECTS
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15.	Partial discharge level	
	a) @ 1.2Vm/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	13±2 Liters Approx.
21.	Whether CT is hermitically sealed?	Yes
22.	Whether all O-rings are fixed in properly machined grooves?	Yes
23.	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
24.	O-rings & gaskets' material	Nitrile Butyl Rubber
25.	Oil filling arrangement	Oil filling valve on top of the tank & drain valve at the bottom
26.	Insulation Class	A
27.	Make of Porcelain Insulator	CJI / Ravi Kiran / Modern / Any std. make
28.	Type of Insulator construction	Both flanges cemented at the top & bottom of the bushing
29.	Weight of Steel	22 Kgs approx..
30.	Weight of Copper	1.5 Kgs approx..
31.	Total weight	65 ± 10 Kgs approx..
32.	Mounting details	400mm X 400mm
	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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PROJECTION 

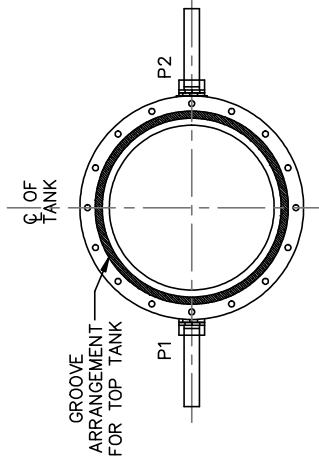
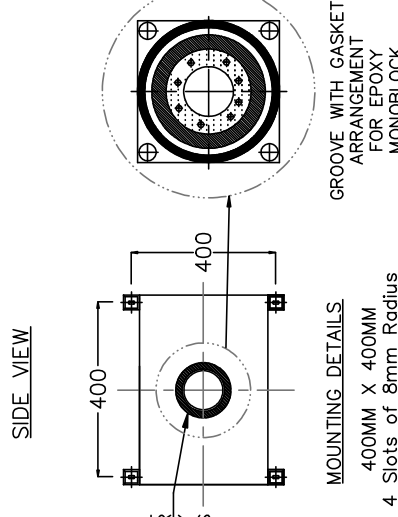
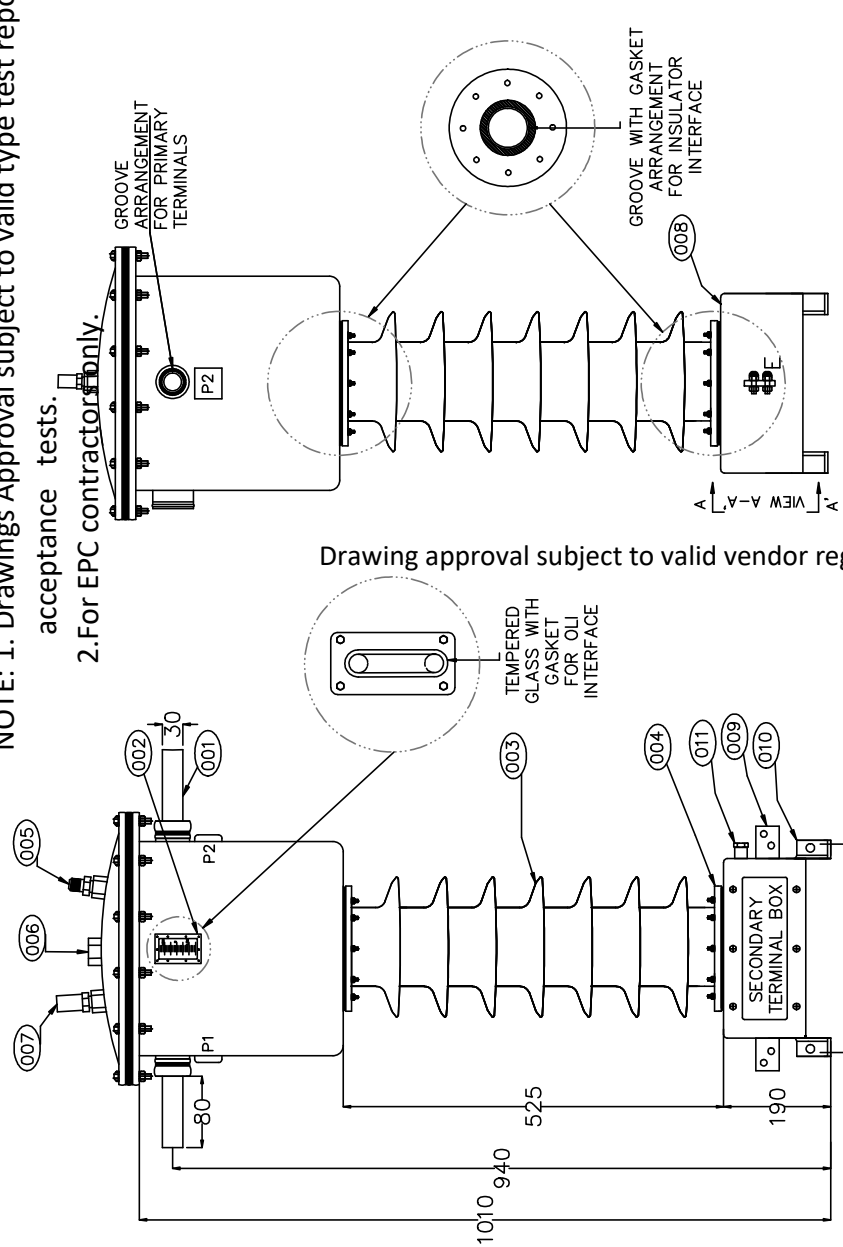
SCALE : NTS

DATE : 01-06-2023

DWG #: 330C01/WP1

SPECIFICATIONS	
SYSTEM VOLTAGE/HSV	33/36kV
BASIC INSULATION LEVEL	36/70/170kVp
TYPE	OIL IMMERSED LIVE TANK
STC & DURATION	140 x Rated Primary current
NO. OF CORES	1
RATIO	25/1A
CLASS	0.2S
BURDEN	5VA
TOTAL CREEPAGE DISTANCE	25mm/kV
REF. STANDARD	IS 16227:2016
TOTAL WEIGHT	65±10 Kgs.

S.NO	ITEM DESCRIPTION	MATERIAL	QTY
001	HT TERMINALS	φ30mm NICKEL PLATED COPPER	01
002	OIL LEVEL INDICATOR (OLI)	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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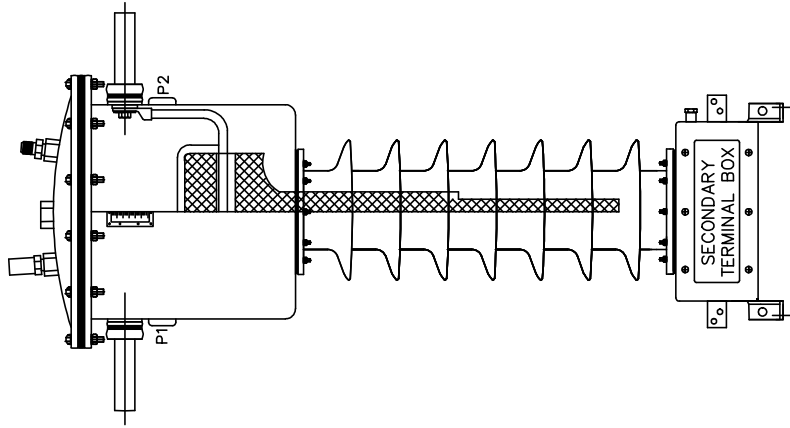


TITLE:
 GENERAL ARRANGEMENT DRAWING FOR
 33kV OIL IMMERSED CT OF RATIO
 25/1A

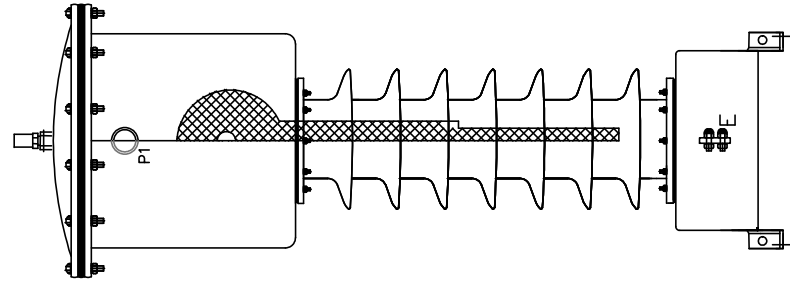
DRAWN	CHECKED	APPROVED	SG	SR	PD	SIGN	DATE

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FRONT VIEW



SIDE VIEW

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NO. OF CORES	1
RATIO	25/1A
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BURDEN	5VA
TOTAL CREEPAGE DISTANCE	25mm/kV
REF. STANDARD	IS 16227:2016
TOTAL WEIGHT	65±10 Kgs.

DESIGN DATA:

PRIMARY WINDING:

- a. Area of Crossection: 25Sq.mm
- b. No. of turns: 12
- c. Conductor material: Electrolytic Copper
- d. Weight of conductor: 1.3Kgs approx.

SECONDARY WINDING:

- a. Area of Crossection: 21SWG (0.518Sq.mm)
- b. No. of secondary turns: 300 Turns
- c. Conductor material: Super enameled Copper wire

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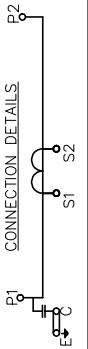
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TITLE:
 CROSSSECTIONAL VIEW OF
 33kV OIL IMMERSED CT OF RATIO
 25/1A

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NAME PLATE DETAILS

STRATON®		CURRENT TRANSFORMER		Made in India	
Make	Straton Electricals Pvt Ltd.	CT Ratio	25/1A	Mfg Year	2023
Type	33kV Outdoor Oil Immersed CT	Core #	1	Ratio (A/A)	25/1
Ref Std	IS 16227 (Part 1&2): 2016.	Pri.Terminals	P1-P2	Sec.Terminals	S1-S2
HSV	36 kV	Ins Level(kV/kVp)	70/170	Output VA	5
Ins Class	A	STC	140x1h	Acc. Class	0.2S
Freq.	50Hz	Idyn	8.75 kAp	ALF/ISF	<5
Temp. cat.	-5/50°C	Weight	65±10 Kgs	Vk (V)	---
Oil Qty	13±2 Ltrs	Oil Confirms to	IS 335	Ret at 75°C(θ)	---
Minimum Creepage distance	900 mm	 CONNECTION DETAILS			
Serial No	M/s. TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED.				
Owner					
Made in India by: Straton Electricals Pvt Ltd., Sy.No:42/A1/1, Gaddapotharam, Jinnaram,Sangareddy,Hyd.,T.S.-502319. Email: info@stratonelectricals.com					
CAUTION: SECONDARY TERMINALS SHOULD BE SHORT CIRCUITED & EARTHED BEFORE THE BURDEN IS DISCONNECTED.					

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TITLE:
NAME PLATE DETAILS OF
33kV OIL IMMERSED CT OF RATIO
25/1A

DRAWN	SG	SIGN	DATE
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ALL DIMENSIONS ARE IN mm

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TYPE TEST APPLICABILITY STATEMENT							
Ratio	Rated STC (in times the rated current)	Rated STC KA/1 sec	Rated Peak Dynamic current KA(p)	Number of primary turns	Cross-sectional area of each primary turn sq.mm	Current density at rated STC A/mm sq.	Product of Peak dynamic current and number of primary turns KATs
Current Transformer offered by us:							
Details as per test report No. RP-2122-021634 dated 30/10/2021							
200/1A	125	25	62.5	2	160	156.25	125
25/1A	140	3.5	8.75	12	25	140.00	105
It would be observed from above table that the current density selected by us for the CTs offered against the present requirement is less than that cleared by the CT type tested. (Wound primary)							
It would also be observed that the product of the peak dynamic current and the maximum number of primary turns employed in the CT offered by us is less than the product cleared in the type tested.							
It is therefore, concluded that the test certificate RP-2122-021634 dated 30/10/2021 is fully applicable to the CTs offered by us.							

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