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2. For EPC contractors only.

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Drawing approval subject to valid vendor registration

**GUARANTEED TECHNICAL PARTICULARS FOR OIL IMMERSSED
33KV CURRENT TRANSFORMER OF RATIO: 25-15/1-1-1A CT**

	Client Name:	M/s. Transmission Corporation of Andhra Pradesh Limited		
	Drawing No:	33OC04/WP2		
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	25-15A		
	Secondary core details:			
	a) Number of cores	Core-I Diff. Protection	Core-II Diff. Protection	Core-III Metering
	b) Rated secondary current	1A	1A	1A
	c) Rated Burden	-	-	15VA
	d) Class of accuracy	PX	PX	0.2S
	e) Accuracy Limit Factor (ALF)	-	-	-
	f) Instrument Security Factor (ISF)	-	-	<5
	g) Knee Point Voltage (Vk)	250V@25A 150V@15A	250V@25A 150V@15A	-
	h) Excitation Current (mA)@ Vk	<30	<30	-
	i) Secondary winding resistance, Rct @75 deg. C	<3.6Ω@15A & <6Ω@25A	<3.6Ω@15A & <6Ω@25A	-
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	60 x Rated Primary Current		
10.	Rated dynamic current (Peak value)	2.5 times of STC / 3.75kAp		
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)		

Straton Electricals Pvt. Ltd

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

Mobile #: +91 9849513001, 9849513002

CIN: U31900TG2012PTC080052

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 info@stratonelectricals.com
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7543593/2023/EEMR/ENE51

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14.	One minute power frequency withstand voltage on secondary	3KV (rms)
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	23±5 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	25 Kgs approx..
30.	Weight of Copper	6 Kgs approx..
31.	Total weight	90 ± 10 Kgs approx..
32.	Mounting details	400mm X 400mm
	Overall dimensions	As per GA drawing.

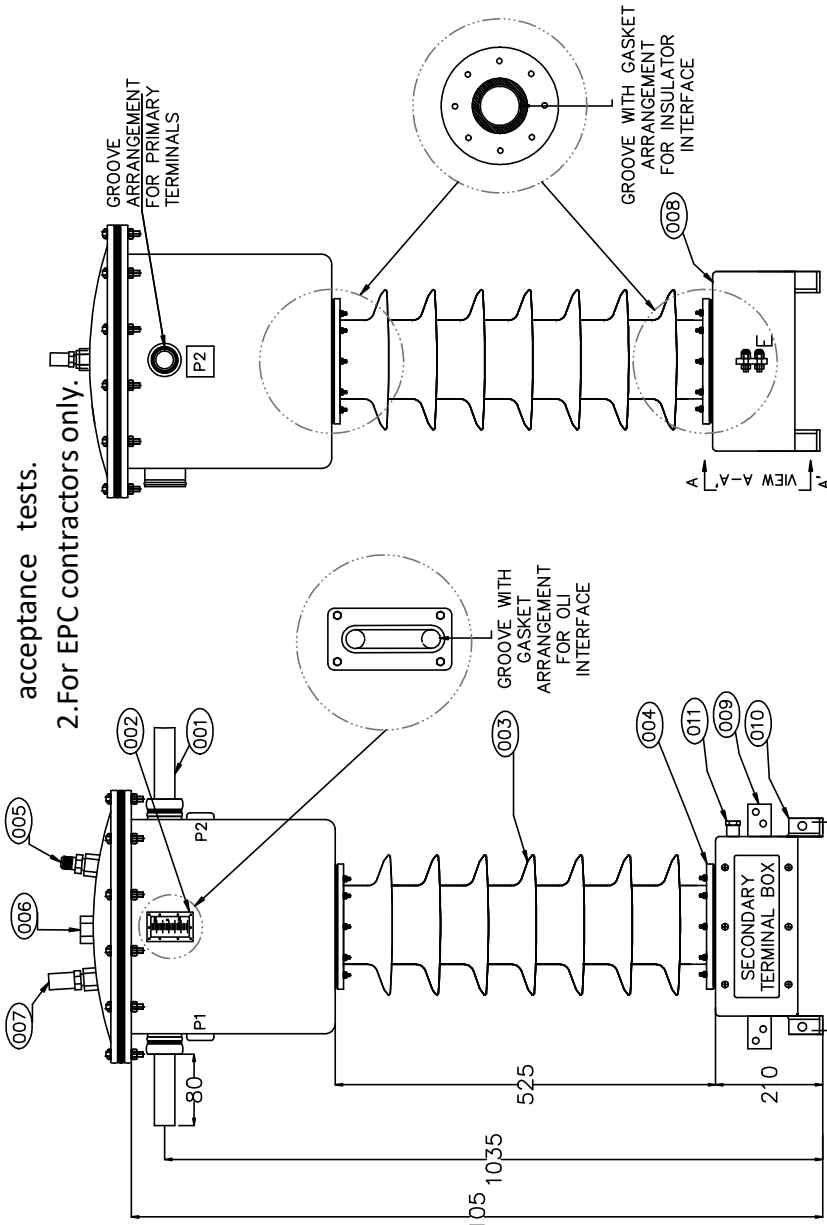
1. Minimum 300mm plinth shall be maintained for CT/PT/CVT/Isolators/IV/LA/Breakers in the substation during foundation works to ensure safe live to ground clearance per IE rules.
2. Since the supply of terminal connectors is not in the scope of manufacturer as mentioned in the drawings. The EPC contractor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

Straton Electricals Pvt. Ltd

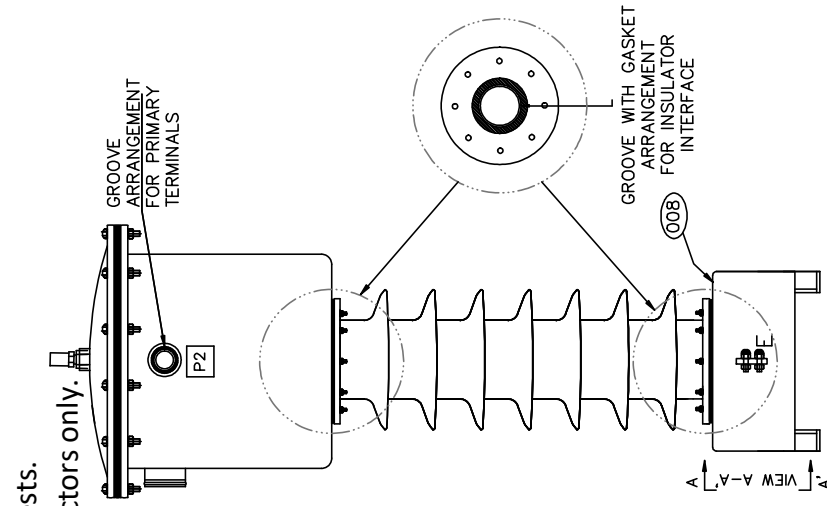
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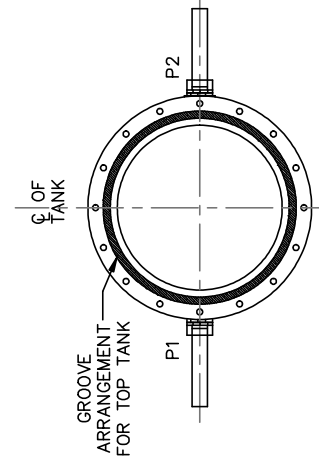
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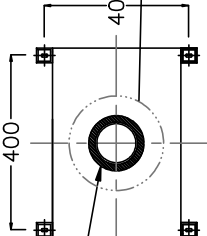
FRONT VIEW



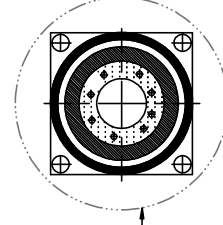
SIDE VIEW



TOP TANK
(TOP COVER OPEN)



MOUNTING DETAILS
400MM X 400MM
4 Slots of 8mm Radius



GROOVE WITH GASKET ARRANGEMENT FOR EPOXY MONOBLOCK

SPECIFICATIONS	
SYSTEM VOLTAGE/HSV	33/36kV
BASIC INSULATION LEVEL	36/70/170kVp
TYPE	OIL IMMERSED LIVE TANK
STC & DURATION	60 x Rated Primary current
NO. OF CORES	3
RATIO	25-15/1-1-1A
CLASS	PX, PX, 0.2S
BURDEN	-, -, 15VA
Vk FOR PS CORE/lex @Vk	250V@25A, 150V@15A; lex<30mA
TOTAL CREEPAGE DISTANCE	25mm/kV
REF. STANDARD	IS 16227:2016
TOTAL WEIGHT	90±10 Kgs.

S.NO	ITEM DESCRIPTION	MATERIAL	QTY
001	HT TERMINALS	ø30mm 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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APTRANSCO/VS/VIJAYAWADA

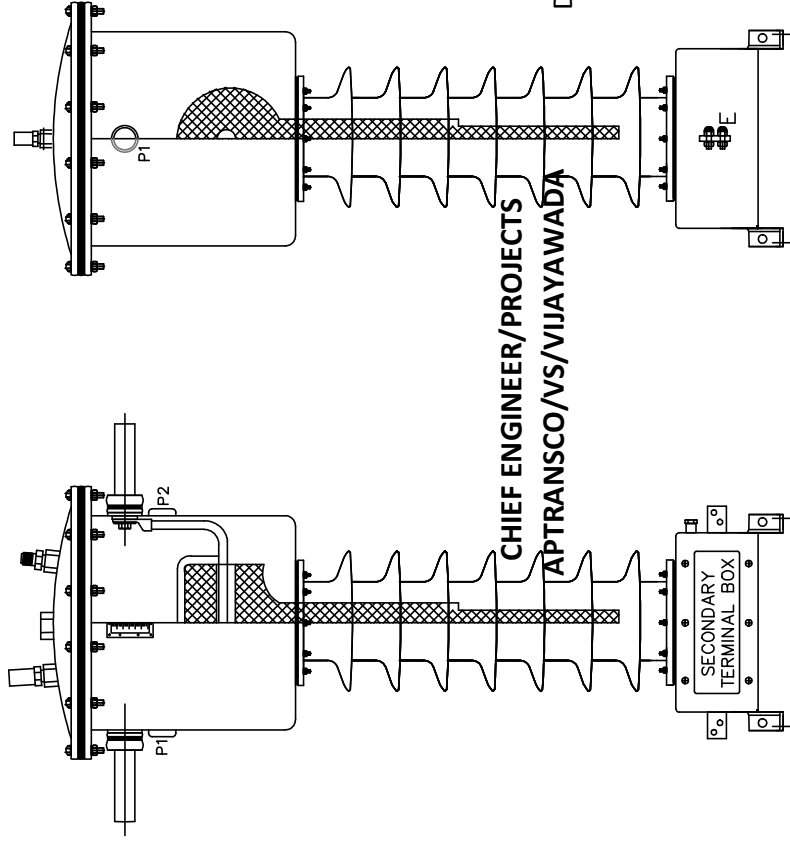


TITLE:
GENERAL ARRANGEMENT DRAWING FOR
33kV OIL IMMERSED CT OF RATIO
25-15/1-1-1A

SIGN	DATE
SG	
SR	
PD	

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FRONT VIEW

SIDE VIEW

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DESIGN DATA:

PRIMARY WINDING:

- a. Area of Crosssection: 25 Sq.mm
- b. No. of turns: 30
- c. Conductor material: Electrolytic Copper
- d. Weight of conductor: 4Kgs approx.

SECONDARY WINDING:

- a. Area of Crosssection:
 - Core-I: 20SWG (0.655Sq.mm)
 - Core-II: 20SWG (0.655Sq.mm)
 - Core-III: 21SWG (0.518Sq.mm)
- b. No. of secondary turns:
 - Core-I: 450-750 Turns
 - Core-II: 450-750 Turns
 - Core-III: 450-750 Turns
- c. Conductor material: Super enameled Copper wire

SPECIFICATIONS	
SYSTEM VOLTAGE/HSV	33/36kV
BASIC INSULATION LEVEL	36/70/170kVp
TYPE	OIL IMMERSED LIVE TANK
STC & DURATION	60 x Rated Primary current
NO. OF CORES	3
RATIO	25-15/1-1-1A
CLASS	PX, PX, 0.2S
BURDEN	-, -, 15VA
Vk FOR PS CORE/lex @Vk	250V@25A, 150V@15A; lex<30mA
TOTAL CREEPAGE DISTANCE	25mm/kV
REF. STANDARD	IS 16227: 2016
TOTAL WEIGHT	90±10 Kgs.

- 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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TITLE:

CROSSSECTIONAL VIEW OF
 33kV OIL IMMERSED CT OF RATIO
 25-15/1-1-1A

DRAWN	SG	SIGN	DATE
CHECKED	SR		
APPROVED	PD		

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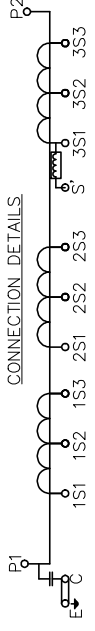
NAME PLATE DETAILS

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STRATON® CURRENT TRANSFORMER

Made in India

Make	Straton Electricals Pvt Ltd.		CT Ratio	25-15/1-1-1A	
Type	33kV Outdoor Oil Immersed CT		Core #	I	
Ref Std	IS 16227 (Part 1&2): 2016.		Ratio (A/A)	15/1	25/1
HSV	36 kV		Pri. Terminals	P1-P2	25/1 P1-P2
Ins Class	A		Sec. Terminals	1S1-1S2	1S1-1S3
Ins Level	60xln		Output VA	---	
Freq.	50Hz		Acc. Class	PX	
Temp. cat.	-5/50°C		ALF/ISF	---	
Oil Qty	23±5Ltrs		Vk (V), Iex@Vk	250V@25A, 150V@15A; Iex<30mA	
Minimum Creepage distance	900 mm		Rct at 75°C(Ω)	<3.6@15A & <6@25A	



CAUTION:
SECONDARY TERMINALS SHOULD BE SHORT CIRCUITED & EARTHED BEFORE THE BURDEN IS DISCONNECTED.
NOTE:
S' TERMINAL IS PROVIDED FOR THE METERING CORE TO ACHIEVE ISF.
① 15/1A, CONNECT S' TERMINAL WITH 3S2.
② 25/1A, CONNECT S' TERMINAL WITH 3S3.

Serial No
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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TITLE:
NAME PLATE DETAILS OF
33kV OIL IMMERSD CT OF RATIO
25-15/1-1-1A

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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
25-15/1-1-1A	60	1.5	3.75	30	25	60.00	112.5
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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